

NARCISSUS
HYACINTH+
SPECIAL PICTURE BOOK
FLOWER BULBS

Narcissus, Hyacinth and Special Flower Bulbs Picture Book

Picturebook Narcis, Hyacint en Bijzondere Bolgewassen

风信子、洋水仙和特殊种球花卉品种图册



Contents/Inhoud/内容

5	Foreword
5	Voorwoord
5	简介
8	Introduction
12	Inleiding
16	简介
22	Introduction Narcissus
26	Inleiding Narcis
30	洋水仙介绍
34	Narcissus
34	Narcis
34	洋水仙
92	Introduction Hyacinth
96	Inleiding Hyacint
100	风信子介绍
104	Hyacinth
104	Hyacint
104	风信子
120	Introduction Special Bulbs
122	Inleiding Bijzondere Bolgewassen
124	特殊种球花卉介绍
126	Special Bulbs
126	Bijzondere Bolgewassen
126	特殊种球花卉
282	Special Dry Bulbs
282	Bijzondere Bolgewassen: droge bollen
282	干球图片
287	Conservation
287	Bewaaradviezen
287	储藏信息
293	Contents
293	Inhoud
293	内容
310	Index A-Z
310	Index A-Z
310	目录



Foreword

This Narcissus, Hyacinth and Special Bulbs Picture Book is a supplement to the existing series which includes the Tulip Picture Book and the Lily Picture Book. This book features popular assortments of narcissi, hyacinths and both spring- and summer-flowering special bulbous plants. Each of the various groups is accompanied by limited and general information; for more detailed information, please contact your flower bulb supplier who is knowledgeable about the possibilities and backgrounds of certain cultivars. The information provided here is based on Dutch growth and climate conditions and can thus differ from your locally prevailing conditions.

The people at the IBC who compiled this book wish to acknowledge their gratitude to the many fellow professionals who helped them gather the necessary information and who cooperated in providing photographic material. More information about flower bulbs and the International Flower Bulb Centre (IBC) can be found at www.bulbsonline.org

Voorwoord

Dit Picturebook Narcis, Hyacint en Bijzondere Bolgewassen is een aanvulling op de reeds bestaande serie Tulip picture- en Lily picture book. In dit boek vindt u het gangbare assortiment narcissen, hyacinten en de voorjaars- en zomerbloeiende bijzondere bolgewassen. Bij de verschillende groepen vindt u korte en algemene informatie; voor meer uitvoerige gegevens kunt u zich wenden tot uw leverancier van de bloembollen die voldoende kennis heeft over de mogelijkheden en achtergronden van een bepaalde cultivar. De gegevens berusten op de groei- en klimaatomstandigheden in Nederland en kunnen als gevolg van elders heersende omstandigheden afwijken.

De samenstellers van het IBC zijn bijzondere dank verschuldigd voor de hulp van zoveel vakgenoten bij het verzamelen van de noodzakelijke informatie en de medewerking voor het verkrijgen van fotomateriaal. Meer informatie over bloembollen en het Internationaal Bloembollen Centrum (IBC) vindt u op: www.bulbsonline.org

前言

这本风信子、洋水仙和特殊球根品种图册是对现有的郁金香品种图册和百合品种图册的补充。该图册中主要介绍了常见的风信子、洋水仙以及春季和夏季开花的球根类植物。每一个类群都附有简单发相关信息；如需更详细的资料，请与你们的种球供应商进行联系，他们会提供相应品种的背景资料。该图册中的信息是基于在荷兰的种植以及气候条件所提供的，可能与你们当地的条件会有所区别。

编辑该图册荷兰国际球根中心的工作人员，在此还要感谢众多帮助他们收集相关资料和提供图片材料的专业人事。

如需更多关于球根花卉和荷兰国际球根中心的信息，你们可在 www.bulbsonline.org 网站中进行查找。



Introduction

Inleiding

简介

Narcissus, Hyacinth and Special Flower Bulbs

Bulbs, Corms and Tubers

Bulbs such as narcissi and hyacinths are underground storage organs that survive from year to year and look like onions in that they are composed of thickened leaf parts surrounded by a central shoot. Corms (e.g. crocuses) and tubers (e.g. dahlias) are also underground storage organs that survive from year to year. What differentiates them from bulbs is that they are composed of thickened stem parts so that the shoots develop, not inside, but on the outside of these storage organs – similar to the development of potatoes.

All of these underground storage organs store nutrient reserves that provide an energy source allowing bulbs, corms and tubers to develop into a mature (flowering) plant when planted under the right conditions. In principle, other than these reserves, all they really need to grow and flower are: water, the right temperature conditions and light. After flowering (at least in the case of spring-flowering bulbous plants), it will take the bulb, corm or tuber another four to eight weeks to regenerate the underground storage organ so that a new plant will emerge the following year. The advantage associated with bulbs, corms and tubers is that many of their species and cultivars can be stored for long periods and treated so that they can be planted and made to flower at specific times other than their normal flowering periods. Each species and cultivar has its own optimum storage conditions in regard to temperature, air circulation, ventilation and relative humidity.

Spring and summer-flowering bulbous plants

Flower bulbs have been produced in the Netherlands for more than 400 years. Today, Dutch bulb growers are dedicating around 21,000 hectares to the production of a wide array of different bulbs. Despite the fact that almost a 100 different species – and sometimes hundreds of different cultivars per species – are grown in the Netherlands, almost none of them originated in the Netherlands. Dutch flower bulb growers try to mimic the various conditions of the original habitats of these plants – the succession of temperatures, the moisture levels and the light conditions. These attempts have led to classifying bulbs into spring-flowering and summer-flowering categories. The work of dedicated plant breeders, as well as the fact that bulbs sometimes mutate on their own, regularly results in new cultivars being added to the existing assortment.

Spring-flowering bulbous plants

These are all of the species and cultivars that must be planted in the autumn, before winter sets in, in order to produce flowers, which happens immediately following the winter period. The timing of planting is very important: the bulbs should have time to develop roots before the soil freezes so that they can better withstand the frost. These bulbs, corms and tubers are sold from September through December.

Spring-flowering bulbous species originally come from such areas as Caucasia, Turkistan, Iran, Japan, China, North America and the Mediterranean. In their natural habitats, they evolved to survive a cold winter period and now need this cold in order to grow and flower. Research conducted on many of these species and cultivars has revealed how long this cold period (temperatures at least colder than 9°C) has to be. It has been found that flower bulbs do not always have to be subjected to natural conditions in the planted state in order to produce flowers. The same result can also usually be achieved by subjecting them to largely 'artificial' conditions in a refrigerated chamber. Flower bulb suppliers are very experienced in this regard and can provide the proper information concerning these procedures. Under Dutch conditions, flowering takes place in the spring from early March through to the end of May, at temperatures ranging from roughly 10 to 20°C. In regions where these temperatures are higher in the spring, the flowering period can start earlier and also be somewhat shorter.

Summer-flowering plants

These are all the species and cultivars that flower during the summer period from May through October and have to be planted in spring after the winter period. These bulbs, corms and tubers are sold from February through May. Because these species evolved in regions without a winter period, such as South Africa and Central and South America, they are also much more dependent on light for producing a good flowering result than are spring-flowering bulbous plants. Due to their evolutionary backgrounds, these bulbs, corms and tubers cannot be planted in the Netherlands until after winter when soil temperatures have reached about 13°C. Most of these species can either barely tolerate frost or will perish if subjected to zero-degree conditions. This means that their underground storage organs have to be taken out of the soil before the winter period, usually in October and November, and kept covered in a frost-free environment to be replanted the following spring.

Uses

Flower bulbs have many uses with flowering results depending on how well local conditions meet the needs of the cultivar.

Your supplier of planting material has sufficient information about the various possibilities for:

- CUT FLOWER PRODUCTION AND FORCING
- POT PLANT PRODUCTION
- GARDEN AND PARK PLANTING

CUT FLOWER PRODUCTION

Bulbs, corms and tubers can be made ready to plant and flower at various times by subjecting them to temperature treatments. Commercial floriculture refers to this as 'forcing' – when the planting material is being treated to flower earlier

than its natural flowering period – and ‘delayed production’ – when treatment is intended to postpone flowering until after the natural flowering period. Cut flower production can take place outside, in a greenhouse or a plastic tunnel, the choice depending on growing conditions.

POT PLANT PRODUCTION

Many bulbous plants such as hyacinths, narcissi, crocuses and muscari can also be ‘forced’ (subjected to modified temperature treatments) and sold during the winter as pot plants.

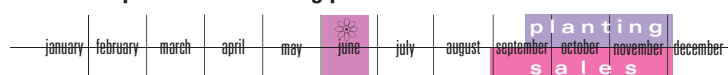
GARDEN AND PARK PLANTING

The great advantage of planting spring-flowering bulbous plants is the explosion of colour they bring to gardens and parks so early in the season – no other plants can match them in this capacity. Spring-flowering bulbs can also be easily combined with perennials and shrubs that will start developing after the spring bulb flower display is over. Summer-flowering bulbs are perfect for providing colour effects in gardens and parks later in the season. All types of soil are suitable for planting flower bulbs; the only soil conditions they cannot tolerate are prolonged flooding or poor drainage, either of which can result in a lack of oxygen so that the bulbs ‘smother’.

Research into how well flower bulbs will bloom year after year has shown that many cultivars and species will naturalise if climate conditions are favourable. (The chapters on hyacinth, narcissus and specialty bulbs address this in more detail.) To naturalise well, growing conditions – particularly for the 6 to 8 weeks after flowering – have to be ideal for bulb development. This means letting the foliage of the plant senesce naturally. Flower bulbs can also be planted in pots and containers and allowed to flower on balconies and patios. This application, however, will require devoting special attention to protecting them from frost and keeping the soil sufficiently moist. Planting various kinds of bulbs in two or three layers in one pot can extend the flowering period of spring-flowering bulbs. Selling ‘instant plants’ is a fairly new development: bulbs planted in pots and then partially forced can be planted directly in the garden or container in the spring and then flower.

Key to symbols

The photos are accompanied by a series of symbols that provide extra information about each cultivar. The information is based on Dutch conditions and can differ per country, climate and set of growing conditions. **Sales period, planting period and flowering period** are combined in one timeframe bar.



s a l The **sales period** is the period during which the bulbs, corms and tubers can be sold. For spring-flowering bulbs, this is from mid-August to early December; for summer-flowering bulbs, this period starts in March and lasts until late May.

p l a

The **planting period** is the period during which the bulbs can be planted.



The **flowering period** is the period when that particular cultivar flowers. This depends very much on the planting time and growing conditions.



Average height of the mature plant in cm.: can vary depending on the growing conditions and the planting location.



Distance (in cm.) between bulbs when planting: this is only a recommendation and can be modified to suit the desired result.



Planting depth in cm.: for spring-flowering bulbs, the general rule is that this is equal to twice the height of the bulb.



Suitability as a **cut flower**: the criteria used to determine this are sufficient stem length and a keeping quality of about one week.



Suitability for planting in **pots and containers**: almost all bulbs, corms and tubers can be used this way, the only possible limitations being the growing location and the size of the container.



Suitable for growing under protected conditions; e.g. **glasshouses**.



Suitability for **naturalising** depending on the growing location and growing conditions, many species and cultivars can be left undisturbed for years.



Scent: many flowers produce a specific scent, but the assessment made for each scent will not be unanimous. For hyacinths, a division is made, based on research, concerning the strength of their scent (see chapter ‘hyacinth’).



Shape and size of the bulb: usually given as the number of centimetres measured around the bulb's circumference. Terms such as ‘first’ and ‘second’ sizes are also given for certain odd-shaped bulbs, corms or tubers.



Type: the chapter dedicated to narcissi provides a separate list with symbols indicating the group into which, based on their inflorescence, the various types of narcissi are classified.





Narcis, Hyacint en bijzondere bolgewassen

Bollen en knollen

Bollen zoals bijvoorbeeld narcis en hyacint zijn ondergrondse, overblijvende verdikte bladdelen die een centrale spruit omringen, te vergelijken met een ui. Knollen zoals bijvoorbeeld crocus en begonia zijn ondergrondse, overblijvende verdikte stengeldelen waarbij de spruiten zich aan de buitenkant van de knol ontwikkelen, te vergelijken met een aardappel. In deze ondergrondse delen is reservevoedsel opgeslagen, met behulp van dit reservevoedsel kunnen de bollen en knollen, na het uitplanten onder de juiste condities, zich ontwikkelen tot een volwaardig (bloeiend) gewas. In principe is alleen water, temperatuur en licht in combinatie met het opgeslagen reservevoedsel noodzakelijk voor de bol of knol om uit te kunnen groeien en te gaan bloeien. Na de bloei is, in ieder geval voor de voorjaarsbloeiende bolgewassen, een periode van 4-8 weken groei noodzakelijk om weer een nieuwe bol of knol te kunnen vormen voor het volgende jaar. Het voordeel van bollen en knollen, afhankelijk van soort en cultivar, is dat ze langdurig bewaard, opgeslagen en geprepareerd kunnen worden en op afwijkende tijdstippen kunnen worden opgeplant en ook kunnen bloeien. Per soort en cultivar bestaan optimale bewaaromstandigheden voor wat betreft temperatuur, circulatie, ventilatie en relatieve luchtvochtigheid.

Voorjaars- en zomerbloeiende bolgewassen

In Nederland worden al meer dan 400 jaar bloembollen geteeld; op dit moment ongeveer 21.000 ha in een zeer breed assortiment. Ondanks het feit dat er bijna 100 verschillende soorten (species) en per soort soms wel honderden verschillende cultivars in Nederland worden geteeld, komt bijna geen enkel soort van oorsprong in Nederland voor. Afhankelijk van de oorspronkelijke plaats van herkomst probeert de Nederlandse bloembollenteler deze soorten en cultivars onder Nederlandse klimaatomstandigheden te telen waarbij rekening moet worden gehouden met de oorspronkelijke groeiplaats als temperatuurverloop, vocht en lichtomstandigheden. Op deze manier wordt er een onderscheid gemaakt in voorjaars- en zomerbloeiende bolgewassen. Door intensief veredelingswerk maar ook door spontane mutaties worden zeer regelmatig nieuwe cultivars aan het bestaande assortiment toegevoegd.

Voorjaarsbloeiende bolgewassen

Dit zijn alle soorten en cultivars die in het voorjaar, direct na de winterperiode bloeien en in de herfst vóór de winter moeten worden geplant. In ieder geval moeten de bollen vóór de vorstperiode wortels hebben gevormd; ze zijn dan beter bestand tegen vorst. De verkoop van deze bollen en knollen vindt plaats in de periode september-december. Deze soorten komen oorspronkelijk voor in gebieden als de Kaukasus, Turkistan, Iran, Japan, China, Noord-Amerika en het mediter-

rane gebied. In deze natuurlijke groeiomstandigheden onder- vinden de daar groeiende soorten een koude/winterperiode die noodzakelijk is voor het groeien en bloeien van de soort. Door middel van onderzoek is van veel soorten en cultivars de lengte van de koudeperiode bekend; onder koude verstaat men in ieder geval temperaturen beneden 9°C. Het ondergaan van de koudeperiode behoeft niet altijd plaats te vinden onder 'natuurlijke' en opgeplante omstandigheden maar kan ook grotendeels 'kunstmatig' in een koelcel plaatsvinden. De leverancier van de bloembollen beschikt over de nodige kennis en ervaring om de juiste informatie hierover te verschaffen. Onder Nederlandse omstandigheden vindt bloei plaats in het voorjaar, begin maart tot eind mei, bij temperaturen oplopend van ongeveer 10 tot 20°C. In gebieden waar deze temperaturen in het voorjaar hoger zijn zal de bloeiperiode eerder kunnen zijn en kan ook de bloeiperiode iets korter zijn.

Zomerbloeiende bolgewassen

Dit zijn alle soorten en cultivars die in de zomerperiode, mei-oktober, bloeien en pas na de winterperiode kunnen worden geplant. De verkoop van deze bollen en knollen vindt plaats in de periode februari-mei. Deze soorten komen oorspronkelijk uit gebieden zonder een winterperiode, zoals Zuid-Afrika en Midden- en Zuid Amerika, en zijn voor een goed bloeiresultaat ook veel meer lichtafhankelijk dan de voorjaarsbloeiende bolgewassen. Als gevolg van de natuurlijke, oorspronkelijke groeiomstandigheden kunnen deze bollen en knollen in Nederland pas na de winter worden geplant bij grondtemperaturen vanaf ongeveer 13°C. Lage temperaturen en vorst kunnen de meeste soorten niet of nauwelijks verdragen; dit betekent dat de bollen en knollen voor de winterperiode, in oktober-november, uit de grond moeten worden gehaald of vorstvrij moeten worden afgedekt.

Gebruiksmogelijkheden

Afhankelijk van de cultivar en de lokale omstandigheden kunnen bloembollen voor vele doeleinden worden gebruikt. De leverancier van het uitgangsmateriaal beschikt over voldoende informatie voor de verschillende mogelijkheden.

- SNIJBLOEMENTEELT EN BROEIERIJ
- POTPLANTENTEELT
- TUIN- EN PARKBEPLANTING

SNIJBLOEMENTEELT

Door het toepassen van temperatuurbehandelingen kunnen bollen en knollen voor verschillende plant- en bloeitijdstippen plantklaar gemaakt worden. In de praktijk spreekt men bij bloeitijdstippen eerder dan de natuurlijke bloei van broeierij en bij latere bloeitijdstippen van een geremde teelt. Afhankelijk van de groeiomstandigheden vindt snijbloementeel zowel buiten als in een kas of plastic tunnel plaats.

POTPLANTENTEELT

Veel bolgewassen, o.a. hyacint, narcis, crocus en muscari, zijn ook vooral geschikt om in de winterperiode als potplant aangewend te worden; aangepaste temperatuur behandelingen zijn hiervoor noodzakelijk.

TUINBEPLANTING

Het grote voordeel van met name de voorjaarsbloeiende bolgewassen is het vroege bloeitijdstip; een periode dat nog geen enkele andere plant zo uitbundig bloeit in tuin of park. Bloembollen laten zich dan ook goed combineren met vaste planten en struiken die zich pas na de voorjaarsbloei van de bolbloem gaan ontwikkelen maar ook de zomerbloeiende bolgewassen zijn prima geschikt voor kleureffecten in tuinen en parken. Alle grondsoorten zijn geschikt om bloembollen te planten; langdurige wateroverlast, slechte afvoer of drainage kunnen zuurstofgebrek tot gevolg hebben waardoor de bollen kunnen 'stikken'. Onderzoek naar de meerjarenbloei van bloembollen heeft uitgewezen dat een groot aantal cultivars en soorten, afhankelijk van klimaatomstandigheden hiervoor in aanmerking komen, bij de hoofdstukken hyacint, narcis en bijzondere bolgewassen zal hier verder op worden ingegaan. De groeiomstandigheden, vooral na de bloei, moeten dan wel optimaal zijn om de bol nog 6-8 weken te laten groeien; het 'natuurlijk' af laten sterven van het gewas is dan noodzakelijk. Bloembollen kunnen ook geplant worden in bakken, potten en containers om ze op balkon of terras te laten bloeien. Er zal wel extra aandacht besteed moeten worden aan bescherming tegen vorst, ook de grond zal voldoende vochtig moeten blijven. Het planten van verschillende soorten in twee of drie lagen in een pot geeft de mogelijkheid van een langere bloei-periode bij voorjaarsbloeiers. Een nieuwere ontwikkeling is het aanbieden van 'instant' planten; opgeplante reeds uitgegroeide bollen op pot die in het voorjaar direct in de tuin of container kunnen worden geplant om verder in bloei te komen.

Verklaring symbolen

Bij de foto's treft u een reeks van symbolen aan die extra informatie geven over de betreffende cultivar. De gegevens hebben betrekking op de Nederlandse omstandigheden en kunnen per land, klimaat en groeiomstandigheden afwijken.

Verkoopperiode, planttijd en bloeitijd zijn gecombineerd in een tijdsbalk.



s a l **Verkoopperiode (sales)** is de periode dat de bollen en knollen verkocht kunnen worden. Bij de voorjaarsbloeiende gewassen is dat de periode vanaf half augustus tot begin december terwijl bij de zomer bloeiende bolgewassen dit de periode maart tot eind mei is.

p l a **Plantperiode (planting)** is de periode dat de bollen geplant kunnen worden.

 **Bloeitijd** is de periode dat de cultivar bloeit en is sterk afhankelijk van de planttijd en de groeiomstandigheden.



Gemiddelde groeihoogte in cm, onder invloed van groeiomstandigheden en groeiplaats kunnen verschillen ontstaan.



Onderlinge plantafstand in cm, dit is slechts een aanwijzing, afhankelijk van het gewenste resultaat kan men dichter planten of juist ook ruimer.



Plantdiepte in cm, als algemene regel geldt een plantdiepte van tweemaal de hoogte van de bol.



Geschikt als **snijbloem**, uitgangspunt is voldoende steellengte en een houdbaarheid van ongeveer een week.



Geschikt voor **bakken en potten**, afhankelijk van standplaats en grootte van de container kunnen bijna alle bollen en knollen voor deze toepassing worden gebruikt.



Alleen geschikt voor **kasteelt**.



Geschikt voor **meerjarige beplanting**, afhankelijk van groeiplaats en groeiomstandigheden kunnen een groot aantal soorten en cultivars een aantal jaren op dezelfde plaats in de tuin blijven staan zonder ze uit de grond te halen.



Geur, veel bloemen hebben een specifieke geur waarvan de beoordeling niet voor iedereen hetzelfde zal zijn. Bij de hyacinten wordt een onderscheid gemaakt, op grond van onderzoek, in de sterkte van de geur, zie hoofdstuk hyacint.



Vorm van de bol, de grootte van de bol wordt in het algemeen aangegeven in omvang uitgedrukt in cm. Bij afwijkende bol- of knolvormen heeft men ook de aanduiding eerste en tweede grootte.



Bij het hoofdstuk narcis treft u aan de hand van een aparte lijst met symbolen nog een indeling aan van de verschillende **typen** narcis op grond van de bloeiwijze.





风信子、洋水仙和特殊种球花卉品种图册

鳞茎、球茎和块茎

风信子、洋水仙的鳞茎是其地下的营养储藏组织，可存活多年。就像洋葱一样它们是由叶片变厚后组成，中间是花芽。球茎（如番红花）和块茎（如秋海棠）也是它们的地下营养储藏组织，可存活多年。与鳞茎不同的是它们是由变厚的茎组成，因此，芽不是从内部，而是从这些储藏组织的外侧发育的，就像马铃薯一样。

所有的这些地下储藏组织可储藏营养，在适合条件下，它们可成为那些鳞茎、球茎和块茎的能量来源，使它们发育成一个成熟的植株（开花）。原则上说，它们生长和开花所需的其它元素是：水、适合的温度和光照。开花后（至少是春季开花的球根植物），这些鳞茎、球茎和块茎一般需要经过 4 到 8 周来形成下一代的营养储藏组织，这样新的植株在来年就可以形成了。这些鳞茎、球茎和块茎植物的一个优点是，它们的大多数品种可以长时间地储藏或进行处理后种植，然后在不同于它们正常的开花时间开花。每一个品种有它们自己适合的最佳储藏条件，如温度、空气流动、通风和相对湿度要求。

春季和夏季开花球根植物

球根开花植物在荷兰有 400 多年的栽培历史。目前，荷兰的球根种植者在面积 21000 公顷的土地上对不同的球根植物进行着栽培。尽管在荷兰栽培有近百个品种，每个品种有时又有几百种的栽培品种，但是它们的原产地几乎都不在荷兰。荷兰的球根种植者努力模拟这些不同植物的原始生长条件，如温度、湿度和光照量。这些条件将球根区分成了春季开花和夏季开花两类。对于那些育种者来说，除了植株有时自己有变异外，通过他们的工作使我们现有的品种不断得到丰富。

春季开花的球根植物

这是指必须在秋季（在冬季到来前）种植，冬季过后立即开花的那些品种。种植的时间非常重要：种球必须在土壤冰冻前将根系发育好，这样它们可更好地度过霜冻期。这些鳞茎、球茎和块茎的销售时间为九月到十二月。

春季开花的球根品种的原产地一般在高加索地区、土耳其、伊朗、日本、中国、北美和地中海地区。在它们的自然习性中，它们须经过一个冬季阶段，并需要这个阶段以使它们生长开花。通过对这些品种的研究来揭示它们所需的低温阶段（至少要低于 9°C）到底要多长。经过研究发现这些种球种植后并非一定要经过自然条件才能开花。通过给它们在冷藏室提供‘人工’的类似条件，通常我们也可以得到相同的开花结果。种球的供应商在这方面非常有经验，关于这个问题他们可以为你提供正确的信息。

在荷兰的条件下，在春季开花的时间一般为从三月初到五月底，这时的温度范围在 10 到 20°C。在春季温度较高的区域，开花阶段将会提前而且缩短。

夏季开花的球根植物

这些品种须在春季种植，它们的开花时间在夏季，一般从五月到十月。这些鳞茎、球茎和块茎的销售时间在二月到五月。由于这些品种的进化地区没有冬季，如南非、中南美洲，与春季开花的球根植物相比，要得到好的开花效果更多取决于光照水平。

由于进化的原因，这些球根在土壤温度没有达到 13°C 时，荷兰不能种植。它们大多数的品种不能忍受霜冻或在零度时将死亡。这就意味着它们的地下储藏组织在冬季来临前必须被从土壤中挖出来，通常是十月和十一月，在防霜冻的环境下保存，然后在来年春季再种植。

用途

根据当地的具体需要，球根花卉可以有多种用途。你们的种球供应商会给你们提供足够的相关信息。

- 切花生产和促成栽培
- 盆花生产
- 公园和花园栽培

切花生产

通过对鳞茎、球茎和块茎进行特定的温度处理，使它们可以在不同的时间进行栽培。在园艺商业化生产上就是所谓的‘促成栽培’，即栽培材料经过处理后比自然的开花时间提前，或‘延迟生产’，即通过处理使开花时间比自然的开花时间延迟。切花生产可在室外、温室或塑料大棚中进行，具体的选择主要取决于种植条件。

盆花生产

许多球根花卉如风信子、洋水仙、番红花和葡萄风信子也可‘促成栽培’（取决于不同的温度处理），并在冬季作为盆花销售。

公园和花园栽培

春季开花的球根花卉一个最大的优点是它们在每年的年初给公园或花园所带来的缤纷色彩。春季开花的球根也可与四季开花的植物和一些球根花卉开花结束后开始发育的灌木结合起来使用。夏季开花的球根可为公园和花园的下半年提供色彩。

所有类型的土壤都可用来种植球根花卉；唯一它们不能忍受的土壤情况是长期漫灌或排水不好，这样会导致因缺氧而使种球窒息。

通过对怎样使球根可以多年开花发现，许多品种在气候条件适合的情况下可以复壮（风信子、洋水仙和特殊球根花卉的章节中详细的说明）。要使种球复壮的好，生长条件--特别是开花后的 6 到 8 周一必须有利于种球的发育。这就是说应使植株的叶片自然地衰老。

球根花卉也可种植在盆中或容器中，放在阳台或天井中观赏。这种运用的方法应注意防止霜冻和保持土壤足够的水分。在一个盆中种植两到三层种球，可以延长春季球根花卉的开花阶段。

销售‘速成植株’是较新的发展：球根被种植在花盆中，部分促成栽培后在春季可直接种植到花园或容器中，然后开花。

符号说明

这些图片同时附有一系列的符号，以提供给你们关于每一个品种的相关信息。这些信息是基于在荷兰的条件，可以在不同的国家、不同的气候和栽培情况下有所不同。

销售阶段、种植阶段和开花阶段被合并在一个时间框内。



sales 销售阶段是指鳞茎、球茎和块茎可以被销售的时间。对于春季开花的球根，这是指从八月中旬到十二月初；对于夏季开花的球根，这个阶段从三月到五月末。

种植阶段是指球根可以被种植的时间。

flower 开花阶段是指特定的品种开花的时间。这取决于种植的时间以及生长条件。

50 成熟植株的平均高度，厘米：主要取决于生长条件和种植区域。

10 种植时种球间的距离（厘米）：这里只是建议，可以进行更改以达到最佳效果。

8 种植深度，厘米：对于春季开花的种球，一般的规律是两倍于种球的高度。

cut 适合于切花：所用的标准足够的长度以及可保持一个星期的花瓶期。

pot 适合与盆栽和容器栽培：几乎所有的鳞茎、球茎和块茎植物可以用此方法，唯一的限制是生长条件和容器的大小。

greenhouse 适合于保护地栽培：如玻璃温室

perennial 适合多年生：取决于生长条件和生长区域，许多品种可以多年不用收起。
(风信子和洋水仙和特殊球根的章节提供相关的研究结果)



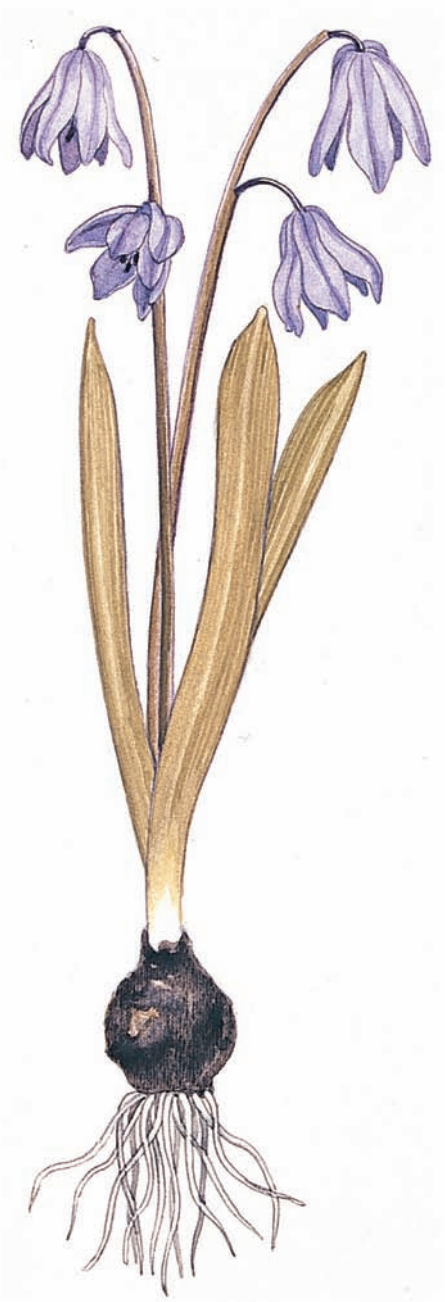
香味：许多花卉可产生特殊的香味，但是每种香味可能不一样。如风信子中就根据味道的大小做出了区分（见‘风信子’的章节）



种球的形状和大小：通常用厘米来表示种球的周长。而术语‘一级’和‘二级’是指特殊形状的鳞茎、球茎和块茎。



1-12 类型：在洋水仙章节中，提供了一个用类型表示的表格，这是根据它们的花序而定的，对不同的洋水仙进行了分类。







Narcis





Daffodils

The most important species naturally occur predominantly in mountainous and humid areas of the Mediterranean region. It is these species which have been bred to develop the very extensive commercial assortment of daffodils we have today. Daffodils (genus, *Narcissus*) belong to the family, Amaryllidaceae. All these species and their cultivars have true bulbs (an embryo surrounded by fleshy scales) which continue to produce flowers year after year. Known as 'spring-flowering bulbs', they are planted in the spring and will almost always survive the winter. Depending on the size of the bulb, each one will produce one or more flower stems.

Although daffodils are generally known to produce yellow, trumpet-shaped flowers, they are also available in many flower shapes and colour combinations that include white, crème, pink, orange and red.

Classification and colour description

The Royal Horticultural Society (RHS) in London is the official registration authority for daffodils. Any new cultivars have to be reported to this organisation in order to be registered. The RHS also publishes the 'International Daffodil Register and Classified List', (latest edition: 1998), which outlines the classification of divisions and the flower colour code used in this book. Each cultivar in this book is accompanied by the number representing this daffodil's official division and a series of numbers and letters indicating its flower colour code.

Divisions



Division 1 – **Trumpet**

A single flower per stem with the trumpet (cup) as long or longer than the length of the petals.



Division 2 – **Large-cupped**

A single flower per stem with the cup more than one-third, but less than equal to, the length of the petals.



Division 3 – **Small-cupped**

A single flower per stem with the cup not more than one-third the length of the petals.



Division 4 – **Double**

One or more flowers per stem with fully double flowers or sometimes a double corona only, or both.



Division 5 – **Triandrus**

Daffodils sharing the characteristics of *Narcissus triandrus*: usually two or more nodding flowers, with somewhat reflexed petals, per stem.



Division 6 – **Cyclamineus**

Daffodils sharing the characteristics of *Narcissus cyclamineus*: a single, slightly nodding flower, with markedly reflexed petals, per stem.



Division 7 – **Jonquilla**

From one to five small flowers per stem; petals are spreading or slightly reflexed; these flowers usually have a characteristic daffodil fragrance.



Division 8 – **Tazetta**

Three to twenty small flowers on each sturdy stem; petals are not reflexed; these flowers are usually scented.



Division 9 – **Poeticus**

Daffodils sharing the characteristics of *Narcissus poeticus*: a single flower per stem; pure sparkling-white petals and a very short cup; flowers are usually scented.



Division 10 – **Bulbocodium**

Usually a single flower per stem; the size of the cup being so large as to make the petals almost inconspicuous.



Division 11 – **Split-corona**

Cups usually split at least one-half of their length; this division is subdivided into:

11a – **collar**: petals usually arranged in two whorls of three.

11b – **papillon**: petals usually arranged in a single whorl of six.



Division 12 – **Miscellaneous daffodils**

Cultivars which do not share the characteristics of those in the other groups.

The colour code

The colour of both the petals and the cup during full bloom is expressed in a number and letter combination code. This code consists of a number that indicates the division followed by either one letter or a set of three letters, followed by a hyphen, followed by another letter or another set of three letters. The first letter (or set of letters) indicates the colour of the petals while the second letter (or set of three letters) indicates the colour of the cup.

To make the most accurate possible description, the petal and cup are divided into three zones: for the petals, the zones begin at the tip and go toward the base of the cup; for the cup, the zones begin at the base and go toward the opening of the cup. When dealing with a daffodil in which the petals and/or cup



display uniform colours, only one letter is used to describe each of these two elements of the inflorescence. When dealing with a daffodil that displays a gradation of colour on petals and/or cup, three letters are used.

The abbreviations are as follows:

White or whitish	W
Green	G
Yellow	Y
Pink	P
Orange	O
Red	R

Examples

Narcissus 'Abba' **4W-O**:

A double daffodil (Division 4), with white (**W**) petals and an orange cup (**O**).

Narcissus 'Cairngorm' **2YYW-WYY**:

A large-cupped daffodil (Division 2) with petals that are 2/3 yellow starting from the tips and then 1/3 white toward the base of the cup, and a cup that is 1/3 white starting at the base and then 2/3 yellow toward the end.

Information pertaining to commercial cultivation

About 1800 hectares are devoted to cultivating a wide assortment of daffodils in the Netherlands. A sizeable production also takes place in England but cultivation there is predominantly biennial (bulbs being lifted once every two years), more limited in assortment than in the Netherlands, and more aimed at flower production. In the Netherlands, production takes place mainly on sandy soils; the bulbs are lifted every year in late July – early August and replanted in September.

Once lifted and dried, the bulbs are graded according to size. Officially, the size of daffodil bulbs is indicated by the number of centimetres measured around the circumference of the bulb (also known as the sieve size) – just as is done with most other bulbs, corms and tubers. In dealing with daffodils, however, use is often made of the 'old' grading terms: DN I, DN II and DN III. This 'Dutch' grading system is based on manual sorting methods. In this system 'DN' is an abbreviation for 'double-nosed' and the number that follows indicates the bulb as being a first, second or third size. A first-size double-nosed bulb (DN I) consists of a round bulb closely attached to two offsets that form a single unit and will usually produce three flower stems. The second size (DN II) is a round bulb including an offset that will produce two flower stems. The third size (DN III) is either a round bulb with a small offset or just a single round bulb, either of which will produce only one flower stem. This grading system is used most commonly for the bulbs in Division 1 (trumpet), Division 2 (large-cupped), Division 8 (split-corona) and most cultivars in Division 3 (small-cupped) and Division 4 (double).



'Sieve sizes' are used for grading the bulbs in other divisions as they are usually much smaller and are more often round. Today, 'slot size' is the more common indicator of size as the grading of daffodil bulbs by machine is done on 'slot plates' in which the bulbs have to pass through slots of certain sizes. Most other bulbs, however, are graded by being passed through a series of plates with round holes. The slots in a plate are a certain distance apart in centimetres, and this number of centimetres is then used to indicate the slot size for the largest bulbs passing through them.

The following table shows the 'old sizes' and the corresponding slot sizes that are now generally applied for grading purposes.

Double-nosed	Slot sizes
DN I (extra)	17 / +
DN I (normal)	16 / 18
DN II	15 / 17
DN III	12 / 14

Sieve sizes	Slot sizes
14 / +	12 / +
12 / 14	10 / 12
11 / 12	9 / 10
10 / 12	8 / 10
8 / 10	6 / 8
6 / 8	4 / 6

Temperature treatments

Applying various temperature treatments to the bulbs after lifting and drying can make them suitable for flowering at certain times and/or for certain uses. These temperature treatments involve the application of temperatures ranging from 34 to 17 degrees Celsius for a certain period of time in order to stimulate the initiation and development of the parts of the plant within the bulb. For the continued growth of leaves and flowers, temperatures from 9 to 5°C are applied for 12 to 16 weeks to obtain plants and flowers of good quality.

In addition to enhancing certain cultivar-related characteristics, the length of the cold period also affects the length of the 'cuff': a sheath formed by the outer leaf at the point where the shoot emerges from the bulb and which surrounds the other leaves and flower stem, thus keeping the plant standing upright. When the cuff is missing or even too short, the plant will start to spread out faster, a phenomenon that can be a problem in the production of both pot plants and cut flowers. The type of temperature treatment to be applied depends on the cultivar and the intended use of the plant.

Uses

Daffodils can be used:

- For PARK, GARDEN and CONTAINER PLANTINGS
- As POT PLANTS
- As CUT FLOWERS

PARK, GARDEN and CONTAINER PLANTINGS

Daffodils are perfect for planting outside and will bloom from late March to early May depending on the cultivar and climate conditions. Daffodils are not very vulnerable to frost damage as long as they are planted in time (September-October) so that they will have developed sufficient roots before the frost period begins. Unrooted daffodil bulbs are more vulnerable to frost damage: 'frozen' bulbs will no longer be able to root.

The proper planting depth is two to three times as high as the bulb. To promote good rooting after planting, the soil should be sufficiently moist. When planting in containers, extra attention will have to be devoted to the prevention of frost damage.

Almost all cultivars will produce flowers year after year as long as the daffodils are located in a sunny place and their leaves are not removed for about six weeks after flowering takes place. This allows the bulb to absorb nutrients and grow for next year. For more information and research findings, you can visit the International Flower Bulb Centre website at **www.bulbsonline.org** and select 'professional' and then 'landscaping information' where you will see 'flower bulbs in the landscape'.

POT PLANTS

As you can see from these pictures, many daffodil cultivars +are just right for use as pot plants. Factors affecting flowering period and the final results are: the choice of cultivar, the choice of temperature treatment and the production conditions in the greenhouse. Paperwhite cultivars (Division 8: Tazetta) need no specific cold period to produce flowers. These cultivars can be planted immediately after having been subjected to a 'storage temperature' and can be in flower within 3-4 weeks. This means that consumers can plant these bulbs indoors straightaway, in containers filled with gravel/stones and water. Paperwhite cultivars have a pungent fragrance.

CUT FLOWERS

Daffodils have a fairly long vase life: from five to seven days. Early forcing (starting in December) is possible. Factors influencing the success of forcing being: the choice of cultivar, choice of temperature treatment and climate conditions. Many of the daffodil bulbs used for cut flower production are planted in open fields or fields covered by mobile greenhouses. The bulbs have to be planted deeply enough: two to three times the height of the bulb. This also provides additional stem length since the stem can be cut from below the soil surface.

Flowers can also be harvested in the field during their natural flowering period. Bulb production will not be adversely affected if only the stem is picked and the leaves are left attached to the bulb. These flowers are harvested while the sheath surrounding the flower is entirely intact and when the flower stem is often no longer than 25 cm., a stage known by growers as 'the pencil stage'.



Narcissus

De belangrijkste oorspronkelijke botanische soorten komen voornamelijk voor in bergachtige en vochtige streken in het mediterrane gebied. Het huidige uitgebreide assortiment narcissen is ontstaan uit allerlei kruisingen. De narcis behoort tot de familie van de *Amaryllidaceae*, heeft een meerjarige gerokte bol en wordt gerekend tot de zogenaamde voorjaars-bloeiende bolgewassen; wordt in het najaar geplant en is redelijk goed winterhard. Afhankelijk van de grootte van de bol worden een of meerdere bloemstelen geproduceerd. Hoewel de narcis algemeen bekend staat als een gele trompetvormige bloem zijn er veel bloemvormen en kleurcombinaties met wit, crème, roze, oranje en licht rood.

Groepsindeling en kleuromschrijving

De Royal Horticultural Society (RHS) in Londen is de officiële registratie autoriteit voor narcissen. Alle nieuwe cultivars worden hier aangemeld en geregistreerd. De RHS publiceert de 'International Daffodil Register and Classified List', (laatste uitgave in 1998) en hanteert een groepsindeling en kleuromschrijving die ook in dit boek wordt aangehouden. Bij elke afbeelding vindt u het nummer van de desbetreffende groep en lettercombinatie van de bloemkleur.

Groepsindeling



Groep 1 – Trompet

Eén bloem per steel, trompet of cup net zo lang of langer dan de lengte van de bloemblaadjes



Groep 2 – Grootkronig

Eén bloem per steel, cup langer dan eenderde maar korter dan de lengte van de bloemblaadjes.



Groep 3 – Kleinkronig

Eén bloem per steel, cup niet langer dan eenderde van de lengte van de bloemblaadjes.



Groep 4 – Dubbel

Eén of meer bloemen per steel, cup of bloemblaadjes gevuldbloemig of beide.



Groep 5 – Triandrus

Eigenschappen komen overeen met *Narcissus triandrus*, doorgaans twee of meer hangende bloempjes per steel, bloemblaadjes naar achteren geslagen.



Groep 6 – Cyclamineus

Eigenschappen komen overeen met *Narcissus cyclamineus*, één bloem per steel en iets hangend, bloemblaadjes duidelijk naar achteren geslagen.



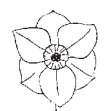
Groep 7 – Jonquille

Eén tot vijf bloempjes per steel, bloemblaadjes gespreid of naar achteren geslagen, bloemen doorgaans geurend.



Groep 8 – Tazetta

Drie tot twintig bloempjes op een dikke steel, bloemblaadjes niet naar achteren geslagen, bloemen doorgaans geurend.



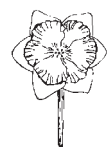
Groep 9 – Poeticus

Eigenschappen komen overeen met *Narcissus poeticus*, één bloem per steel, bloemblaadjes helder wit, zeer korte cup, bloemen doorgaans geurend.



Groep 10 – Bulbocodium

Gewoonlijk één bloem per steel, overheersende cup waarbij bloemblaadjes nauwelijks opvallen.



Groep 11 – Spleetkronig

Bloemblaadjes doorgaans voor meer dan de halve lengte ingesneden, onderverdeeld in:

11a – kraagvormig, bloemblaadjes doorgaans

in twee kransen van drie;

11b – vlinderbloemig, bloemblaadjes doorgaans

in een enkele krans van zes.



Groep 12 – Andere

Cultivars die niet overeenkomen met de kenmerken van de genoemde groepen.



Kleuromschrijving

De bloemkleur op het moment van volle bloei van zowel de bloemblaadjes als de cup wordt uitgedrukt in een lettercombinatie. Deze code of combinatie bestaat uit twee letters of twee groepen van letters gescheiden door een streepje. De eerste combinatie heeft betrekking op de bloemblaadjes, de tweede combinatie beschrijft de kleur van de cup. Voor zo een duidelijk mogelijke omschrijving heeft men als het ware de bloemblaadjes zowel als de cup in twee of drie zones verdeeld; bij de bloemblaadjes beginnend aan de buitenkant en bij de cup beginnend vanuit de basis. Als de bloemblaadjes en de cup duidelijk een uniforme kleur hebben, gebruikt men per onderdeel één letter; bij verloop van kleur of meerdere kleuren gebruikt men per combinatie twee of drie letters.

De volgende kleuren met de daarbij behorende, van het Engels afgeleide, lettercodes worden aangehouden.

Wit of witachtig	W
Groen	G
Geel	Y
Roze	P
Oranje	O
Rood	R

Voorbeeld

Narcissus 'Abba' **4W-O**

Een dubbele narcis (groep 4), witte (W) bloemblaadjes en een oranje cup (O).

Narcissus 'Cairngorm' **2YYW-WYY**

Een grootkronige narcis (groep 2), bloemblaadjes, van buitenaf beginnend, 2/3 geel, 1/3 wit en een cup beginnend vanuit de basis 1/3 wit, 2/3 geel.

Teelttechnische informatie

In Nederland wordt ongeveer 1800 ha geteeld in een uitgebreid assortiment. In Engeland vindt ook een omvangrijke teelt plaats. De teelt is daar voornamelijk tweejarig; het sortiment is beperkter dan in Nederland en in belangrijke mate gericht op bloemproductie. In Nederland vindt de teelt voornamelijk plaats op zandgronden; elk jaar wordt er eind juli-begin augustus gerooid en in september weer opnieuw geplant. Na het rooien en drogen worden de bollen gesorteerd naar grootte. Officieel wordt de grootte zoals bij de meeste bol- en knolgewassen uitgedrukt in cm bolomvang (z.g. zifmaten). Bij narcissen wordt in de praktijk nog vaak de 'oude' sortering DN I, DN II en DN III gehanteerd. Deze z.g. 'Nederlandse' sortering berust op het handmatig sorteren.

DN betekent dubbelneus en de toevoeging I, II en III, eerste, tweede of derde grootte. De eerste grootte (DN I) bestaat uit een hoofdbol met twee spanen of klisters die één geheel vormen en doorgaans 3 bloemstelen zal produceren. De tweede grootte (DN II) is een bol inclusief een klister die twee bloemstelen zal produceren. De derde grootte (DN III) is een bol inclusief een kleine klister of een ronde bol die doorgaans

maar één bloem produceert. Deze indeling is voornamelijk van toepassing op de bollen uit de groep 1 (trompet), groep 2 (grootkronig), groep 8 (spleetkronig) en op de meeste cultivars uit groep 3 (kleinkronig) en groep 4 (dubbel). Bij de overige groepen, die doorgaans veel kleinere en meer ronde bollen produceren, werden wel ziftmaten gebruikt; voor deze groepen geldt nu ook een spijlenmaat. Het machinaal sorteren van narcissen vindt plaats op z.g. spijlenplaten in tegenstelling tot het sorteersysteem waarbij ronde gaten worden gebruikt, zoals bij de meeste andere bolsoorten. De spijlen van een plaat hebben onderling een bepaalde afstand in centimeters, deze aanduiding in centimeters wordt aangehouden als maat of grootte aanduiding voor de betreffende narcisbol. In onderstaand overzicht treft u de 'oude maten' aan met de daarbij behorende, nu algemeen geldende, overeenkomstige spijlenmaten.

Dubbelneus Spijlenmaat

DN I (extra)	17 / +
DN I (normaal)	16 / 18
DN II	15 / 17
DN III	12 / 14

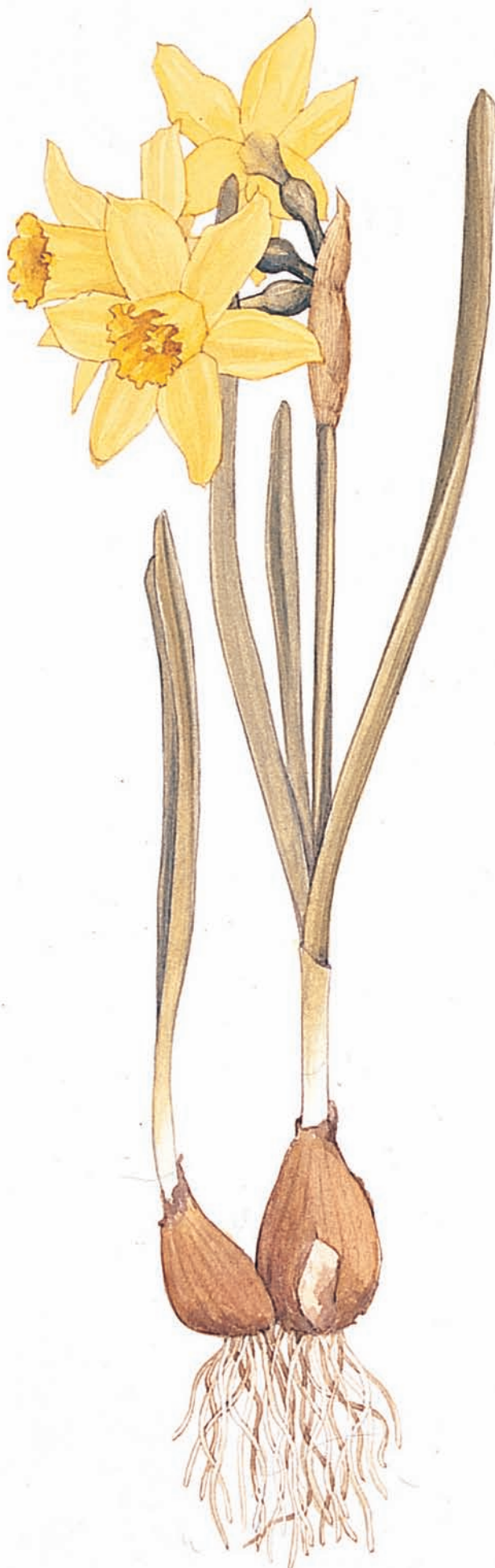
Ziftmaat Spijlenmaat

14 / +	12 / +
12 / 14	10 / 12
11 / 12	9 / 10
10 / 12	8 / 10
8 / 10	6 / 8
6 / 8	4 / 6

Temperatuurbehandelingen

Onder invloed van verschillende temperatuurbehandelingen na het rooien en drogen is het mogelijk om de bollen geschikt te maken voor een bepaald bloeitijdstip en/of een bepaalde toepassingsmogelijkheid. De temperatuurbehandelingen bestaan uit temperaturen tussen 34 en 17 graden C uitgedrukt in weken waarbij de aanleg en ontwikkeling van de plant in de bol wordt gestimuleerd. Voor de verdere uitgroei van blad en bloem zijn 12 tot 16 weken koude, temperaturen van 9 tot 5°C, noodzakelijk om een goede kwaliteit plant en bloem te krijgen. Naast cultivareigenschap heeft de lengte van de koudeperiode ook invloed op voldoende vorming van een 'manchet'.

Een manchete is een schedebled dat boven de bol wordt gevormd en het blad rondom de steel omvat en daardoor stevigheid aan de plant verschaft. Wanneer dit geheel of grotendeels ontbreekt zal het gewas eerder gaan 'strijken', bij zowel potplant als snijbloem is dit een belangrijk gegeven. De temperatuurbehandelingen zijn afhankelijk van cultivar en gebruikstoepassing.



Gebruiksmogelijkheden

Narcissen zijn voor de volgende doeleinden te gebruiken:

- PARK-, TUIN- EN BAKBEPLANTING
- POTPLANT
- SNIJBLOEM

PARK-, TUIN- EN BAKBEPLANTING

Narcissen zijn bij uitstek geschikt voor buiten beplanting en bloeien afhankelijk van de cultivar en de klimaatsomstandigheden in de periode van eind maart tot begin mei.

Narcissen zijn weinig vorstgevoelig mits ze op tijd, september – oktober, zijn geplant en vóór de vorstperiode voldoende wortels hebben ontwikkeld. Onbewortelde narcissen zijn extra gevoelig voor vorstschade; ‘bevrozen’ bollen zullen zich niet meer ontwikkelen. De juiste plantdiepte is tweemaal de hoogte van de bol. Om na het planten goed te kunnen bewortelen zal de grond ook voldoende vochtig moeten zijn. Bij bakbeplanting zal men extra aandacht moeten besteden aan het voorkomen van vorstschade.

Bijna alle cultivars zijn uitermate geschikt voor meerjarenbloei; voorwaarde is wel dat de narcissen op een zonnige plaats staan en het blad na de bloei, voor een periode van ongeveer zes weken, niet wordt verwijderd. Dit geeft het gewas de mogelijkheid om te kunnen groeien. Informatie en resultaten van onderzoek vindt u op de website van het Internationaal Bloembollen Centrum www.bulbsonline.org onder professional/bloembollen in het groen.

POTPLANT

Een groot aantal cultivars zijn uitermate geschikt om te gebruiken als potplant, zoals aangegeven bij de afbeeldingen. Cultivarkeuze, aangepaste temperatuurbehandelingen en teeltomstandigheden in de kas zijn van grote invloed op het tijdstip van bloei en het uiteindelijke resultaat. Tazetta narcissen die tot de z.g. Paperwhite groep behoren hebben geen specifieke koude periode nodig om te kunnen bloeien. Deze soorten kunnen na een ‘bewaartemperatuur’ direct opgeplant worden en kunnen binnen een periode van 3-4 weken bloeien. Deze bollen kunnen door de consument direct in huis worden geplant, o.a. op bakjes met grind en water. Paperwhite cultivars hebben een doordringende geur.

SNIJBLOEM

Narcissen zijn redelijk houdbare snijbloemen; vijf tot zeven dagen. Afhankelijk van cultivar, temperatuurbehandeling en klimaatomstandigheden is er vervroegde bloei mogelijk vanaf december. Een groot gedeelte van de narcissen voor snijbloemen productie vindt plaats in de volle grond, o.a. in zogenaamde rolkassen maar ook gewoon buiten. Er moet voldoende diep worden geplant, 2 tot 3 maal de hoogte van de bol; op deze manier kan ook het extra stengelgedeelte in de grond worden geoogst. Tijdens de normale bloeiperiode worden ook buiten in het veld bloemen geplukt. Indien alleen de steel, zonder blad, wordt geplukt zal dit geen invloed hebben op de uiteindelijke bolproductie. De bloemen worden volledig in knop geplukt waarbij de bloemsteel vaak niet langer is dan 25 cm; in de praktijk spreekt men van ‘potloden’.



洋水仙

大多数重要的野生品种是在地中海附近的山区和潮湿的区域。这些品种后来通过育种被培育为我们现在所常用的商业品种。

洋水仙(水仙属)属于石蒜科。它们所有的品种都有一个真正的鳞茎(在一个胚芽外包裹着许多新鲜的鳞片),可以持续多年开花。作为‘春季开花的种球’,它们在春季被种植,几乎大多数都可以越冬存活。根据鳞茎的大小,每一个种球都可以产生一到多个花枝。尽管洋水仙通常是开黄色喇叭型的花,但是它们还是有许多的花型和颜色,例如白色、乳白色、粉色、橙色和锈红色。

分类和颜色种类

伦敦的皇家园艺协会(RHS)是洋水仙正式的注册权利机构。洋水仙所有的新品种必须在该组织进行注册。RSH还出版‘国际洋水仙注册和分类清单’,(最后一版为:1998年),阐述了类别的区分和花的颜色代号。

分类



分类 1 - 喇叭型

每枝单花,有喇叭状花杯,其长度大于或等于花瓣的长度



分类 2 - 大杯型

每枝单花,花杯的长度小于整个但大于三分之一花瓣的长度



分类 3 - 小杯型

每枝单花,花杯的长度小于三分之一花瓣的长度



分类 4 - 复瓣型

每枝单花或多花,全部为复瓣或有时为复冠,或两者兼有



分类 5 - 西班牙水仙型

品种享有西班牙水仙的特性:每枝通常有两到多朵低垂的花,花瓣下弯



分类 6 - 仙客来型

品种享有仙客来水仙的特性:每枝有一朵稍微低垂的花,花瓣下弯明显



分类 7 - 长寿花型

每枝有一到五朵小花;花瓣分散或稍微下弯;这些花通常具有典型的水仙花的芳香



分类 8 - 多花水仙型

每枝强健的枝条上有3到20朵小花;花瓣不下弯;这些花通常有香味



分类 9 - 红口水仙型

品种享有红口水仙的特性:每枝单花;花瓣光亮、纯白,花杯很短;花通常有香味



分类 10 - 围裙水仙

通常每枝单花;花杯特大,以至于使花瓣几乎不明显



分类 11 - 裂冠型

花杯通常至少有一半在其长度方向开裂;该类型又可分为:

11a) 项圈型:花瓣通常排列为两个三花瓣的螺旋状

11b) 长毛玩具型:花瓣通常排列为一个六花瓣的螺旋状



分类 12 - 其它水仙型

与其它上述类别水仙特性不同的品种

颜色解释

花完全开放时花瓣和花杯的颜色由一个数字和字母组合代号组成。这些代号包括一个分类的数字代号,之后是一个字母或三个字母组,接下来是连字符,之后又是另外的一个字母或三个字母组。第一个字母(或字母组)表示花瓣的颜色,第二个字母(或字母组)表示花杯的颜色。为了尽可能描述地准确,花瓣和花杯被分为三个区域:在花瓣上,该区域从花的尖端到花杯的基部;在花杯上,该区域从花杯的基部到花杯的顶端。对于那些花瓣或花杯都是统一颜色的洋水仙品种,就只用一个字母来表示花的这两个部分。当洋水仙的花瓣和花杯有多种颜色组合时,就使用三个字母。

颜色的缩写如下:

白色	W
绿色	G
黄色	Y
粉色	P
橙色	O
红色	R

例如

洋水仙 ‘Abba’ (4W-O):

复瓣洋水仙(分类 4),花瓣白色(W),花杯橙色(O)。

洋水仙 ‘Cairngorm’ (2YYW-WYY):

大花杯洋水仙(分类 2),花瓣从尖端开始 2/3 为黄色,到花杯基部的 1/3 为白色;花杯从基部开始的 1/3 为白色,接下来的 2/3 为黄色。



商业化栽培的相关信息

在荷兰大约有 1800 公顷的土地用于栽培各种的洋水仙，在英国也有大规模的生产，主要为两年生球（种球每隔两年收获），而且品种要比荷兰的少。在荷兰洋水仙的生产大多数在沙质土壤中进行；种球在六月到八月初收获，在九月份再次种植。

种球收获并干燥后，它们将按照大小被分级。通常洋水仙的大小规格是根据它们种球周长的厘米数来进行划分（即网筛的大小）的，就象其他的鳞茎、块茎类的种球一样。

在洋水仙的分级处理中，有时还经常使用‘老’的分级标准：DN I、DN II 和 DN III。这种荷兰的分级系统是基于一人工分级的方法而来的。该系统中的‘DN’是双头的缩写，之后的数字则表示种球的规格，是一级、二级还是三级。第一级（DN I）是由在一个圆的种球和旁边两个侧球组成的一个整体，它们以后将开三枝花。第二级（DN II）是由在一个圆的种球和旁边一个侧球组成的一个整体，它们以后将开两枝花。第三级（DN III）只是一个圆的种球或旁边带一个侧球，但它们以后只开一枝花。这种分级的方法主要用于类别 1（喇叭型）、类别 2（大杯型）和类别 11（裂冠型）以及类别 3（小杯型）和类别 4（复瓣型）的大多数品种中。

‘网筛规格’被用于分级那些较小以及通常圆型类别的种球。

目前，‘狭槽规格’被用于那些通过机器分级的洋水仙种球，即种球需通过一定尺寸的狭槽。而大多数其它的种球则通过带有圆洞的筛板来进行分级。这些板上的狭槽每隔一定的距离有一个特定的规格，这个规格的厘米数就被用来表示那些通过它们来进行分级大球的规格。下表中列出了‘老的规格’和目前使用狭槽规格之间的关系。

双头规格	狭槽规格
DN I (extra)(超大)	17 / +
DN I (normal)(正常)	16 / 18
DN II	15 / 17
DN III	12 / 14

网筛规格	狭槽规格
14 / +	12 / +
12 / 14	10 / 12
11 / 12	9 / 10
10 / 12	8 / 10
8 / 10	6 / 8
6 / 8	4 / 6

温度处理

种球收获并干燥后, 对它们进行不同的温度处理, 可使它们在一定的时间开花或作为特定的用途。这些温度处理包括给种球提供一定时间的 34 到 17°C 的处理, 以促使种球内的植株开始发育。为了使叶片和花进行发育, 接下来进行 9 到 5°C 温度处理, 这样进行 12 到 16 周后可得到高质量的植株和花。为了增加一些品种的相关特性, 冷处理的时间可影响到叶鞘的长短。叶鞘是由外层的叶片形成, 位于种球的芽萌发处的基部, 包裹着其他的叶片和花茎, 并维持植株的直立。如果没有叶鞘或叶鞘太短, 植株的发芽会较快, 这样在盆花和切花生产时就会发生问题。

温度处理的类型取决于所被栽培的品种和将来的用途。

用途

洋水仙可被用于:

- 可在公园、花园和容器中栽培
- 作为盆花
- 作为切花

在公园、花园和容器中栽培

洋水仙较适合于种植在室外, 根据所栽培的品种以及气候情况, 它们会在 3 月低到 5 月初开花。洋水仙如果及时栽培的话 (9-10 月份), 因为在寒流到来之前它们已经长出了足够的根系, 所以它们不太容易受到冻害。没有根系的洋水仙种球比较容易出现冻害。被‘冻’的种球将不在能够生长出根系。为了促使根系的生长, 种植后的土壤必须足够的湿润。如果进行容器栽培时, 要格外注意防止冻害的出现。

几乎所有的洋水仙在接受足够的光照的情况下都可多年开花。在开花后 6 周内不要除去叶片, 这将使种球能够吸收足够的营养以供来年开花使用。要想了解更多的相关信息, 你们可进入国际球根花卉中心的网站

www.bulbsonline.org 并点击‘专业生产’, 再点击‘园林设计信息’, 你将看到‘园林设计中的种球花卉’网页。

盆花

正如你在图片中所看到的, 许多的洋水仙品种很适合作为盆花使用。影响开花阶段和最后效果的因素有: 品种的选择、温度处理的选择和温室的生产条件。

‘白纸’这个品种 (分类 8: 多花型) 不需要特殊的温度处理就可以开花。这些品种从储藏温度中拿出来后可立即种植, 并在 3-4 周之后开花。这就是说, 消费者可以直接在家中种植这些种球, 只是在容器中放些石头和水就可。这些品种都有浓郁的芳香。

切花

洋水仙有较长的花瓶期: 一般为 5 到 7 天。促成栽培 (12 月份开花) 也可以。影响到促成栽培的因素有: 品种的选择、温度处理的选择和气候条件。许多洋水仙的切花生产都是露天种植, 或用可移动温室进行遮盖。种球必须种植的足够深: 两到三个种球的深度。这样也可以得到更多的花茎, 因为可将地面以下部分的花茎一起剪断。

也可以在洋水仙的自然开花季节在田间进行采收。种球的生产不会因为花茎的折断而受到影响, 只要保持叶片还保留在种球上就可。当包裹着花的花鞘还完整时就可以采收, 通常花茎的长度不超过 25 厘米, 种植者通常把它们称为‘铅笔阶段’。



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

- 3944 -

Narcissus 'Abba'



4

30

15

20

2

- 3865 -

Narcissus 'Accent'



2

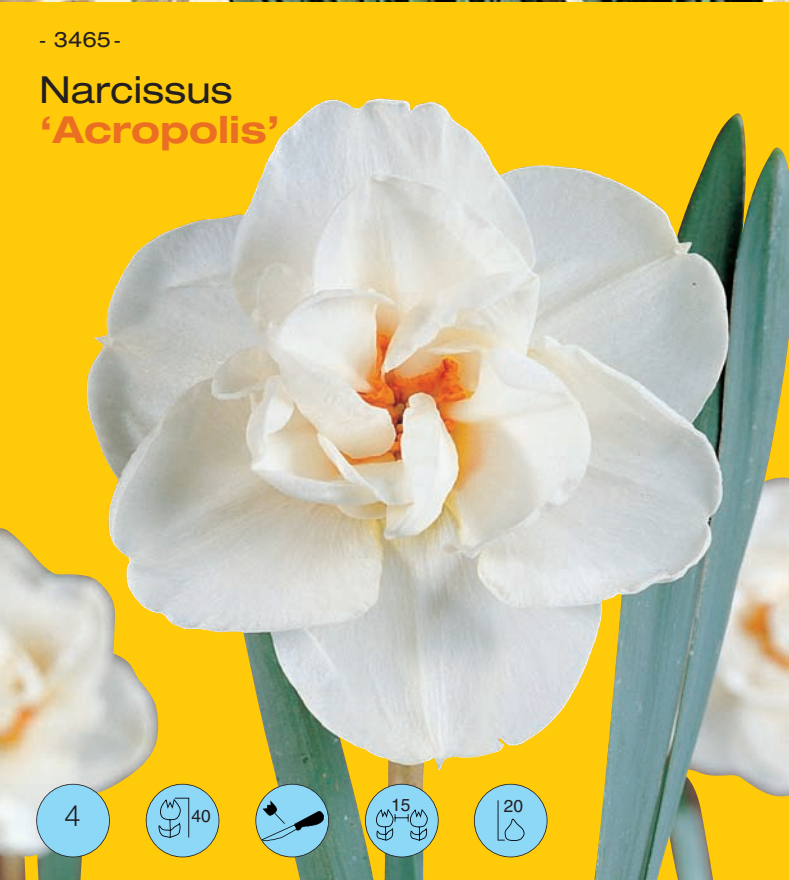
15

40

20

- 3465 -

Narcissus 'Acropolis'



4

40

15

20

- 3473 -

Narcissus 'Actaea'



9

40

10

15

1

january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------



- 3842 -

Narcissus
'Ambergate'

2

35

15

20



- 3625 -

Narcissus
'Arctic Gold'

1

40

15

20

january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------



- 3938 -

Narcissus
'Apotheose'

4

40

15

20



- 3736 -

Narcissus
'Arkle'

1

40

15

20

january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 3780 -
Narcissus
‘Audubon’



2

40

15

20

- 3811 -
Narcissus
‘Avalon’



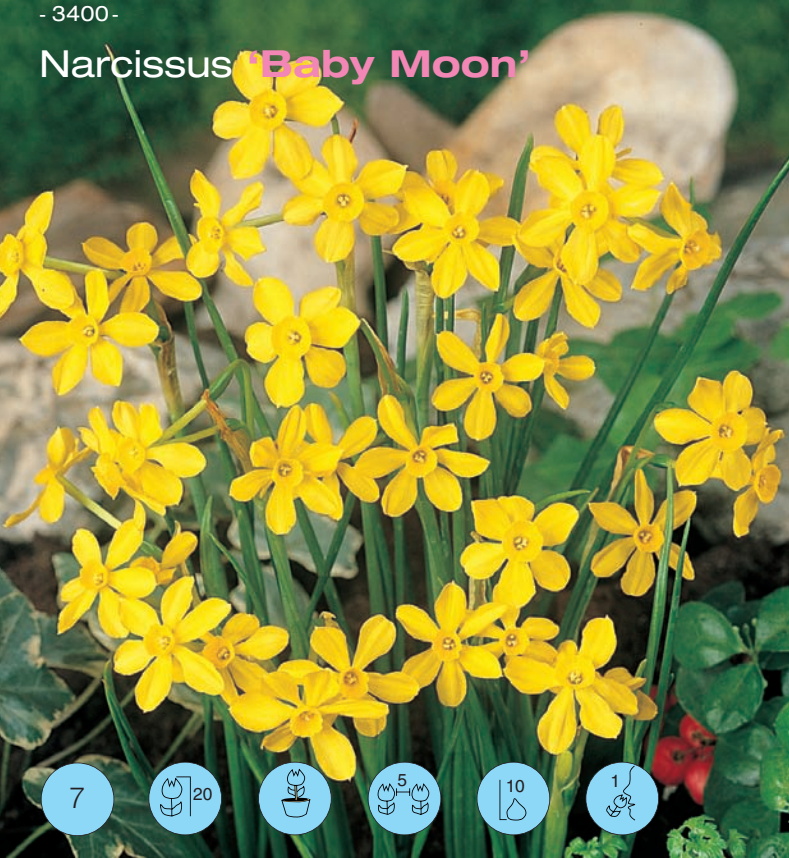
2

35

15

20

- 3400 -
Narcissus ‘Baby Moon’



7

20

5

10

1

- 3597 -
Narcissus
‘Ballade’



1

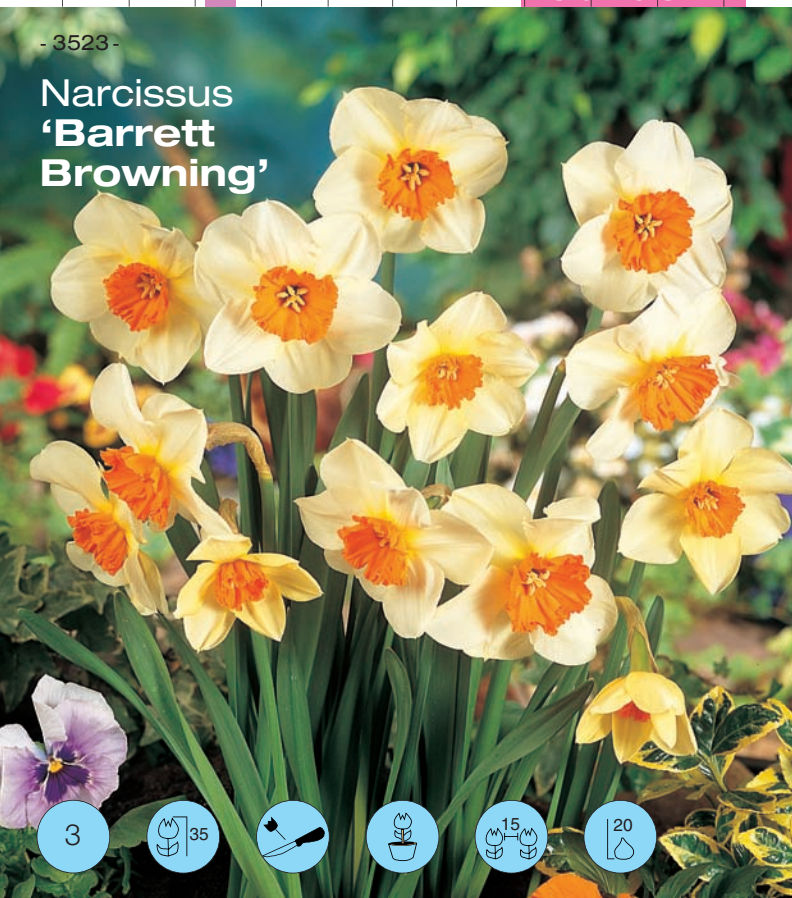
40

15

20

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	planting september	october	november	december	january	february	march	april	may	june	july	august	planting september	october	november	december
								sales												sales			



january	february	march	april	may	june	july	august	planting september	october	november	december	january	february	march	april	may	june	july	august	planting september	october	november	december
								sales												sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 3781 -
Narcissus
'Bella Vista'



2

35

15

20

2
30
15
20
- 3844 -
Narcissus
'Berlin'



2

30

15

20

- 3284 -
Narcissus
'Birma'



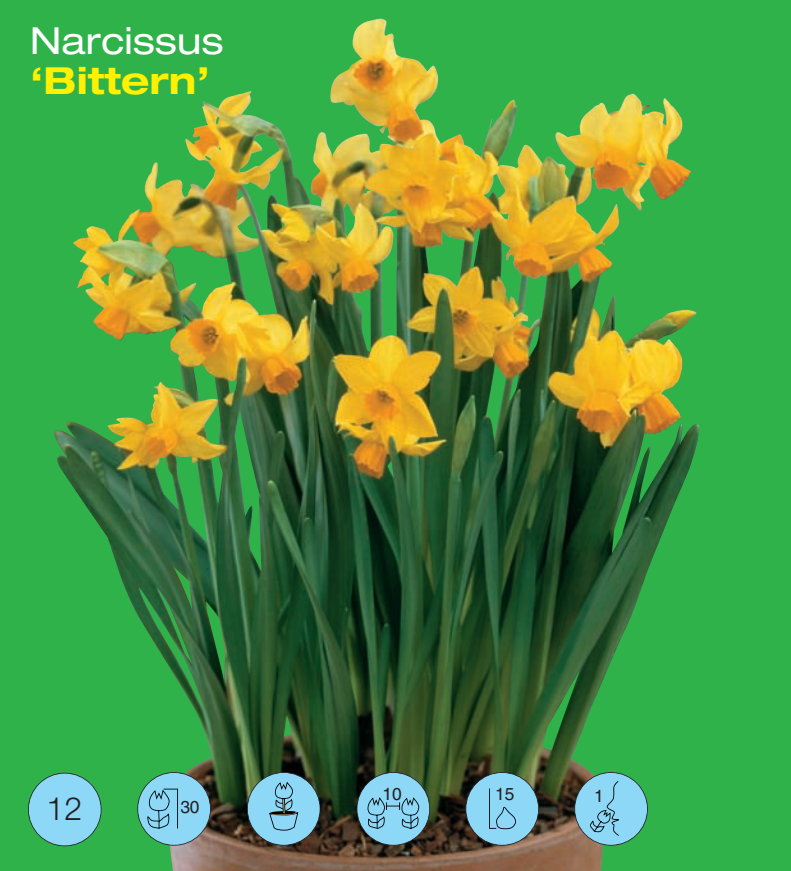
3

40

15

20

Narcissus
'Bittern'



12

30

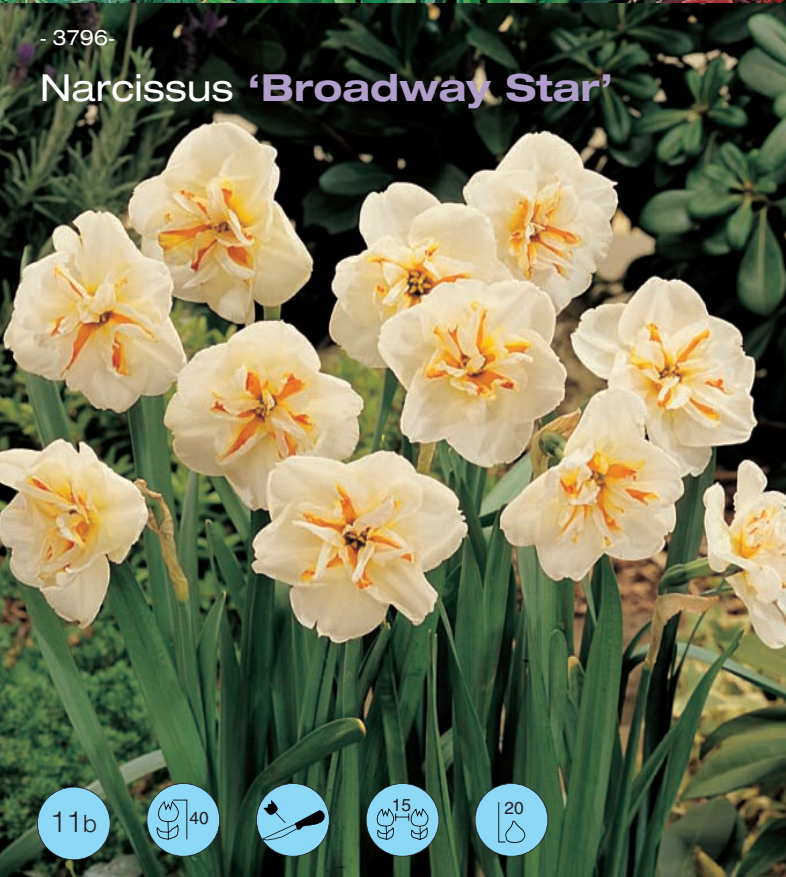
10

15

1

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

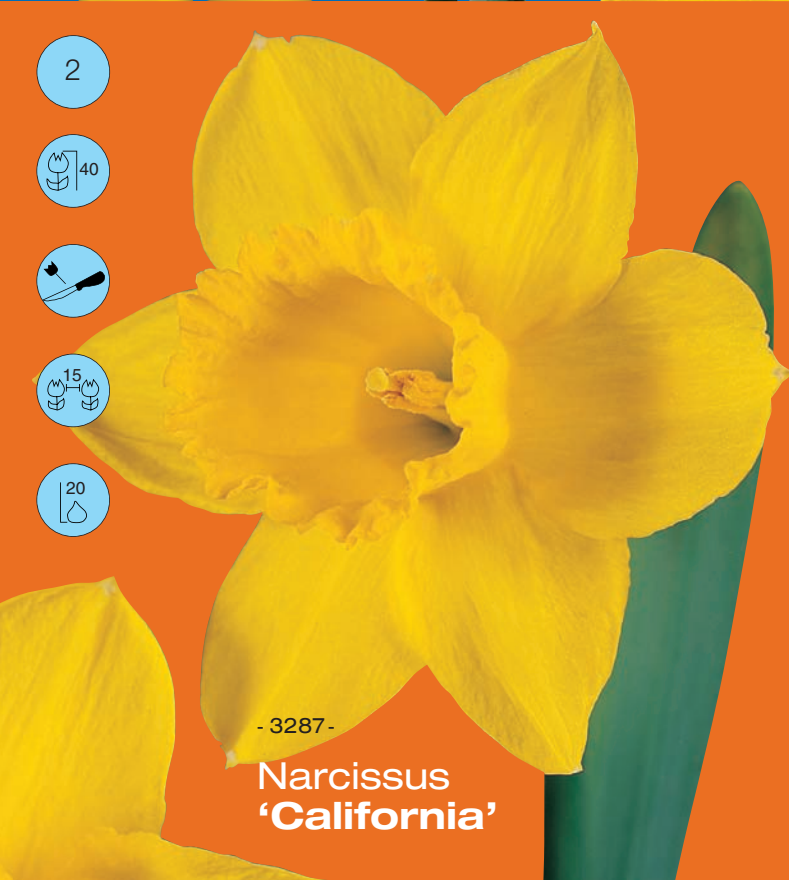
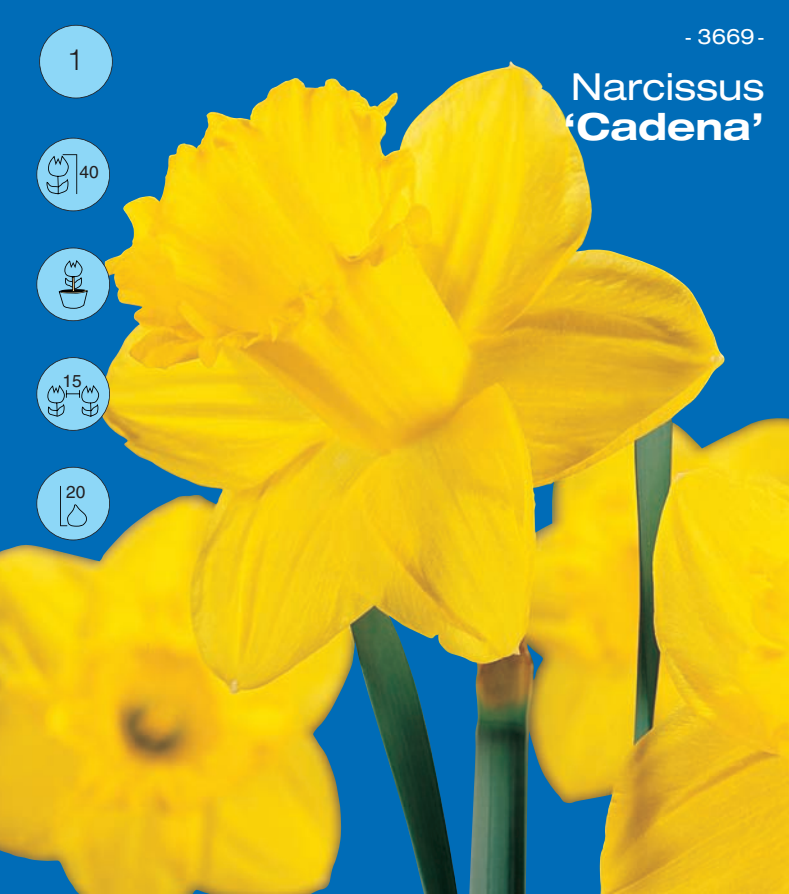
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

'Canaliculatus'



8

15

10

10

1

'Carbineer'

2

15

40

20

Icon of a bulb with a knife, indicating planting instructions.

- 3476 -

Narcissus
'Carlton'



2

35

15

20

Narcissus
'Cassata'



11a

15

35

20



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting sales												planting sales			

planting

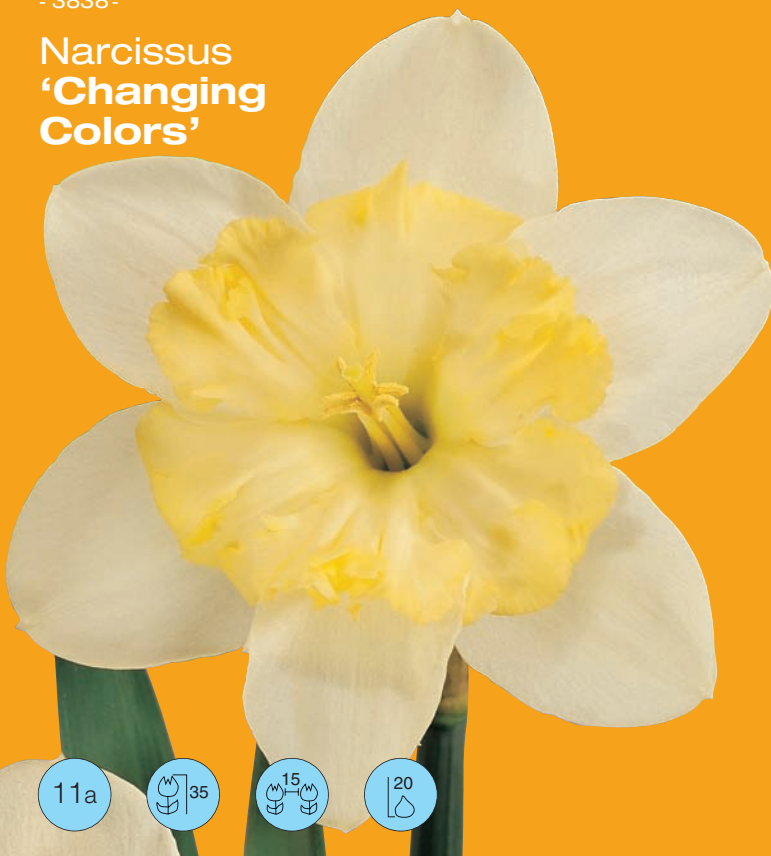
planting

sales

January February March April May June July August September October November December

January February March April May June July August September October November December

Narcissus 'Changing Colors'



Narcissus 'Chantarelle'



Narcissus 'Cherry Spot'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december	
								planting				planting								planting				planting
								sales				sales								sales				sales

january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------



- 3764 -

Narcissus
'Chinese Sacred Lily'

8

40

2



- 3126 -

Narcissus
'Cragford'

8

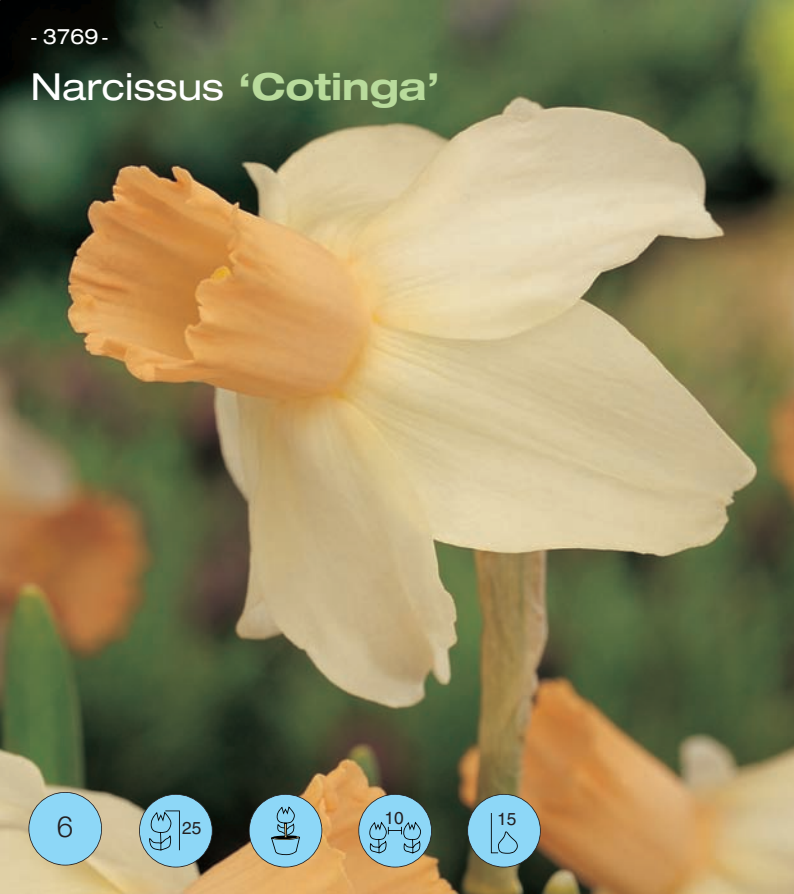
30

10

20

2

january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------



- 3769 -

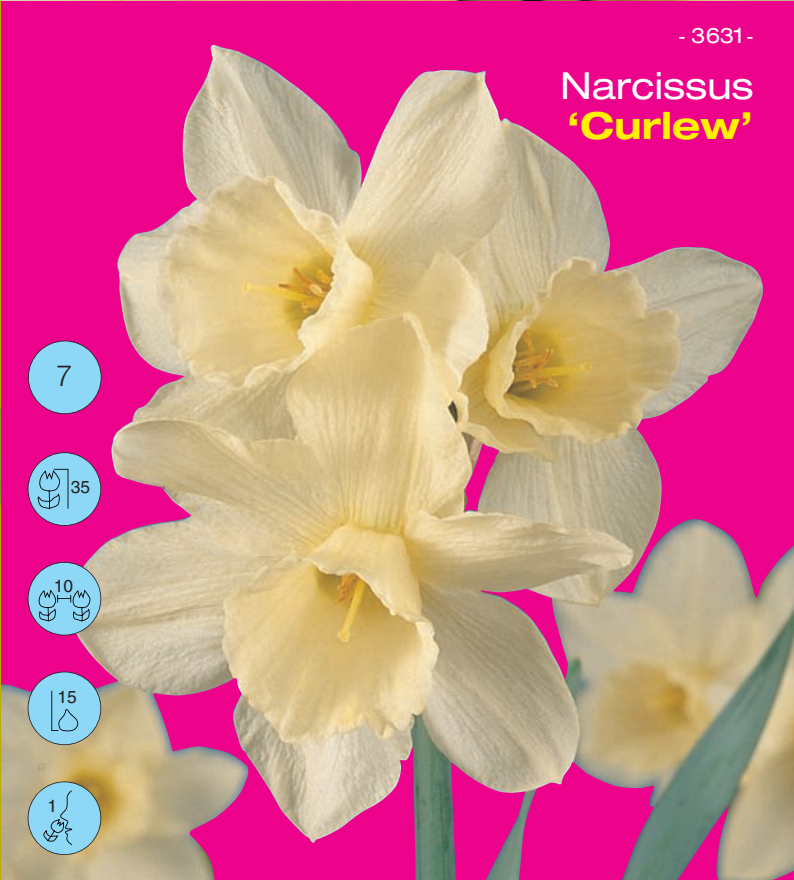
Narcissus **'Cotinga'**

6

25

10

15



- 3631 -

Narcissus
'Curlew'

7

35

10

15

1

january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------

Narcissus ‘Cyclope’



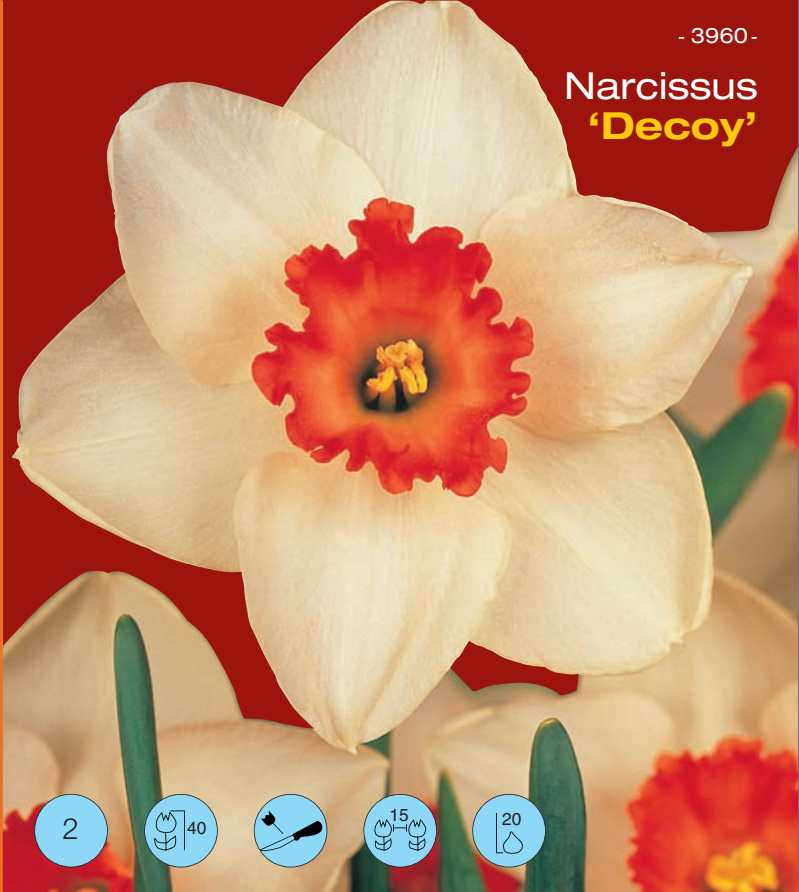
- 3593 -

Narcissus ‘Cyclope’



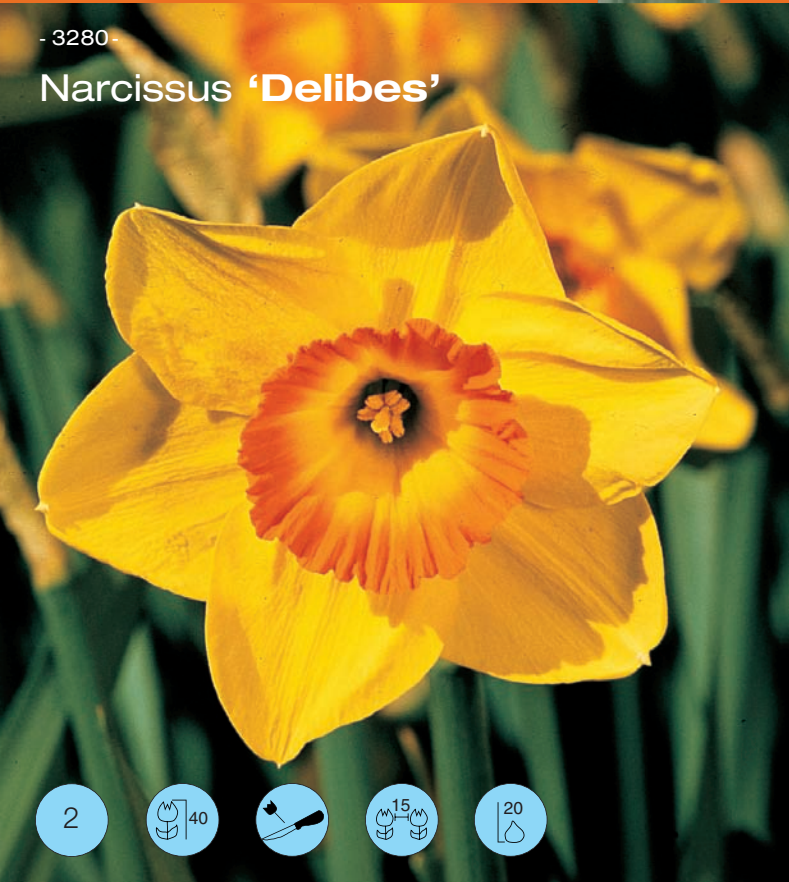
- 3960 -

Narcissus ‘Decoy’



- 3280 -

Narcissus ‘Delibes’



- 3863 -

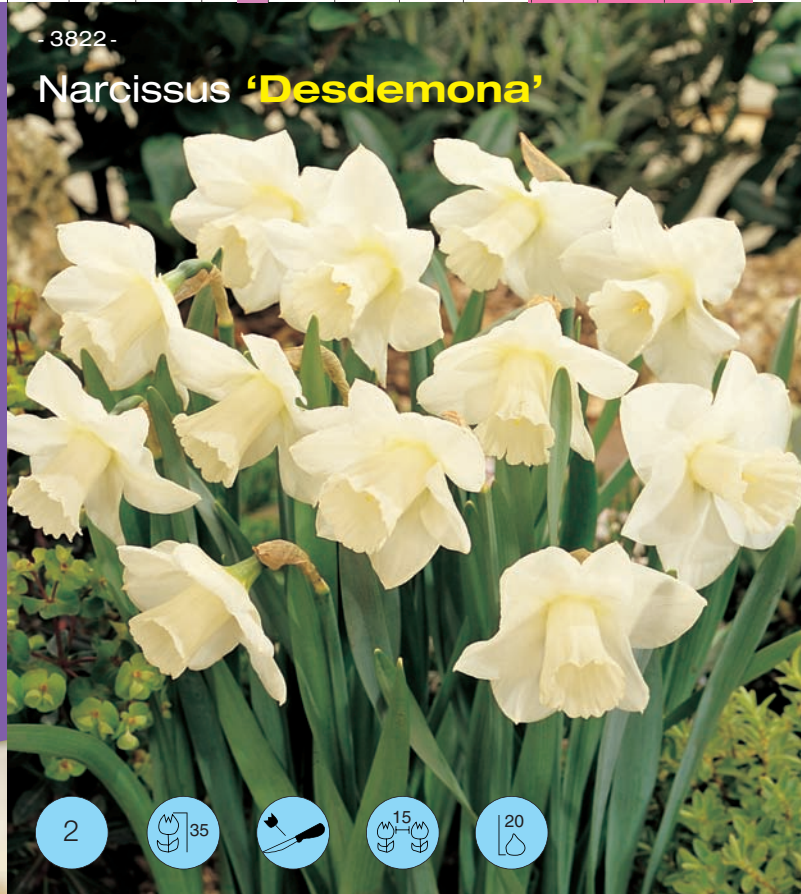
Narcissus ‘Delnashaugh’



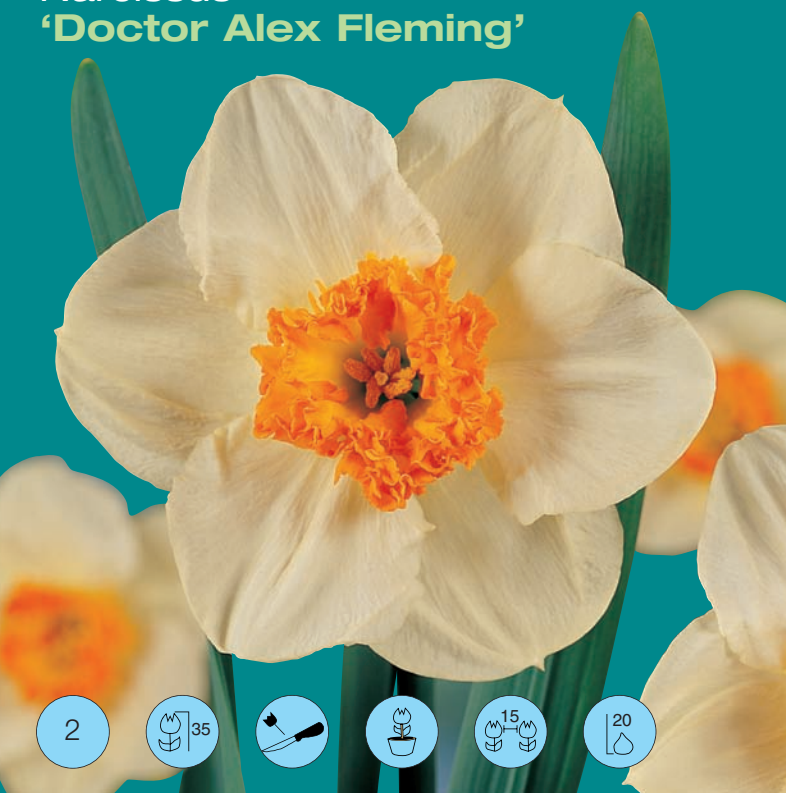
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



'Doctor Alex Fleming'



2

35

15

20

Narcissus
'Double Fashion'



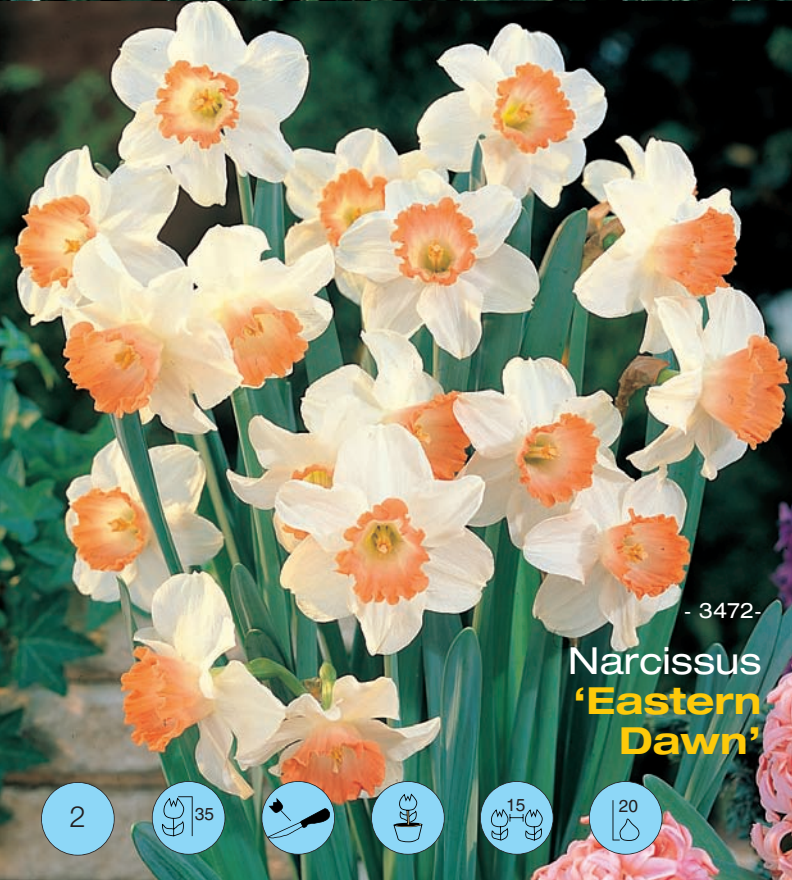
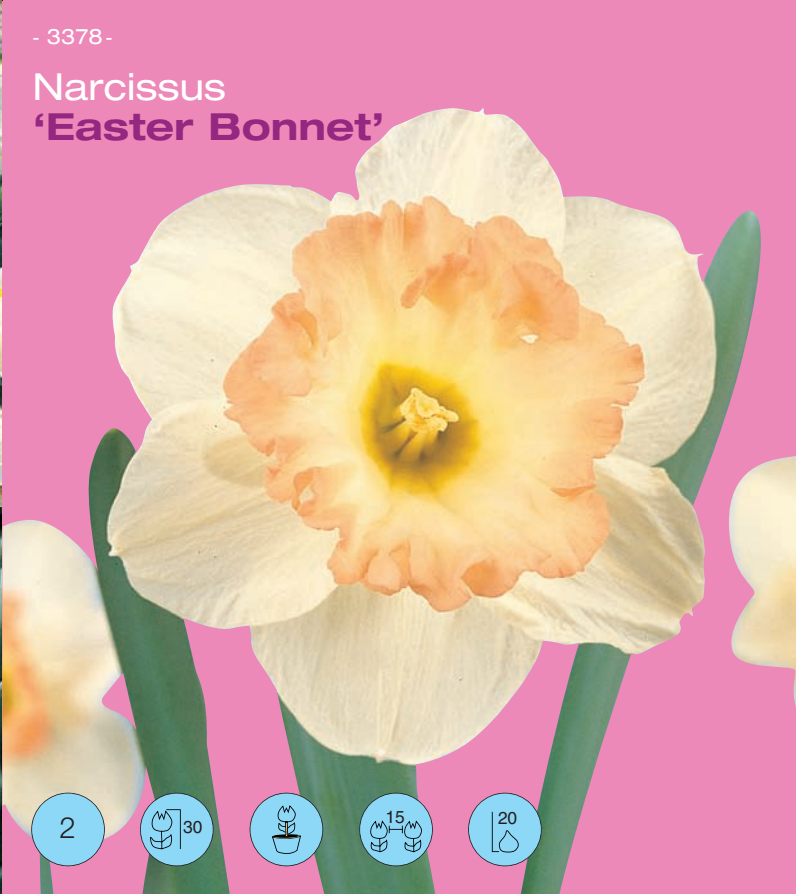
4

40

15

20

january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			✿					planting	planting	planting	planting				✿					planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 3128 -

Narcissus
'Erlicheer'



- 4
- 35
- 10
- 15
- 1

- 3805 -

Narcissus
'Exception'



- 1
- 40
- 15
- 20



- 3946 -

Narcissus
'Falconet'

- 8
- 35
- 10
- 15
- 2

- 3379 -

Narcissus
'February Gold'



- 6
- 30
- 10
- 15

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			✿					planting	planting	planting	planting				✿					planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

- 3591 -

Narcissus
'February
Silver'



- 3870 -

Narcissus
'Flower
Drift'



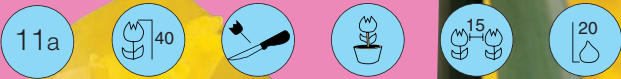
- 3873 -

Narcissus 'Flower Record'



- 3826 -

Narcissus
'Flyer'



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 3333 -

Narcissus
'Foresight'

1

35

3

15

20



- 3799 -

Narcissus
'Fortissimo'

2

40

3

15

20



- 3531 -

Narcissus
'Fortune'

2

40

3

15

20



- 3788 -

Narcissus
'Fragrant Rose'

2

40

3

15

20

1

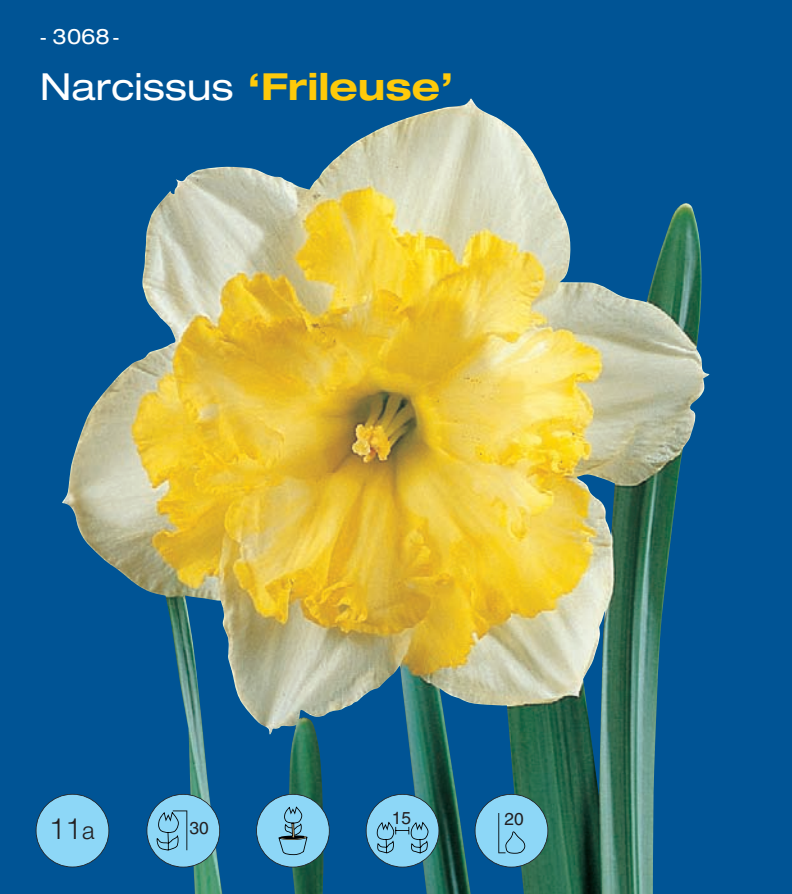


january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 3068 -

Narcissus ‘Frileuse’



11a

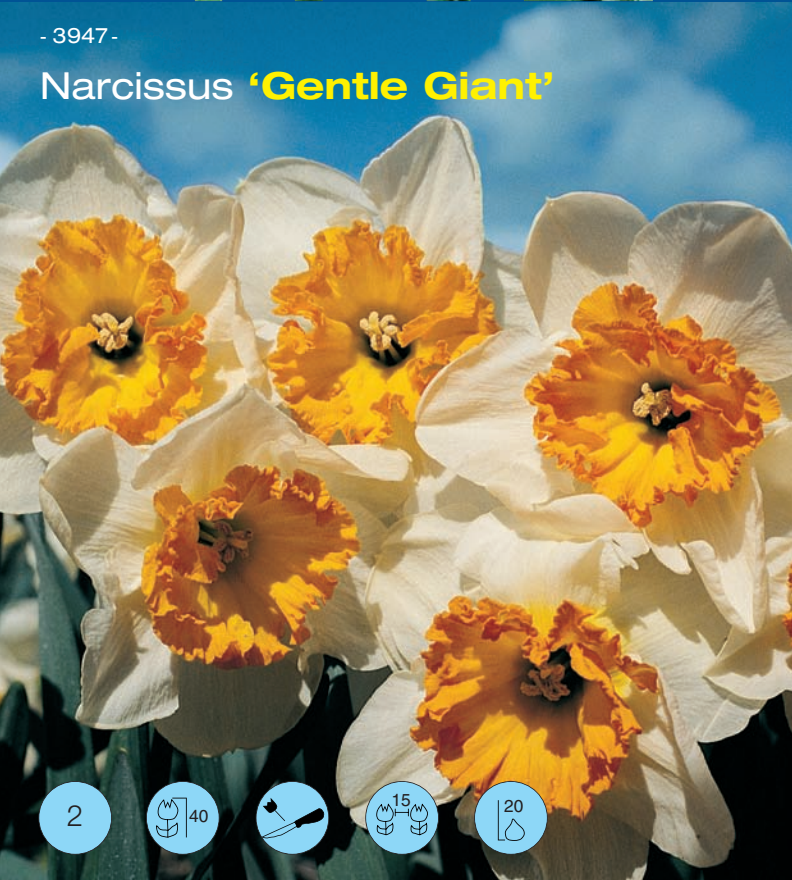
30

15

20

- 3947 -

Narcissus ‘Gentle Giant’



2

40

15

20

- 3751 -

Narcissus ‘Full House’



4

35

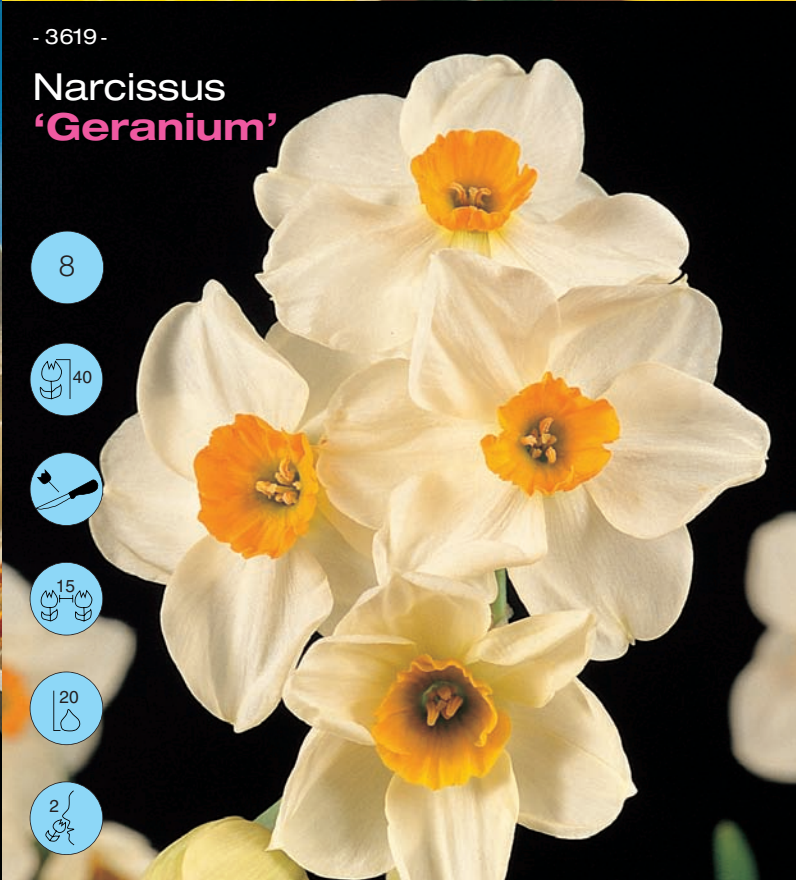
15

20

1

- 3619 -

Narcissus ‘Geranium’



8

40

15

20

2

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

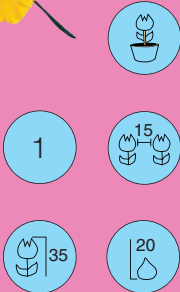
- 3410-
Narcissus
‘Gigantic Star’



- 3801-
Narcissus
‘Goblet’



- 3225-
Narcissus
‘Gold Medal’



- 3515-
Narcissus ‘Golden Bells’



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

january	february	march	april	may	june	july	august	planting	september	october	november	december	january	february	march	april	may	june	july	august	planting	september	october	november	december
								sales													sales				



- 3249 -

Narcissus
‘Golden Dawn’

8 30 10 15 2



- 3007 -

Narcissus **‘Golden Ducat’**

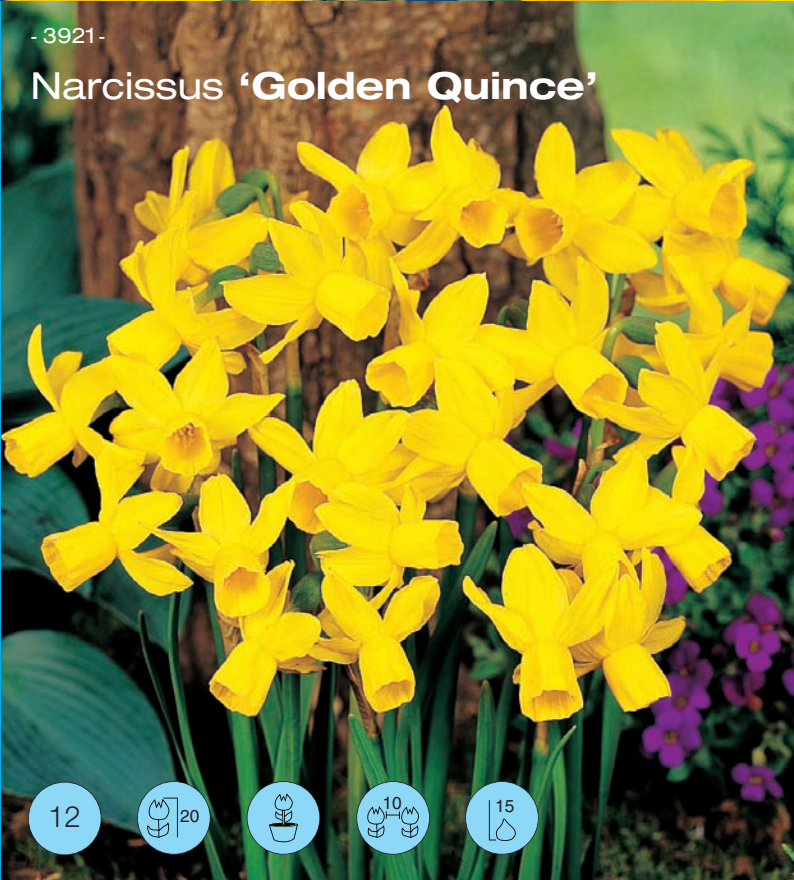
4 40 15 20



- 3003 -

Narcissus
Golden Harvest

1 40 15 20



- 3921 -

Narcissus **‘Golden Quince’**

12 20 10 15

january	february	march	april	may	june	july	august	planting	september	october	november	december	january	february	march	april	may	june	july	august	planting	september	october	november	december
								sales													sales				

january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales			



- 3478 -

Narcissus 'Hawera'



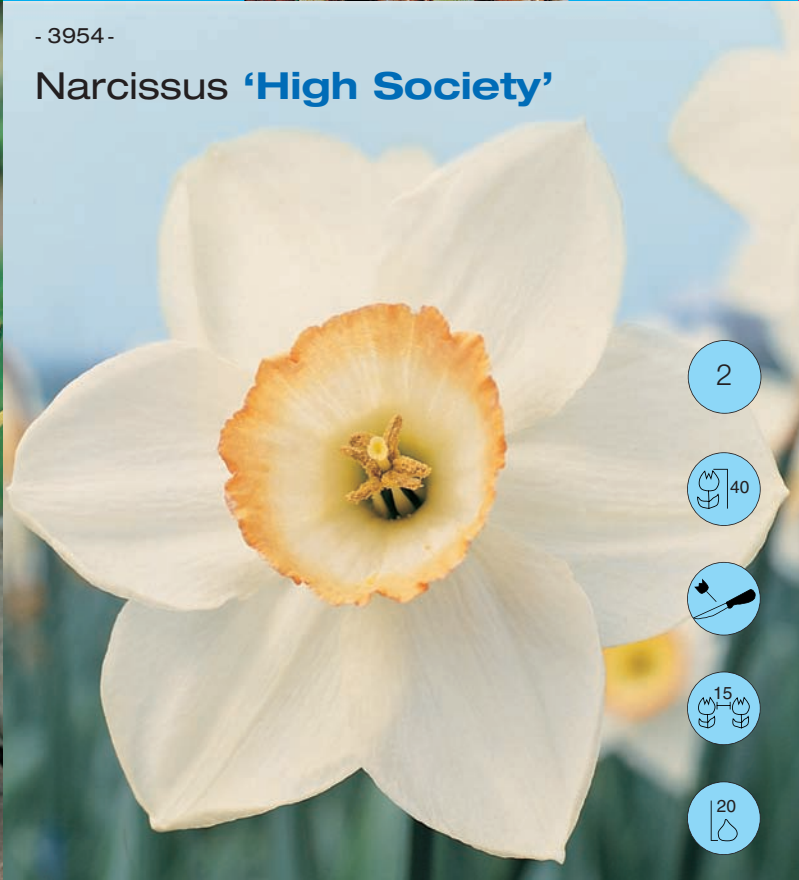
january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales			

january	february	march	april	may	june	july	august	september	october	november	december
								planting			



- 3954 -

Narcissus 'High Society'



january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 3553 -

Narcissus 'Hillstar'



7

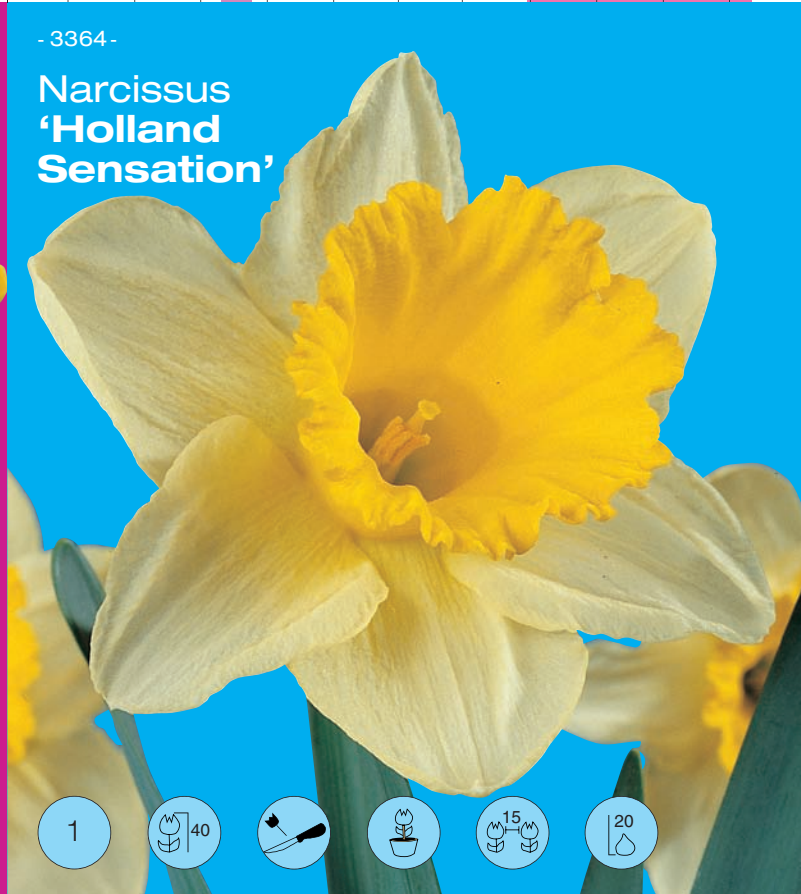
35

10

15

- 3364 -

Narcissus 'Holland Sensation'



1

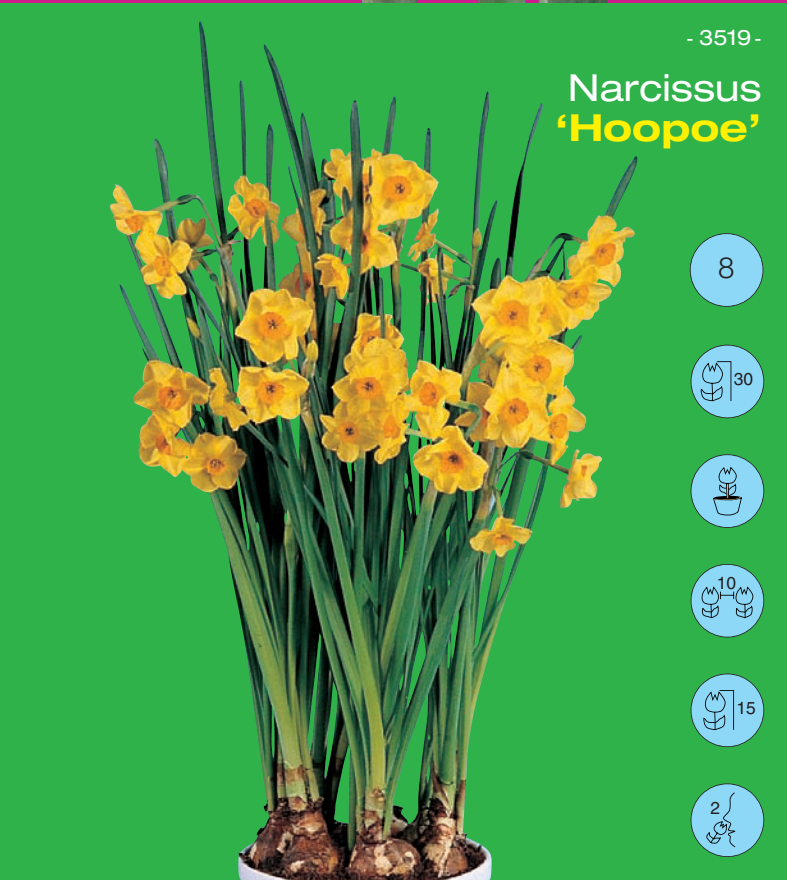
40

15

20

- 3519 -

Narcissus 'Hoopoe'



8

30

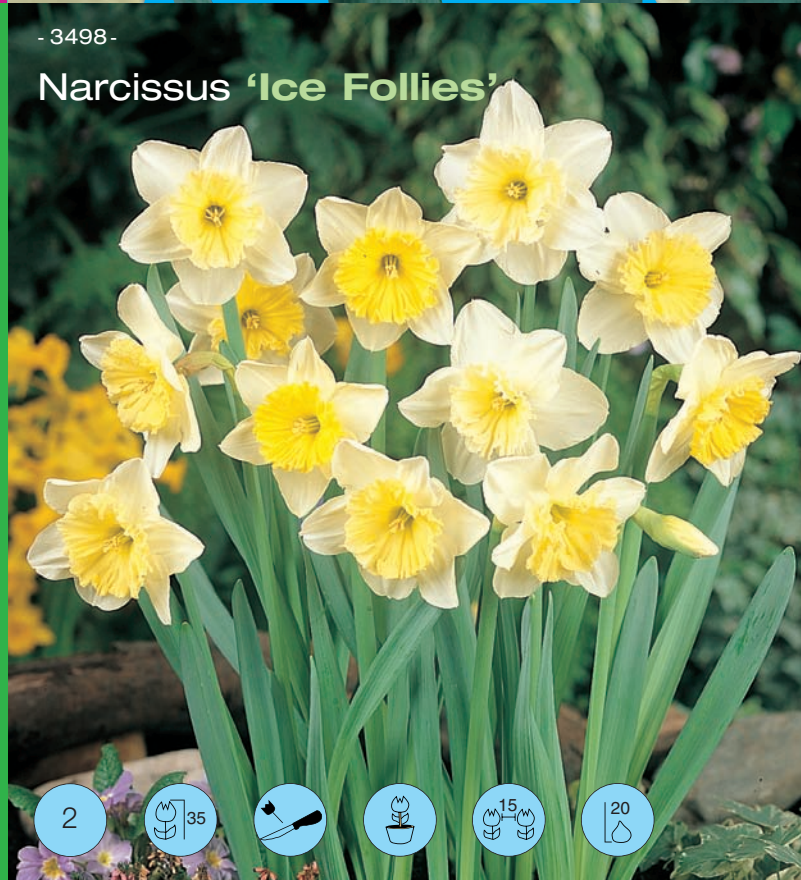
10

15

2

- 3498 -

Narcissus 'Ice Follies'



2

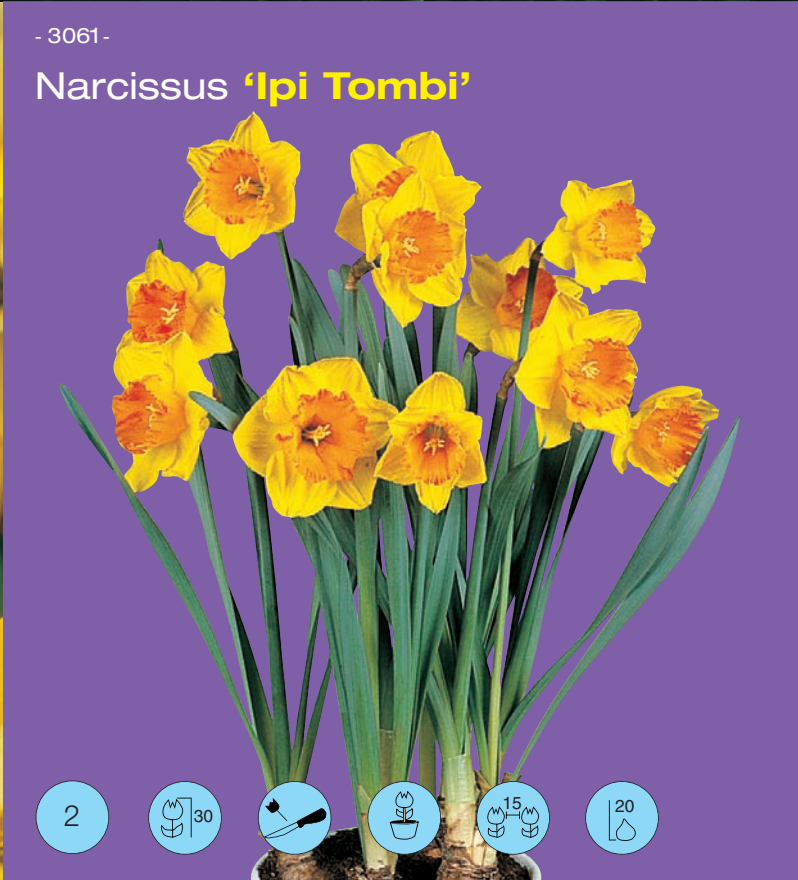
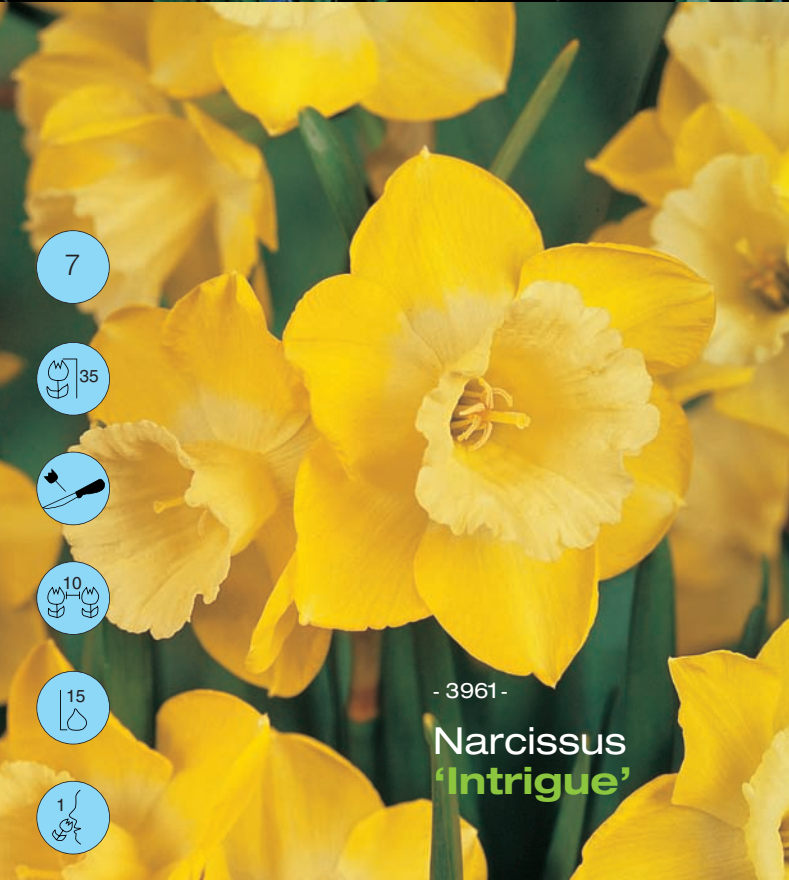
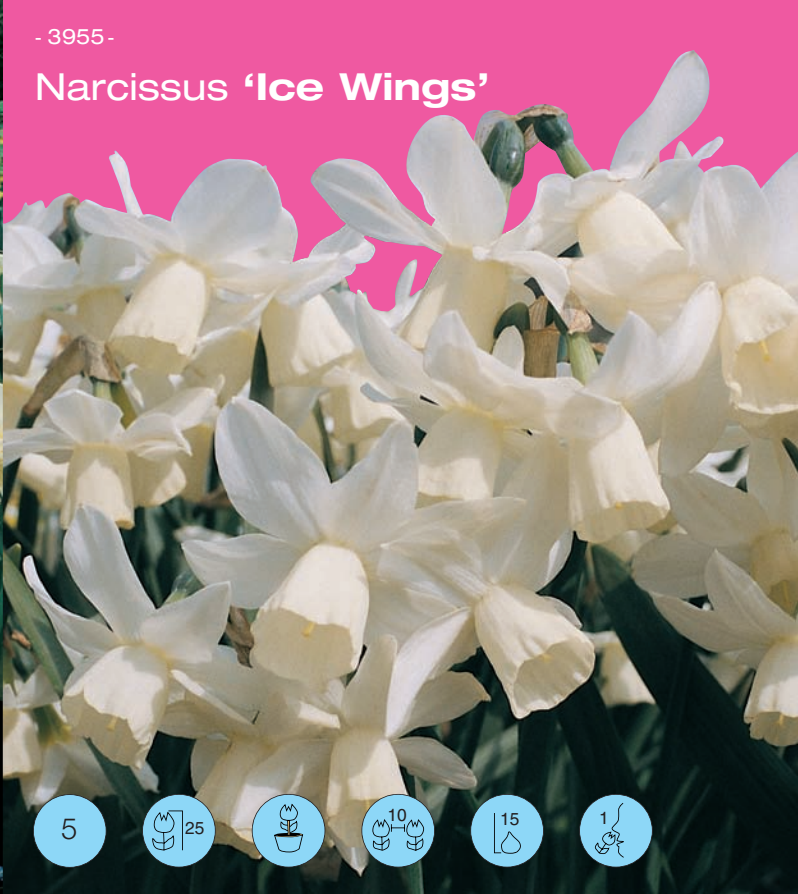
35

15

20

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------



january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales											planting	sales		

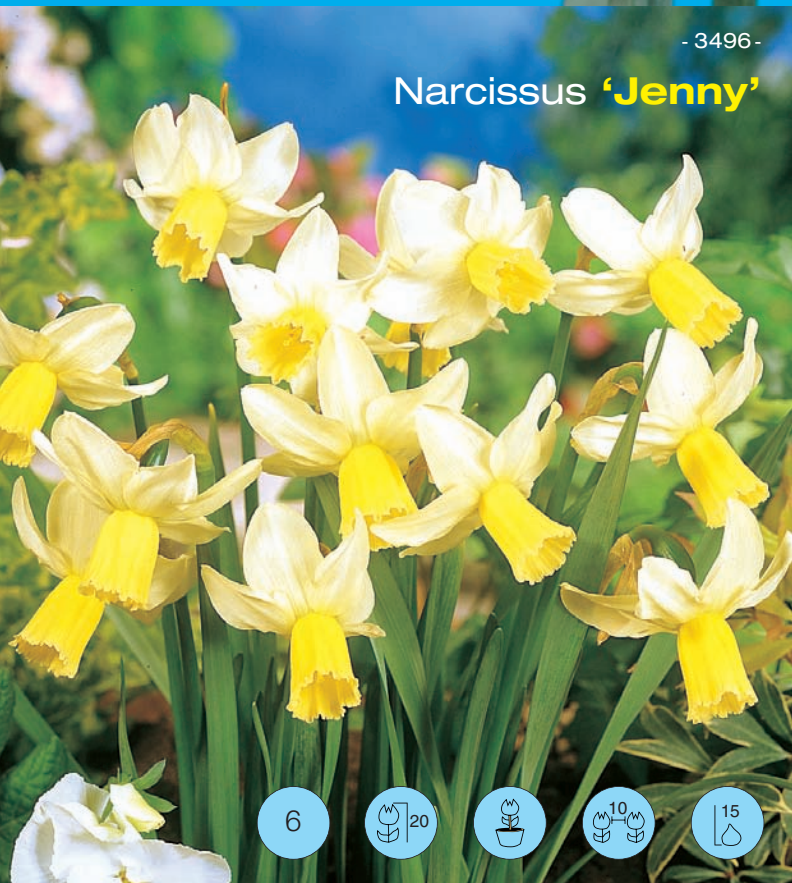
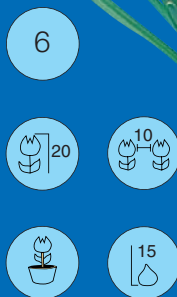
- 3589 -

Narcissus
'Itzim'



- 3224 -

Narcissus
'Jack Snipe'



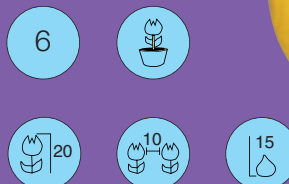
- 3496 -

Narcissus 'Jenny'



- 3551 -

Narcissus
'Jetfire'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales											planting	sales		



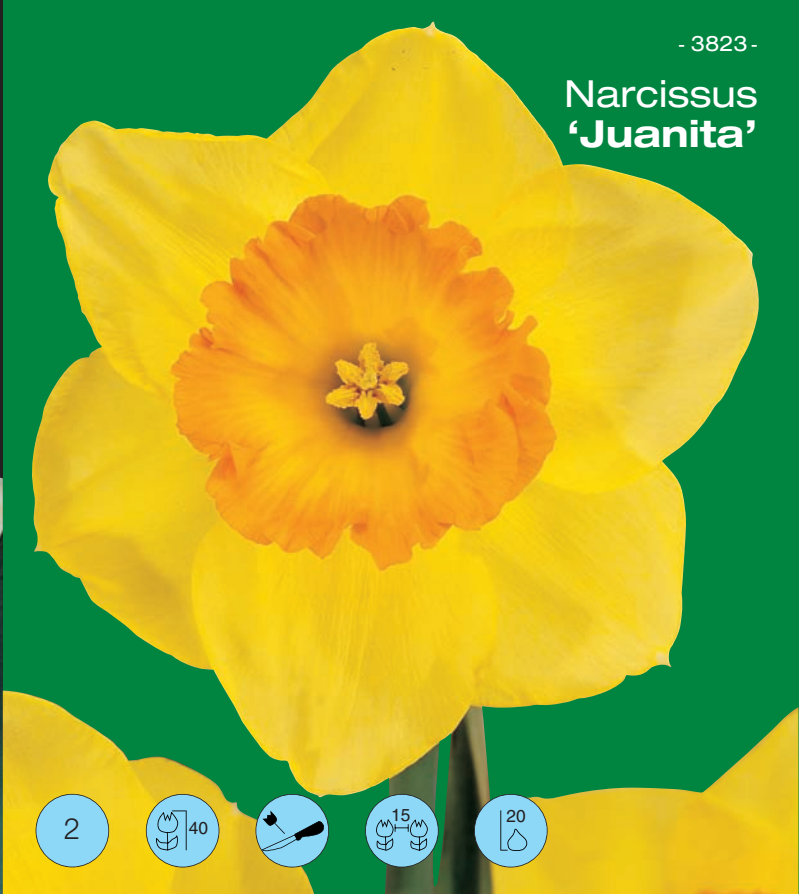
- 3366 -

Narcissus
‘Johann Strauss’



- 3823 -

Narcissus
‘Juanita’



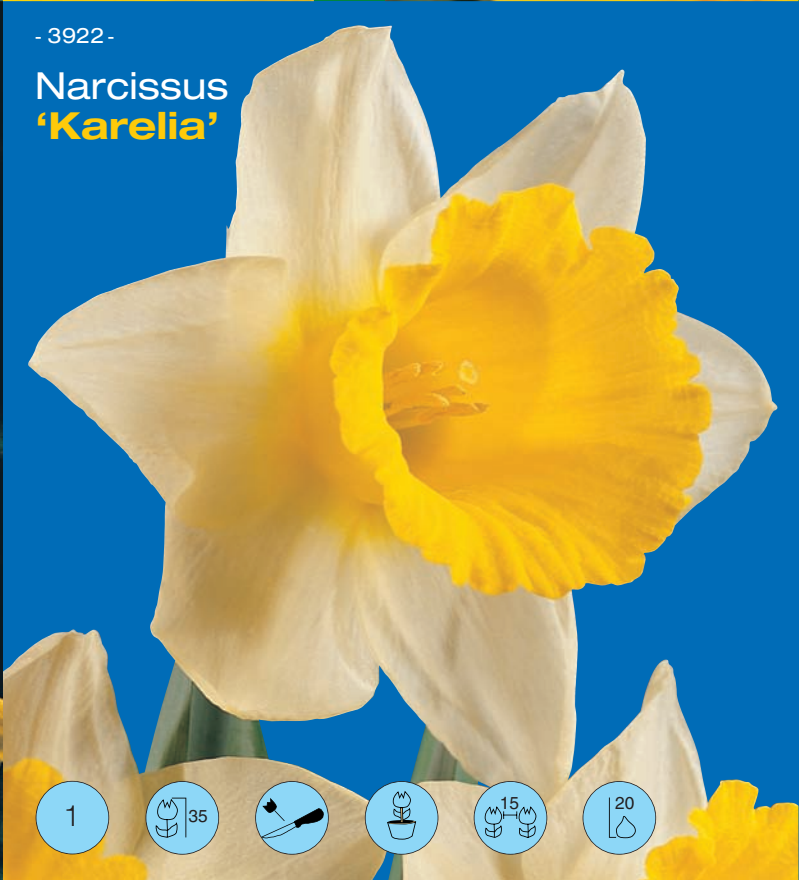
- 3349 -

Narcissus
‘Jumblie’



- 3922 -

Narcissus
‘Karelia’



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

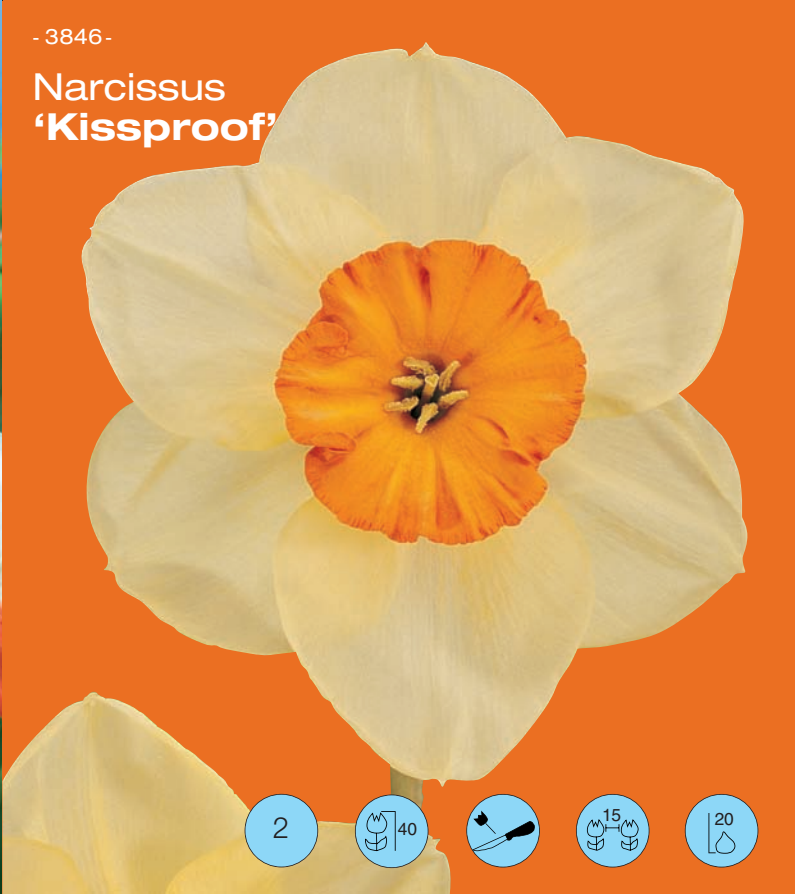
Narcissus 'Kaydee'



- 6
- 30
- 10
- 15

- 3846 -

Narcissus 'Kissproof'



- 2
- 40
- 15
- 20

- 3966 -

Narcissus 'Largo'



- 2
- 40
- 15
- 20
- 1

- 3541 -

Narcissus 'Las Vegas'



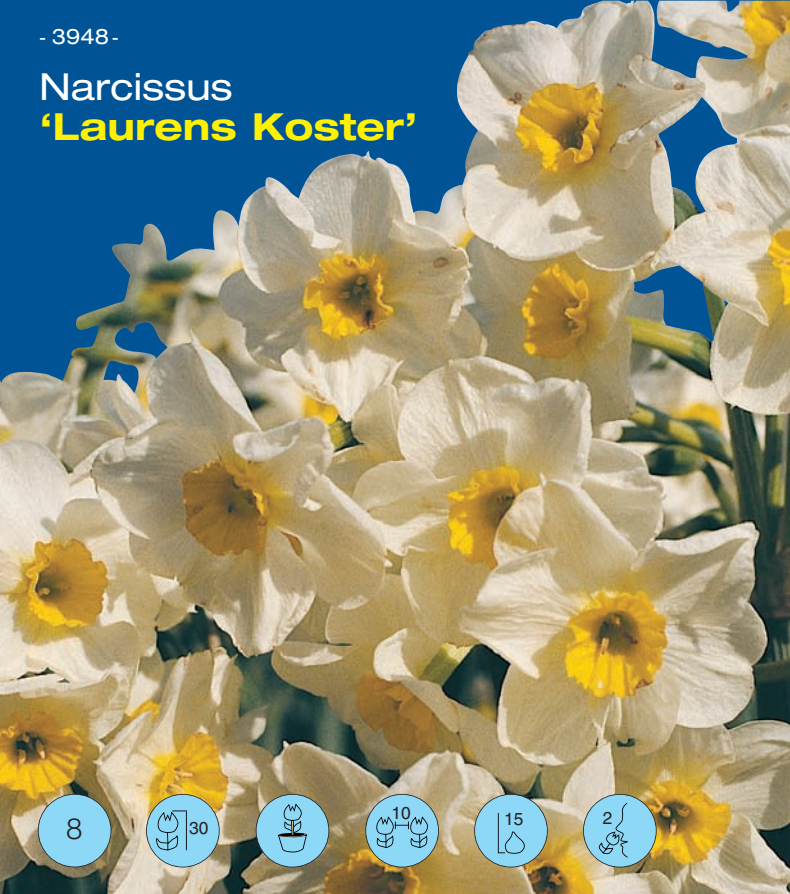
- 1
- 40
- 15
- 20

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

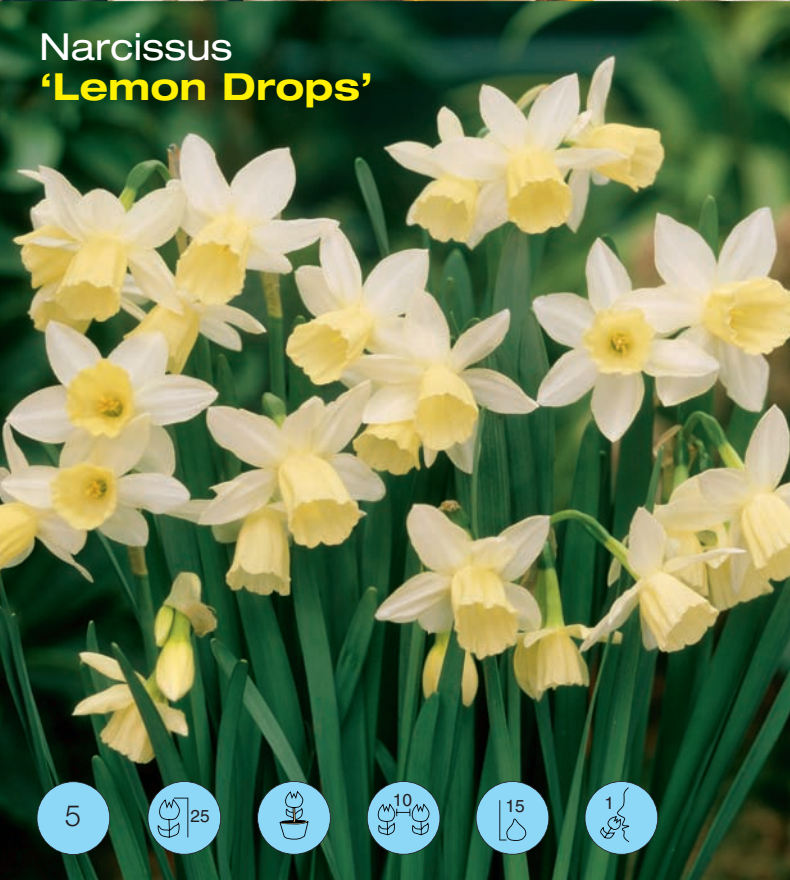


- 3948 -

Narcissus ‘Laurens Koster’



Narcissus ‘Lemon Drops’



- 3933 -

Narcissus ‘Lemon Beauty’



- 3039 -

Narcissus ‘Little Gem’





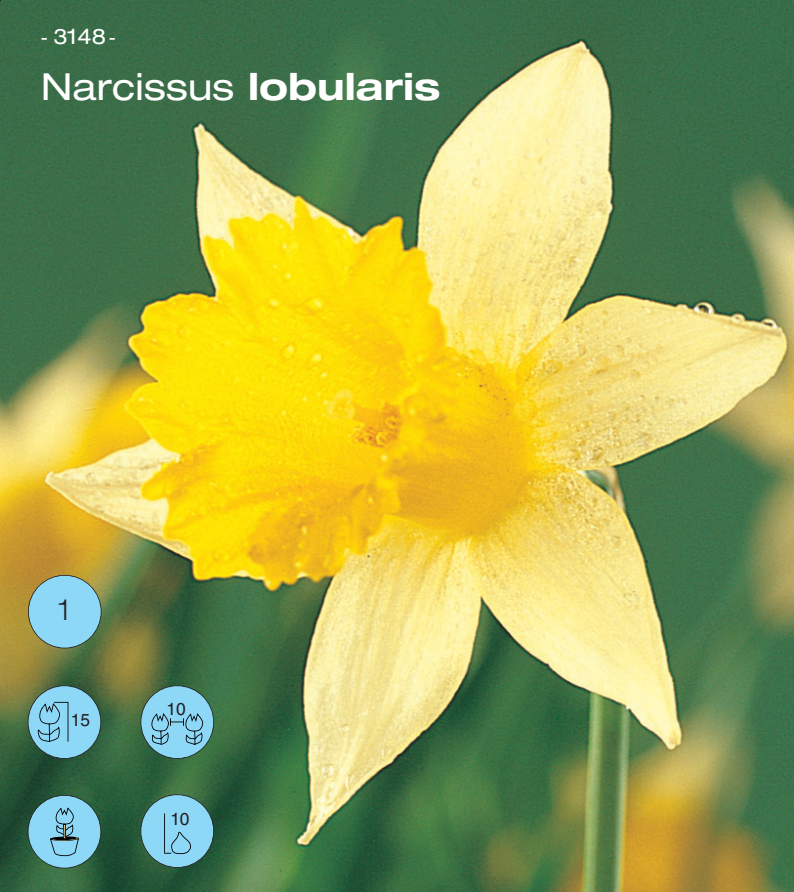
- 3949 -

Narcissus
‘Little Witch’



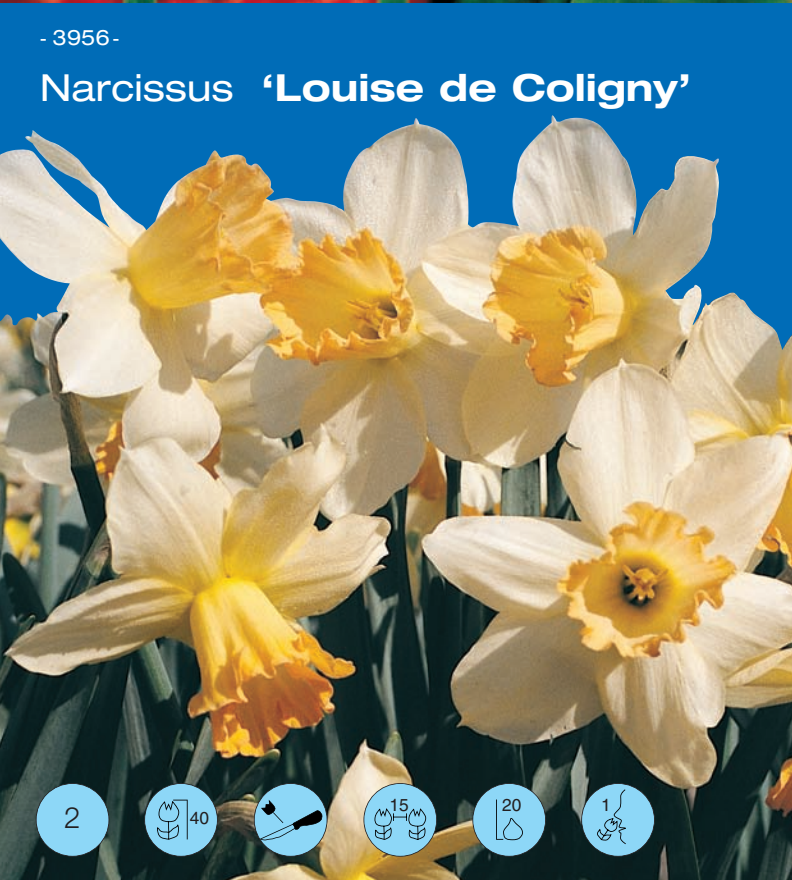
- 3148 -

Narcissus lobularis



- 3956 -

Narcissus ‘Louise de Coligny’



- 3621 -

Narcissus
‘Manly’





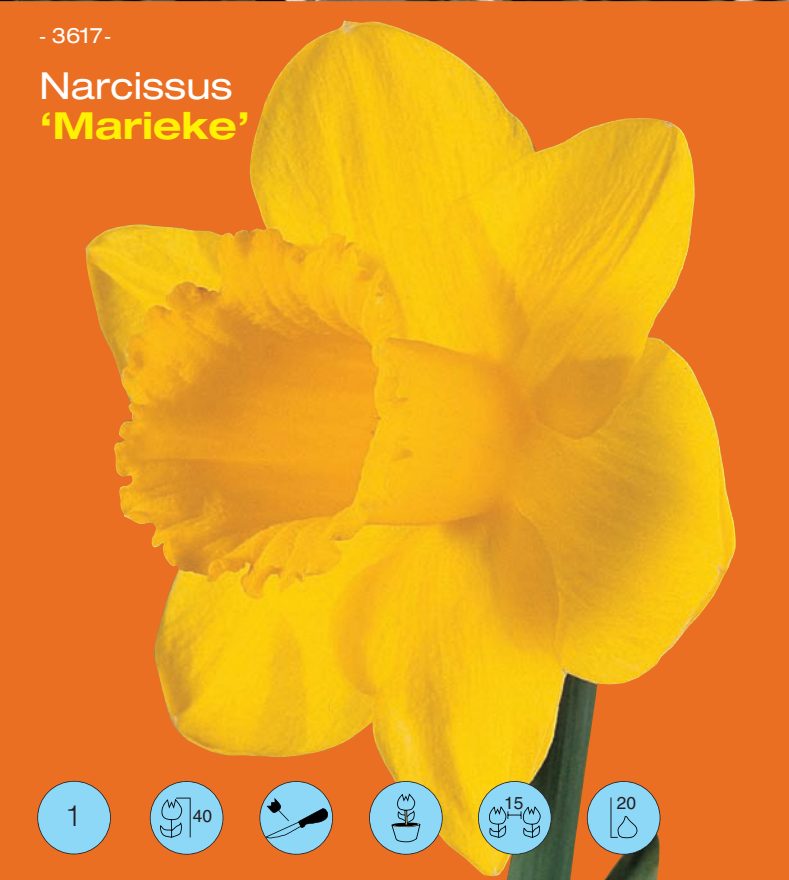
- 3957 -
Narcissus
'Margaret Mitchell'



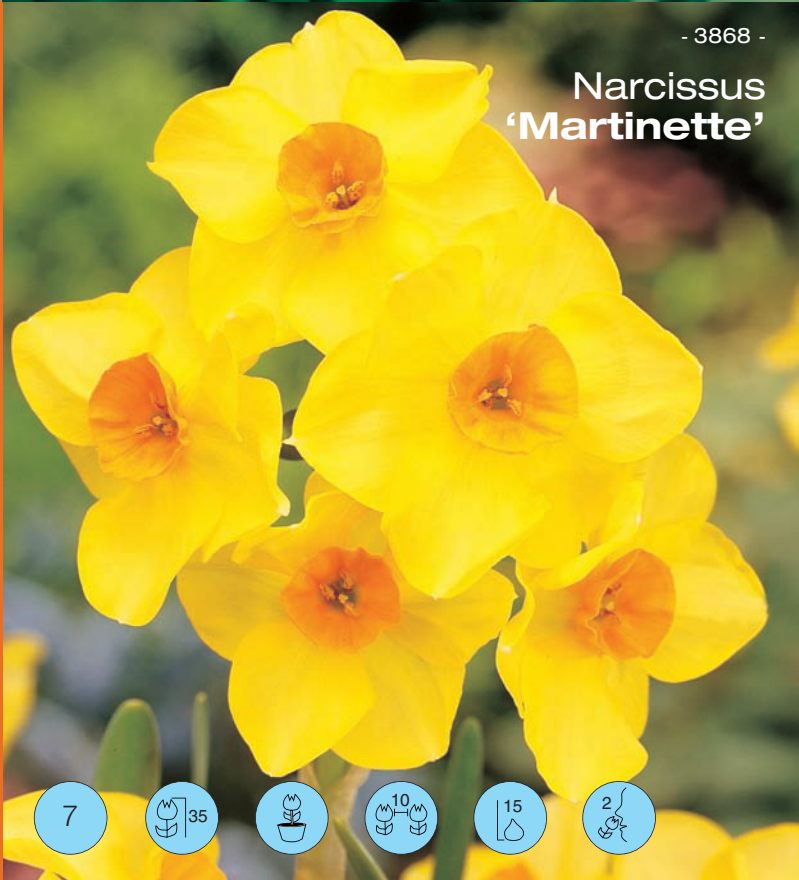
Narcissus
'Marie-José'



- 3617 -
Narcissus
'Marieke'



- 3868 -
Narcissus
'Martinette'



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

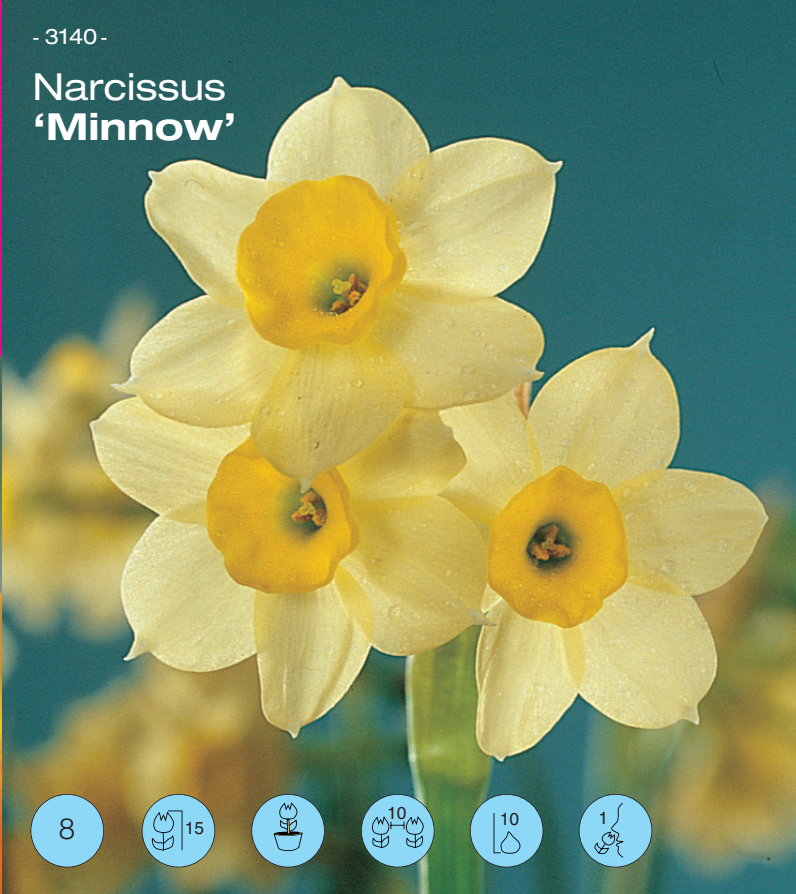
- 3935 -

Narcissus
‘Mary
Bohannon’



- 3140 -

Narcissus
‘Minnow’



- 3919 -

Narcissus ‘Misty Glen’



- 3840 -

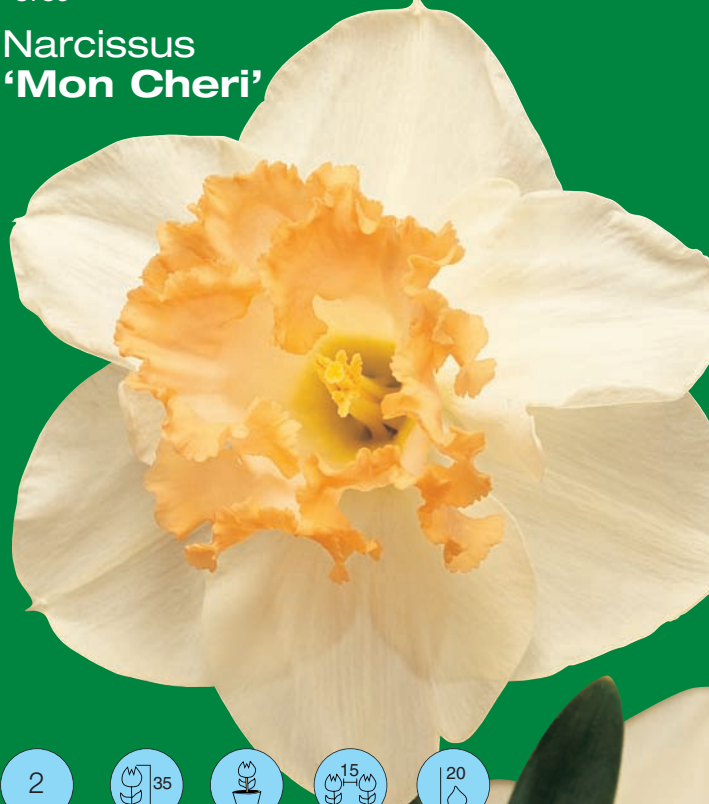
Narcissus
‘Modern Art’



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

- 3739 -

Narcissus
'Mon Cheri'



2

35

15

20

- 3542 -

Narcissus
'Mondragon'



11a

40

15

20

2



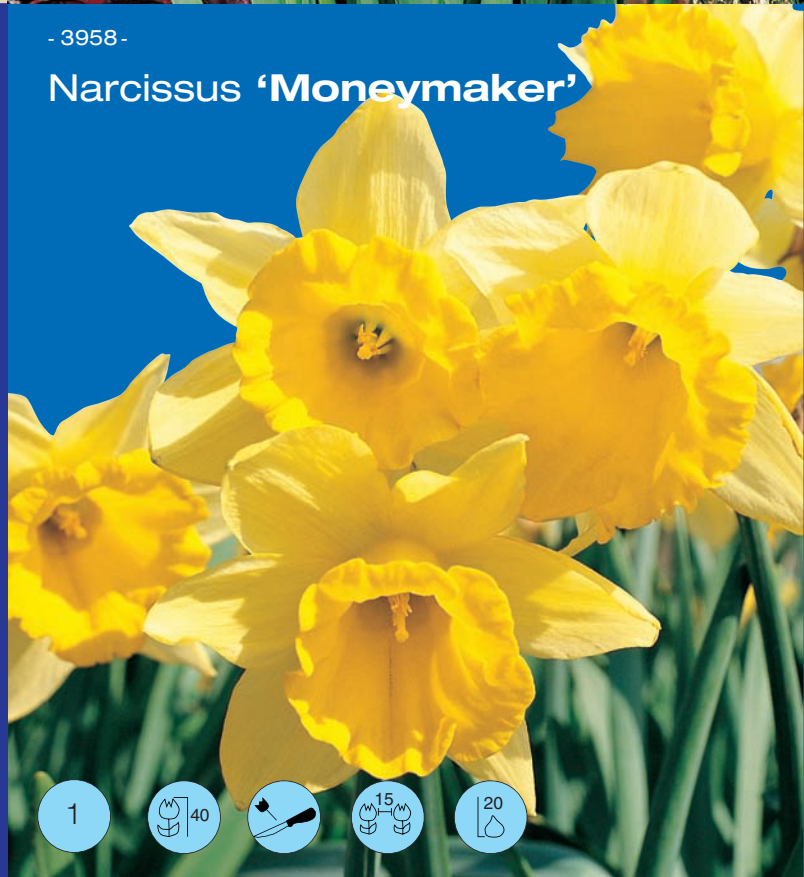
- 3925 -

Narcissus 'Monal'

2	 40		 15	 20
---	--	---	--	--

- 3958 -

Narcissus 'Moneymaker'



1 40 15 20

			🌸						planting sales					🌸					planting sales				
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december

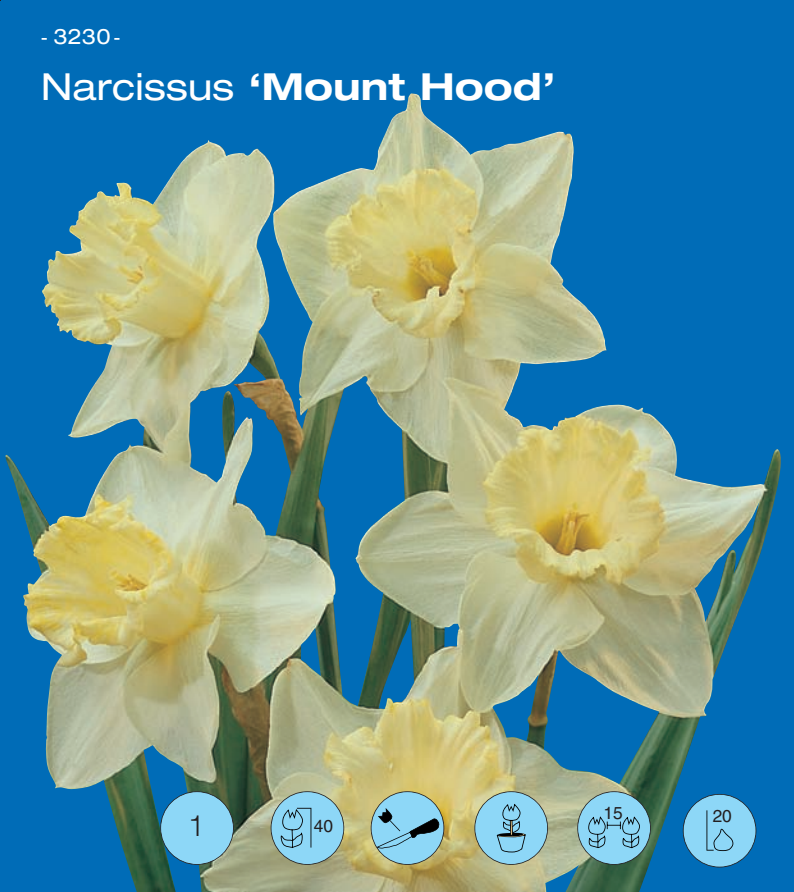


Narcissus 'Monza'



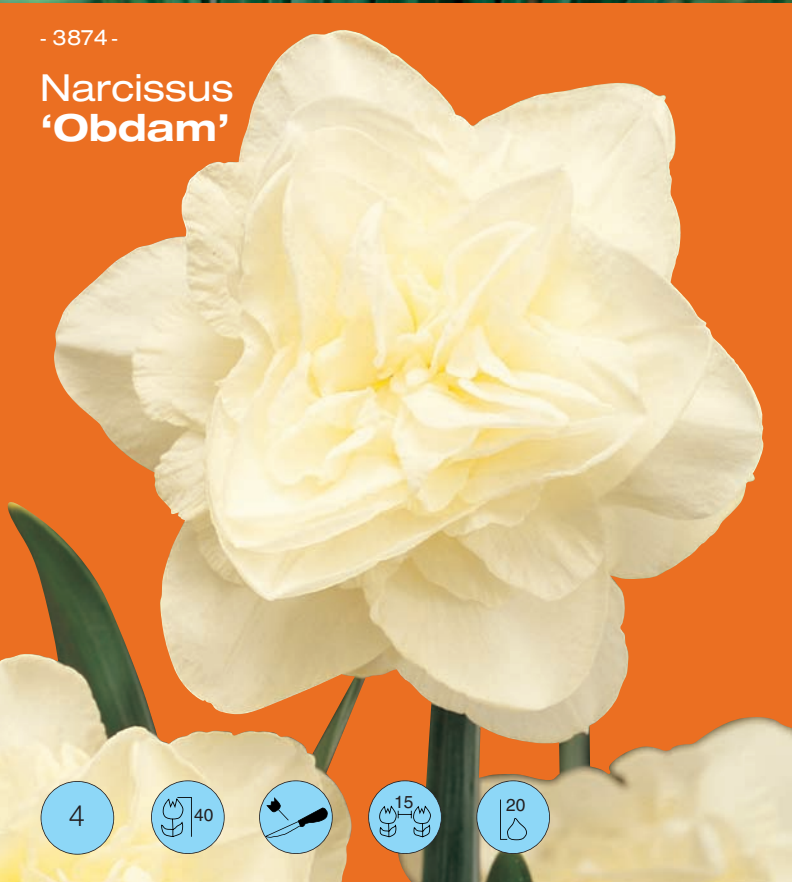
- 3230 -

Narcissus 'Mount Hood'



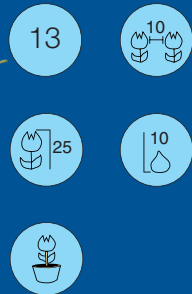
- 3874 -

Narcissus 'Obdam'

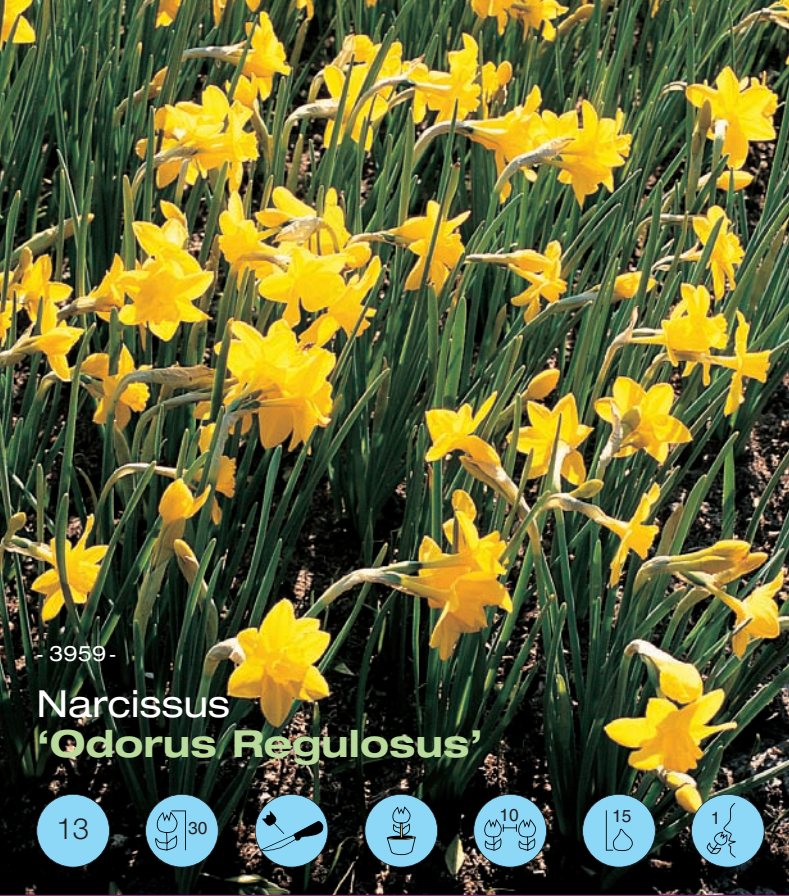


- 3602 -

Narcissus 'Obvallaris'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



- 3852 -

Narcissus
'Parisienne'



- 3326 -

Narcissus
'Passionale'



- 3185 -

Narcissus
'Peaches and Cream'



- 3113 -

Narcissus 'Peeping Tom'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 3092 -

Narcissus 'Pencrebar'



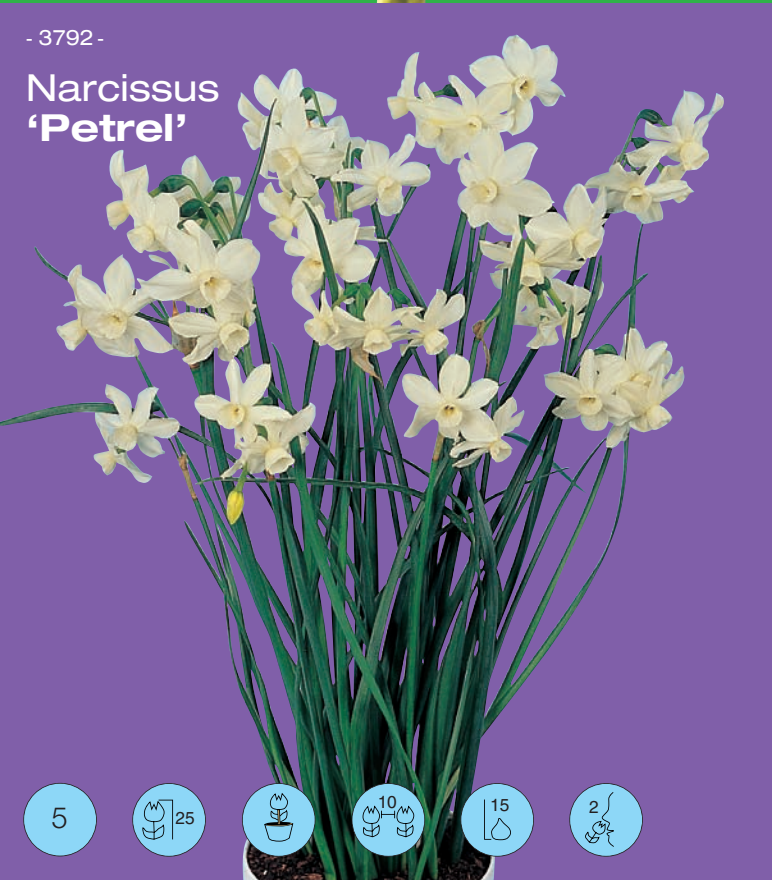
- 3319 -

Narcissus 'Petit Four'



- 3792 -

Narcissus 'Petrel'



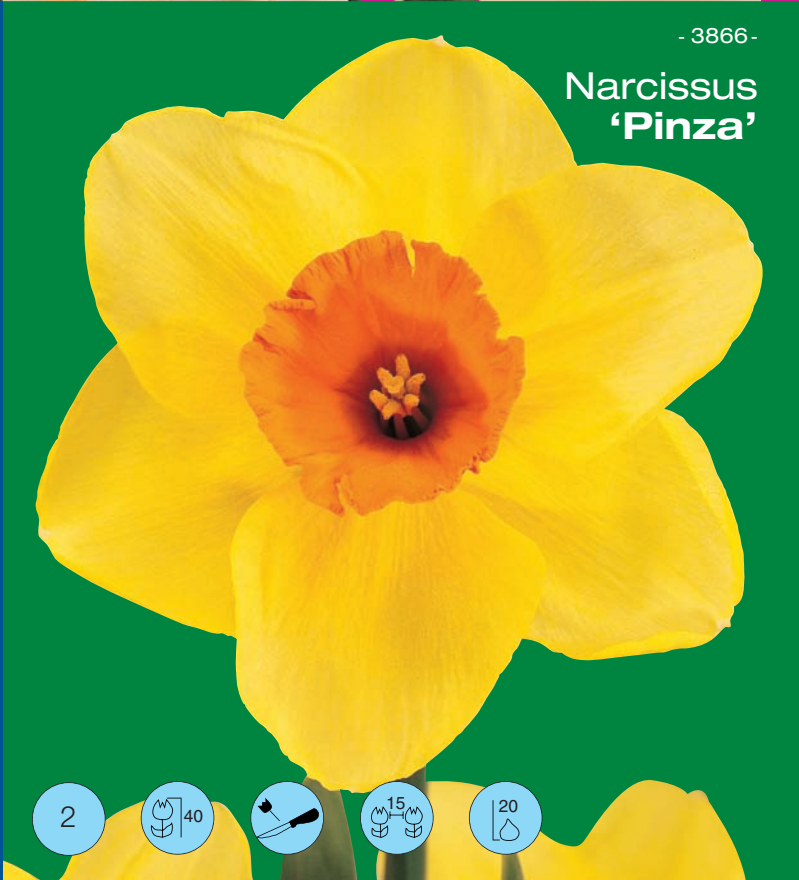
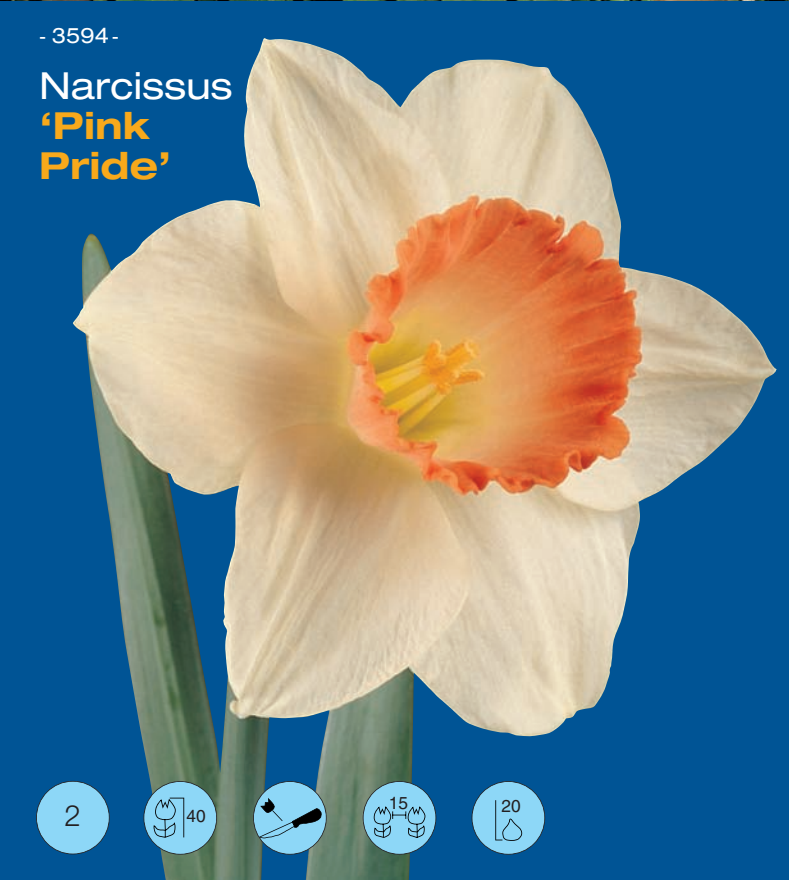
- 3746 -

Narcissus 'Pick Up'



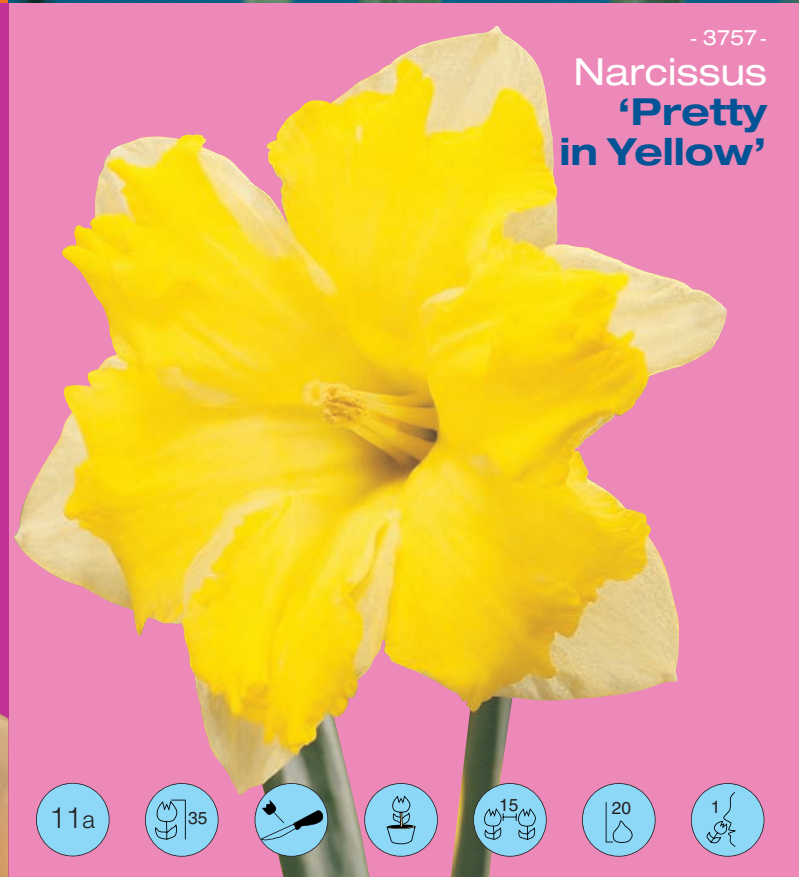
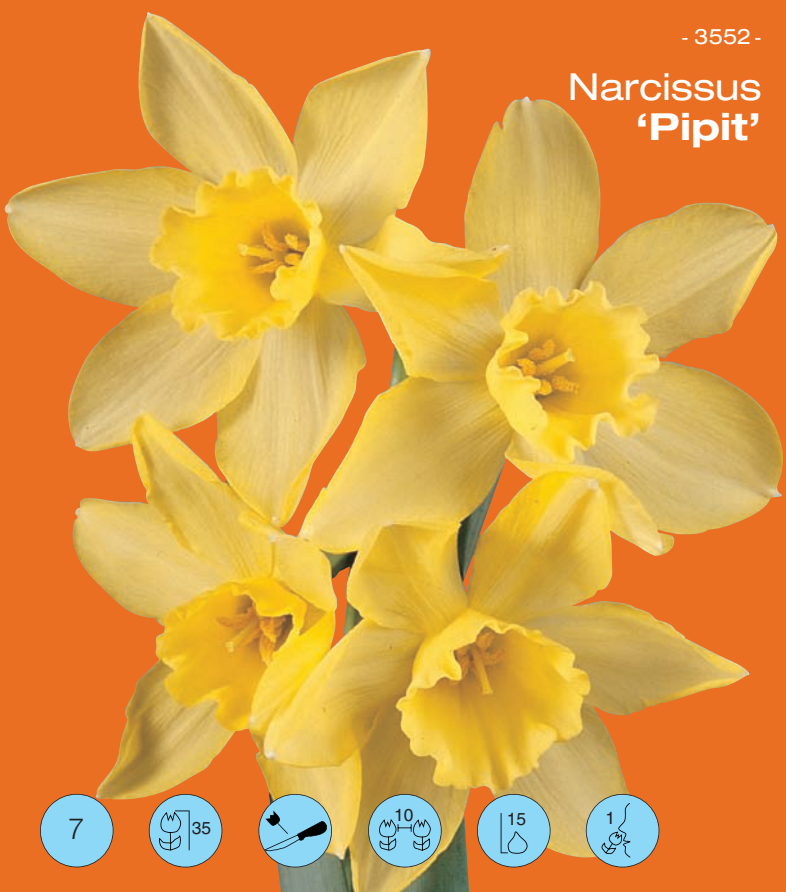
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting				planting								planting			
			sales					sales				sales								sales			



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting				planting								planting			
			sales					sales				sales								sales			

january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------



- 3380 -

Narcissus
'Primeur'

1

35

15

20



- 3066 -

Narcissus
'Printal'

11a

40

15

20



- 3009 -

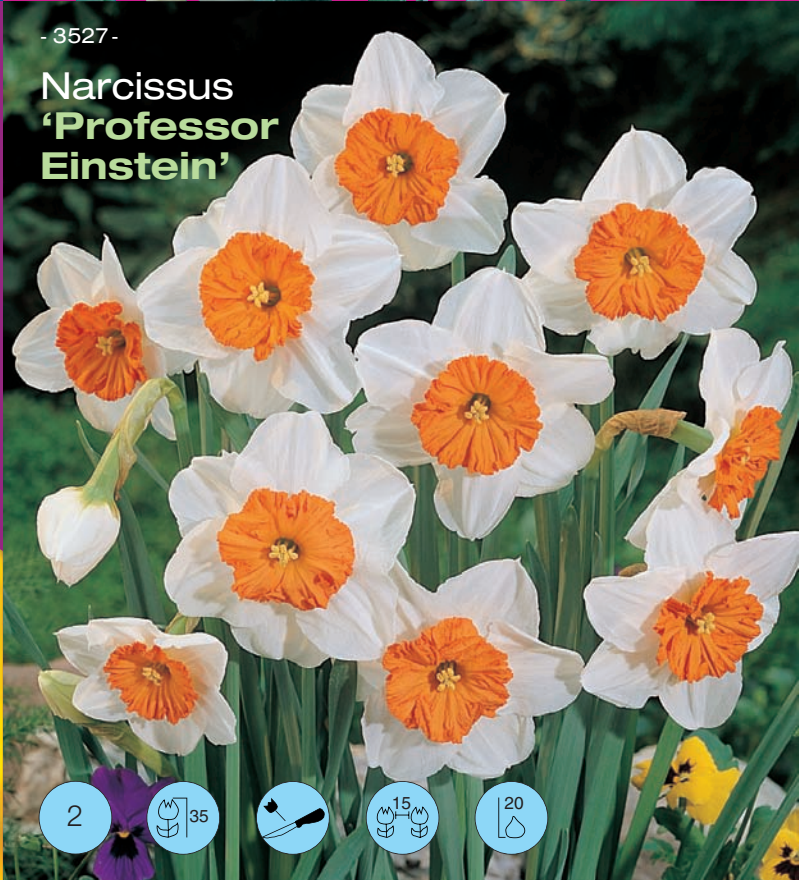
Narcissus
'Prizewinner'

1

40

15

20



- 3527 -

Narcissus
'Professor Einstein'

2

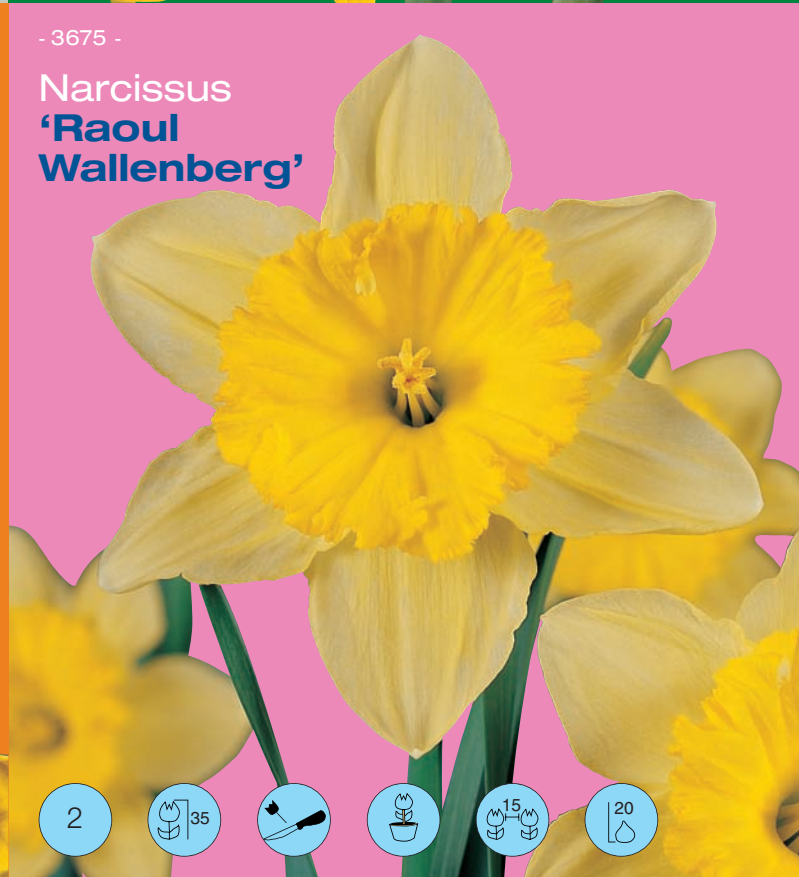
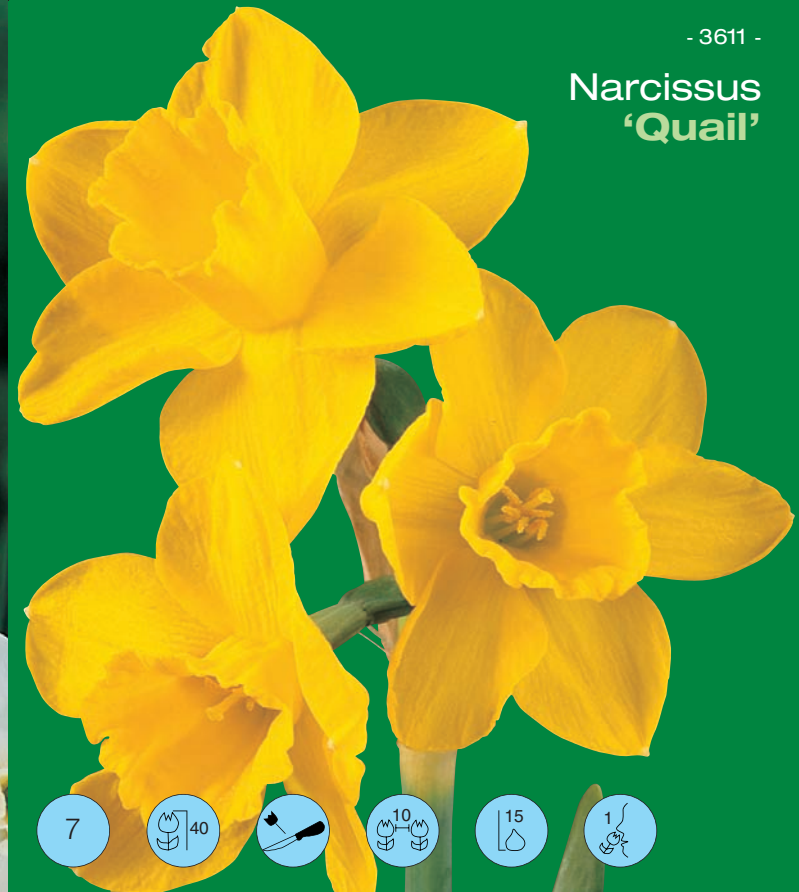
35

15

20

january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales											planting	sales		



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales											planting	sales		

january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------

- 3752 -

Narcissus
'Reggae'



6 25 10 15

- 3815 -

Narcissus
'Replete'



4 40 15 20

- 3489 -

Narcissus
'Rijnveld's Early Sensation'



1 30 10 20

- 3479 -

Narcissus
'Rip van Winkle'



4 15 10 10

january	february	march	april	may	june	july	august	planting	sales	september	october	november	december	january	february	march	april	may	june	july	august	planting	sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	----------	-------	-----------	---------	----------	----------

- 3951 -

Narcissus **'Romance'**



2

35

15

20

- 3951 -

Narcissus **'Romance'**

2

35

15

20

- 3951 -

Narcissus **'Romance'**



2

35

15

20

- 3951 -

Narcissus **'Romance'**



2

35

15

20

- 3951 -

Narcissus **'Romance'**



2

35

15

20

- 3019 -

Narcissus
'Royal Gold'



1

35

15

20

- 3019 -

Narcissus
'Royal Gold'

1

35

15

20

- 3019 -

Narcissus
'Royal Gold'



1

35

15

20

- 3019 -

Narcissus
'Royal Gold'



1

35

15

20

- 3019 -

Narcissus
'Royal Gold'



1

35

15

20

- 3019 -

Narcissus
'Royal Gold'



1

35

15

20

- 3019 -

Narcissus
'Royal Gold'



1

35

15

20

- 3019 -

Narcissus
'Royal Gold'



1

35

15

20



Narcissus
'Sailboat'

7

25

10

15

1

Narcissus
'Sailboat'

7

25

10

15

1



Narcissus
'Sailboat'

7

25

10

15

1



Narcissus
'Sailboat'

7

25

10

15

1



Narcissus
'Sailboat'

7

25

10

15

1



Narcissus
'Sailboat'

7

25

10

15

1



Narcissus
'Sailboat'

7

25

10

15

1



Narcissus
'Sailboat'

7

25

10

15

1

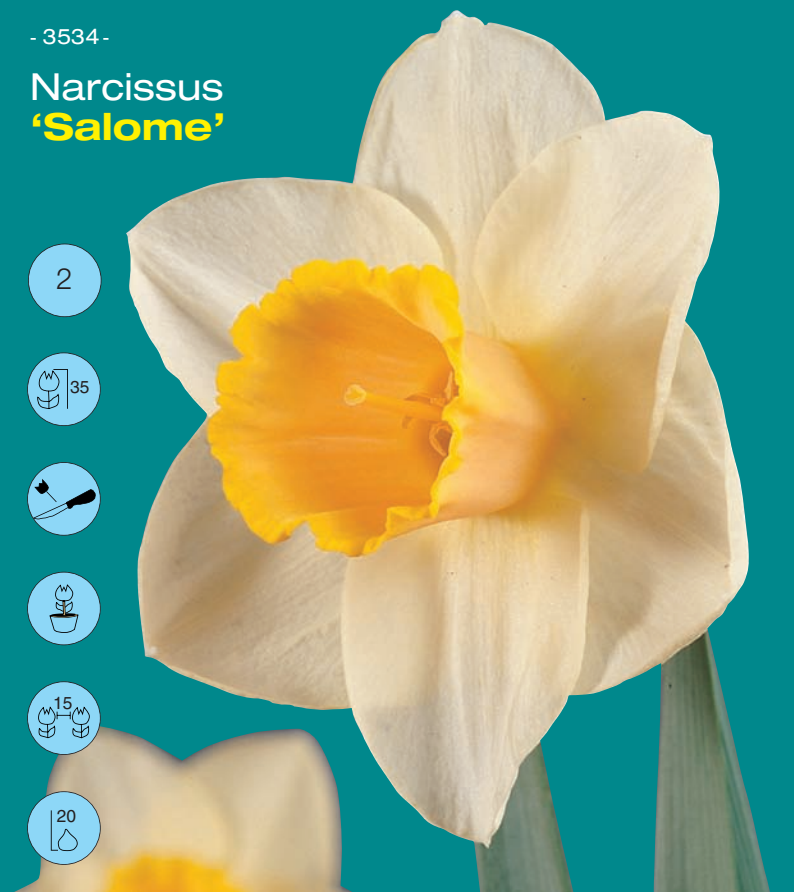
Narcissus ‘Saint Keverne’

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales			planting								planting	sales		



Narcissus ‘Saint Keverne’

- 2
- 40
- 15
- 20



- 3534 -
Narcissus
‘Salome’

- 2
- 35
- 15
- 20



Narcissus
‘Scarlet Gem’

- 8
- 35
- 10
- 15
- 1

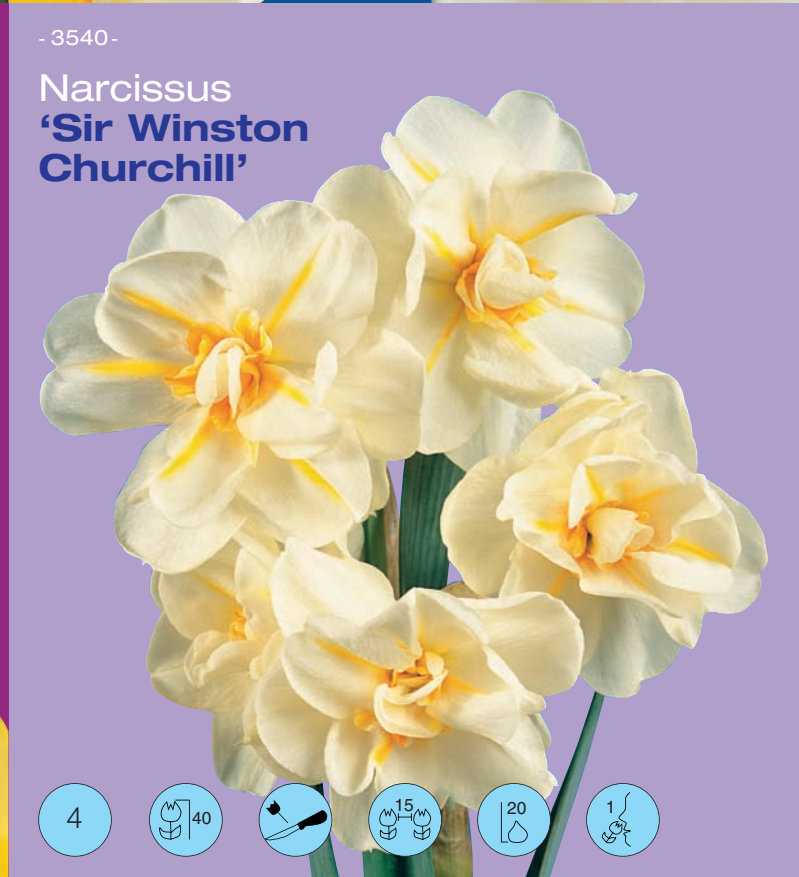
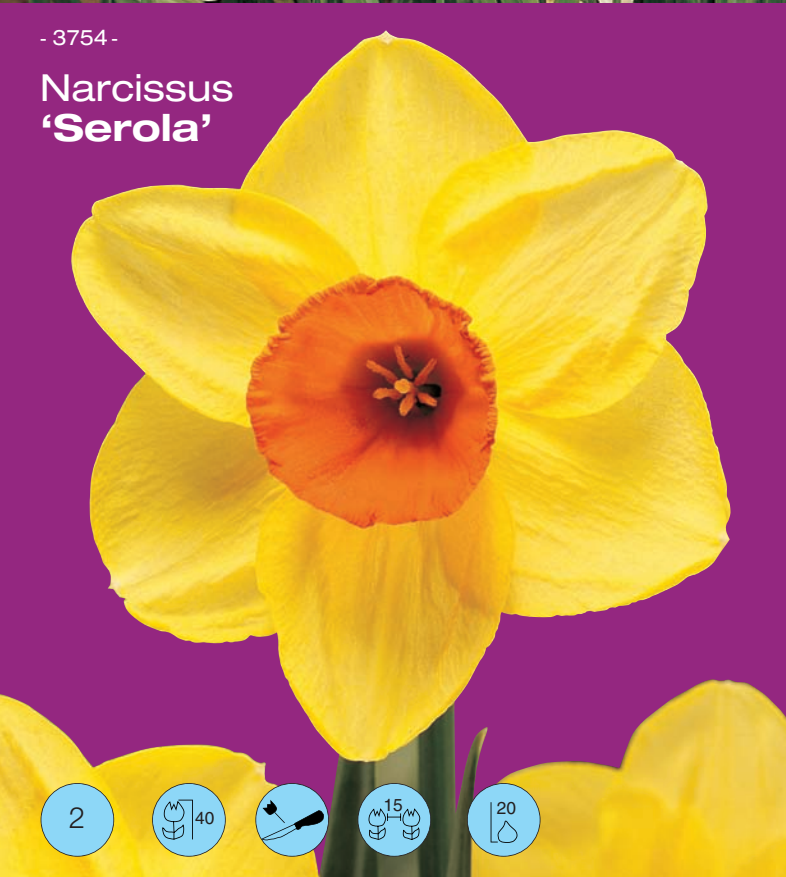


- 3962 -
Narcissus ‘Scarlet Royal’

- 2
- 40
- 15
- 20

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales			planting								planting	sales		

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales			planting								planting	sales		



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales			planting								planting	sales		

Narcissus ‘Slim Whitman’

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales			planting								planting	sales		

- 3763 -

Narcissus ‘Slim Whitman’



2

35

15

20

- 3470 -

Narcissus ‘Soestdijk’



2

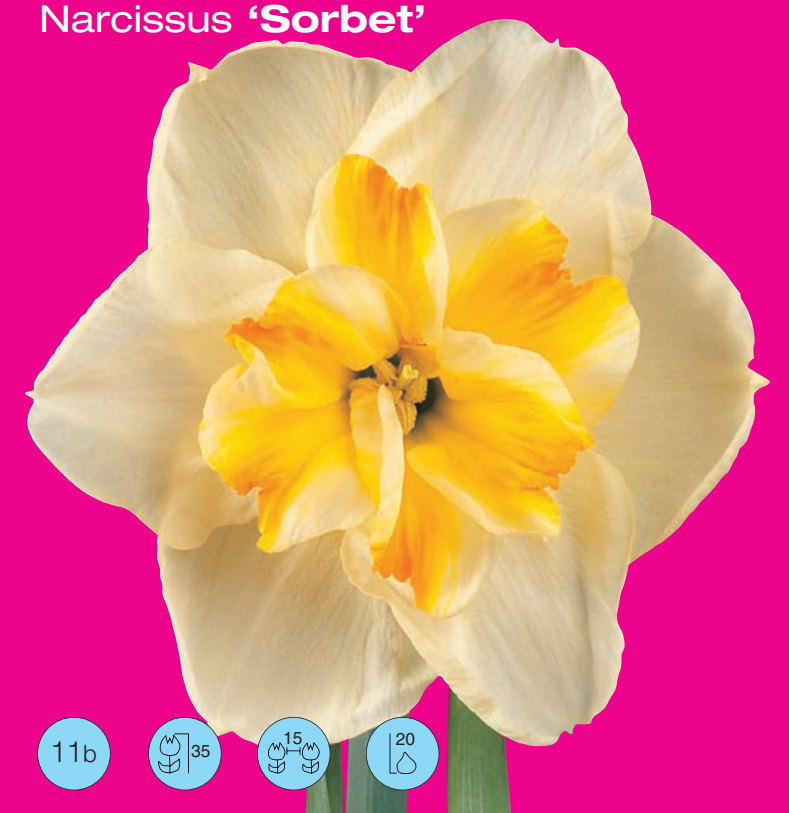
35

15

20

- 3604 -

Narcissus ‘Sorbet’



11b

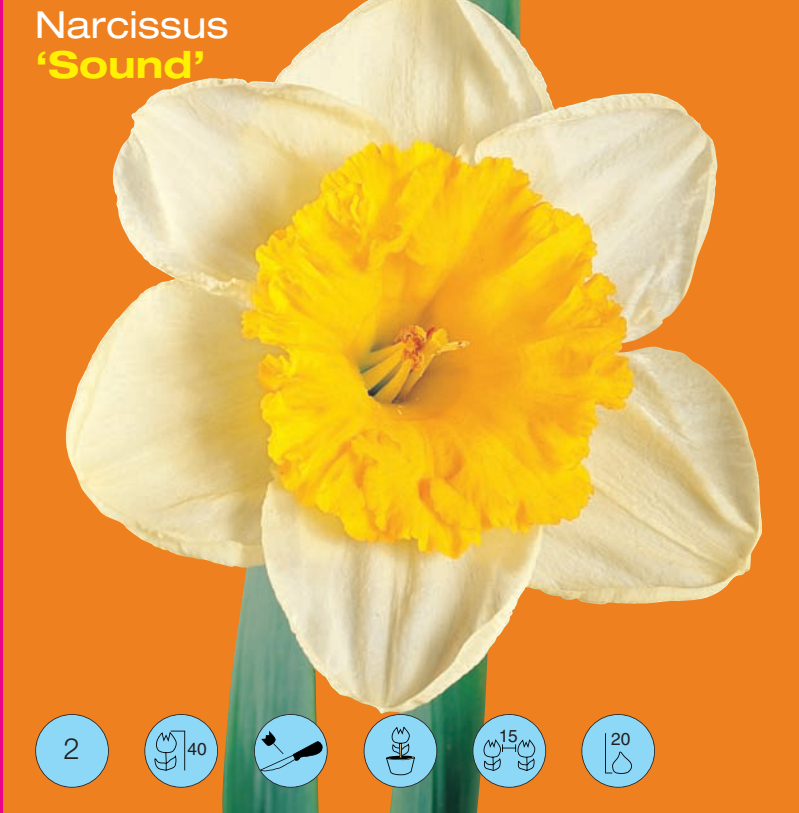
35

15

20

- 3707 -

Narcissus ‘Sound’



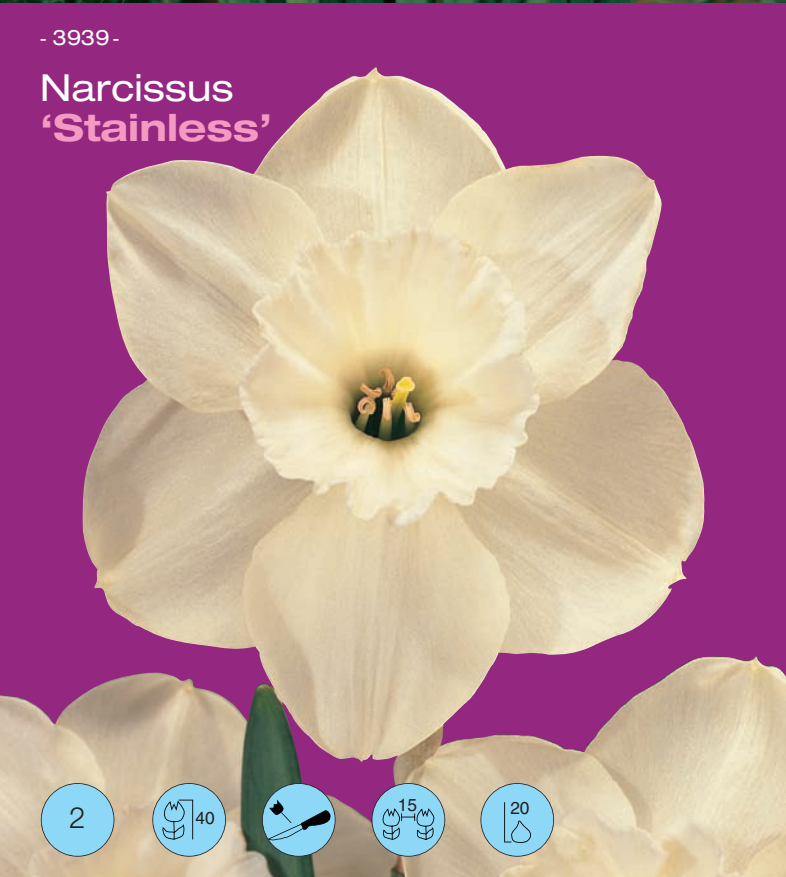
2

40

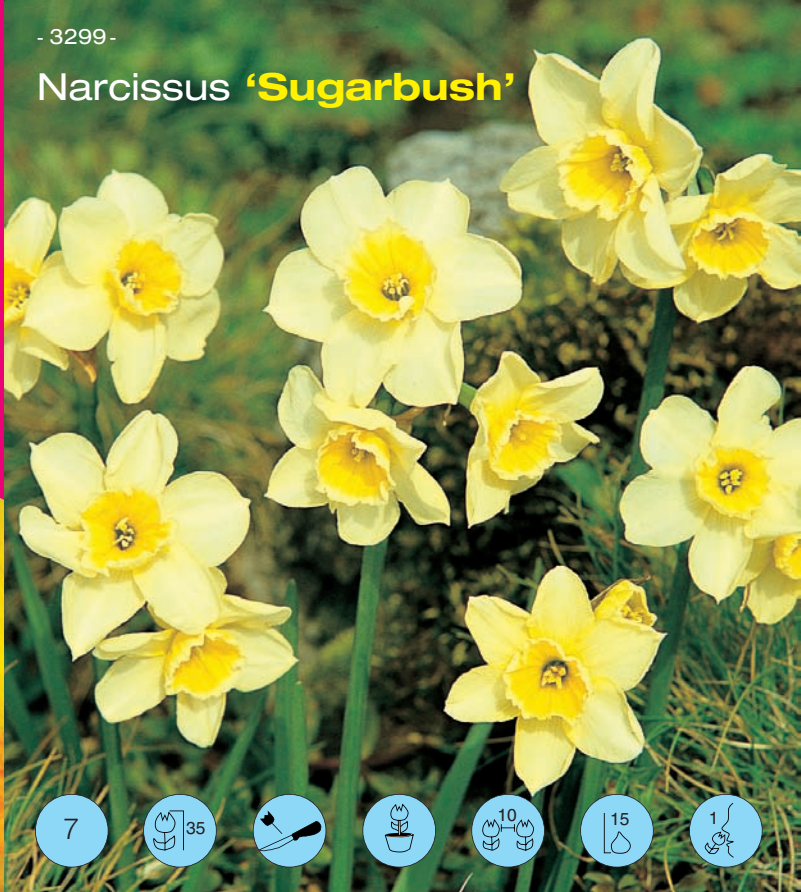
15

20

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales			planting								planting	sales		



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

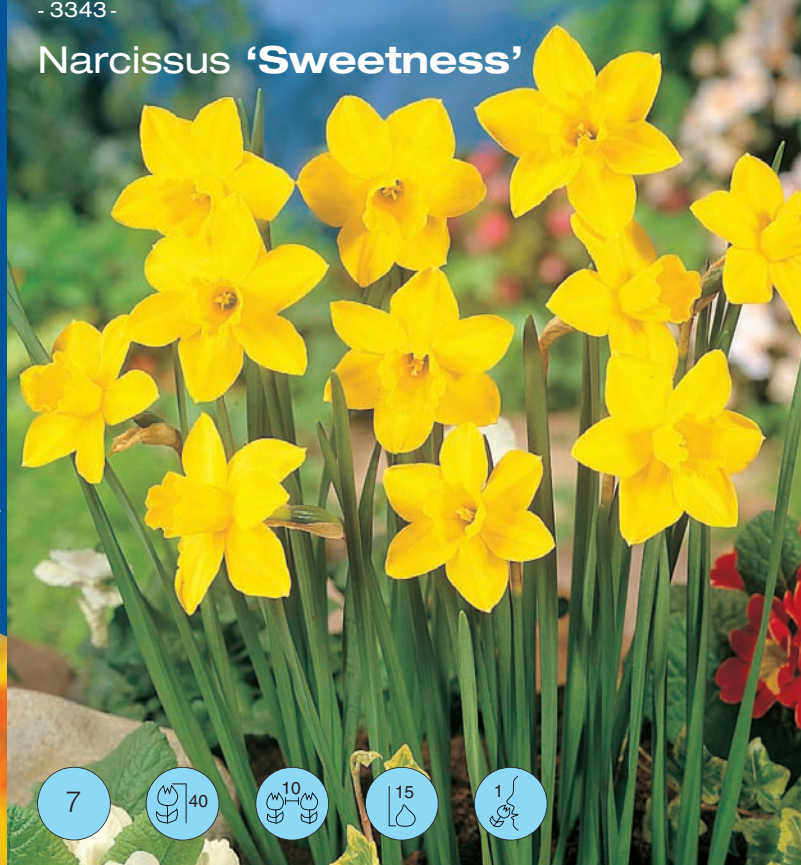
- 3535 -

Narcissus 'Suzy'



- 3343 -

Narcissus 'Sweetness'



- 3555 -

Narcissus 'Tahiti'



- 21598 -

Narcissus 'Tête-à-Tête'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

Narcissus 'Texas'

january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

- 3424 -
Narcissus
'Texas'



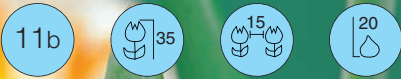
- 3549 -
Narcissus
'Thalia'



- 3369 -
Narcissus
'Topolino'



- 3793 -
Narcissus
'Trepolo'



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales											planting	sales		

- 3848 -

Narcissus
'Tresamble'



5 30 15 1

- 3063 -

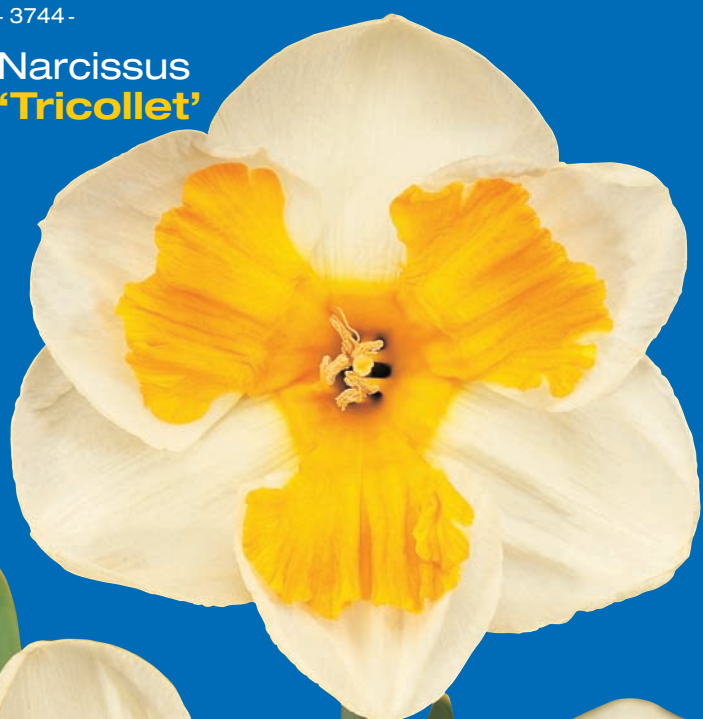
Narcissus
'Trevithian'



7 35 10 15 1

- 3744 -

Narcissus
'Tricollet'



11a 35 15 20

- 3928 -

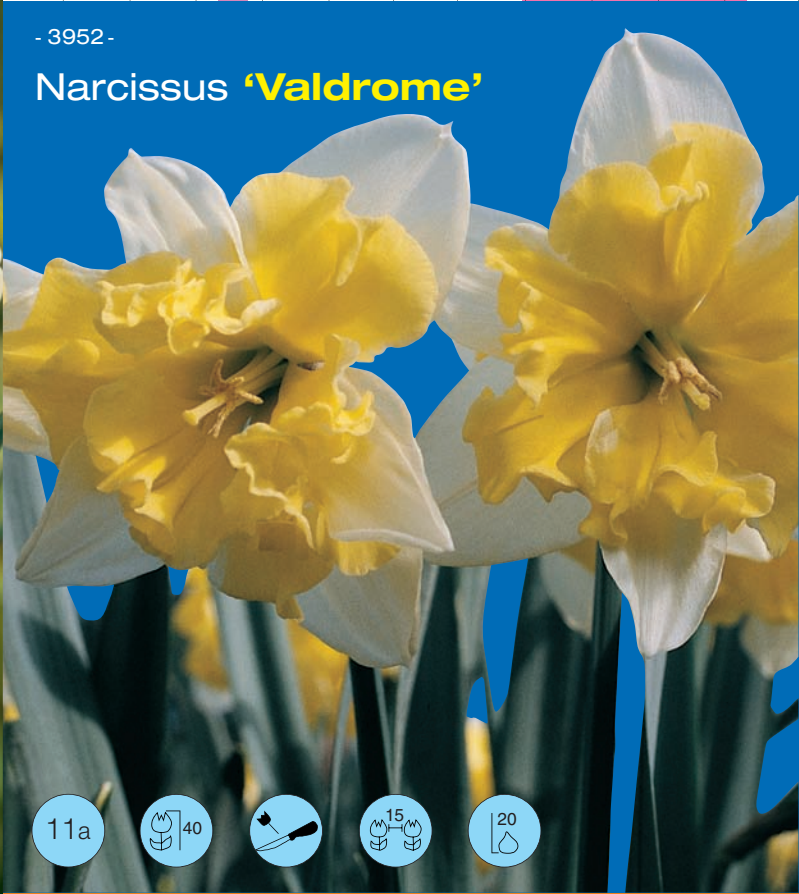
Narcissus 'Tripartite'



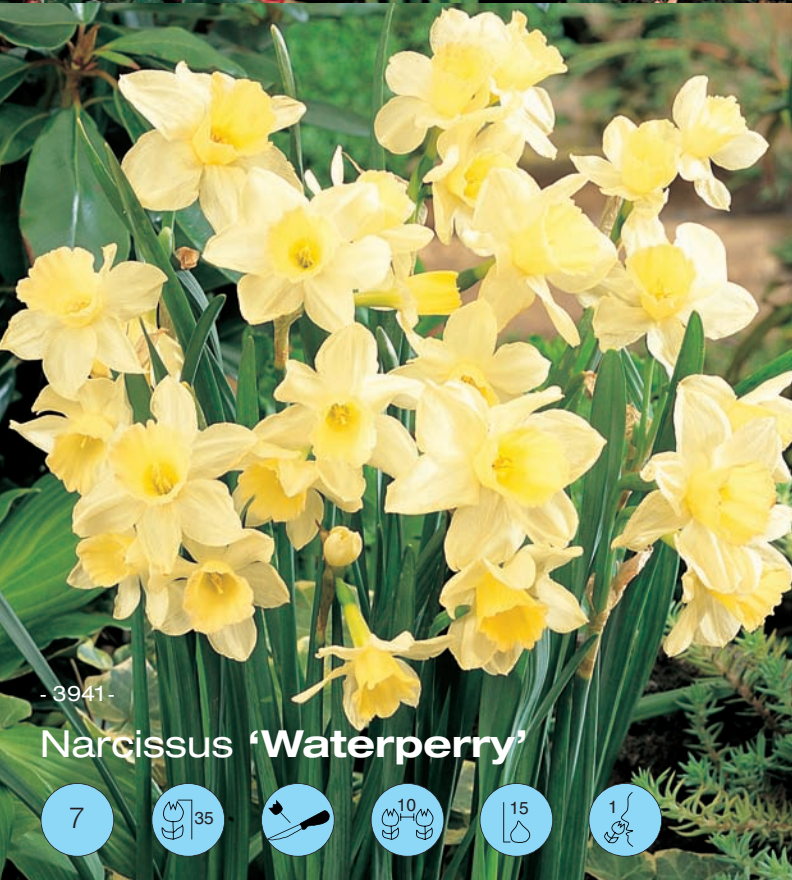
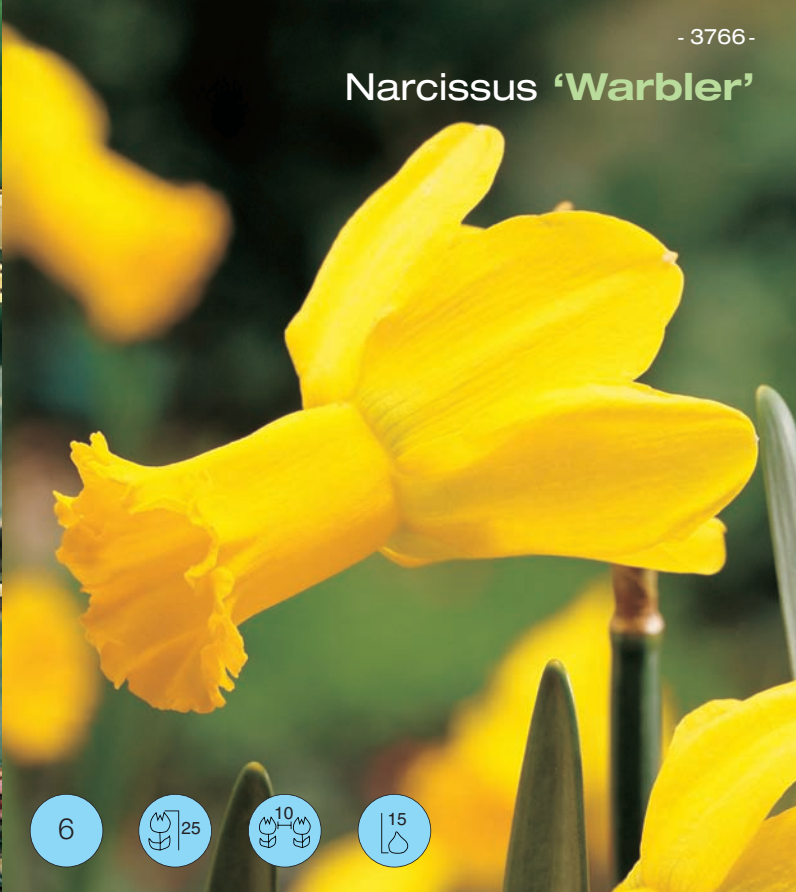
11a 40 10 15 1

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales											planting	sales		

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting				planting								planting			
			sales					sales				sales								sales			



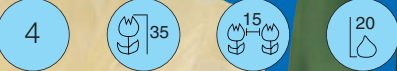
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting				planting								planting			
			sales					sales				sales								sales			



january	february	march	april	may	june	july	august	planting	september	october	november	december	january	february	march	april	may	june	july	august	planting	september	october	november	december
									sales													sales			

- 3813 -

Narcissus
‘White Medal’



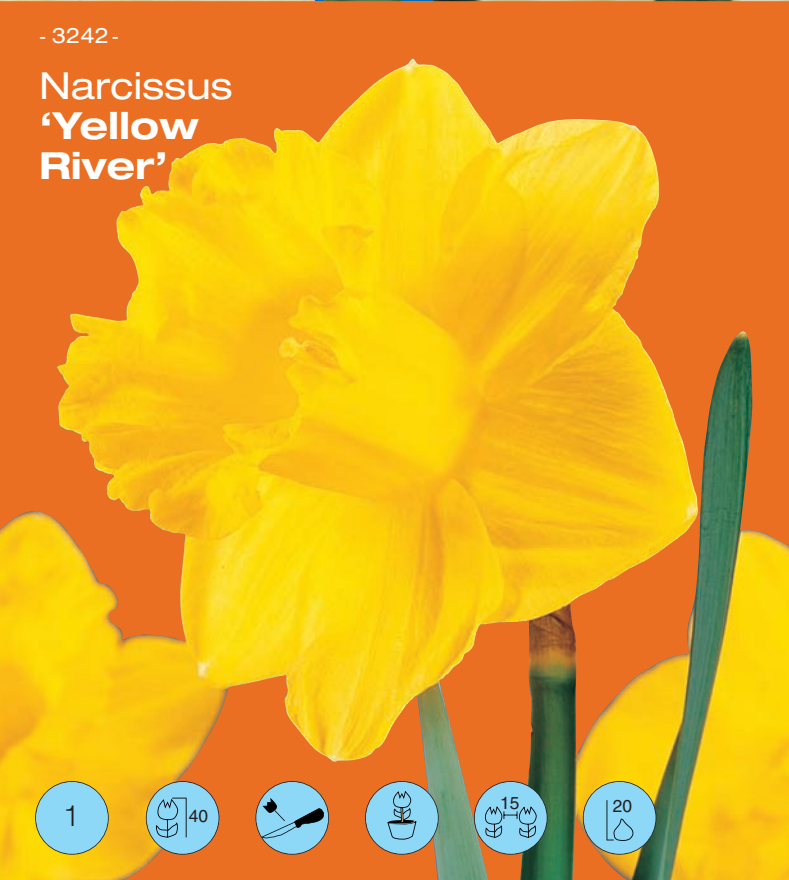
- 3356 -

Narcissus ‘Yellow Cheerfulness’



- 3242 -

Narcissus
‘Yellow River’



- 3627 -

Narcissus
‘Yellow Sun’



january	february	march	april	may	june	july	august	planting	september	october	november	december	january	february	march	april	may	june	july	august	planting	september	october	november	december
									sales													sales			

january	february	march	april	may	june	july	august	september	october	november	december
								planting			
								sales			

- 3460 -

Narcissus 'Ziva'



8







Hyacinth





Hyacinth

The current assortment of hyacinths has been developed from *Hyacinthus orientalis*, a species named already in 1562, and which originates in central and southern Turkey, North Western Syria and Lebanon. Hyacinth species belong to the Liliaceae. They are true bulbs that will flower for more than one year in succession and are classified as spring-flowering bulb plants. Planted in the autumn, they are moderately winter hardy. The bulb is surrounded by a number of dry bulb scales that are a crème to deep bluish-purple in colour depending on the flower colour. The stem reaches a height of about 25 cm. The inflorescence is a spike: a flower stem full of 40 to 50 sweetly scented florets or 'bells', the number of bells depending on the size of the bulb. Hyacinths have a distinctive fragrance. Research has shown that the strength of this scent varies

widely among the cultivars in the assortment. The pictures of the cultivars are accompanied by an indication of the strength of the fragrance: 4 for a heavily scented cultivar, 1 for a very light scent.

Technical production information

About 1100 hectares are devoted to hyacinth bulb production in the Netherlands; this is more than 90% of the world's entire production. Optimum growing conditions are a marine climate, calcareous sandy soil with a pH of 7 to 8, controlled drainage and, to prevent diseases, several years between growing these bulbs at the same location. The planting material is planted out in the autumn (October/November) at a planting depth of about 20 cm. Beds are mulched with straw to prevent frost damage. The bulbs are lifted every year in June/July.



It takes an average of three years for planting material to mature into saleable bulbs but bulbs are lifted every year and sorted into planting material and saleable bulbs. When they reach a circumference of 15 cm., they are considered saleable; the largest saleable size is 19 cm. Bulbs smaller than 15 cm. are replanted.

The larger the bulb, the heavier and larger the flower spike and the more bells it will have per stem. Large flower spikes are often top heavy and can easily fall over without support. Breeding efforts are now being devoted to developing genetically shorter inflorescences.

The 'multiflora' types display a different inflorescence. Producing these involves destroying the main bud of the bulb during the year previous to flowering. Growers then plant these bulbs which produce a cluster of several small bulbs instead of the usual large single bulb. These clusters of bulbs are harvested, sold, and produce an average of 5 smaller spikes per cluster. Breeding has also produced cultivars displaying this characteristic, an example being the Festival cultivars.

Temperature treatments

By subjecting the bulbs to various temperatures after lifting and drying, it is possible to make the bulbs suitable for flowering at a certain time and/or for a certain application. The temperature treatment consists of applying temperatures between 30 and 17°C for a certain number of weeks. This treatment stimulates the initiation and development of the leaves and the flower inside the bulb. Next, the bulbs are subjected to 8 to 13 weeks of cold temperatures from 9 to 13°C during which time the leaves and flower emerge and start to grow.

This is required to produce a plant and flower of good quality. The temperatures depend on the cultivar and the use. Once the number of cold weeks exceeds 10 weeks, any additional weeks will increase the height of the plant and its flower spike. This is particularly important for producing hyacinths for cut flowers. The temperature treatment is started as soon as the bulbs have been lifted and dried; by lifting earlier (early June), the temperature treatments can be begun earlier so that the bulbs can also be forced into flower earlier – starting in early November. This kind of temperature treatment for early flowering is known as 'preparation'; these bulbs are then known as 'prepared hyacinths'.

Uses

Hyacinths can be used as follows:

- PARK, GARDEN AND CONTAINER PLANTING
- POT PLANTS
- CUT FLOWERS

PARK, GARDEN AND CONTAINER PLANTING

Hyacinths are perfect for outdoor planting and flowering. Depending on spring weather conditions, they will bloom from mid-April to mid-May. Since the larger bulbs (bigger than 17 cm.) also produce heavier flower spikes that can easily fall over unless individually supported, bulb sizes 15-16 are recommended. Hyacinths are susceptible to frost damage, so the best results will be achieved by planting the bulbs early enough to develop roots, planting them deep enough to protect them (twice the height of the bulb), and mulching them with organic material. When planting in containers, extra attention should be devoted to preventing frost damage. All hyacinth cultivars can be used for outdoor planting.

Although it is preferable to remove hyacinth bulbs from the garden after flowering, they can be left undisturbed for one or more years. Success in succeeding years will then depend on allowing the bulbs to senesce for at least 4-6 weeks after flowering and having soil temperatures of at least 20°C. The bulbs will often produce a few bulblets, the effect next year being similar to a multiflora hyacinth. Research on a limited number of cultivars indicates that some can produce flowers for five years in a row. The findings of this study show different results for various climate zones. More information about this

can be found at www.bulbsonline.org under professional/landscaping information.

POT PLANTS

Most cultivars, as indicated by the symbols accompanying the pictures, are also suitable for use as pot plants. For this application, one or more large plants should occupy each pot. Modified temperature treatments and production conditions in the greenhouse will be major factors in the final result.

CUT FLOWERS

Cultivars with genetically longer flower stems are particularly suited for use as cut flowers and are indicated as such by the symbols accompanying the pictures. Subjecting the bulbs to a longer cold period and following the planting procedure by adding a layer of soil on top of the bulbs to produce additional height are required for producing cut flowers.

Research has clearly shown that the keeping quality and vase life of cut hyacinths are improved when a piece of the basal plate below the flower stem is left attached. In this way, the flower stem and the leaves are kept intact. Special equipment based on the principle of an apple bore can be used to harvest the bulbs in this way.





Hyacint

Het huidige assortiment hyacinten is ontstaan vanuit *Hyacinthus orientalis* die oorspronkelijk voorkomt in Centraal en Zuid Turkije, Noordwest Syrië en Libanon en al wordt genoemd in 1562. De hyacint behoort tot de familie van de Liliaceae, heeft een meerjarige gerokte bol en wordt gerekend tot de zogenaamde voorjaarsbloeiende bolgewassen; wordt in het najaar geplant en is matig winterhard. De bol is omgeven door een aantal droge, lege bolrokken die afhankelijk van de bloemkleur crème tot donker blauwpaars gekleurd kunnen zijn. De steel heeft een lengte tot ongeveer 25 cm. De bloeiwijze is een tros; een bloemsteel waaraan zich tot 40-50 welriekende bloempjes of 'nagels' aan kunnen bevinden, afhankelijk van de grootte van de bol. Hyacinten hebben een specifieke geur. Onderzoek naar de intensiteit van de geur heeft uitgewezen dat er binnen het assortiment grote verschillen bestaan. Bij de afbeeldingen geeft 4 een zware overheersende geur aan en 1 een heel lichte geur.

Teelttechnische informatie

In Nederland wordt ongeveer 1100 ha geteeld, ruim 90% van het wereldareaal. Als optimale groeiomstandigheden gaat men uit van een zeeklimaat, kalkrijke zandgronden met een pH van 7 tot 8, een beheersbare waterhuishouding en ter voorkoming van ziekten dient een ruime vruchtwisseling te worden aangehouden. Het uitgangsmateriaal (plantgoed) wordt in het najaar, oktober-november geplant; een plantdiepte van ongeveer 20 cm en afgedekt met stro om vorstschade te voorkomen. De bollen worden jaarlijks geroid in de periode juni-juli. Van plantgoed tot verkoopbare bol verloopt gemiddeld een periode van drie jaar; elk jaar wordt de bol opnieuw geplant en geroid. Na het rooien van de bollen worden ze gesorteerd naar grootte, bollen tot 15 cm worden gerekend tot het plantgoed, vanaf 15 cm bolomvang spreekt men van leverbaar; de grootste leverbare maat is 19 cm. Hoe groter de bol hoe zwaarder en groter de bloemsteel en ook hoe meer bloempjes per steel. Grote bloemstelen zijn vaak topzwaar en zullen



zonder ondersteuning makkelijk 'omvallen'. Via veredeling ontwikkelt men momenteel cultivars die van nature korter blijven. Een afwijkende bloeiwijze is het 'multiflora' type; bij deze hyacinten is in het voorafgaande jaar de hoofdknop in de bol 'vernietigd'. Deze bollen zijn daarna nog een jaar opgeplant door de teler, in plaats van een normale ronde bol wordt nu een cluster van meerdere kleinere bolletjes geoogst die per bolletje één bloemsteeltje en per bol of cluster gemiddeld 5 bloemsteeltjes produceert. Door veredeling zijn ook cultivars met deze eigenschap ontwikkeld; een voorbeeld zijn de Festival typen.

Temperatuurbehandelingen

Onder invloed van verschillende temperaturen na het rooien en drogen van de bollen is het mogelijk om de bollen geschikt te maken voor een bepaald bloeitijdstip en/of een bepaalde toepassingsmogelijkheid. De temperatuurbehandeling bestaat uit temperaturen tussen de 30 en 17° C uitgedrukt in weken waarbij de aanleg en ontwikkeling van het blad en de bloem in de bol worden gestimuleerd. Voor de uitgroei van blad en bloem zijn 8 tot 13 weken koude, temperaturen van 9 tot 13°C, noodzakelijk om een goede kwaliteit plant en bloem te krijgen. De temperaturen zijn afhankelijk van cultivar en gebruikstoepassing. Hoe groter het aantal weken koude, meer dan 10 weken, hoe langer de plant en bloemsteel zal worden; dit is o.a. van belang voor de produktie van snijhyacinten. De temperatuurbehandeling laat men ingaan op het moment dat de bollen gerooid en gedroogd zijn; door eerder te rooien, begin juni, kan men ook eerder met de noodzakelijke temperatuurbehandelingen beginnen waardoor de hyacinten ook eerder, vanaf begin november, kunnen bloeien. Een dergelijke temperatuurbehandeling voor vroege bloei noemt men *prepareren*; men spreekt dan van geprepareerde hyacinten.

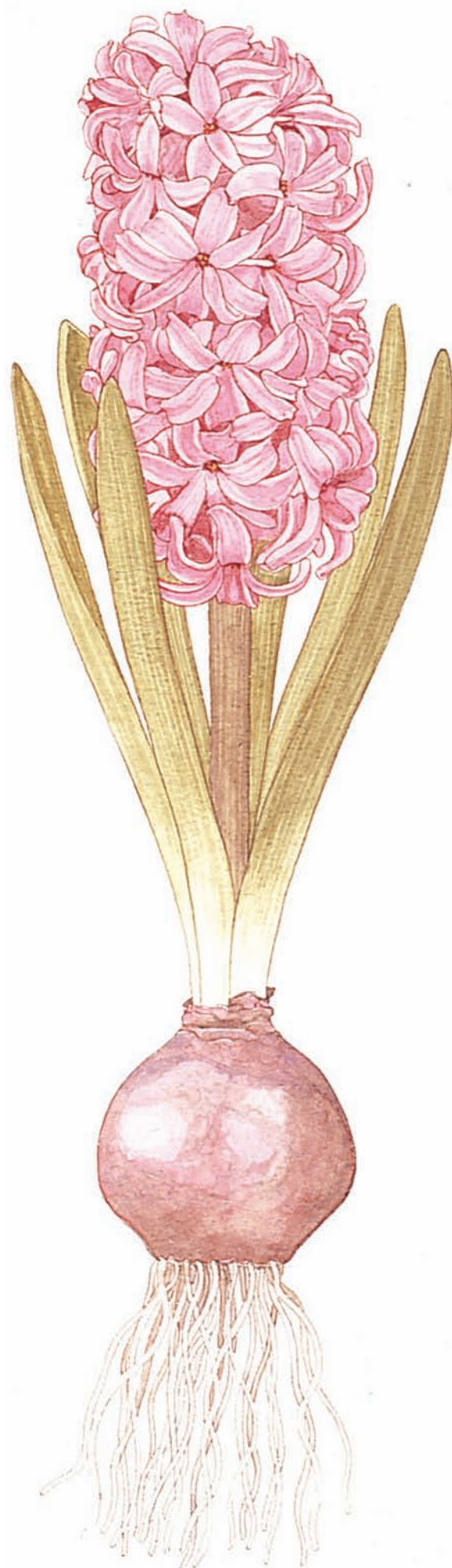
Gebruiksmogelijkheden

Hyacinten zijn voor de volgende doeleinden te gebruiken:

- PARK-, TUIN- EN BAKBEPLANTING
- POTPLANT
- SNIJBLOEM

PARK-, TUIN- EN BAKBEPLANTING

Hyacinten zijn bij uitstek geschikt voor buiten beplanting en bloeien afhankelijk van de voorjaarsomstandigheden in de periode half april-half mei. Gezien het feit dat de dikkere bollen, > 17 cm, ook zwaardere bloemtrossen geven die makkelijk omvallen, tenzij men elke bloemsteel afzonderlijk 'steunt', zijn de bolmaten 15-16 cm en 16-17 cm aan te raden. Hyacinten zijn vorstgevoelig; tijdig en voldoende diep planten, tweemaal de hoogte van de bol, en afdekken met organisch materiaal zal het beste resultaat geven. Bij bakbeplanting zal men extra aandacht moeten besteden aan het voorkomen van vorstschade. Alle hyacinten cultivars zijn te gebruiken voor buitenbeplanting. Hoewel hyacinten bij voor-



keur na de bloei uit de tuin worden verwijderd kunnen de bollen nog één of meerdere jaren in de tuin blijven staan. De bollen worden dan niet uit de grond gehaald; een minimale groeiperiode van 4-6 weken na de bloei en grondtemperaturen van minimaal 20°C zijn dan wel noodzakelijk. Vaak zullen de bollen dan enigszins gaan verkleuren en krijgt men het effect van een multiflora hyacint. Onderzoek met een beperkt aantal cultivars geeft aanbevelingen voor meerjarenbloei van 5 achtereenvolgende jaren. De resultaten uit dit onderzoek verschillen per klimaatzone; meer informatie vindt u op www.bulbsonline.org onder professional/bloembollen in het groen.

POTPLANT

De meeste cultivars, zoals aangegeven bij de afbeeldingen, zijn ook geschikt om als potplant te gebruiken. Uitgangspunt moet zijn een of meerdere stevige planten per pot. Aangepaste

temperatuurbehandelingen en teeltomstandigheden in de kas zijn van grote invloed op het uiteindelijke resultaat.

SNIJBLOEM

Voor de cultivars met van nature iets langere bloemstelen zijn geschikt om als snijbloem te worden gebruikt zoals aangegeven bij de afbeeldingen. Een langere koude periode en na het opplanten een laag grond op de bollen, waardoor ook extra lengte wordt verkregen, zijn noodzakelijk om van een snijbloem te kunnen spreken. Uit onderzoek is heel duidelijk naar voren gekomen dat de houdbaarheid en het vaasleven worden verbeterd wanneer het stukje van de bolbodem onder aan de bloemsteel blijft zitten. Op deze manier blijven bloemsteel en blad ook als één geheel intact. Er bestaat aparte apparatuur, gebaseerd op het principe van een appelboor, om op deze manier de bol te verwijderen.





风信子

当前的风信子品种是从 1562 年命名的风信子品种所发展而来的, 它的原产地在土耳其的中部和南部、叙利亚的西以及黎巴嫩。风信子属于百合科, 春季开花的球根植物, 它们的种球可连续多年开花。在秋季种植后, 种球不能度过严冬。根据花的颜色, 种球被奶油色到蓝紫色的鳞片所包裹, 它们的茎可生长到 25 厘米高。

它们的花序穗状: 在花茎上布满 40 到 50 朵带香味的小花或‘钟形花’。小花的多少取决于种球的大小。

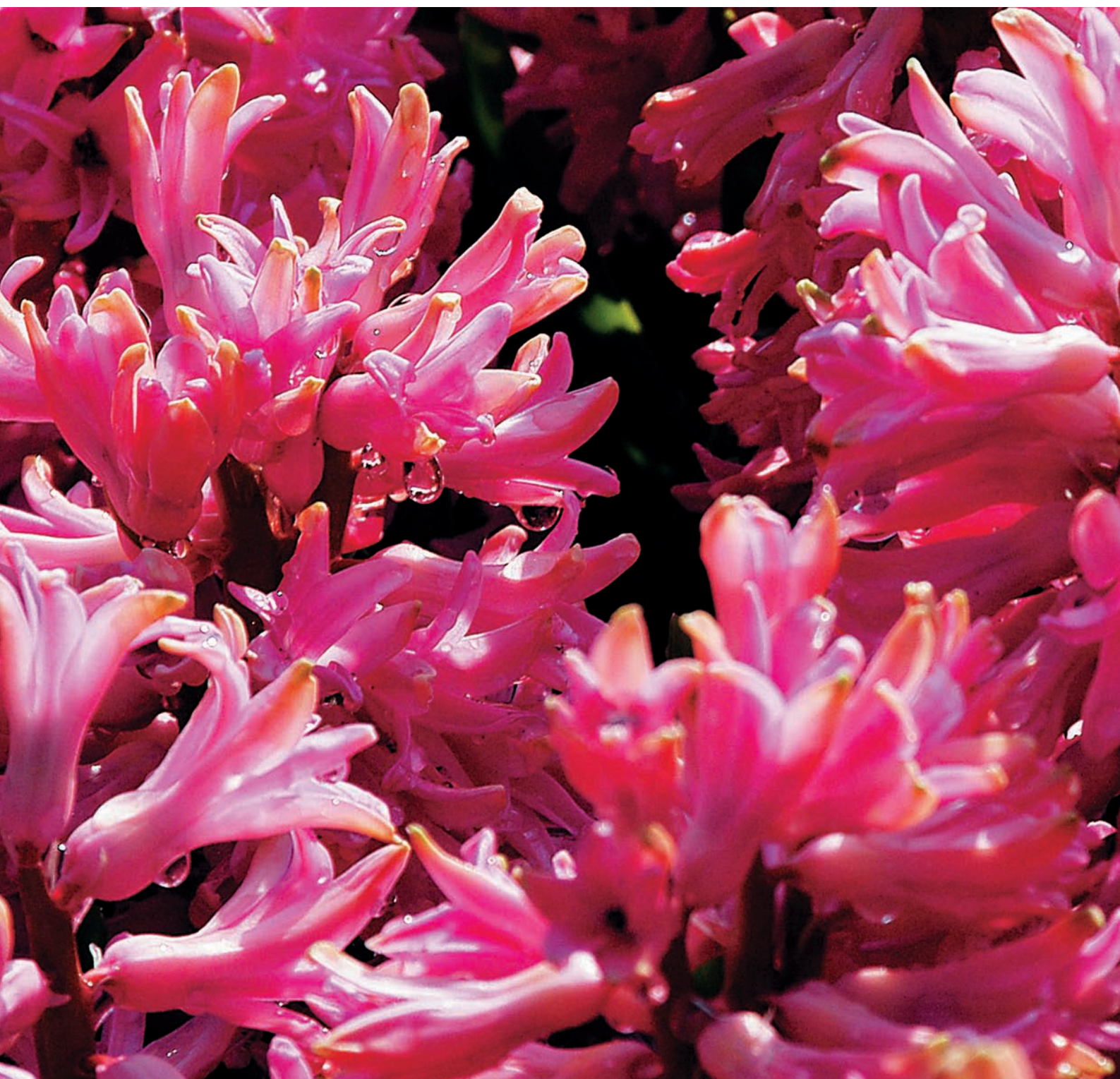
风信子具有与众不同的香味。有研究证明, 其不同品种之间香味的大小区别很大。在该品种图册中也同时附有各品种香味强度大小的指示: (....) 表示强力香型, 只有一个的表示香味较弱。

生产技术资料

在荷兰有 1100 公顷的土地用于风信子种球的生产, 这占到世界风信子总产量的 90% 以上。

风信子种球最佳的生长条件为海洋性气候, 石灰性沙质土壤, pH 在 7 到 8, 排水性能良好, 为了防止病虫害, 在相同的土地上种植几年后, 应进行轮作。

风信子的种球在秋季 (10 月/11 月) 种植, 种植深度为 20 厘米。种植床上覆盖稻草以防止冻害。种球在每年的 6/7 月份从地里被收起。从最初的种植材料到成为可销售用的种球, 一般平均需要 3 年的时间。虽然如此, 种球还是每年被收获起来并进行分级, 将种植材料和可销售



用种球分开。当种球的周长达到 15 厘米就是可销售用种球了, 销售用球最大的规格为 19 厘米, 而小于 15 厘米的种球将作为种植材料进行种植。

种球的规格越大, 花序就越大, 其上面的小花就越多。大的花序头部太重, 如果没有支撑就经常容易倒伏。目前, 育种工作正致力于开发基因型短的花序。

‘多花型’的风信子是另外一种类型的花序。它是在前一个开花季节将种球的主花芽破坏掉, 这样种植者就可以生产出丛生的许多小球, 而不是一个单独的大球。这些丛生的小球经收获、销售、种植后, 在这组小球上可平均长出 5 个小的花序出来。育种人员也在培育有这种特性的新品种, 作为节日用品种

温度处理

在种球收获、干燥后, 通过对其进行不同的温度处理, 可使种球在特定的时间或为一定的需要而进行开花。

温度处理包括两个部分, 首先是对种球进行几周 30° 到 17°C 之间的处理, 这是为了促进种球内部叶片和花的形成和发育。接下来, 在叶片和花形成并开始生长后, 对种球进行 8 到 13 周 9° 到 13°C 的冷处理。这是为了提高植株和花的质量。所用的温度取决于品种和最后的用途。超过 10 周的冷处理都是为了使植株和花序增长。这对于风信子的切花生产尤为重要。

温度处理在种球收获和干燥后就开始进行。通过提前收获 (6月上旬), 温度处理就可以提前进行, 所以促成栽培



所得到的花也会早, 如 11 月上旬就可开花。这种为提前开花而做的温度处理我们将其称为‘准备’, 这些种球就被成为‘经过准备的风信子’。

用途

风信子可以有以下一些用途:

- 用于公园、花园或容器栽培中
- 作为盆花使用
- 作为切花使用

公园、花园和容器栽培

风信子较适合于室外栽培和开花。根据春季的温度情况, 它们会在 4 月中旬到 5 月中旬开花。由于大规格的种球(大于 17 厘米)可以生长出大的花序, 如果没有支撑它们会倒伏。所以建议使用 15-16 厘米规格的种球。风信子容易受到冻害, 所以要得到好在效果种球应尽早种植, 以保护根系, 根据所在的温度区域, 应将种球种植到 2 倍到 3 倍于种球高度的深度, 地面上并覆盖有机材料。如果进行容器栽培时, 更应注意防止种球受到冻害。所有的风信子品种都可用于室外栽培。

尽管风信子的种球在开花后最好是从花园中挖起来, 但是它们也可在原地连续种植一到多年。要成功地做到这一点, 就取决于以后几年风信子种球在开花后到衰老期间, 土壤温度至少有 4-6 周在 20°C。老的种球通常会产新种球, 以后几年的效果就象多花型风信子。有研究表明, 一些品种可连续开花 5 年。这个研究在不同的温度带所得到的结果有差异。如需得到相关更多的信息, 可在网站 www.bulbsonline.org 专业生产中的园林信息部分查找。

盆花

大多数品种, 正如图片中的符号所注明的, 也同时适合于盆花栽培。为此, 在每盆中应种植一个或多个大球。适合的温度处理以及温室生长条件将是影响最终结果的主要因素。

切花

基因型花茎长的品种可作为切花使用, 在品种图片上有符号注明。

通过研究明显地发现, 要提高风信子切花的质量以及花瓶期, 收获整理时, 花茎的基部应带有一小块根盘, 这样也可保持茎与叶片的完整。为此, 根据这个原理所发明特殊的打孔设备在收获后整理时可以使用。





Hyacinth ‘Aiolos’



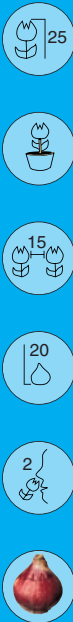
- 24338 -

Hyacinth ‘Aiolos’



- 24127 -

Hyacinth ‘Amethyst’



- 24044 -

Hyacinth ‘Amsterdam’



- 24039 -

Hyacinth ‘Anna Liza’



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales							planting					sales			

- 24245-

Hyacinth 'Anna Marie'



Hyacinth 'Antarctica'®



- 24302-

Hyacinth 'Apricot Passion'®



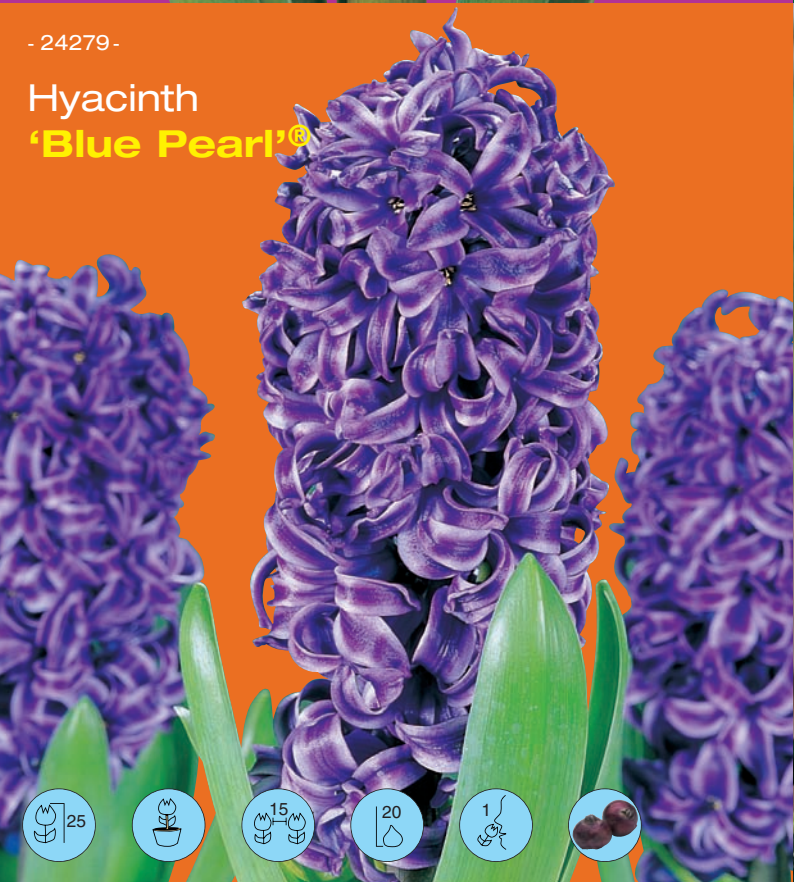
- 24243-

Hyacinth 'Atlantic'®



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales							planting					sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting							planting					planting			
			sales					sales							sales					sales			

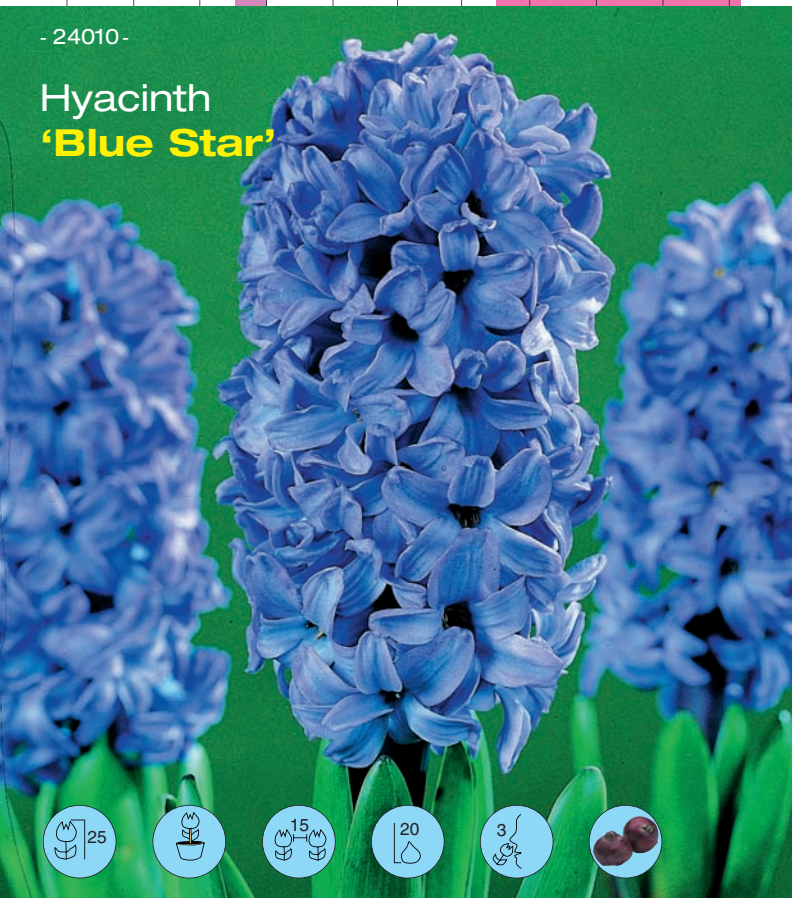


january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting							planting					planting			
			sales					sales							sales					sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 24010 -

Hyacinth
'Blue Star'



Icons: 25, 15, 20, 3, 2

- 24115 -

Hyacinth
'Carnegie'



Icons: 25, 20, 3, 15, 2

- 24380 -

Hyacinth
'China Pink'



Icons: 30, 15, 20, 4, 2

- 24381 -

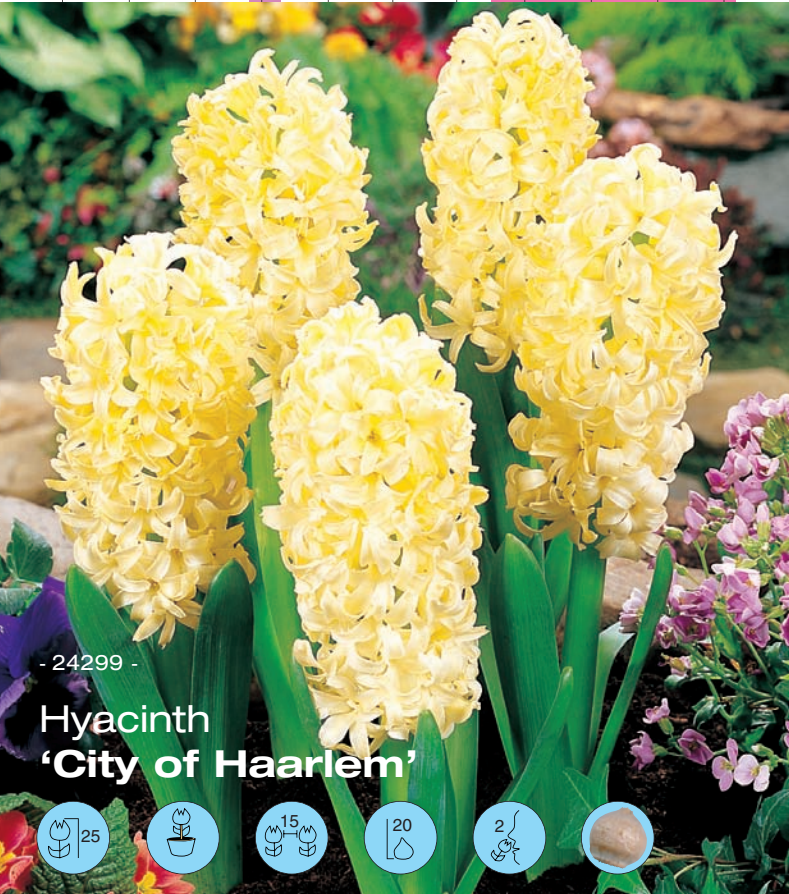
Hyacinth
'City of Bradford'



Icons: 30, 15, 20, 4, 2

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting
								september	october	november	december	january	february	march	april	may	june	july	august
								sales	sales	sales	sales	sales	sales	sales	sales	sales	sales	sales	sales



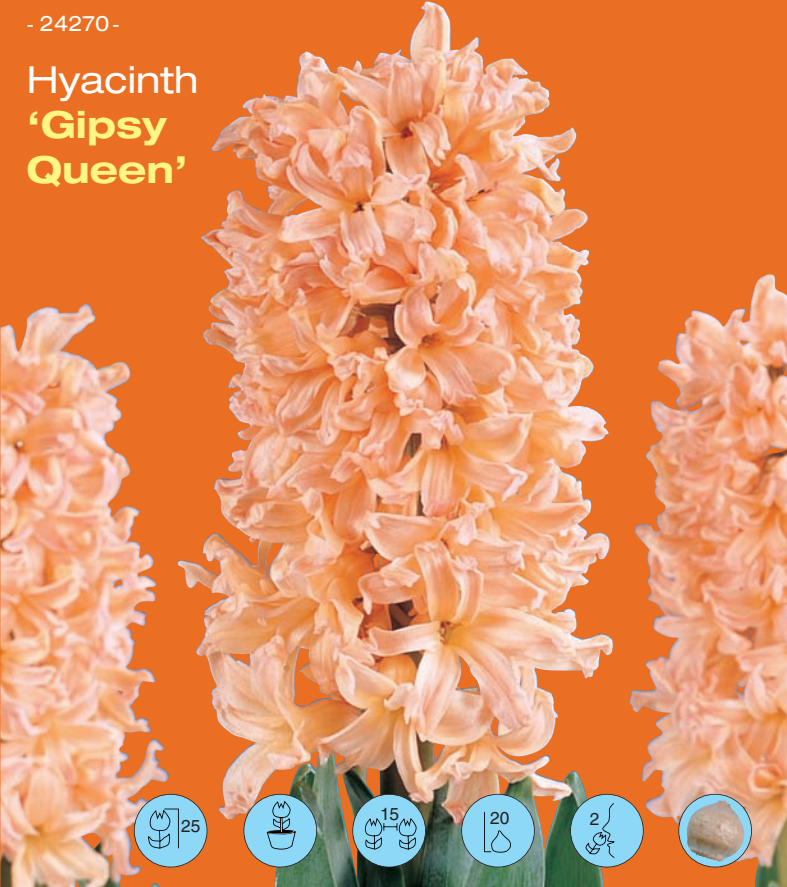
january	february	march	april	may	june	july	august	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting
								september	october	november	december	january	february	march	april	may	june	july	august
								sales	sales	sales	sales	sales	sales	sales	sales	sales	sales	sales	sales

january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------



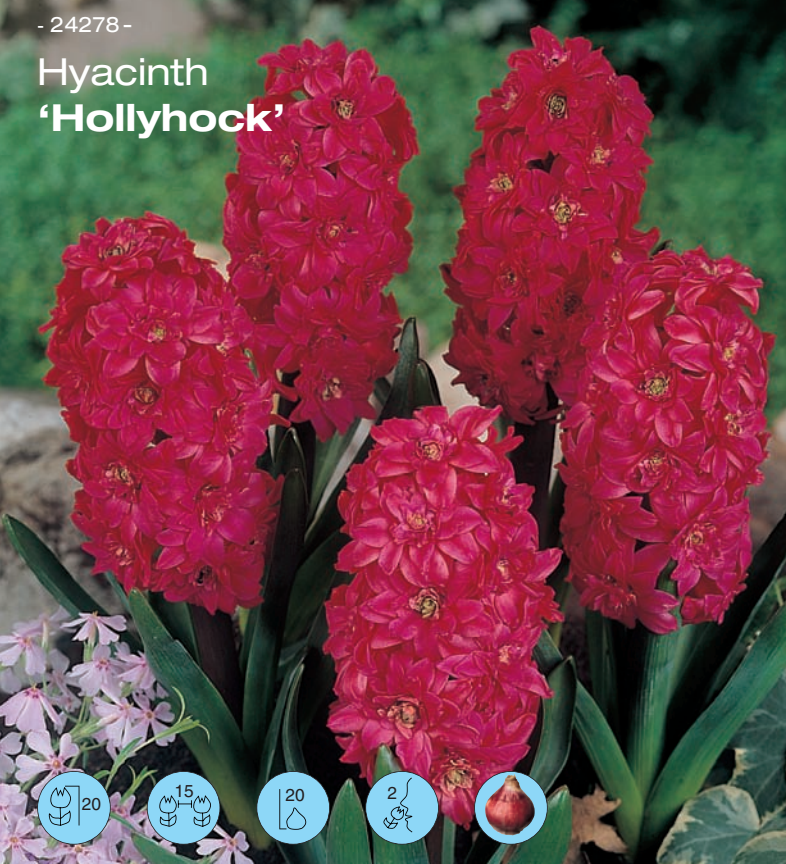
- 24383 -

Hyacinth
'Gipsy Princess'



- 24270 -

Hyacinth
'Gipsy Queen'



- 24278 -

Hyacinth
'Hollyhock'



- 24148 -

Hyacinth
'Jan Bos'

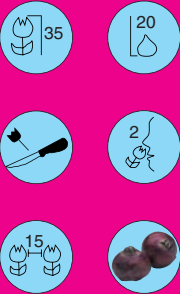
january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

Hyacinth 'Koh-I-Noor'

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales							planting					sales			

- 24114 -

Hyacinth 'Koh-I-Noor'®



- 24142 -

Hyacinth 'Kronos'

- 24020 -

Hyacinth 'Lady Derby'



- 24056 -

Hyacinth 'L'Innocence'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales							planting					sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



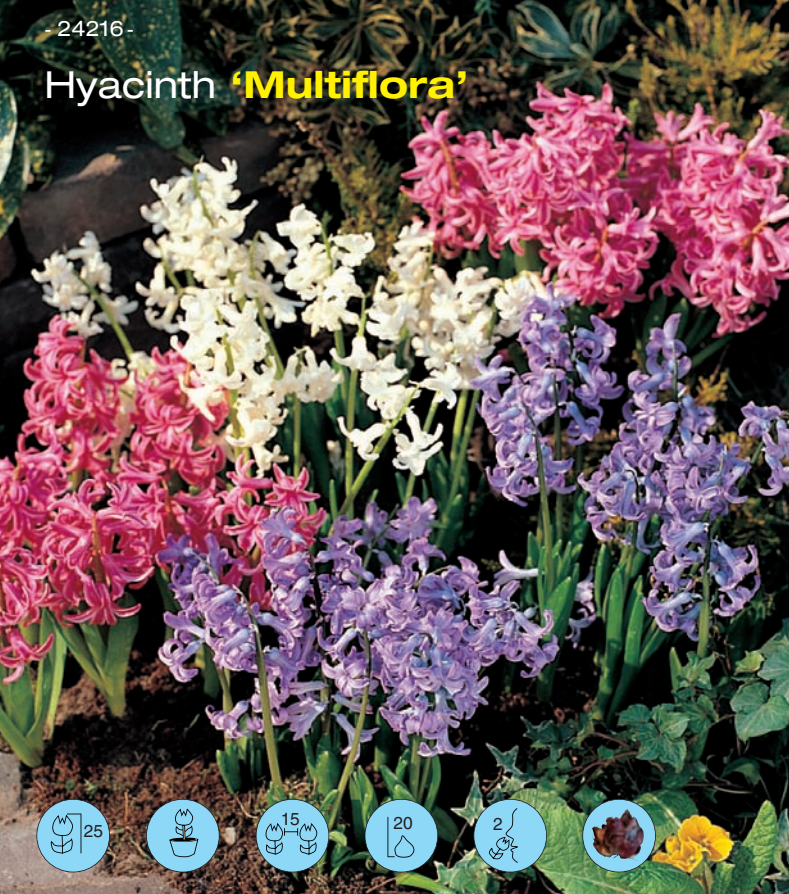
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

Hyacinth 'Multiflora'

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting							planting					planting			
			sales					sales							sales					sales			

- 24216 -

Hyacinth 'Multiflora'



25

15

20

2

2

2

- 24282 -

Hyacinth 'Odysseus'



25

15

20

2

2

2

- 24040 -

Hyacinth 'Ostara'



25

15

20

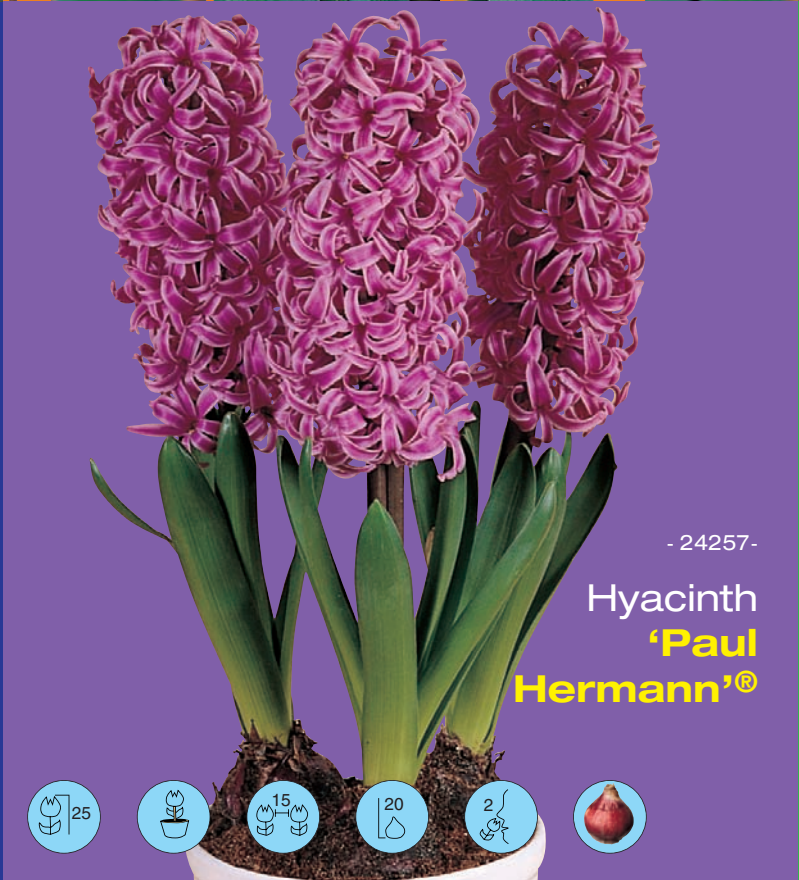
2

2

2

- 24257 -

Hyacinth 'Paul Hermann'®



25

15

20

2

2

2

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting							planting					planting			
			sales					sales							sales					sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 24394 -

Hyacinth
'Peter Stuyvesant'



Hyacinth 'Pink Festival'



- 24116 -

Hyacinth
'Pink Surprise'®



- 24150 -

Hyacinth
'Pink Pearl'



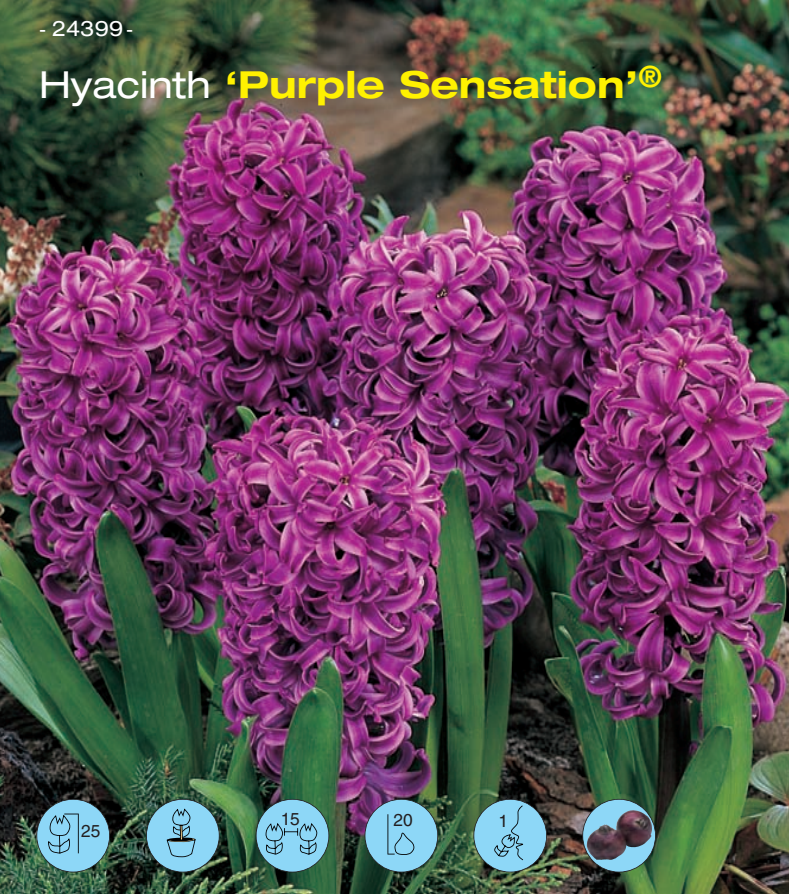
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

Hyacinth 'Purple Sensation'



- 24399 -

Hyacinth 'Purple Sensation'®



- 24255 -

Hyacinth 'Purple Star'®



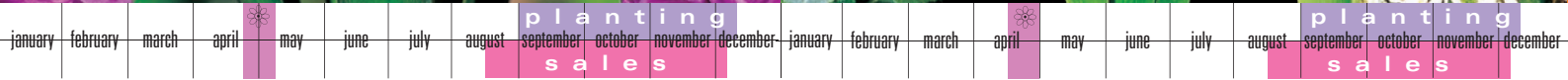
- 24317 -

Hyacinth 'Purple Voice'®



- 24286 -

Hyacinth 'Sky Jacket'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 24303 -

Hyacinth
'Sky Line'®



- 24252 -

Hyacinth
'Splendid Cornelia'



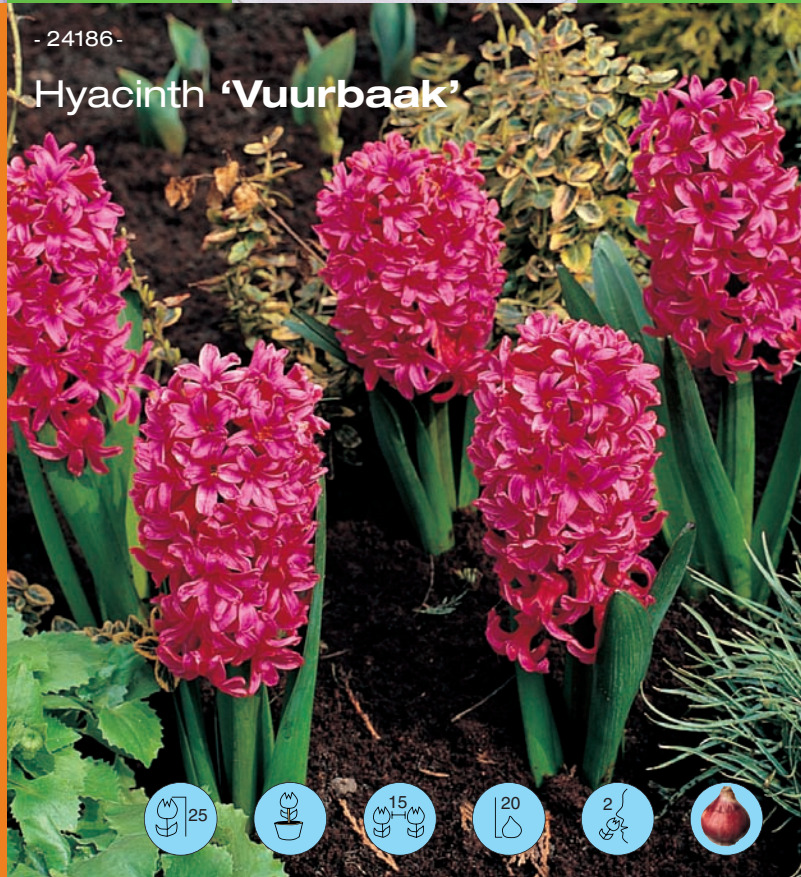
- 24271 -

Hyacinth
'Top White'®



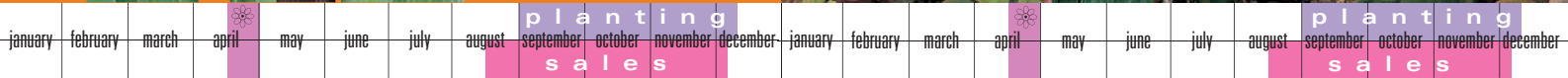
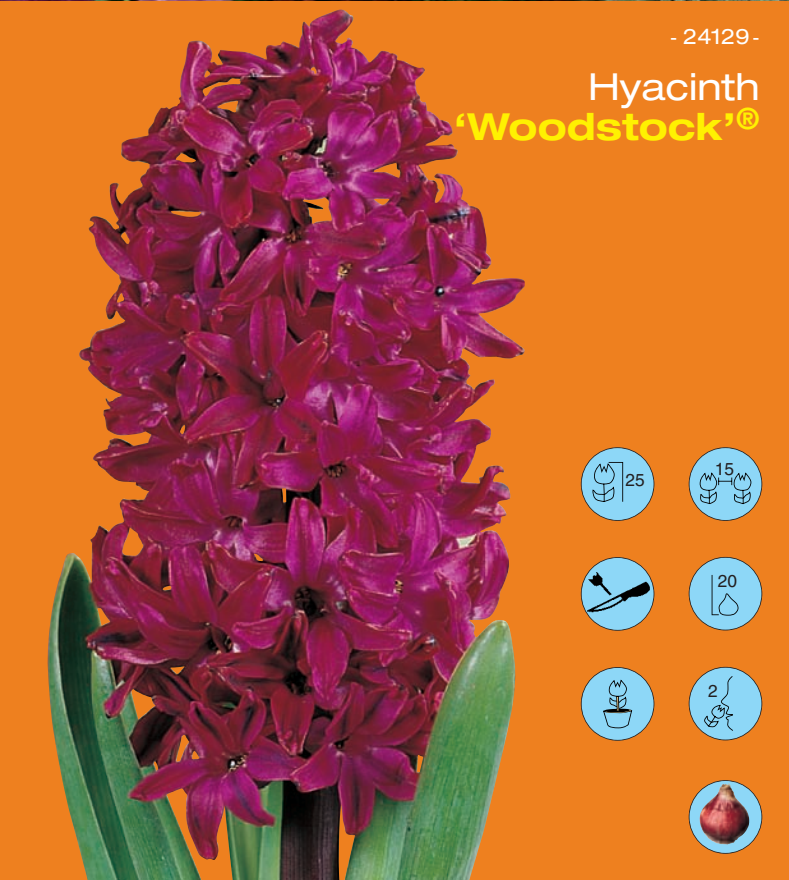
- 24186 -

Hyacinth 'Vuurbaak'



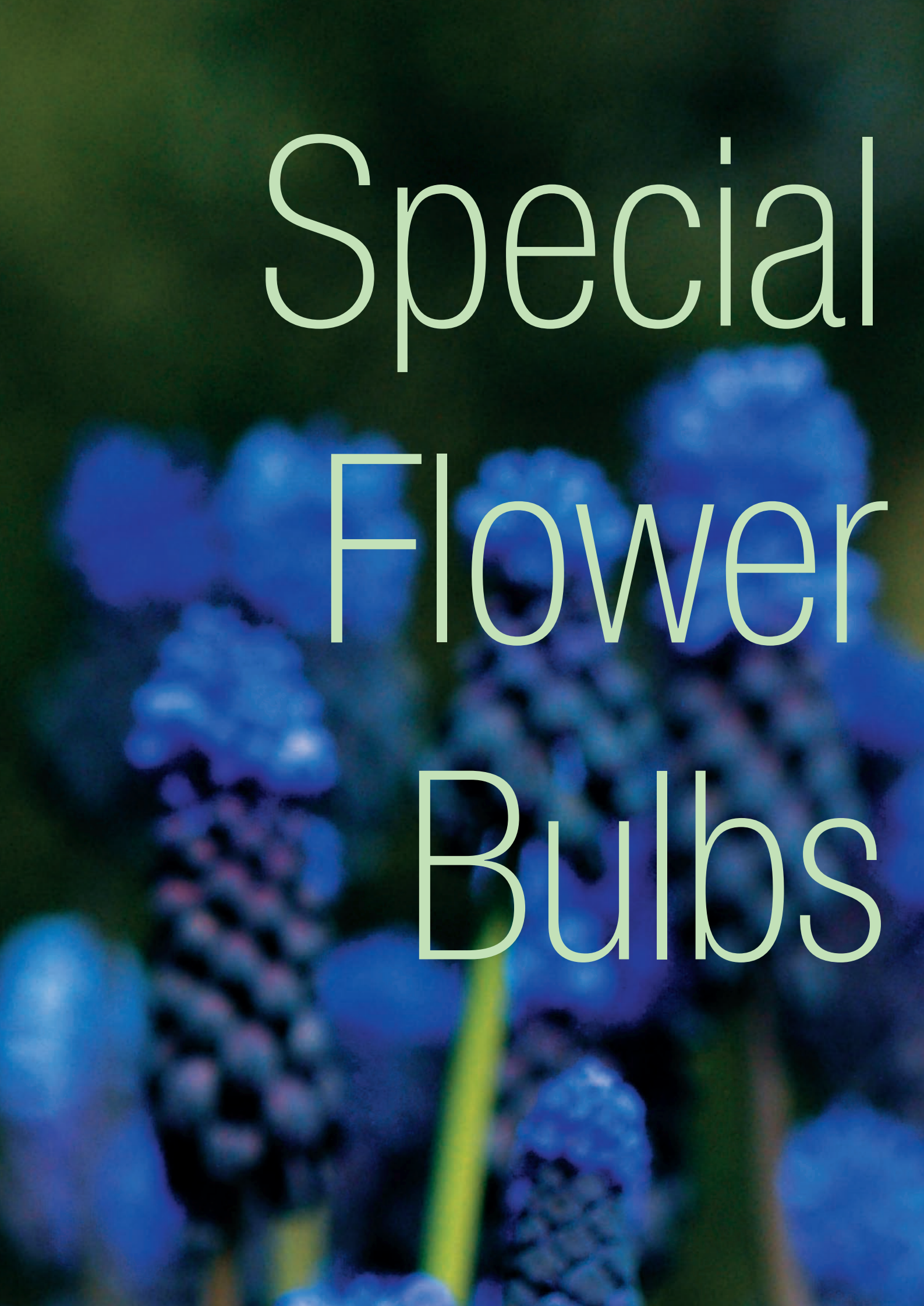
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

Hyacinth 'White Festival'









Special Flower Bulbs

Special Flower Bulbs

This extensive group of bulbous, cormous and tuberous plants, as well as a number of plants that produce rhizomes (e.g. *Canna indica*) used to be referred to as 'miscellaneous bulbs'. Belonging to this group of about a hundred different varieties are all flower bulbs except for tulips, hyacinths, daffodils, gladioli, irises and dahlias. These special bulbs are generally produced in limited quantities and usually at more specialised companies due to these products' specific production conditions as well as their preparation and storage requirements. Within the group of special bulbs, a clear distinction is made between the spring-flowering and summer-flowering plants. Dutch flower bulb growers attempt to produce these species and cultivars under Dutch climate conditions that are as close as possible to the conditions

typical of the plants' original habitats in regard to temperature progression and moisture and light conditions. Intensive breeding efforts as well as spontaneous mutations frequently add new cultivars to the existing assortment.

Spring-flowering special bulbs

These include all the species and cultivars that flower in the spring following the winter period and that have to be planted during the autumn previous to this winter period. In all cases, these bulbs must have produced roots before the frost period sets in so that they can be less susceptible to frost damage. These bulbs, corms and tubers are sold from September to December, their natural habitats being regions where they also experience a winter period necessary for these bulbous plants to grow and flower. This characteristic make these plants the



perfect choice for leaving them undisturbed, otherwise known as 'perennialising'. With optimum growing conditions (i.e. similar to the conditions in these plants' natural habitats), these plants will easily adjust to their new location and even propagate themselves. Examples are *Crocus*, *Eranthis*, *Fritillaria* and *Scilla*.

Summer-flowering special bulbs

These include all the species and cultivars that flower in the summer, from May through October, and which cannot be planted until after the winter period. These bulbs, corms and tubers are usually sold from February through May, their natural habitats being regions such as South Africa, Central America and South America that have no winter or cold period. For good growth and flowering, these species also depend much more on light intensity and temperature. Under Dutch climate conditions (and conditions similar to those typical of this country), these bulbs cannot be planted until after the winter period when soil temperatures have reached around 13°C. Most of these species can scarcely if at all tolerate low and freezing temperatures. For this reason, these bulbs, corms and tubers will have to be removed from the ground in October/November before the winter period or be mulched to keep them from suffering frost damage. Examples are *Begonia*, *Dahlia*, *Eucomis*, and *Tigridia*.

Technical production information

Considering the wide variety of special bulbs, we will limit ourselves here to certain general remarks about their storage and temperature treatment and about the size of their underground storage organs. Temperature treatments and storage methods can have a major impact on final results. Suppliers of parental material have sufficient information for the various options open to growers. Depending on the cultivar and local climate conditions, specialty bulbs can be used for:

- CUT FLOWER PRODUCTION AND FORCING
- POT PLANT PRODUCTION
- GARDEN AND PARK PLANTING

Storage is aimed at keeping the bulb, corm or tuber in optimum condition so that planting will be followed by good growth and flowering performance. This means minimising desiccation; for many special bulbs, 'storage' in the ground itself (i.e. not lifting them) is the rule. For species and genera that have no protective tunic such as *Fritillaria meleagris*, *Erythronium* and *Hyacinthoides*, preventing desiccation is the most important factor in final product quality. The general rule applying to bulb, corm and tuber size is that the 'largest' ones will always provide the highest quality. These larger sizes will produce a sturdier plant and a larger flower or more flowers and/or more flower stems. Due to the great variation within the group of special bulbs, there are also differences in the size and shape of their underground storage organs: the storage

organs of some species are even difficult to grade according to size. The following designations are used:

- first (I) and second (II) sizes: applied for example to *Eremurus*, *Erythronium* and *Tigridia*
- diameter of the tuber: applied for example to *Begonia*
- circumference in centimetres: this is the most commonly used designation for size and is applied for example to *Allium*, *Crocus* and *Scilla*.

Explanation of symbols

Pictograms next to the illustrations show which group the species or cultivar belongs to and how they can be used. The time bar shows the selling period, planting period and flowering period based on Dutch climate conditions. A selling period during the spring indicates that this species or cultivar is a summer-flowering bulb, corm or tuber. A selling period in the autumn means that this is a spring-flowering bulbous plant. The height and flowering period for spring-flowering bulbous plants are largely determined by the spring temperature and climate conditions. For summer-flowering bulbous plants, the most important factors for height and flowering period are the light conditions; too much shade can have a detrimental effect, even to the extent of preventing flower initiation. A more detailed explanation of the symbols is given on page 9. The pictogram with a number from 1 to 196 shows the picture of the bulb or corm, see pages 284 to 287.



Bijzondere Bolgewassen

Deze uitgebreide groep van bol- en knolgewassen en ook een aantal gewassen met wortelstok (o.a. *Canna indica*) werd voorheen bijgoed genoemd. Tot deze groep van ongeveer 100 verschillende rassen rekent men alle bloembolgewassen met uitzondering van tulp, hyacint, narcis, gladiol, iris en dahlia. In het algemeen worden de bijzondere bolgewassen in beperkte hoeveelheden geteeld en doorgaans op meer gespecialiseerde bedrijven i.v.m. specifieke teeltomstandigheden en eisen voor wat betreft preparatie en bewaring. Binnen de groep bijzondere bolgewassen is er een duidelijk onderscheid tussen voorjaarsbloeiende en zomerbloeiende gewassen. Afhankelijk van de oorspronkelijke plaats van herkomst probeert de Nederlandse bloembollenteler deze soorten en cultivars onder Nederlandse klimaatomstandigheden te telen waarbij rekening wordt gehouden met temperatuurverloop, vocht- en lichtomstandigheden. Door intensief veredelingswerk maar ook door spontane mutaties worden zeer regelmatig nieuwe cultivars aan het bestaande assortiment toegevoegd.



Voorjaarsbloeiende bijzondere bolgewassen

Dit zijn alle soorten en cultivars die in het voorjaar, na de winterperiode bloeien en in de herfst vóór de winter moeten worden geplant. In ieder geval moeten de bollen vóór de vorstperiode wortels hebben gevormd; ze zijn dan beter bestand tegen vorst. De verkoop van deze bollen en knollen vindt plaats in de periode september-december. Deze soorten komen oorspronkelijk voor in gebieden waar ze van nature ook een winterperiode meemaken. Een dergelijke koudeperiode is noodzakelijk voor het groeien en bloeien van de soort. De gewassen uit deze groep zijn dan ook prima geschikt om meerdere jaren op dezelfde plaats te blijven staan ofwel te verwilderen. Wanneer de groeiomstandigheden optimaal zijn, overeenkomen met de natuurlijke groeiplaats, zal de soort zich gemakkelijk aanpassen en zich ook vermeerderen. Voorbeelden zijn: *Crocus*, *Eranthis*, *Fritillaria* en *Scilla*.

Zomerbloeiende bijzondere bolgewassen

Dit zijn alle soorten en cultivars die in de zomerperiode, mei-oktober, bloeien en pas na de winterperiode kunnen worden geplant. De verkoop van deze bollen en knollen vindt normaal gesproken plaats in de periode februari-mei. Deze soorten komen oorspronkelijk uit gebieden zonder een winter of koudeperiode zoals Zuid Afrika en Midden en Zuid Amerika. Voor een goede groei en bloei zijn deze soorten ook veel meer licht- en temperatuurafhankelijk. Onder Nederlandse en daarmee vergelijkbare omstandigheden kunnen deze bollen pas na de winter worden geplant bij grondtemperaturen vanaf ongeveer 13°C. Lage temperaturen en vorst kunnen de meeste soorten niet of nauwelijks verdragen; dit betekent dat de bollen en knollen voor de winterperiode, in oktober-november, uit de grond moeten worden gehaald of vorstvrij moeten worden afgedekt. Voorbeelden zijn: *Begonia*, *Dahlia*, *Eucomis*, *Tigridia*.

Teelttechnische informatie

Gezien de grote variatie beperken we ons tot enkele algemene opmerkingen over de bewaring en temperatuurbehandelingen en over de bol- en knolgrootte. Temperatuurbehandelingen en bewaring kunnen van grote invloed zijn op het uiteindelijke resultaat. De leverancier van het uitgangsmateriaal beschikt over voldoende informatie voor de verschillende mogelijkheden. Afhankelijk van de cultivar en de lokale klimaatomstandigheden kunnen bijzondere bolgewassen worden gebruikt voor:

- SNIJBLOEMENTEELT EN BROEIERIJ
- POTPLANTENTEELT
- TUIN- EN PARKBEPLANTING



De bewaring is er op gericht om de bol of knol in een zo'n optimaal mogelijke conditie te houden om na het planten weer goed uit te groeien en te bloeien. Uitdrogen moet daarom zoveel mogelijk worden voorkomen en voor veel bijzondere bolgewassen geldt als regel dat 'bewaring' in de grond, alsof ze dus niet gerooid zijn, de beste bewaarmethode is. Bij soorten die geen beschermende huid hebben zoals bijv. *Fritillaria meleagris*, *Erythronium* en *Hyacinthoides* is het voorkomen van uitdrogen van het grootste belang en van invloed op de uiteindelijke kwaliteit. Bol- en knolgrootte: als algemene regel zijn de 'grootste' bollen of knollen altijd van de beste kwaliteit. Zij zullen een forsere plant en een grotere bloem of meerdere bloemen en/of meerdere bloemstelen produceren. Door de grote variatie binnen de groep van bijzondere bolgewassen zijn er bij de soorten onderling verschillen in vorm en grootte; sommige soorten zijn zelfs moeilijk te sorteren. Er worden verschillende aanduidingen gebruikt:

- eerste (I) en tweede (II) grootte bij bijv. *Eremurus*, *Erythronium* en *Tigridia*
- diameter van de knol in cm bij bijv. *Begonia*
- omtrek in cm zoals meest gebruikelijk, bijv. *Allium*, *Crocus*, en *Scilla*.

Toelichting symbolen

Bij de afbeeldingen is aan de hand van de pictogrammen duidelijk te zien tot welke groep de soort of cultivar behoort en wat de verdere gebruiksmogelijkheden zijn. In de tijdsbalk zijn de verkoopperiode, de plantperiode en de bloeiperiode te zien; uitgaande van de Nederlandse klimaatomstandigheden. Een verkoopperiode in het voorjaar geeft dus aan dat er sprake is van een zomerbloeiend bol- of knolgewas en bij een verkoopperiode in het najaar is sprake van een voorjaarsbloeiend bolgewas. Hoogte en bloeiperiode bij de voorjaarsbloeiende bolgewassen zijn in hoge mate afhankelijk van de temperatuur en het klimaat in het voorjaar. Bij de zomerbloeiende bolgewassen zijn vooral de lichtomstandigheden van grote invloed op de lengte van het gewas en het bloeitijdstip, bij teveel schaduw kan bloemaanleg zelfs achterwege blijven. Voor een verdere verklaring van de symbolen zie pag. 13. De icoon met een nummer van 1 tot 196 geeft een beeld van de vorm van de bol of knol; zie pag. 284 t/m 287.

特殊种球花卉

众多的鳞茎类、球茎类和块茎类植物, 以及许多可产生根茎 (如美人蕉) 的植物, 我们把它们统称为球根类植物。

除了我们熟知郁金香、风信子、水仙、唐菖蒲、鸢尾和大丽花外, 球根植物中还有成百种不同的球根花卉植物。这些特殊的球根通常数量有限, 根据它们准备和储藏的要求, 多数由专业公司在专门的条件下进行专业生产。

在这些特殊球根花卉植物中, 我们明确地把它们分为春季开花植物和夏季开花植物。

荷兰的球根花卉种植者根据它们原产地的温度、湿度和光照的要求, 尽可能地尝试着在荷兰对这些品种和栽培品种进行生产。

大量犹如自然突变的育种工作也在努力地进行着, 新的栽培品种也不断地充实了现有的品种目录。

特殊的春季开花球根植物

这些特殊的球根植物包括那些在前一年秋季种植, 经过一个冬天后在来年春季开花的球根植物品种或栽培品种。总而言之, 这些球根植物必须在霜冻到来前生根, 以降低霜冻所带来的危险。这些鳞茎、球茎和块茎通常是在九月到十二月被销售, 它们的自然习性也需要经过一个冬季后才生长和开花。

这个特性使它们能种植在地下不被挖出来, 就象我们所知的 ‘多年生植物’。在适合的条件 (如接近于它们的自然生长条件), 这些植物很容易适应新的环境, 甚至可自我繁殖。例如番红花、菖葵、贝母和绵枣儿等。

特殊的夏季开花球根植物

这些包括所有夏季开花的球根植物, 即从 5 月到 10 月开花的植物, 它们不能在冬季结束前种植。这些鳞茎、球茎和块茎通常是在 2 月到 5 月被销售, 它们的原产地一般在南非、中南美洲, 那里没有冬季或寒冷的阶段。为了使它们正常的生长和开花, 这些品种需要较多的光照和较高的温度。在荷兰的气候条件下 (以及那些类似气候条件的国家), 这些球根在冬季结束之前, 即土壤温度升高到 13°C 之前不能种植。

大多数的这些品种不能耐受低温, 因此, 这些鳞茎、球茎和块茎必须在 10 月/11 月, 即冬季到来之前从土壤中挖出, 或在土壤上进行覆盖以防止冻害。例如秋海棠、大丽花和虎皮花。

生产技术信息

由于这些特殊球根的品种很多, 在此, 我们对这些地下营养储藏组织的储藏、温度处理以及球根规格的大体情况予以介绍。

温度处理和储藏方法是影响最终结果的主要因素。种植材料的供应商可向种植者坦诚地提供所需的各种信息。

根据品种以及当地的气候条件, 这些球根植物的用途可为:

- 切花生产和促成栽培
- 盆花生产
- 花园和公园中种植

储藏的目的是保持这些鳞茎、球茎或块茎处于最佳的条件下, 使种植以后植株能良好地生长和正常开花。

这就意味着使球根的干枯降为最低; 对于许多的球根, ‘储藏’ 在土壤中 (如不采收它们) 就是一种规定。对于那些没有鳞片保护和种和属, 例如皇冠贝母、猪牙花和风信子, 防止干枯是影响最终产品结果最重要的因素。

一般来说, 鳞茎、球茎和根茎的规格越大, 它们所生产的产品质量也就越高。这些球根可生产出健壮的植株, 所开的花大或多/或花枝多。

这些特殊球根品种之间的差异较大, 它们的地下营养储藏组织在大小和形状上也有许多不同: 有些品种的营养储藏组织甚至很难对它们进行分级, 下列的一些描述方法被得到了运用:

- (I) 级和 (II) 级: 例如对独尾草、猪牙花和虎皮花的分级
- 块茎的直径: 例如对秋海棠的分级
- 周长: 这是最常见的分级方法, 例如对葱属、番红花和绵枣儿的分级。

图标的解释

插图旁的图标说明了它们所属的品种或栽培品种, 以及我们怎样使用它们。时间列表表示在荷兰的气候条件下它们的销售阶段和开花阶段。

销售阶段在春季的说明这些品种或栽培品种属于夏季开花的鳞茎、球茎或根茎。销售阶段在秋季的说明这些品种属于春季开花植物。

春季开花球根植物的高度和开花阶段主要是由春季的温度的气候条件决定。夏季开花球根植物的高度和开花阶段则主要取决于光照条件。遮荫太多可能会产生负面影响, 甚至会影响到初期花的形成。

排号 1 到 196 的图片为不同的鳞茎和块茎; 见页码 284 到 287

其它关于图标详细的说明在第 17 页。



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting												planting								
		sales	sales											sales	sales								

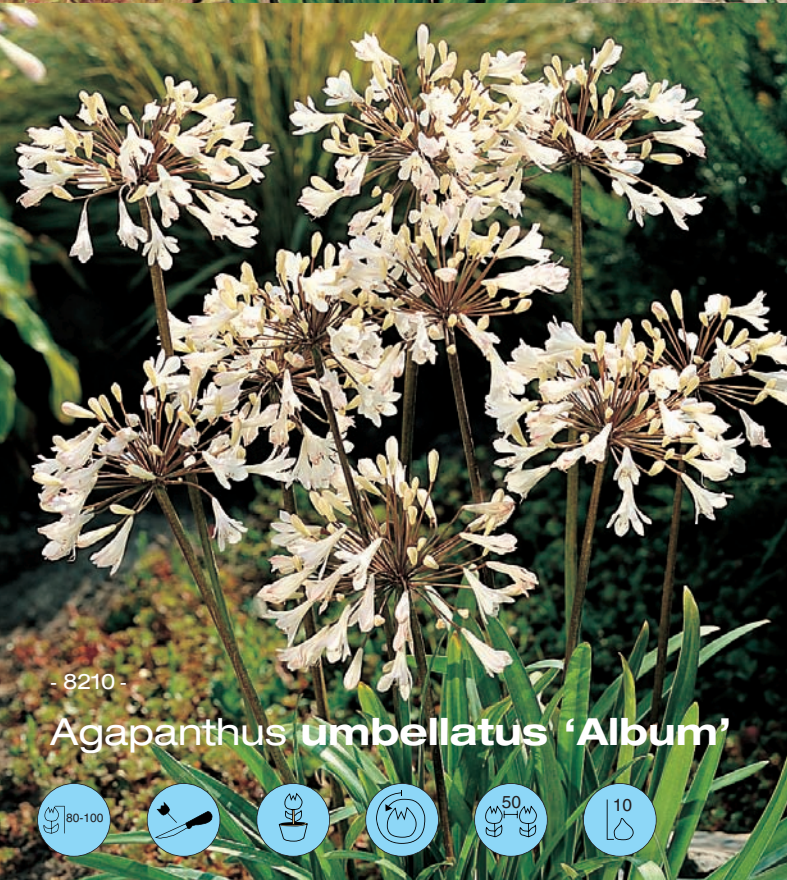
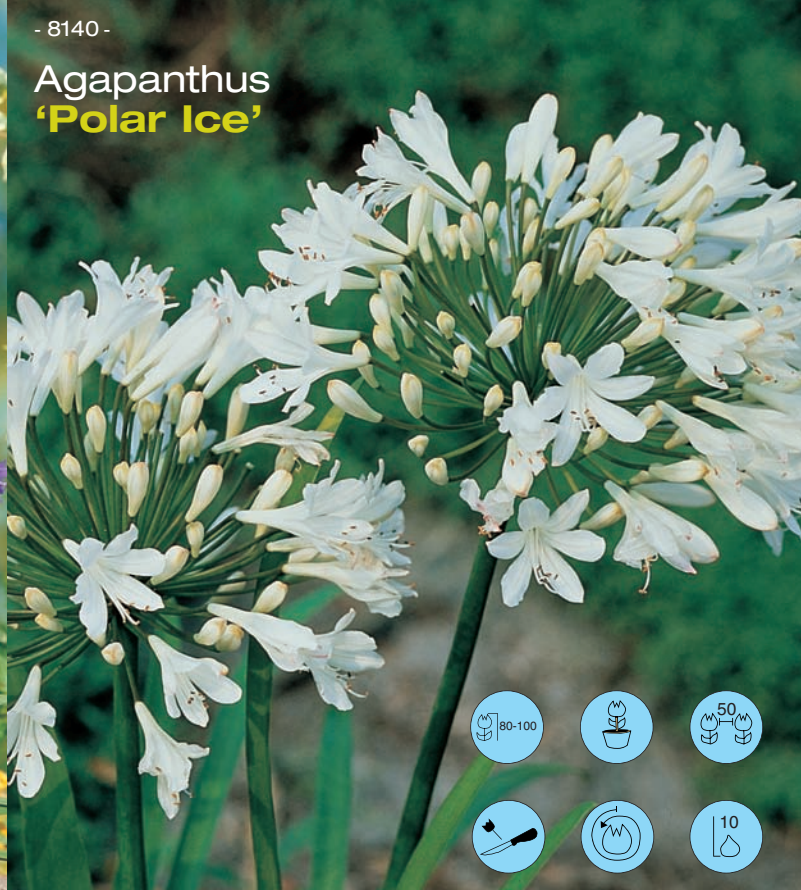
- 8596 -

Agapanthus
'Intermedius'



- 8140 -

Agapanthus
'Polar Ice'



- 8210 -

Agapanthus **umbellatus** 'Album'



january	february	march	april	may	june	july	august	september	october	november	december
			planting								
		sales	sales								



Allium species are found growing in their natural habitats throughout the Northern Hemisphere. Besides the many edible species grown as vegetables, there are more than a hundred species and cultivars, classified under the grouping 'Special Bulbs', which are produced solely for their ornamental value. Almost all of these produce a characteristic onion-like smell.

Allium

SPECIFIC CHARACTERISTICS

All species should be planted before winter sets in; the bulbs are not susceptible to frost damage but the aerial parts of the plant may well be susceptible to this kind of damage. A distinction is made between species with small bulbs and species with large bulbs, and there are also certain species such as *Allium cernuum* and *A. flavum* that are frequently considered to be perennials.

The bulb sizes for species with large bulbs such as *A. aflatunense*, *A. christophii*, *A. giganteum* and the cultivars such as 'Gladiator' and 'Globemaster' start at 10 cm. for such species as *A. aflatunense* and go to 20 cm. and larger for such species as *A. giganteum*. Inflorescences are globe-shaped, the most common colours being purple and violet, however white and off-white varieties can also be found. Stems can reach a height of 150 cm.

Bulb sizes for species with small bulbs such as *A. caeruleum*, *A. moly*, *A. neapolitanum* and *A. oreophilum* range from 3 to 6 cm. Inflorescences in this group can be globe or umbel-shaped in various shades of white, pink, yellow, purple and reddish purple. Stems range in height from 10 to 50 cm.

The growth of most allium bulbs takes place before and during their flowering period. Because the leaves begin to wither back during flowering, thus providing little ornamental value in the garden, alliums are best combined with perennials. Most species flower from late May to late July.

APPLICATIONS

Most alliums can be used for garden planting; the species producing stems longer than 30-35 cm. can also be used as cut flowers.

• GARDEN PLANTING

Almost all alliums flower after the most familiar spring-flowering bulbs. An advantage to alliums is their long flowering period: at least three weeks. Species such as *A. aflatunense*, *A. christophii* and *A. schubertii* also produce ornamental seedpods that remain attractive for several weeks, however their leaves are not particularly attractive during the flowering period. Although the bulbs of all species can be left undisturbed, species such as *A. triquetrum*, *A. ursinum* and *A. zebdanense* are particularly suited for perennialising.

• CUT FLOWER PRODUCTION

All species that produce long enough stems can be used for cut flower production although their characteristic onion-like smell can sometimes be a hindering factor for this purpose. Under Dutch climate conditions, alliums can be forced into flower only a few weeks earlier than normal by using such production methods as plastic-covered tunnels. Species usually used for this purpose are *A. aflatunense*, *A. cowanii* and *A. sphaerocephalon*. Many flowers, such as those of *A. giganteum*, can also be harvested in the field during their normal flowering period.

Allium-soorten komen op het gehele noordelijk halfrond voor. Naast vele eetbare soorten, die in de groenteteelt bekend zijn, zijn er meer dan honderd soorten en cultivars die alleen sierwaarde hebben en tot de bijzondere bolgewassen worden gerekend. Een uiengeur is bijna altijd kenmerkend.

Allium

ENKELE KENMERKEN

Alle soorten moeten voor de winter worden geplant, de bollen zijn niet vorstgevoelig hoewel bovengronds gewas wel vorstschade kan ondervinden. Er wordt onderscheid gemaakt in kleinbollige en grofbollige soorten. Er zijn ook enkele afwijkende soorten zoals *Allium cernuum* en *flavum* die meer als een vaste plant kunnen worden beschouwd.

De grofbollige soorten zoals o.a. *aflatunense*, *christophii*, *giganteum* en cultivars als *Gladiator* en *Globemaster* hebben bolmaten vanaf 10 cm bij o.a. *aflatunense* tot 20 cm en groter bij o.a. *giganteum*. De bloeivorm is bolvormig, de meest voorkomende kleur paars en violet terwijl ook schakeringen van wit voorkomen, de steellengte tot 150 cm.

De kleinbollige soorten zoals o.a. *caeruleum*, *moly*, *neapolitanum* en *oreophilum* hebben bolmaten van 3 tot 6 cm. In deze groep komen zowel bolvormige als schermvormige bloeiwijzen voor, kleurschakeringen van wit, rose, geel, paars en purper. De steellengte varieert van 10 tot 50 cm.

De bolgroei van de meeste alliumsoorten vindt al plaats voor en tijdens de bloei; het blad begint tijdens de bloeiperiode al af te sterven en heeft in de tuin dan ook nauwelijks sierwaarde. Het in de tuin combineren met o.a. vaste planten is een prima alternatief. De bloei van de meeste soorten valt in de periode vanaf eind mei tot eind juli.

GEBRUIKSMOGELIJKHEDEN

De meeste Alliumsoorten zijn geschikt voor tuinbeplanting en de soorten langer dan 30-35 cm ook als snijbloem.

• TUINBEPLANTING

De bloei valt in bijna alle gevallen na de bloei van de bekende voorjaarsbloeiers. Voordeel is de lange bloei-periode van minimaal 3 weken. Soorten als *aflatunense*, *christophii* en *schubertii* maken prachtige zaaddozen die wekenlang extra sierwaarde kunnen geven. Op het moment van bloei heeft het blad echter geen sierwaarde meer. Hoewel men alle soorten enkele jaren kan laten staan in de tuin zijn soorten als *triquetrum*, *ursinum* en *zebdanense* bij uitstek geschikt om te laten verwilderen.

• SNIJBLOEMENTEELT

Alle soorten met voldoende stengellengte zijn geschikt voor de snijbloementeel, soms kan de specifieke uiengeur een belemmering zijn. Onder Nederlandse omstandigheden laten alliums zich niet meer dan enkele weken vervroegen in bijv. een folie tunnel. Soorten die voornamelijk gebruikt worden zijn *aflatunense*, *cowanii* en *sphaerocephalon*. Er worden ook veel bloemen tijdens de normale bloeitijd op het veld buiten geoogst zoals o.a. *giganteum*.

葱属品种的自然原产地被发现贯穿整个北半球。除了它们有许多我们所熟知的作为蔬菜的食用品种外, 还有 100 多个品种和变种, 在分类中归属于‘特殊的种球’, 具有它们独有的观赏价值。它们几乎所有的都会产生特别的洋葱类型的味道。

葱属

特征

所有的品种必须在冬季来临前进行种植; 它们的种球对霜冻不敏感, 但是植株的中空部分容易发生冻害。大球的品种和小球的品种有着明显的差异, 也有一些品种如垂花葱和新疆葱可多年开花。

种球的规格对于大球的品种如细茎葱、黄花韭、和大花葱以及栽培品种 ‘*Gladiator*’ 和 ‘*Globemaster*’ 从 10 厘米开始, 而对于象细茎葱这样的品种则其始的规格为 20 厘米。更大的则如大花葱。花序为球型, 最常见的颜色为紫色和紫罗兰色, 也有白色的品种。茎可达到 150 厘米。

小球品种的规格如棱叶韭、黄花各葱、纸花葱和滩地韭在 3 到 6 厘米。这些类型种球的花序为球状或伞状, 颜色有白色、粉色、黄色、紫色和红紫色。茎的高度在 10 到 50 厘米。

大多数种球的生长在它们开花阶段或之前。由于在开花时它们的叶片开始枯萎, 所以在花园中可供观赏的时间很短, 最好与其它多年生植株混合种植。

大多数的品种在五月下旬到 7 月下旬之间开花。

应用

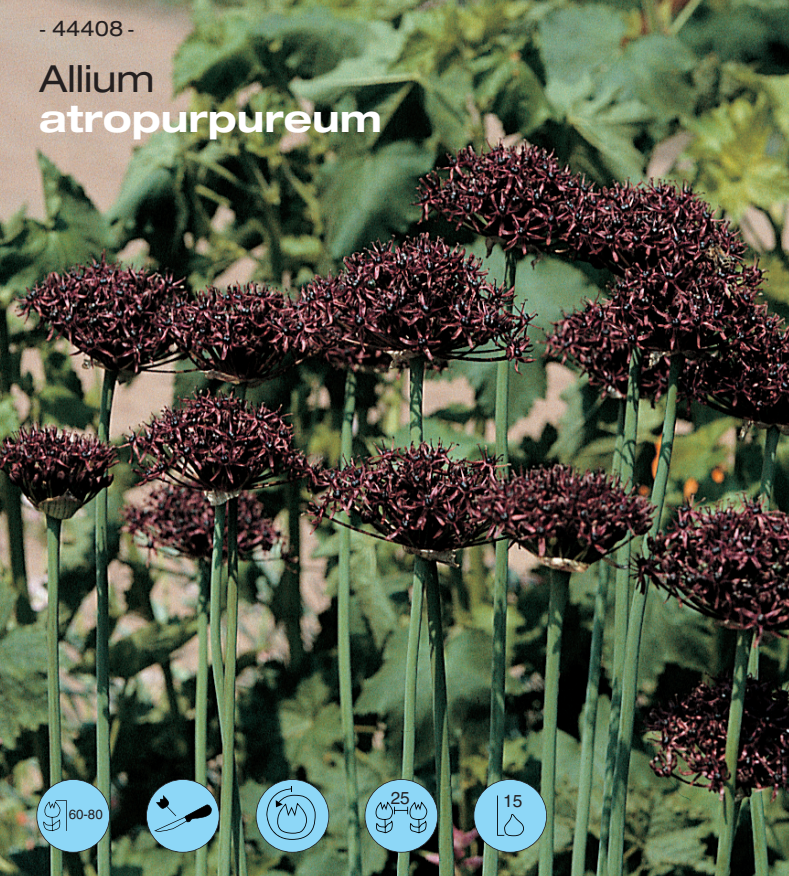
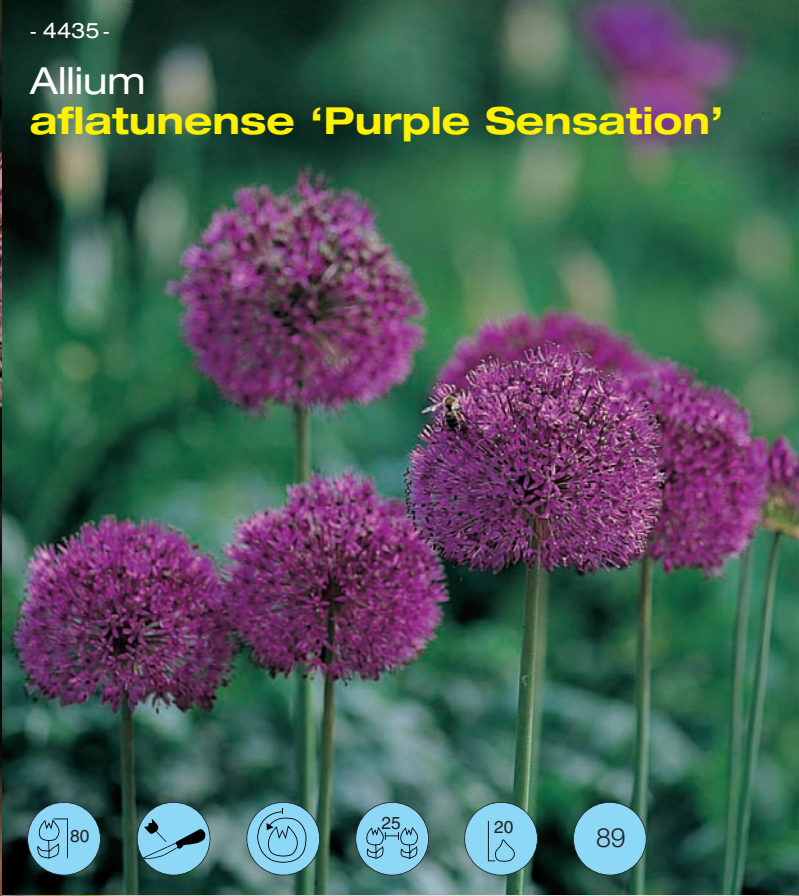
大多数的葱属植株可在花园中种植; 花茎大于 30 到 35 厘米的品种还可作为切花使用。

• 花园栽培

大多数葱属的植株在我们熟悉的春季开花植物之后开花。它们的平均花期至少为 3 周。有些品种如细茎葱和黄花韭还可产生有可观赏效果的心皮, 并可持续几周, 但是它们的叶片在开花期间已没有了观赏效果。虽然所有的品种都可不挖出来, 但是最适合多年栽培的品种是三棱茎葱和熊葱。

• 切花生产

所有能产生足够长度茎品种的花可用于切花生产, 尽管它们具有洋葱味道的特点会影响这个用途。在荷兰的气候条件下, 葱属的品种可利用覆盖塑料薄膜来进行促成栽培, 使它们能早于正常时间几周开花。通常使用这种方法的品种有细茎葱和圆头大花葱。多数的花如大花葱在它们正常的开花季节于田间收获。



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting										planting	planting	planting	
								sales	sales	sales										sales	sales	sales	

- 44250 -

Allium caeruleum



- 4018 -

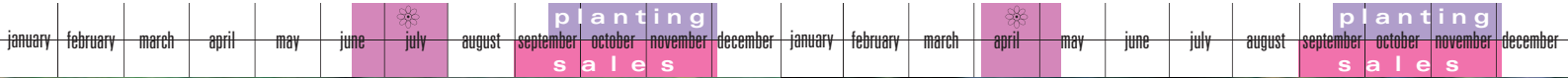
Allium carinatum ssp pulchellum



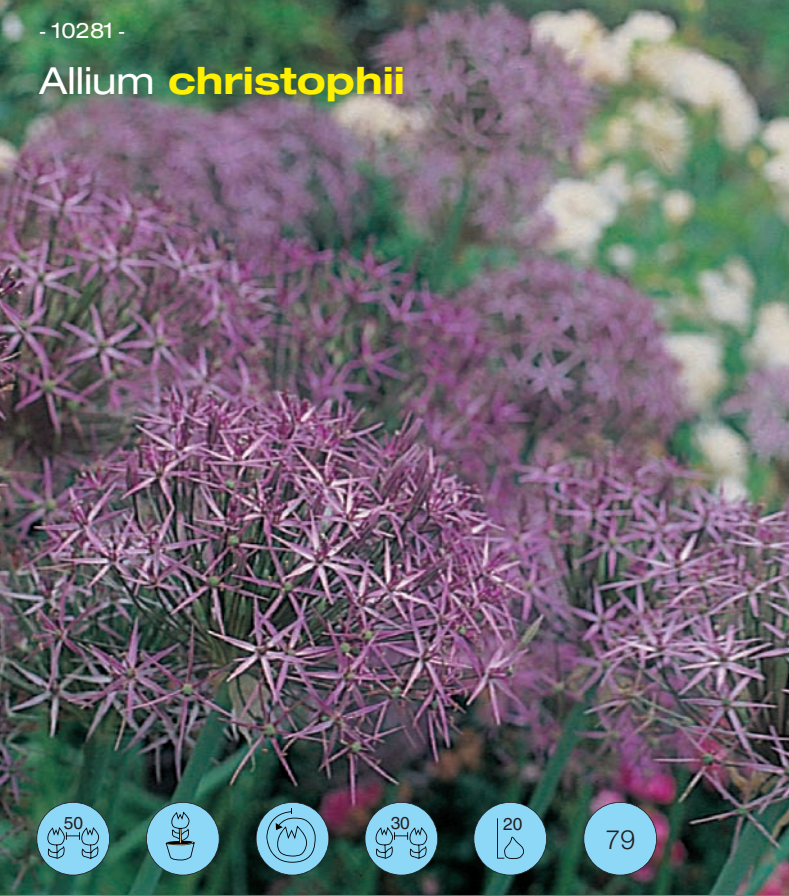
- 4020 -

Allium carinatum ssp pulchellum 'Album'

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting										planting	planting	planting	
								sales	sales	sales										sales	sales	sales	



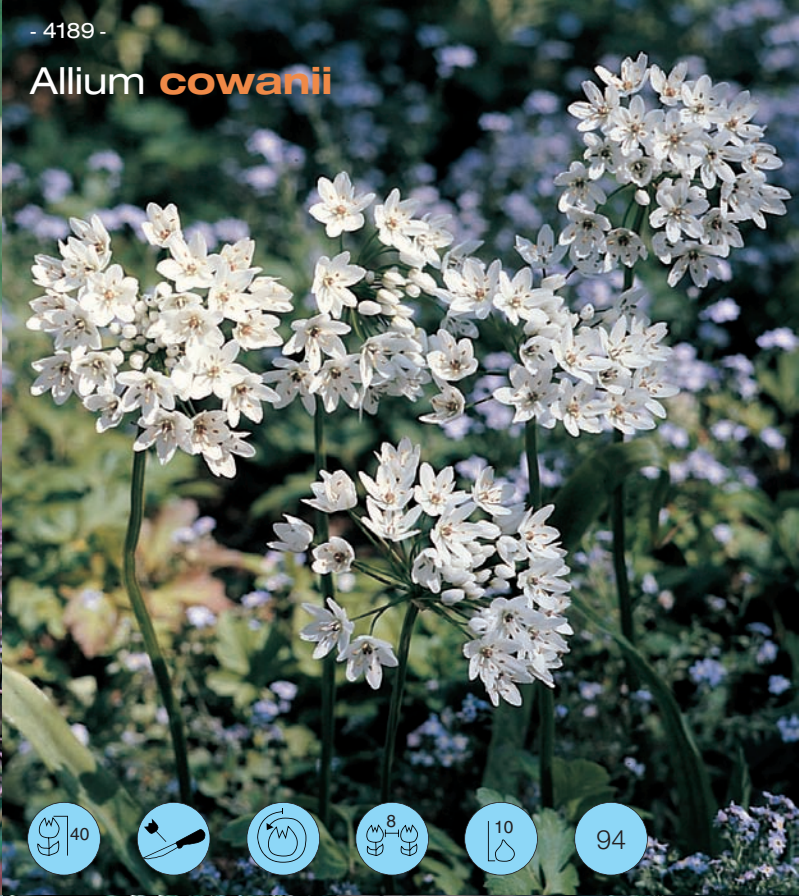
- 10281 -
Allium christophii



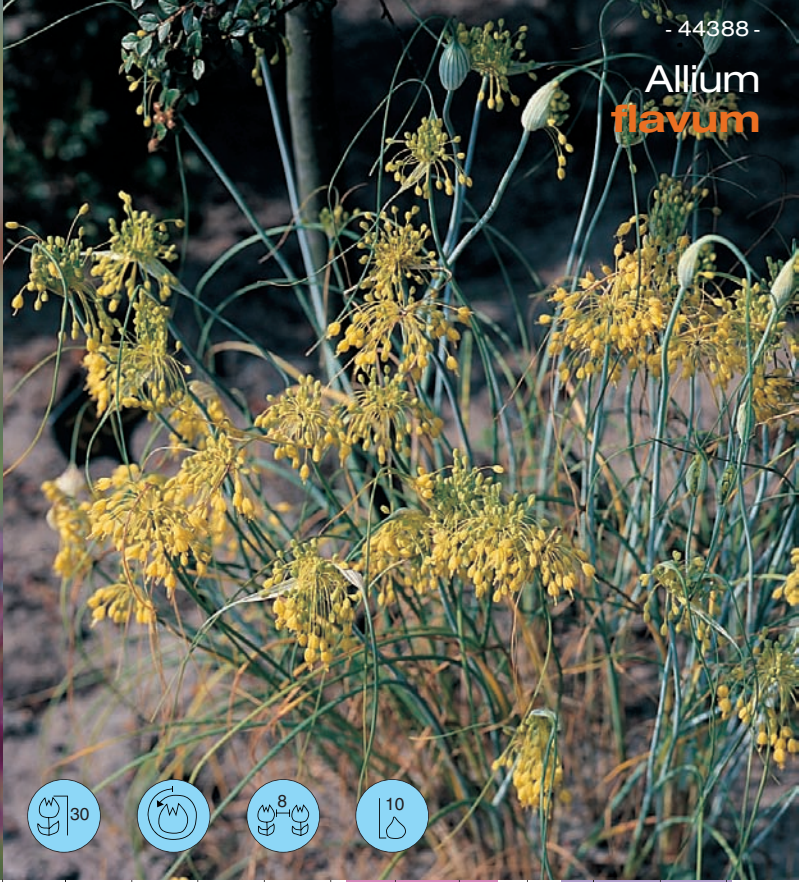
- 44094 -
Allium 'Firmament'



- 4189 -
Allium cowanii



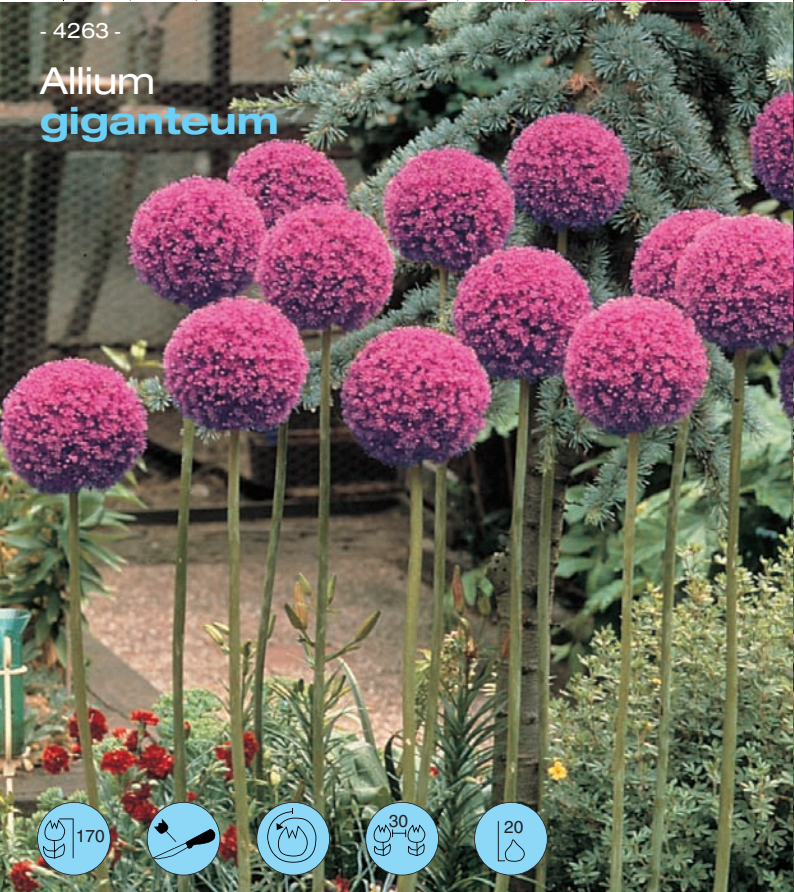
- 44388 -
Allium flavum



january	february	march	april	may	planting sales	august	september	october	november	december	january	february	march	april	may	planting sales	august	september	october	november	december
---------	----------	-------	-------	-----	-------------------	--------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	-------------------	--------	-----------	---------	----------	----------

- 4263 -

Allium giganteum



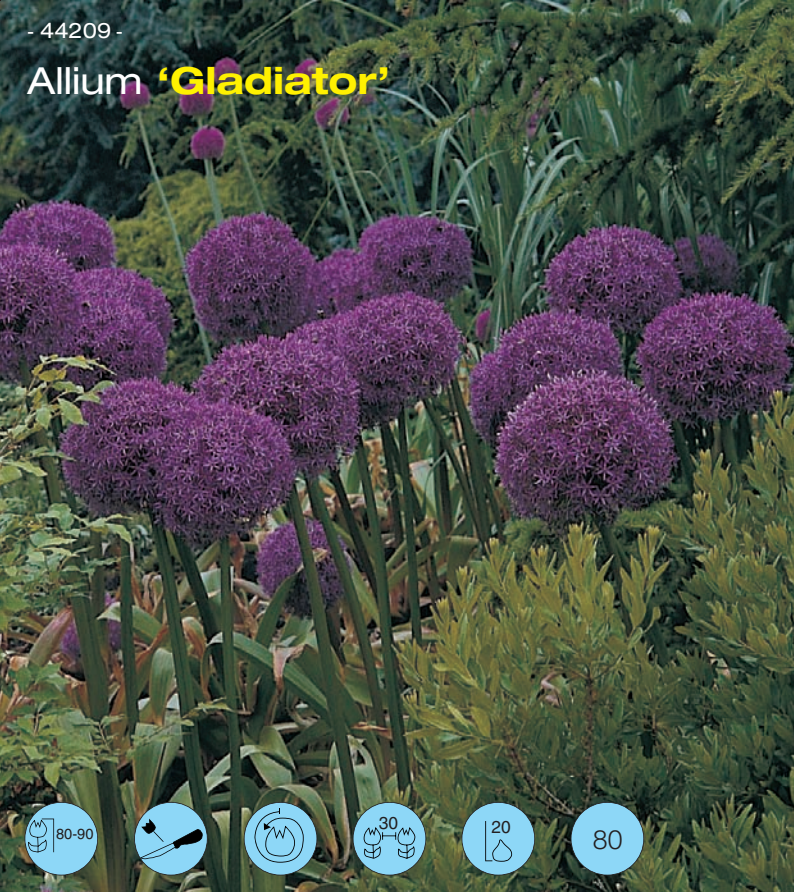
170

30

20

- 44209 -

Allium 'Gladiator'



80-90

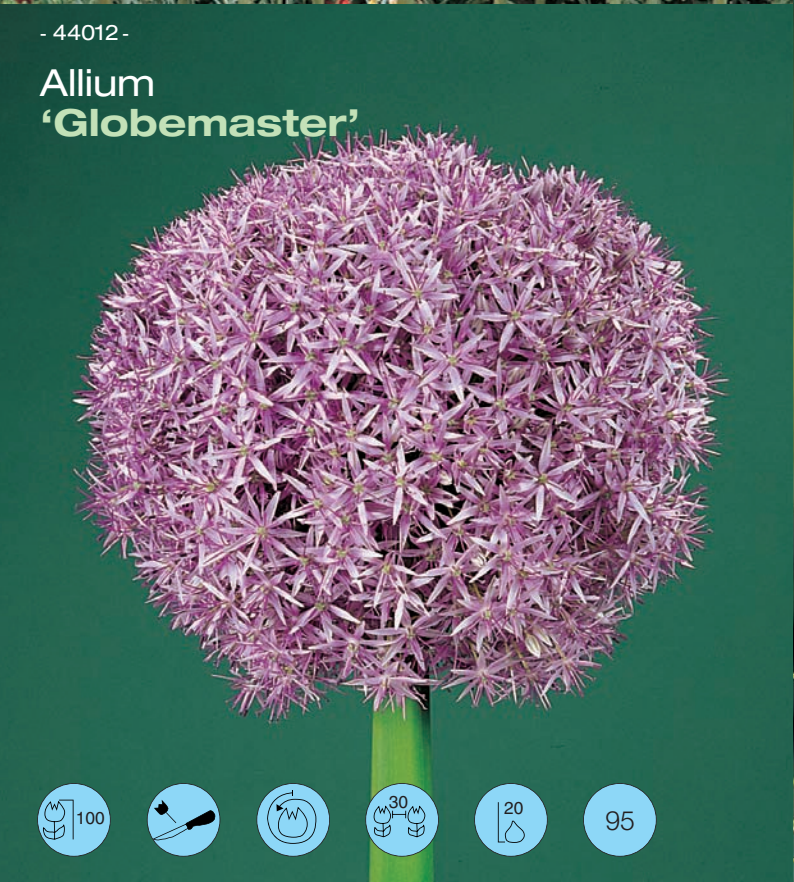
30

20

80

- 44012 -

Allium 'Globemaster'



100

30

20

95

- 44039 -

Allium 'Hair'



50-70

10

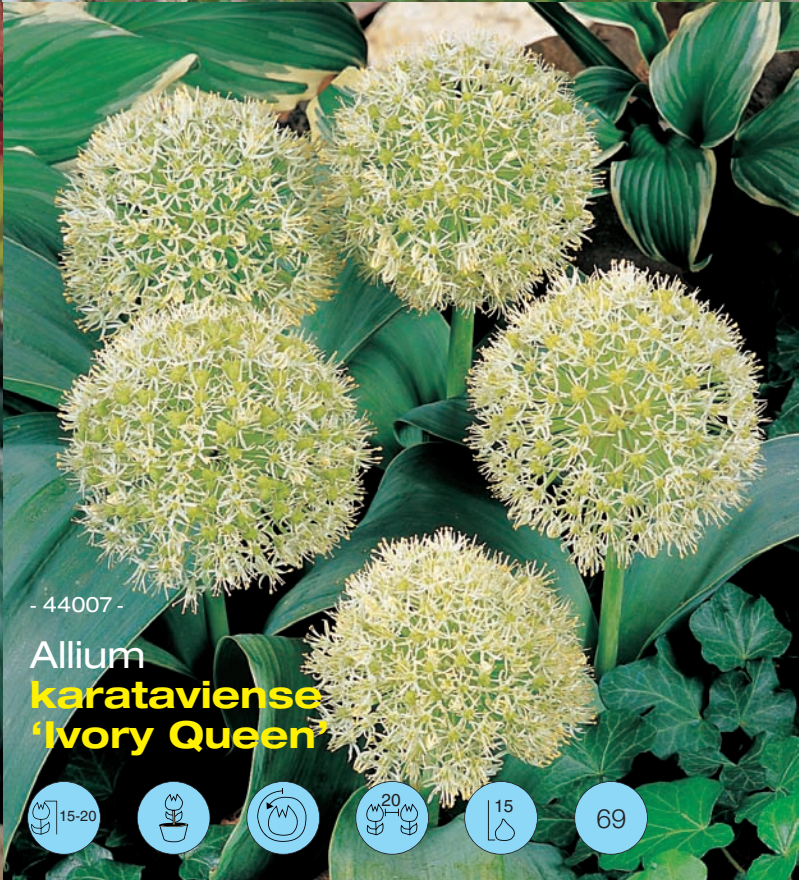
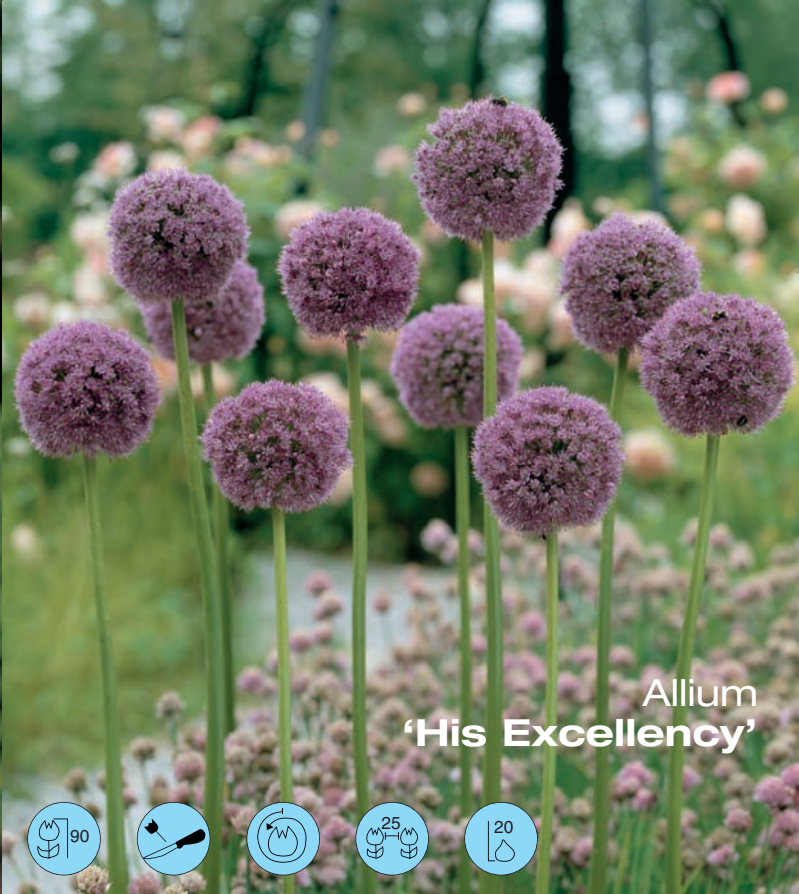
10

93

january	february	march	april	may	planting sales	august	september	october	november	december	january	february	march	april	may	planting sales	august	september	october	november	december
---------	----------	-------	-------	-----	-------------------	--------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	-------------------	--------	-----------	---------	----------	----------

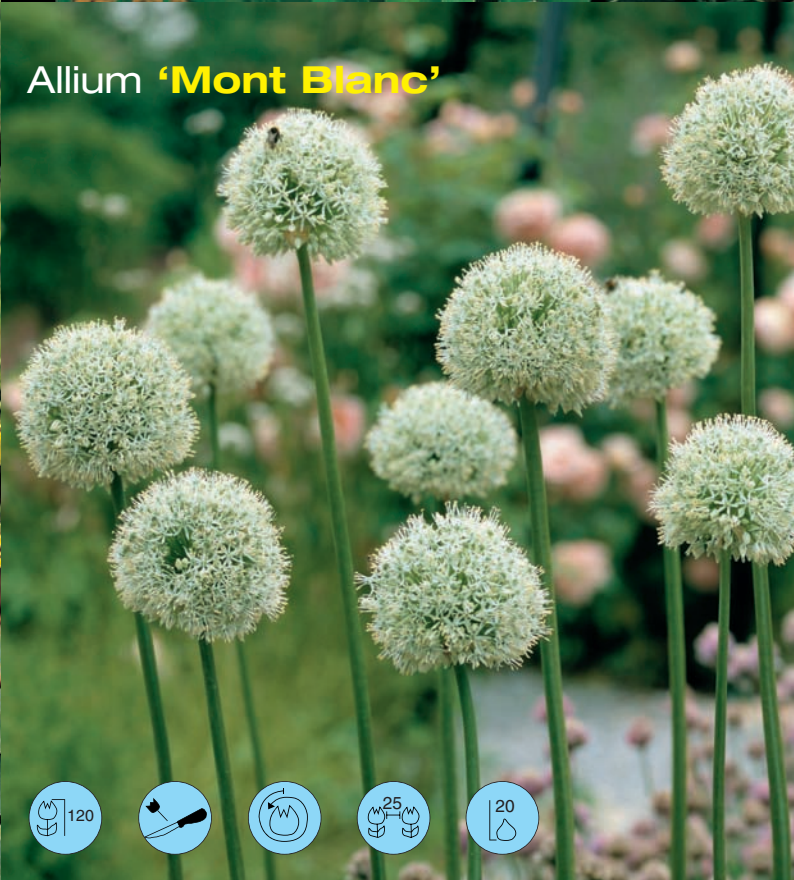
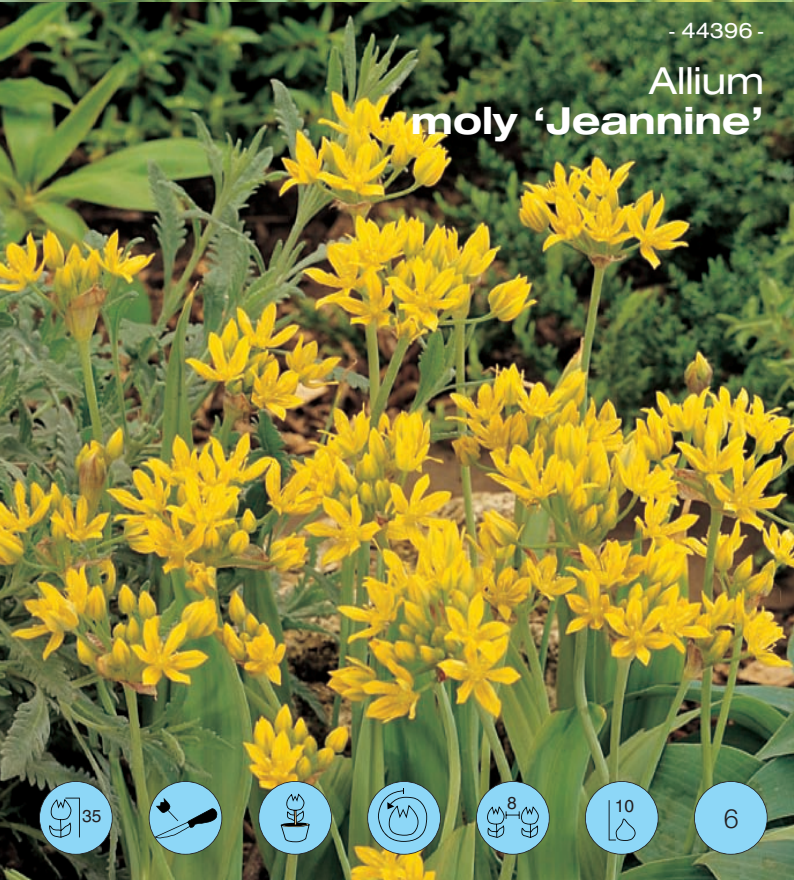
Allium **hirtifolium** var. 'Album'

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



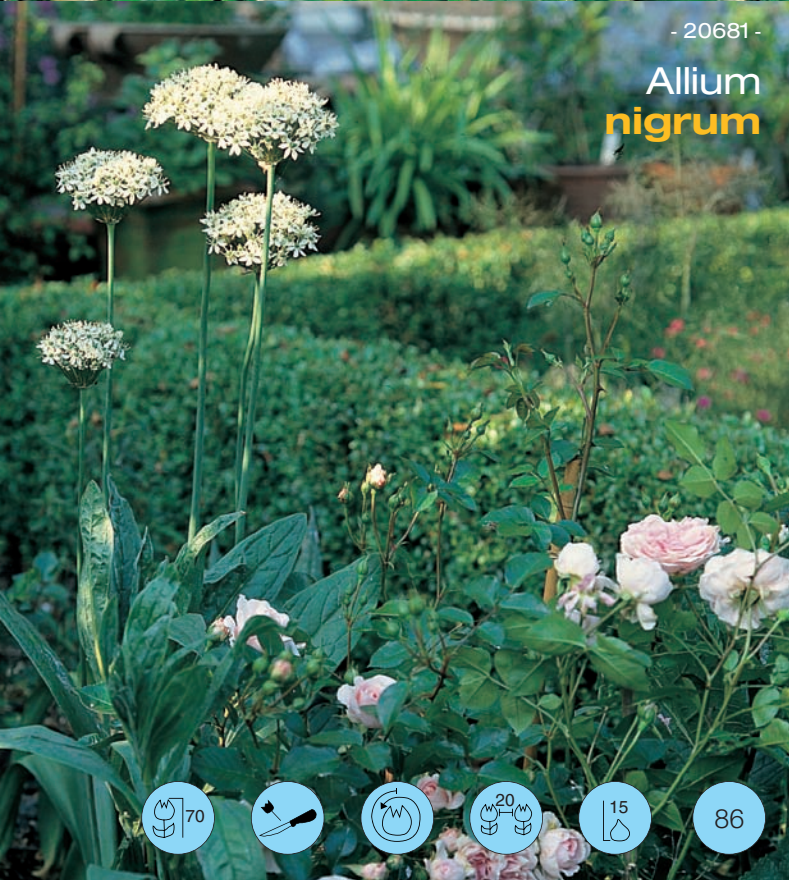
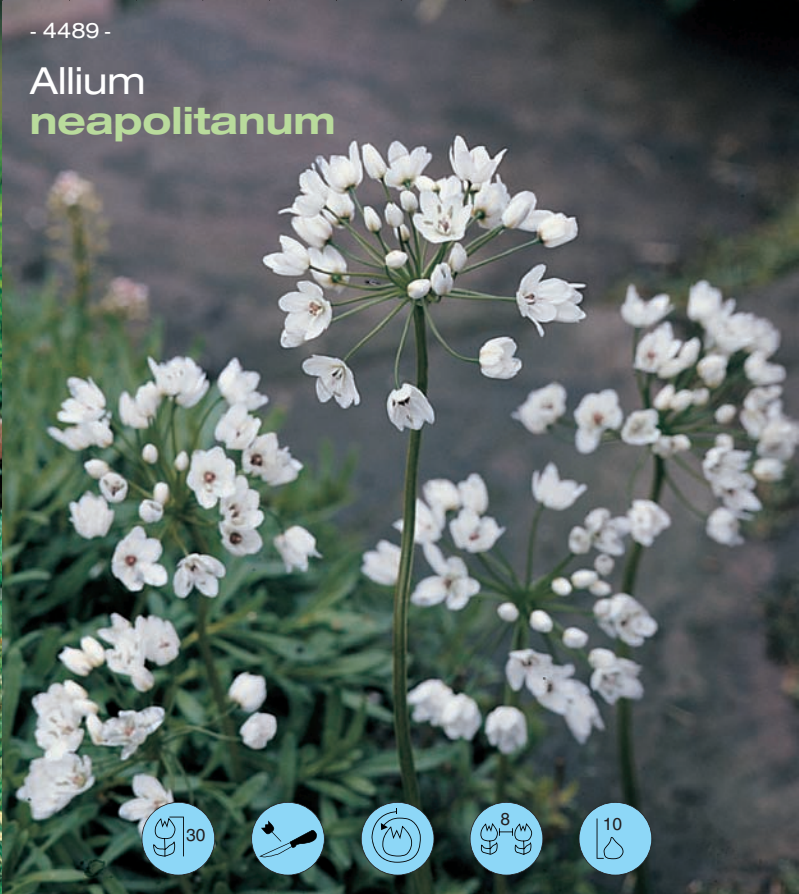
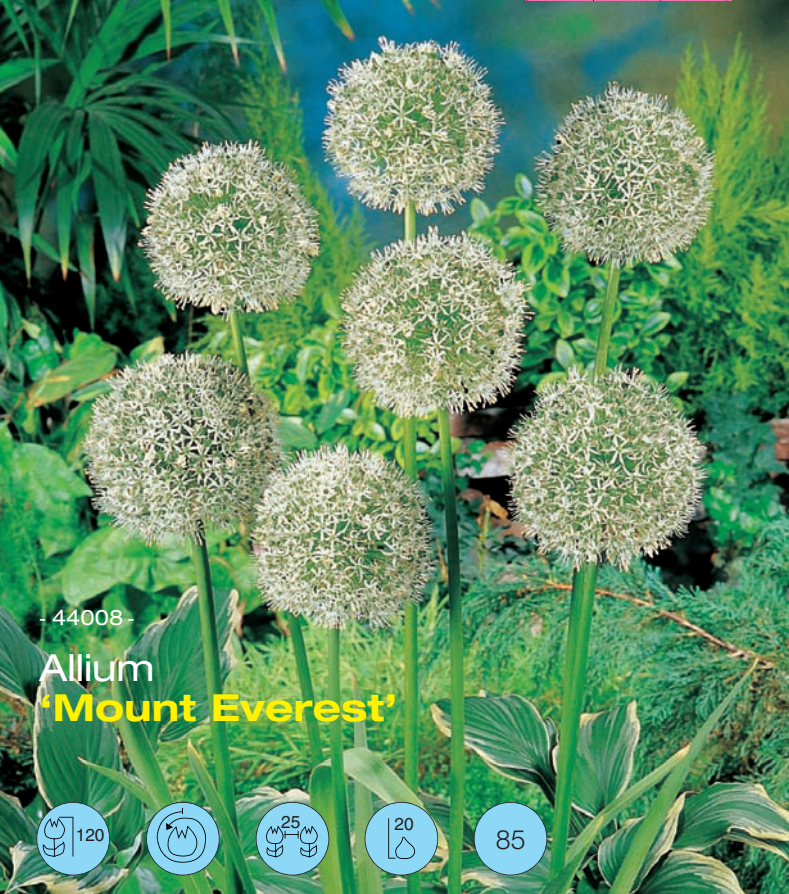
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				planting	sales			planting	sales								planting	sales			planting	sales	



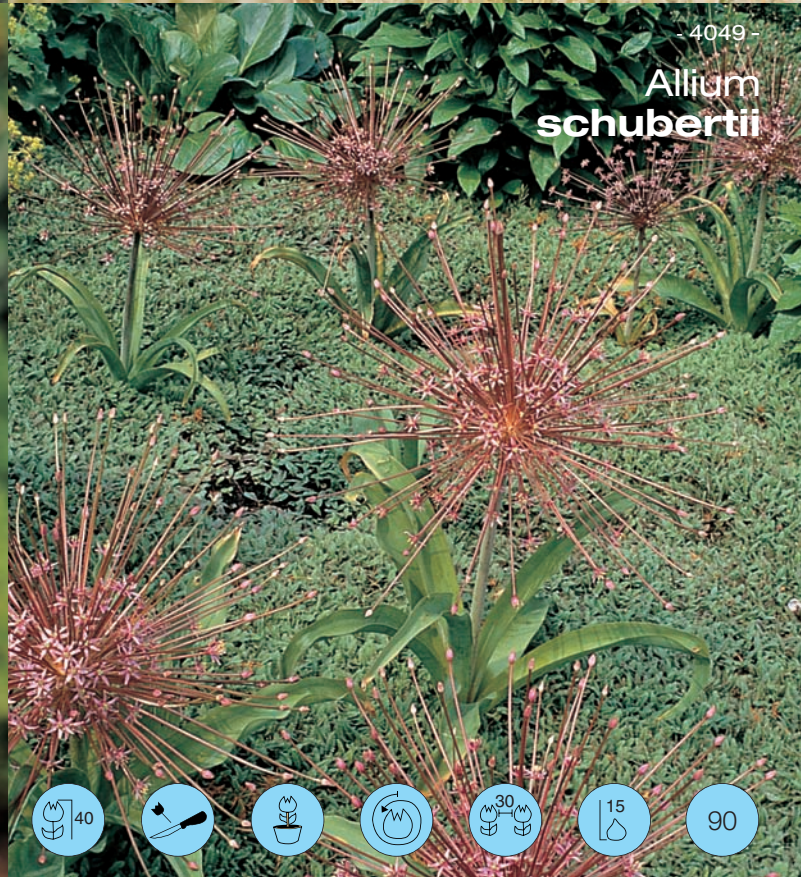
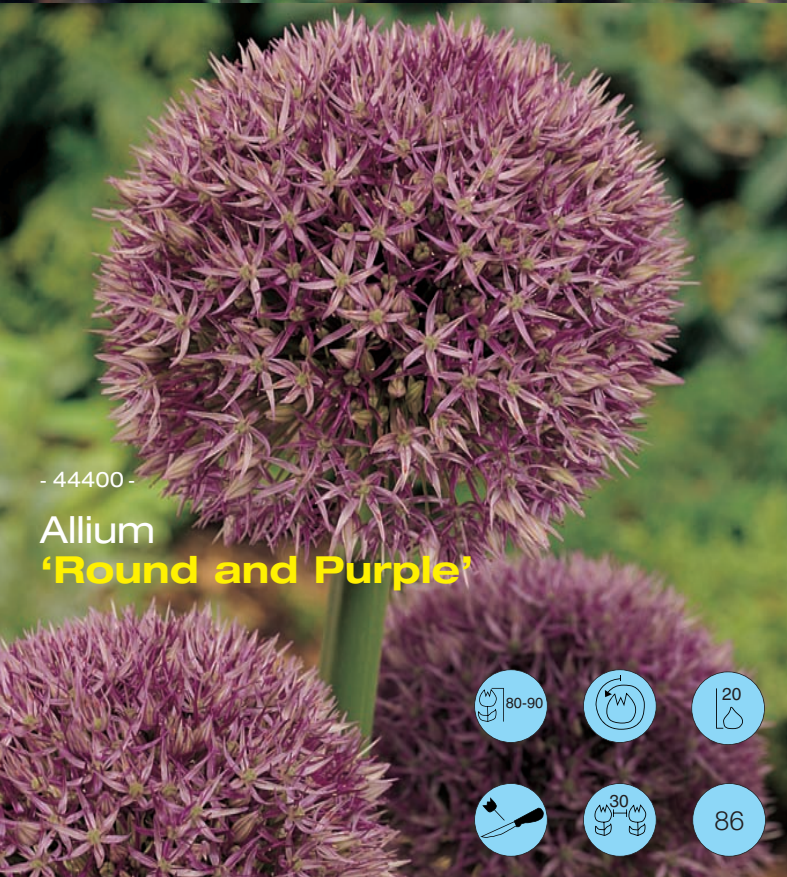
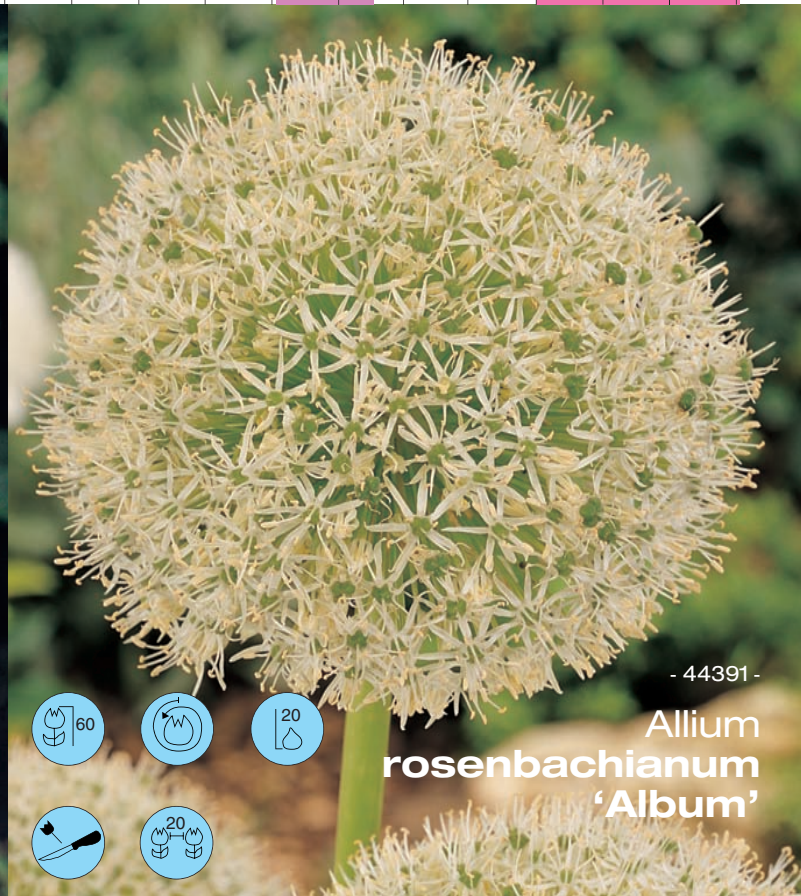
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				planting	sales			planting	sales								planting	sales			planting	sales	

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				planting				planting				planting				planting				planting			
				sales				sales				sales				sales				sales			



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				planting				planting				planting				planting				planting			
				sales				sales				sales				sales				sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				🌸	🌸											🌸	🌸						
								planting	planting	planting	planting									sales	sales	sales	sales

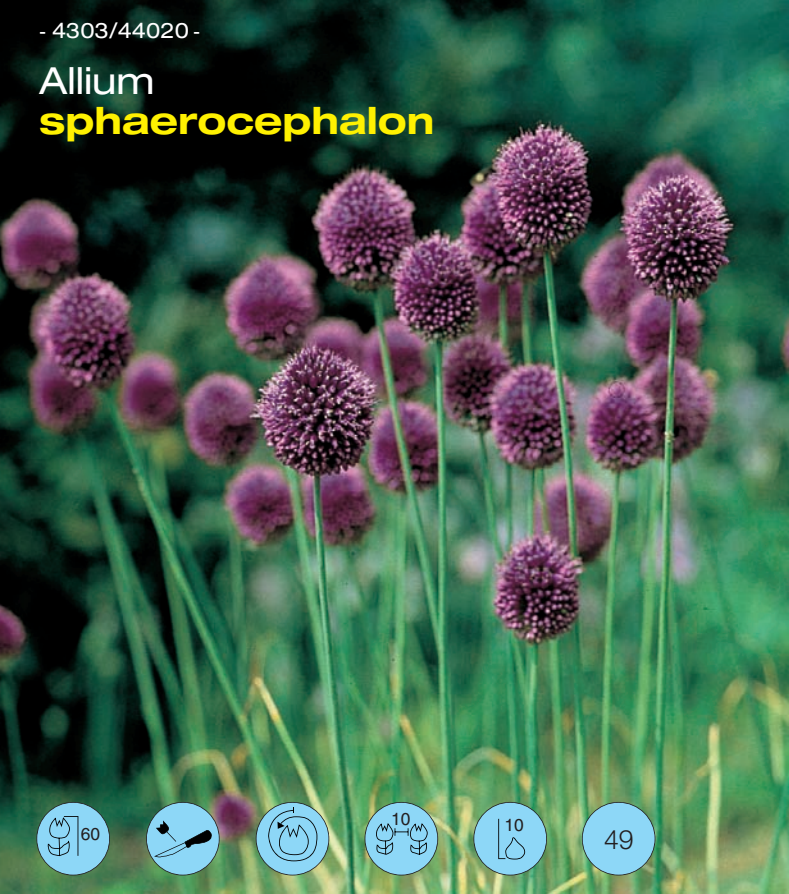


january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				🌸	🌸											🌸	🌸						
								planting	planting	planting	planting									sales	sales	sales	sales



- 4303/44020 -

Allium **sphaerocephalon**



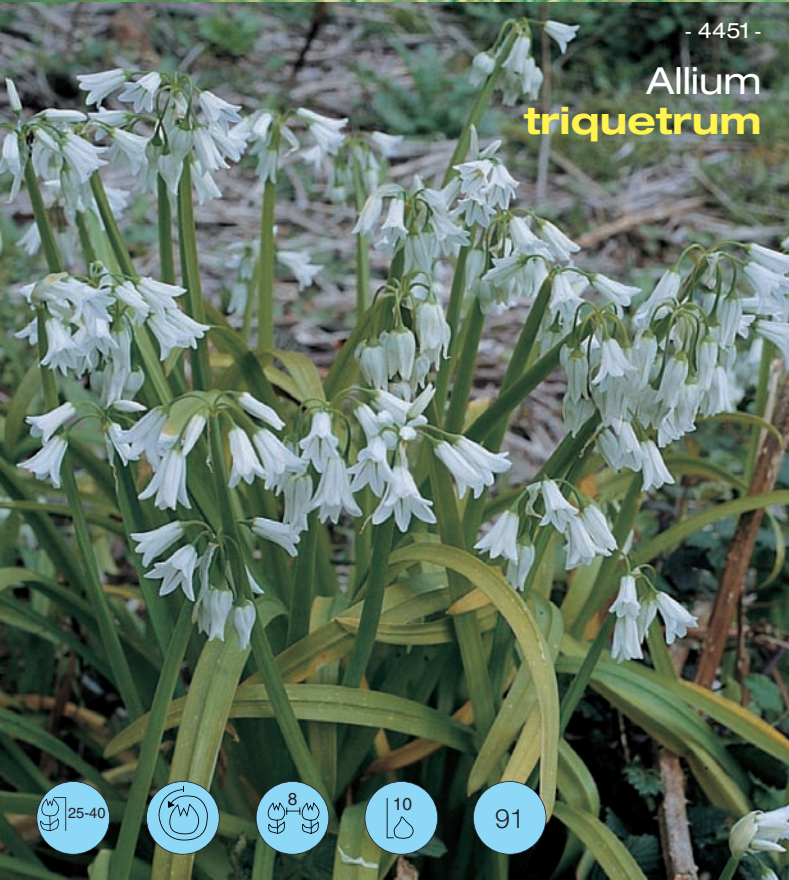
- 44394 -

Allium **stipitatum**



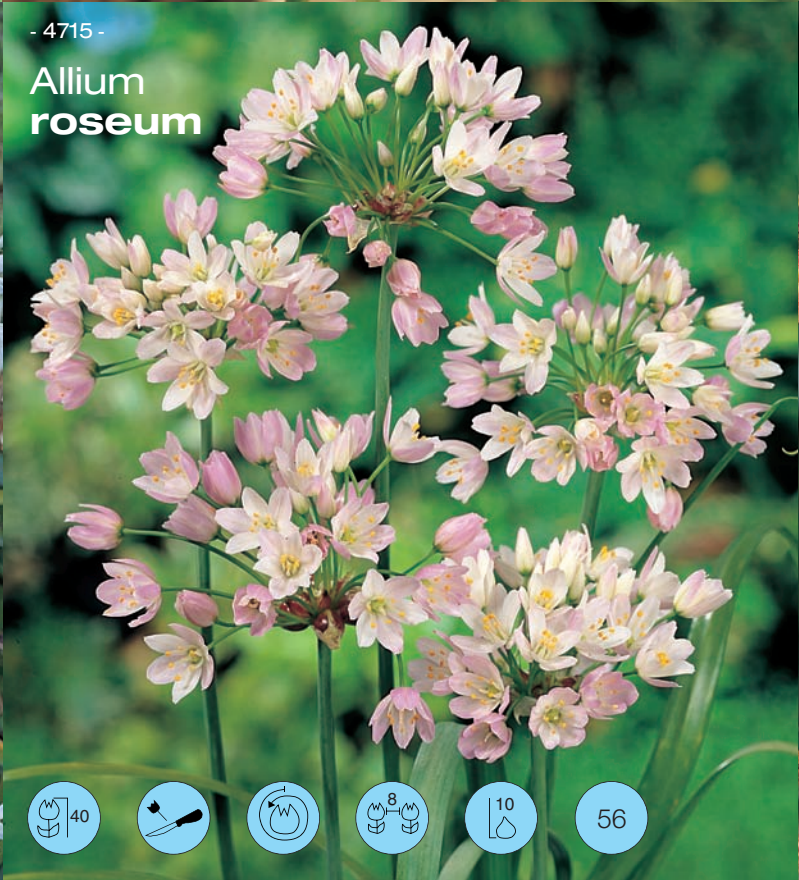
- 4451 -

Allium **triquetrum**

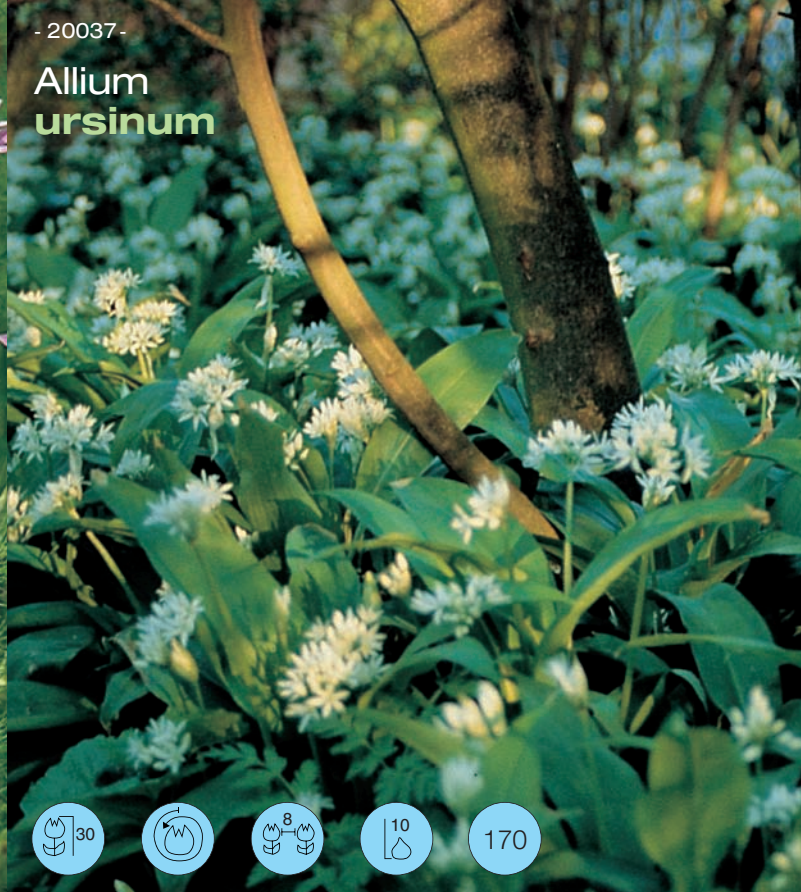


- 4715 -

Allium **roseum**

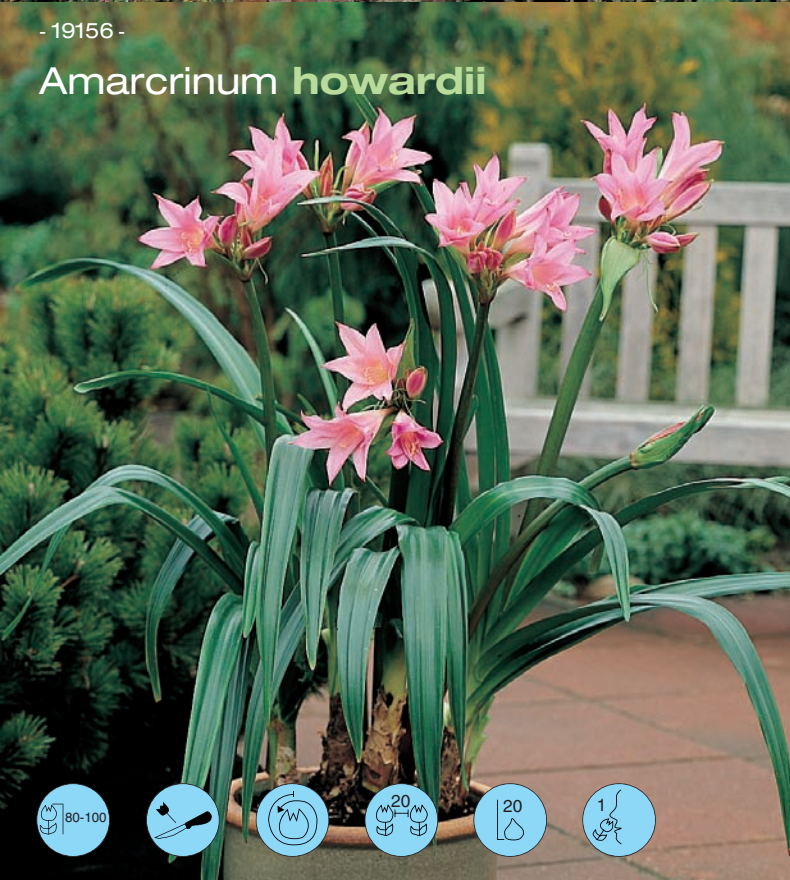


january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				planting				planting							planting					planting			
				sales				sales							sales					sales			



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				planting											planting								
				sales											sales								

january	february	planting						september	october	november	december	january	february	march	april	planting					september	october	november	december
		sales												sales										



january	february	planting						september	october	november	december
	sales										





The original habitats for most of these species are in the eastern Mediterranean countries. Anemones can be categorised into various species or groups, each with its own specific characteristics. *Anemone blanda* and *A. coronaria* produce tubers whilst *Anemone nemorosa* and *A. ranunculoides* produce small rhizomes. Anemones have to be planted before winter sets in, the exception to this rule being *Anemone coronaria*, which is only moderately frost hardy and can also be planted in the spring.

Anemone

SPECIFIC CHARACTERISTICS

- *Anemone blanda*: this small plant comes from the mountains of Greece and Asia Minor. Its original colour is blue, it is propagated from seed, and its tuber size starts at 5 cm. Selections have produced cultivars in other colours as well, but these have to be propagated vegetatively by cutting or breaking the tubers.
- *Anemone coronaria* 'De Caen' came to the Netherlands from France around 1870. *A. coronaria* were initially limited to single-flowering types with bright colours and sturdy stems. Ongoing selection has produced cultivars that can be propagated according to colour but are also sold as mixed colours.
- *Anemone coronaria* 'St. Brigid' produces semi-double flowers with narrower petals and smaller flower than those of 'De Caen'. Under the proper conditions, their tubers can be stored for a year or even longer. One of the factors contributing to tuber size is how long the tubers remain planted. Even the smallest tubers with tuber sizes up to 4 cm. that have been produced one year after planting the seeds will flower. Two-year-old tubers will have bulb sizes from 5 to 8 cm. Tubers propagated from these two-year-old tubers produce many branches and are known in the trade as 'butterflies'.
- *Anemone nemorosa*, (Wood anemone) produce white flowers and are commonly found growing wild in European forests, especially those in Germany and Denmark. Their thin rhizomes can easily dry out, so they should be stored in a cool place and replanted as quickly as possible for optimum results. Their flowering period is March/April.
- *Anemone ranunculoides*: this small plant with its finely textured leaves and small yellow flowers is similar in many ways to *A. nemorosa*.

APPLICATIONS

Depending on the species, anemones are suitable for garden planting, cut flower production and pot plant production.

- CUT FLOWER PRODUCTION: particularly suited to this purpose is 'De Caen' that can be forced under glass from February to early May.
- POT PLANT PRODUCTION: *A. blanda* is perfect as a pot plant and can be forced into flower from late February to late April. It can also be sold as a flowering plant for transplanting to the garden during the spring.
- GARDEN PLANTING: *A. coronaria* is fairly frost hardy and should either be kept mulched during the winter period or planted in the spring. The other species are perfect for perennialising in the garden.

De meeste soorten komen van oorsprong voor in de landen rond het oostelijk deel van de Middellandse Zee. We onderscheiden verschillende rassen of groepen met ieder specifieke eigenschappen. *Anemone blanda* en *coronaria* zijn knollen terwijl *Anemone nemorosa* en *ranunculoides* als kleine wortelstokjes kunnen worden aangemerkt. Anemonen moeten voor de winter worden geplant met uitzondering van *Anemone coronaria* die maar matig winterhard is en ook in het voorjaar kan worden geplant.

Anemone

ENKELE KENMERKEN

- *Anemone blanda*: dit gewasje is afkomstig uit de bergen in Griekenland en Klein-Azië. De oorspronkelijke kleur is blauw en wordt door zaad vermeerderd, knolmaat vanaf 5 cm. Door selectie komen ook andere kleuren, cultivars, voor die echter vegetatief worden vermeerderd door snijden of breken.
- *Anemone coronaria* 'De Caen' is rond 1870 vanuit Frankrijk naar Nederland gekomen. Het zijn enkelbloemige typen, heldere kleuren metelen. Door voortdurende selectie zijn verschillende cultivars op kleur ontstaan; ze worden ook gemengd verhandeld.
- *Anemone coronaria* 'St. Brigid' is halfgevuldbloemig, de bloemen zijn iets kleiner en de bloemblaadjes smaller dan bij 'De Caen'.
De knollen van zowel 'De Caen' als 'St. Brigid' kunnen, mits onder de juiste omstandigheden, een jaar of zelfs langer worden bewaard. De knolmaat is mede afhankelijk van de teeltduur. Pitten zijn éénjarig van zaad, knolmaat tot ongeveer 4 cm. Knopen zijn tweejarig en gegroeid van pitten, knolmaat 5 tot 8 cm. Knollen geteeld van knopen zijn sterk 'vertakt' en noemt men wel 'vlinders'.
- *Anemone nemorosa*, (bosanemoon) is wit van kleur en komt volop in Europa (Duitsland, Denemarken) in bossen in het wild voor. Het zijn dunne wortelstokjes die heel gemakkelijk uitdrogen, koel bewaren en zo snel mogelijk weer planten geeft het beste resultaat. Bloeiperiode maart-april.
- *Anemone ranunculoides*, dit gewasje met fijn blad en kleine gele bloempjes is verder te vergelijken met *nemorosa*.

GEBRUIKSMOGELIJKHEDEN

Afhankelijk van de soort zijn anemonen geschikt voor tuinbeplanting, snijbloementeel en potplant.

- **SNIJBLOEMENTEELT**: hier komt vooral 'De Caen' voor in aanmerking, vervroegen onder glas in de periode februari-begin mei.
- **POTPLANT**: *blanda* is uitermate geschikt in de periode eind februari-eind april, ook om in het voorjaar als bloeiend gewasje te planten in de tuin.
- **TUINBEPLANTING**: *coronaria* is heel matig winterhard en moet gedurende de winterperiode worden afgedekt of in het voorjaar worden geplant. De overige soorten zijn uitermate geschikt om te verwilderen in de tuin.

该种类植物的原产地大多数在地中海东部的国家。银莲花可被分为不同的种类和类别，每种都有它们自己的特征。

淡色银莲花和 *Anemone coronaria* 可产生块茎，而荫蔽银莲花和毛茛状银莲花可产生根茎。通常银莲花必须在冬季之前种植，但是这条规则对于 *Anemone coronaria* 例外，它能不太耐霜冻，可在春季种植。

银莲花属

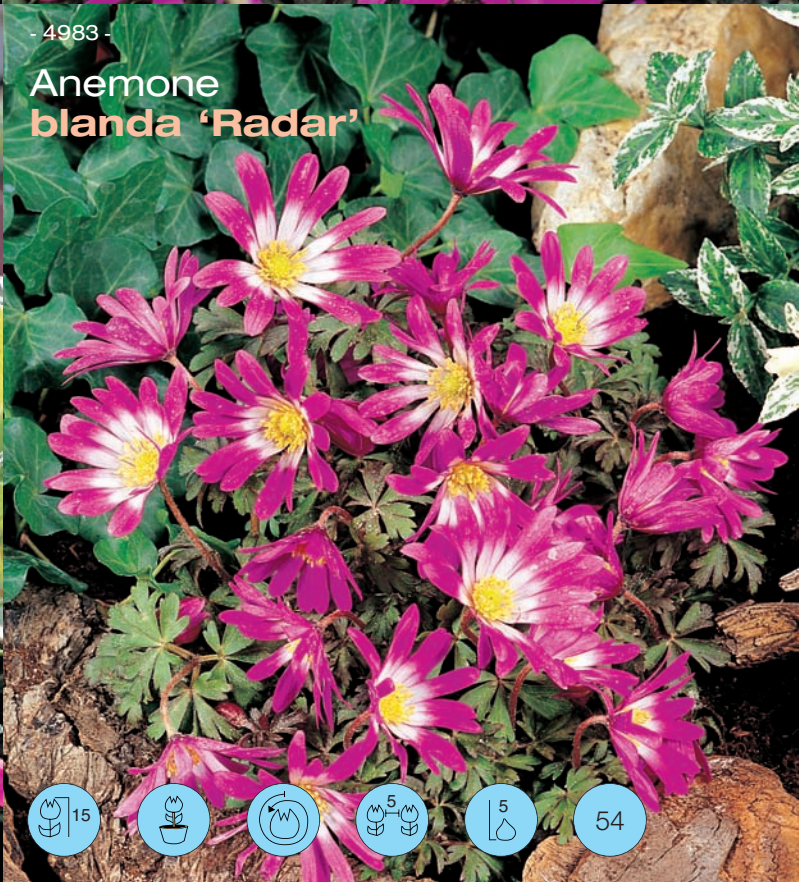
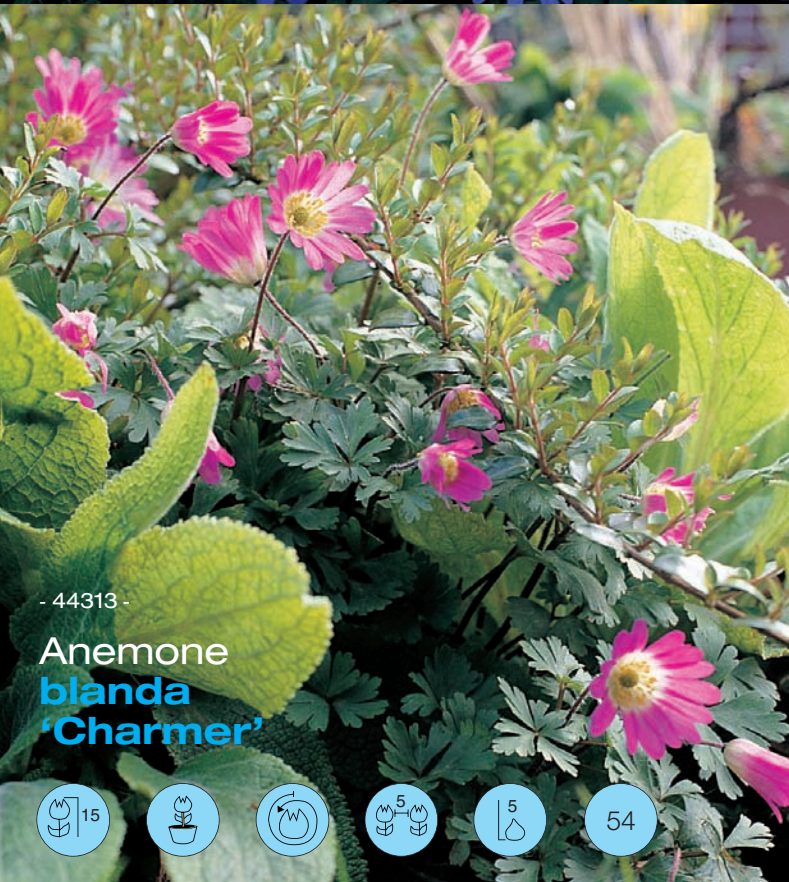
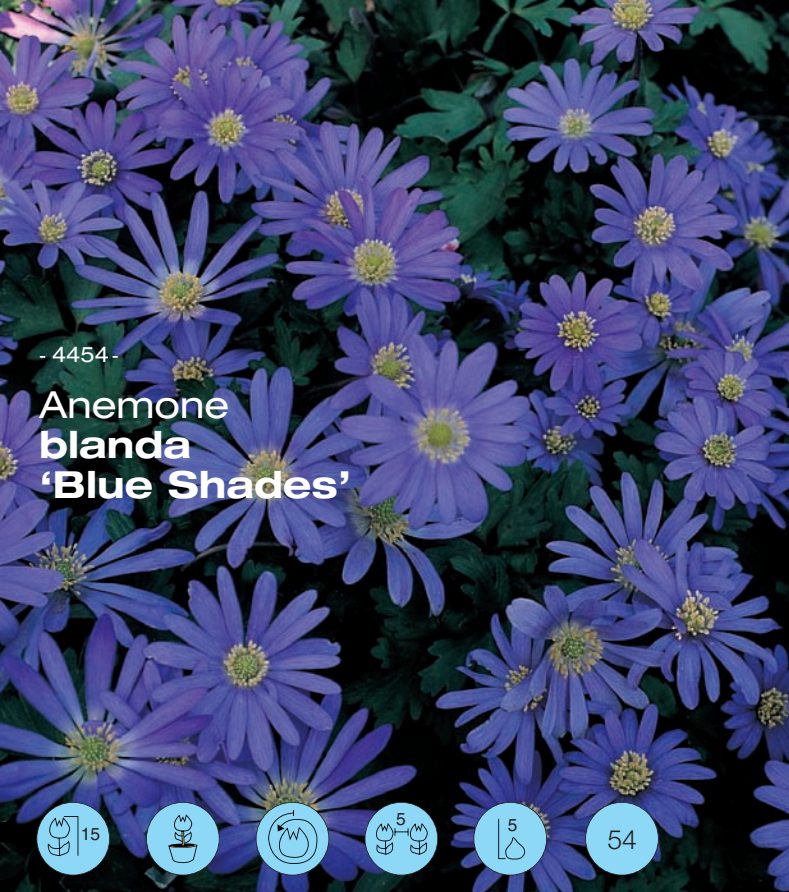
特征

- 淡色银莲花: 这种小型植株来自于希腊和亚洲的山区。它们原始的颜色为兰色，通过种子进行繁殖。它们块茎的起始规格为 5 厘米。通过选育也有其它颜色的栽培品种，但是它们必须通过无性的方法进行繁殖，如扦插或切割块茎。
- *Anemone coronaria*: ‘De Caen’ 大约在 1870 年从法国被引入到荷兰。起初它们只限于单瓣类型，具有亮丽色彩和坚硬的枝条。正在进行选育的新品种不仅仅有新的颜色，而且还有混色的品种。
- *Anemone coronaria* ‘St. Brigid’ 可产生半复瓣型的窄花瓣，它们的花比 ‘De Caen’ 要小。在适合条件下，它们的球根可以储藏一年甚至更长。影响球根大小的重要因素是其种植时间的长短。在种子种植一年并开花后，球根的最小规格也大约在 4 厘米左右。种植两年的球根可在 5 到 8 厘米。由这些两年的球根繁殖而来的，有许多分枝的球根，在交易中被称为 ‘蝴蝶型球根’。
- 荫蔽银莲花: 野生的品种通常在欧洲的森林中可见到这些白色的花，尤其是在德国和丹麦。它们的细小的根茎特别容易干枯，因此，必须将它们储藏在阴凉的地方，并尽快种植，以得到最佳的效果。它们的开花时间为三到四月。
- 毛茛状银莲花: 这些小型的植株具有带细小纹理的叶片，开黄色的花。在许多地方它们于荫蔽银莲花很相似。

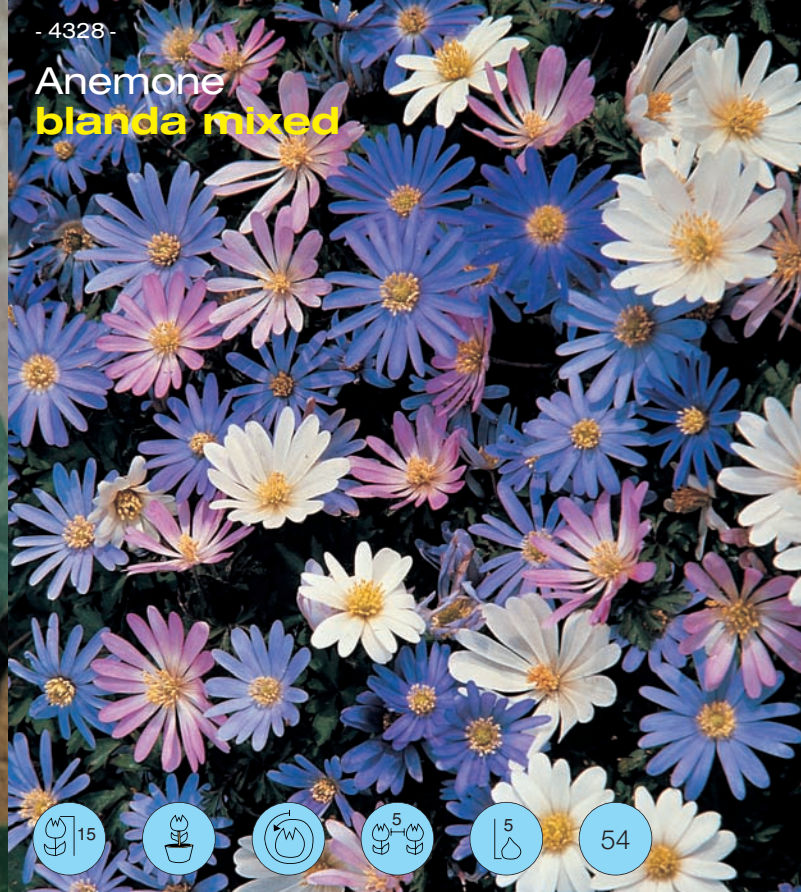
应用

根据品种，银莲花可适合于在花园种植、切花生产和盆花生产。

- 切花生产: 特别适合该用途的是 ‘De Caen’ 这个品种，它们从二月到五月可在温室中进行促成栽培。
- 盆花生产: 淡色银莲花很适合作为盆花使用，它们可从二月底到四月底进行促成栽培，使它们开花。它们也可作为一个开花的植株，在春季被移栽到花园中。
- 花园种植: *Anemone coronaria* 不耐霜冻，在冬季应进行加覆盖或在春季栽培均可。其它的品种比较适合在花园中多年栽培。



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			🌸						planting	sales					🌸						planting	sales	



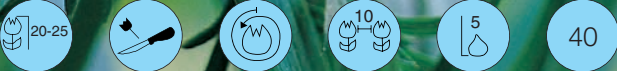
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			🌸	🌸	🌸			planting	sales						🌸	🌸	🌸			planting	sales		

Anemone coronaria 'Mr. Fokker'

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
	sales							planting				planting								planting			
	sales							sales				sales								sales			

- 8855 -

Anemone coronaria 'Mr. Fokker'

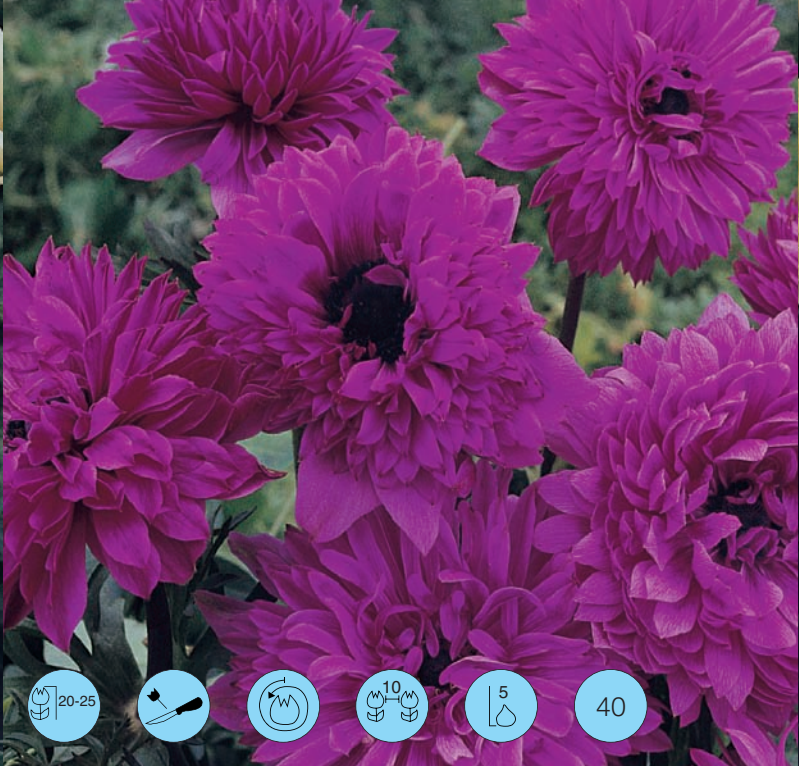


Anemone coronaria 'Sylphide'



- 88076 -

Anemone coronaria 'Admiral'



- 88074 -

Anemone coronaria 'Bride'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
	sales							planting				planting								planting			
	sales							sales				sales								sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
sales								planting				sales								planting			



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
sales								planting				sales								planting			

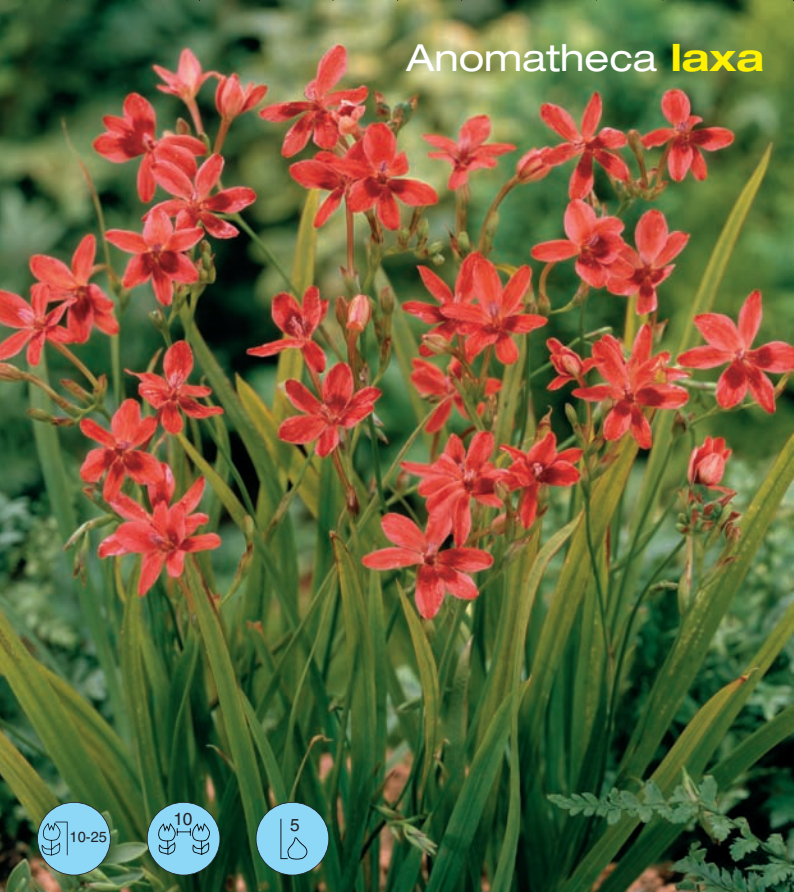


Anemone **nemorosa**
'Vestal'

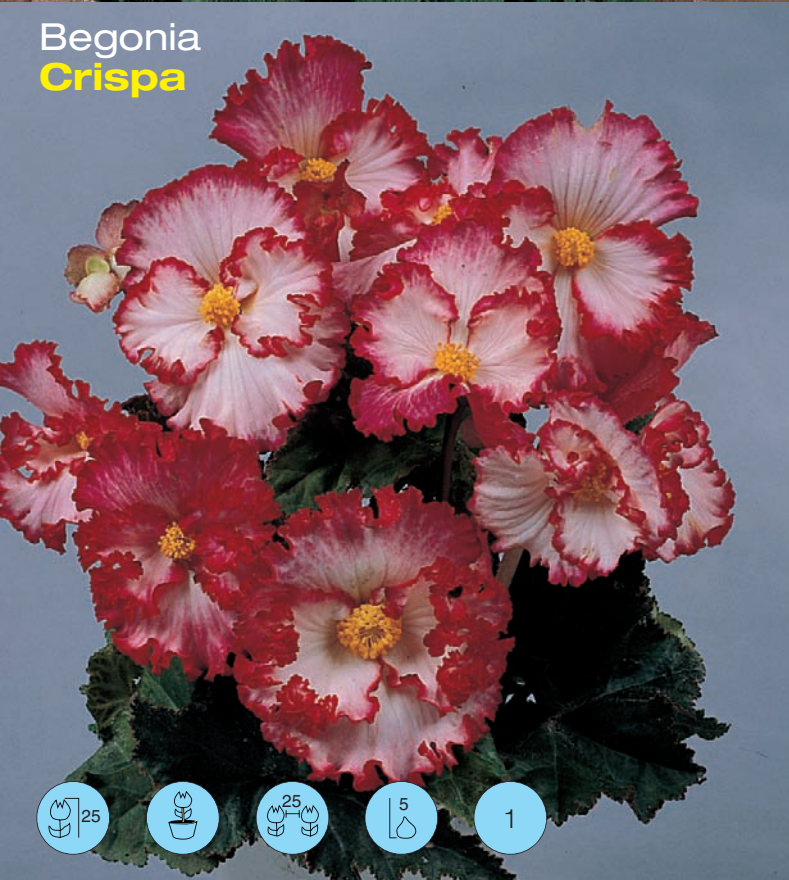


Anemone **ranunculoides**





Babiana **stricta**



january	february	march	planting	april	may	june	planting	july	august	september	october	november	december	january	february	march	planting	april	may	june	planting	july	august	september	october	november	december
		sales														sales											



january	february	march	planting	april	may	june	planting	july	august	september	october	november	december	january	february	march	planting	april	may	june	planting	july	august	september	october	november	december
		sales														sales											

planting

planting

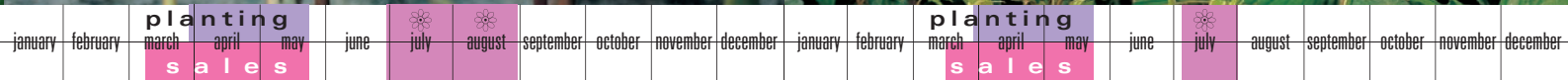
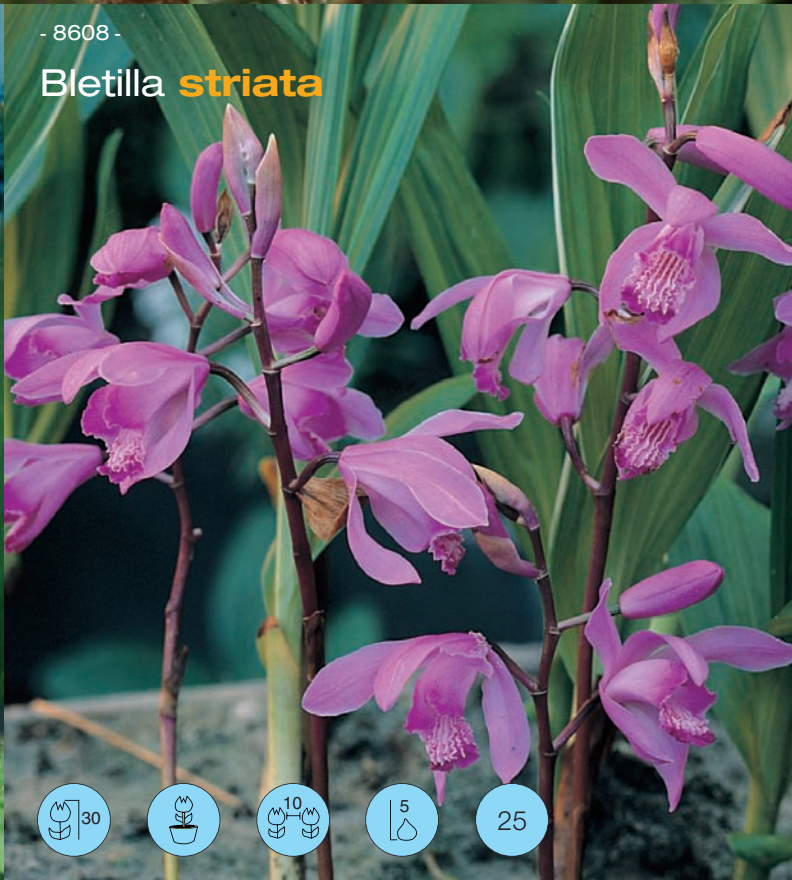
sales

sales

January February March April May June July August September October November December

January February March April May June July August September October November December







- 4711 -

Brimeura
amethystina
mixed



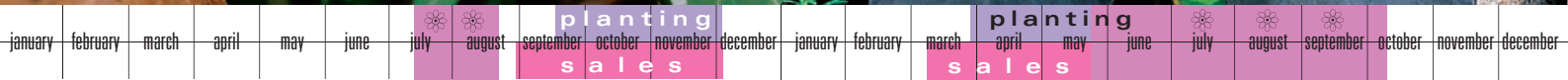
Brodiaea californica 'Babylon'®

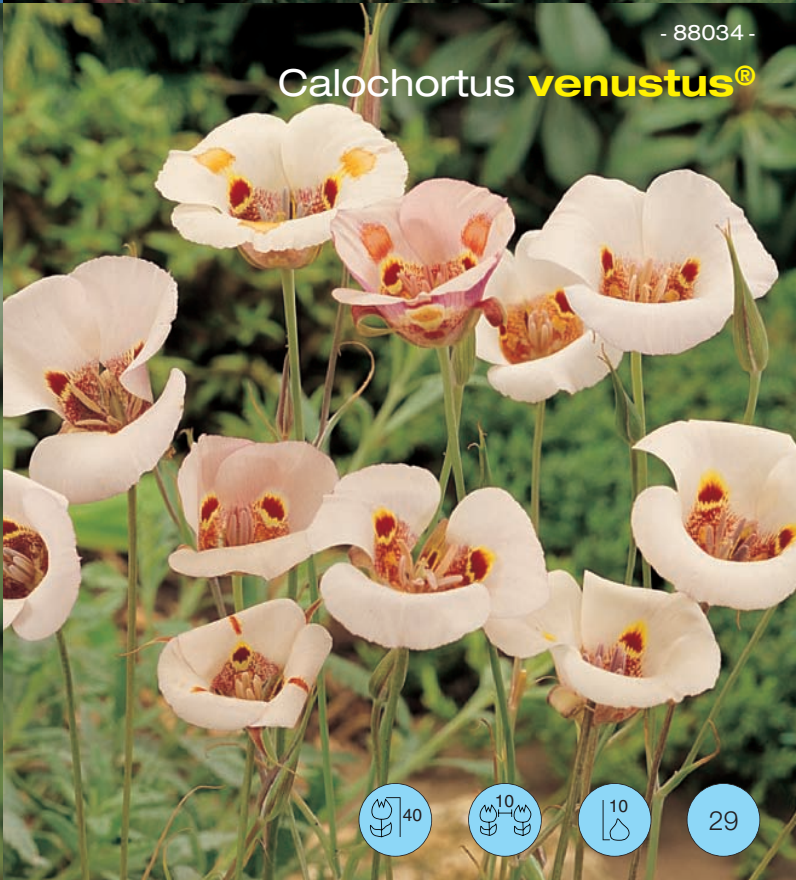


Bulbocodium
vernum

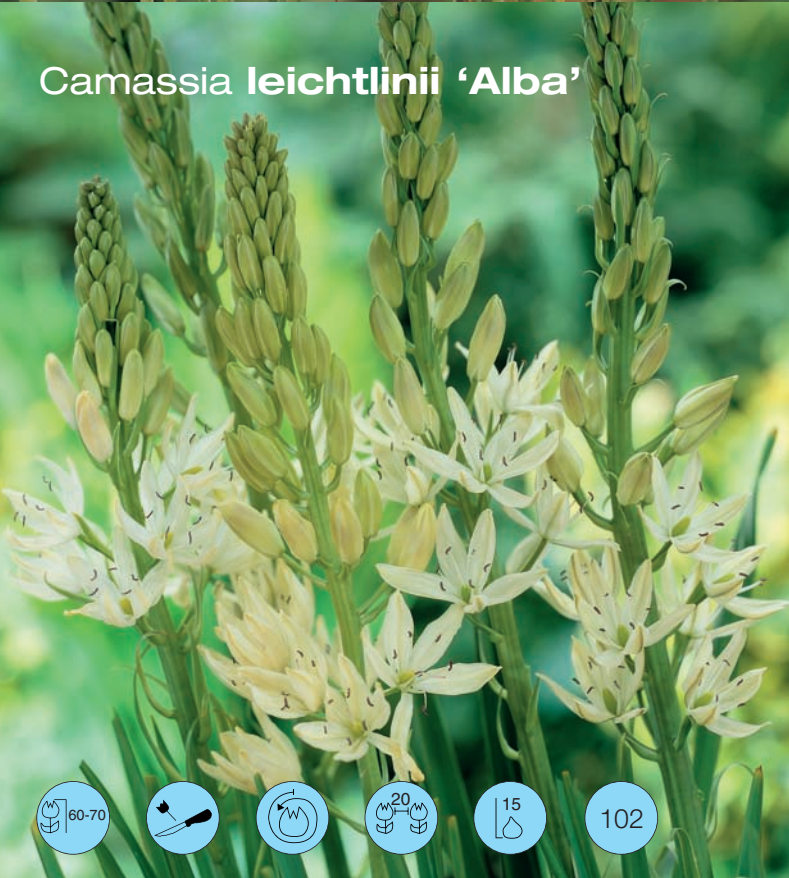


- 8679 -
Colocasia
esculenta





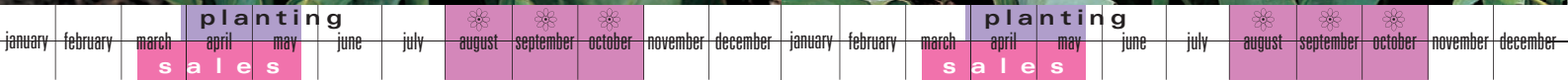
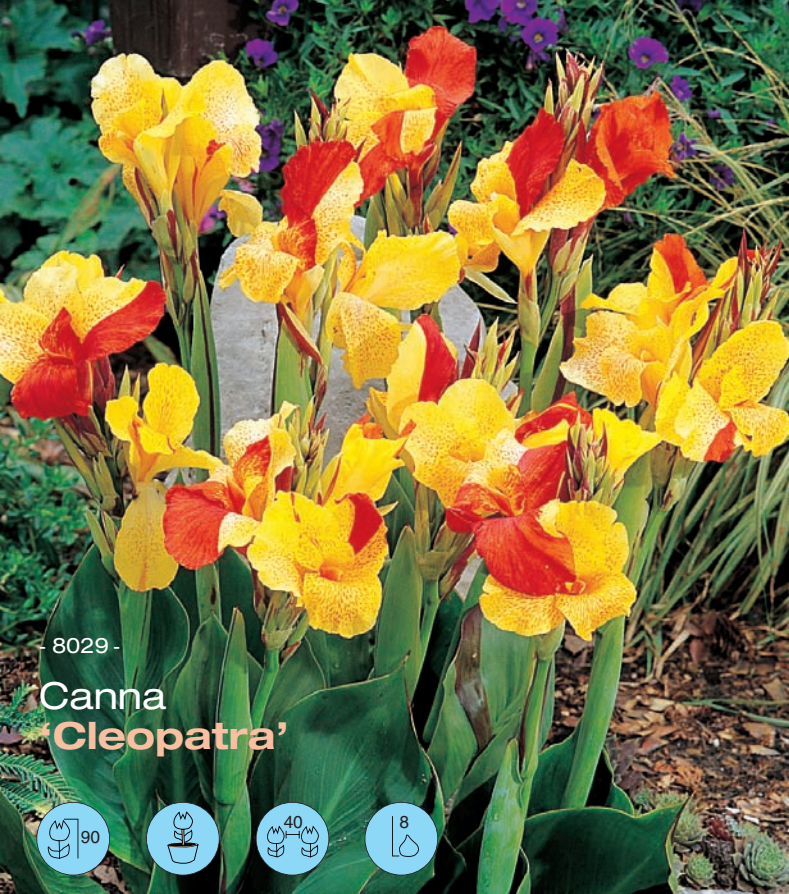
january	february	march	planting	april	may	june	sales	july	august	september	october	november	december	january	february	march	april	may	sales	june	july	august	september	planting	october	november	december
---------	----------	-------	----------	-------	-----	------	-------	------	--------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	-------	------	------	--------	-----------	----------	---------	----------	----------



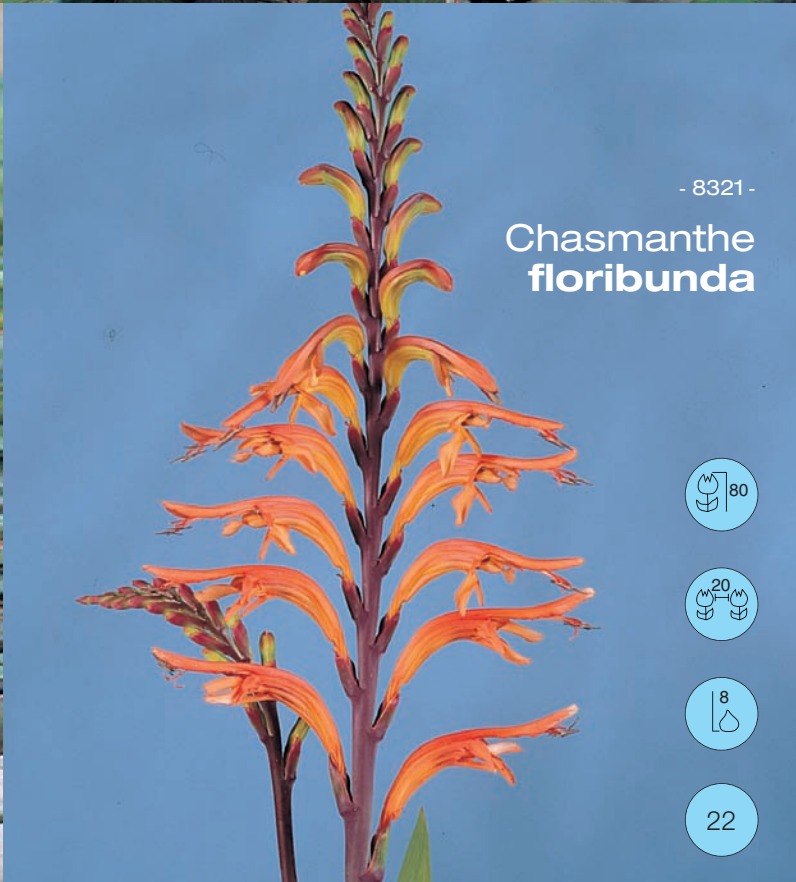
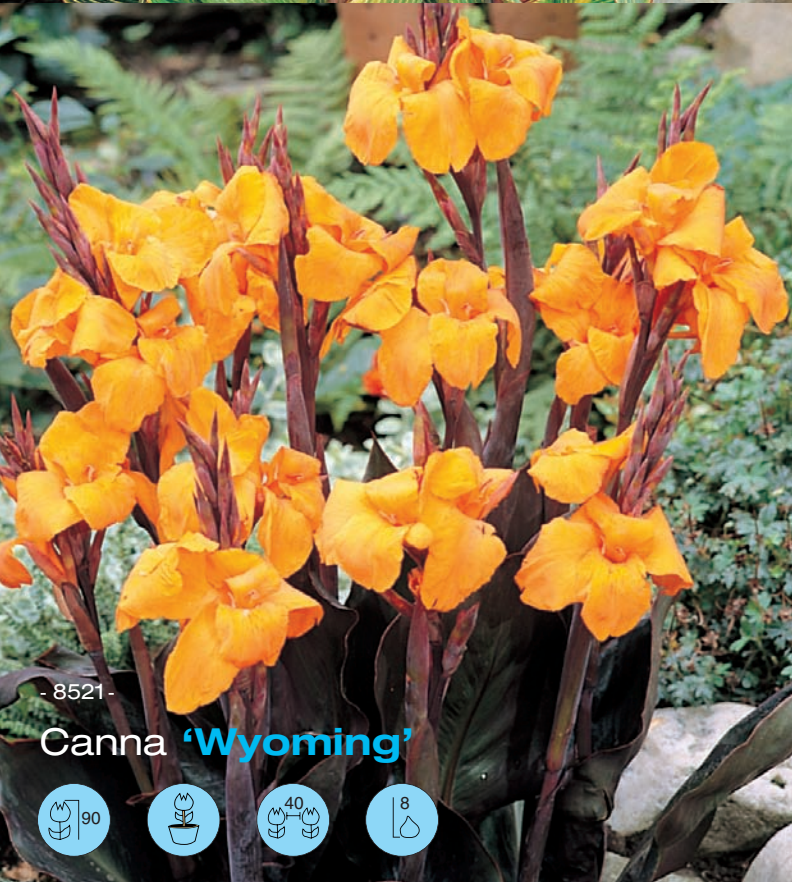
january	february	march	april	may	sales	june	july	august	september	planting	october	november	december	january	february	march	april	may	sales	june	july	august	september	planting	october	november	december
---------	----------	-------	-------	-----	-------	------	------	--------	-----------	----------	---------	----------	----------	---------	----------	-------	-------	-----	-------	------	------	--------	-----------	----------	---------	----------	----------



Canna ‘Cleopatra’



january	february	march	planting	april	may	june	july	august	september	october	november	december	january	february	march	planting	april	may	june	july	august	september	october	november	december
		sales		sales											sales		sales								



january	february	march	planting	april	may	june	july	august	september	october	november	december	january	february	march	planting	april	may	june	july	august	september	october	november	december
		sales		sales											sales		sales								



- 8606 -

Chasmanthe floribunda var. duckitii

80
20
8
22

- 4294 -

Chionodoxa forbesii

15-20
1
8
10
48

- 4765 -

Chionodoxa forbesii 'Pink Giant'

15-20
1
8
10
48

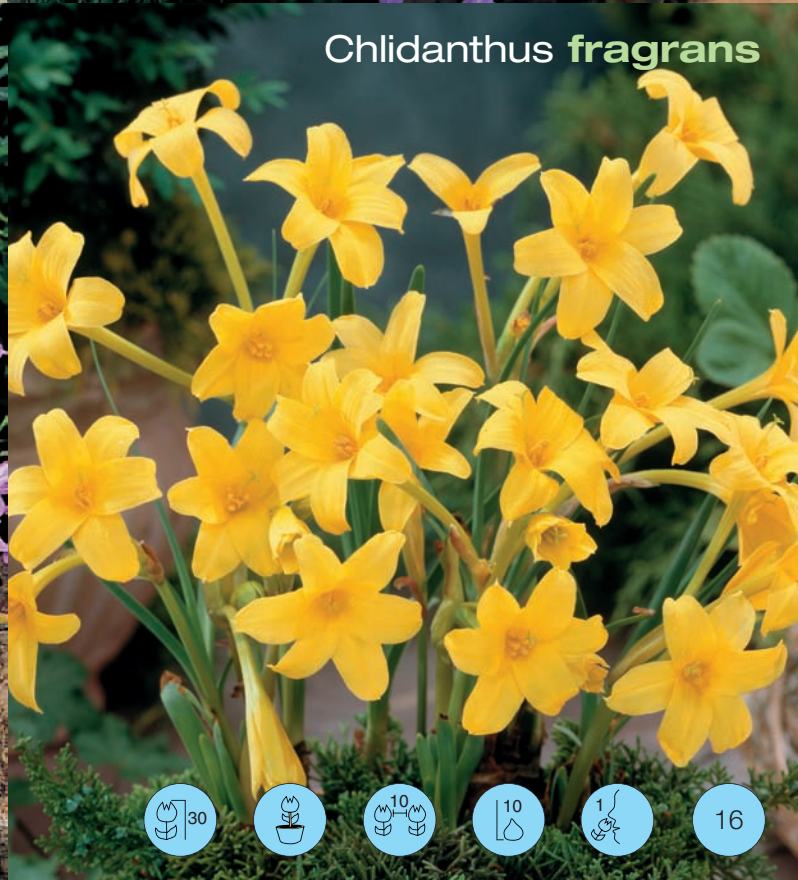
- 44368 -

Chionodoxa luciliae

15
1
8
10
48



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales



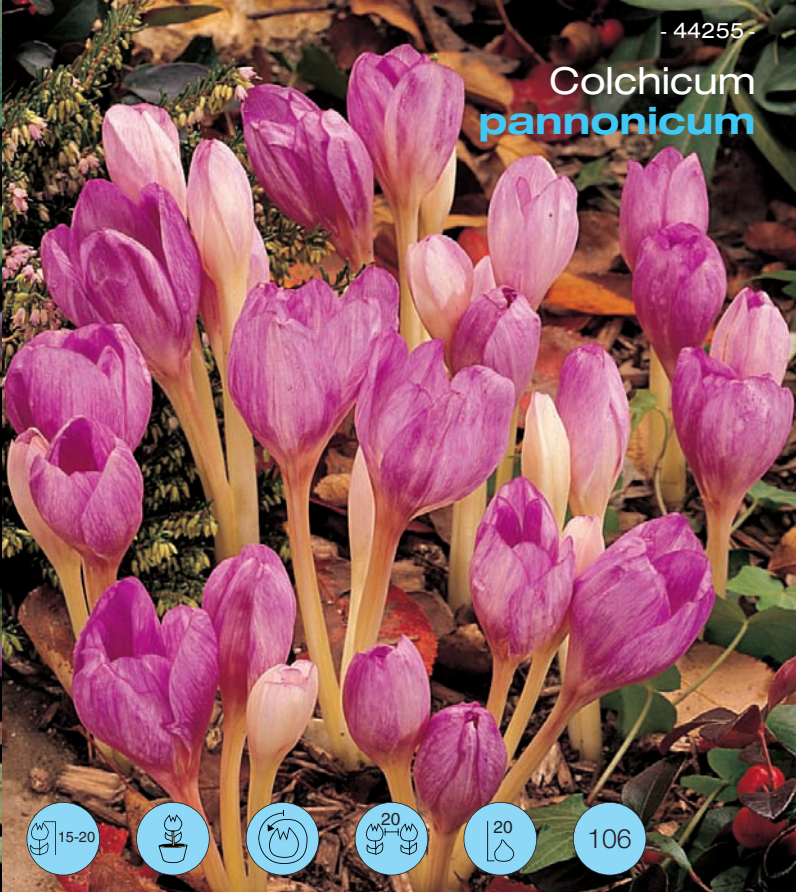
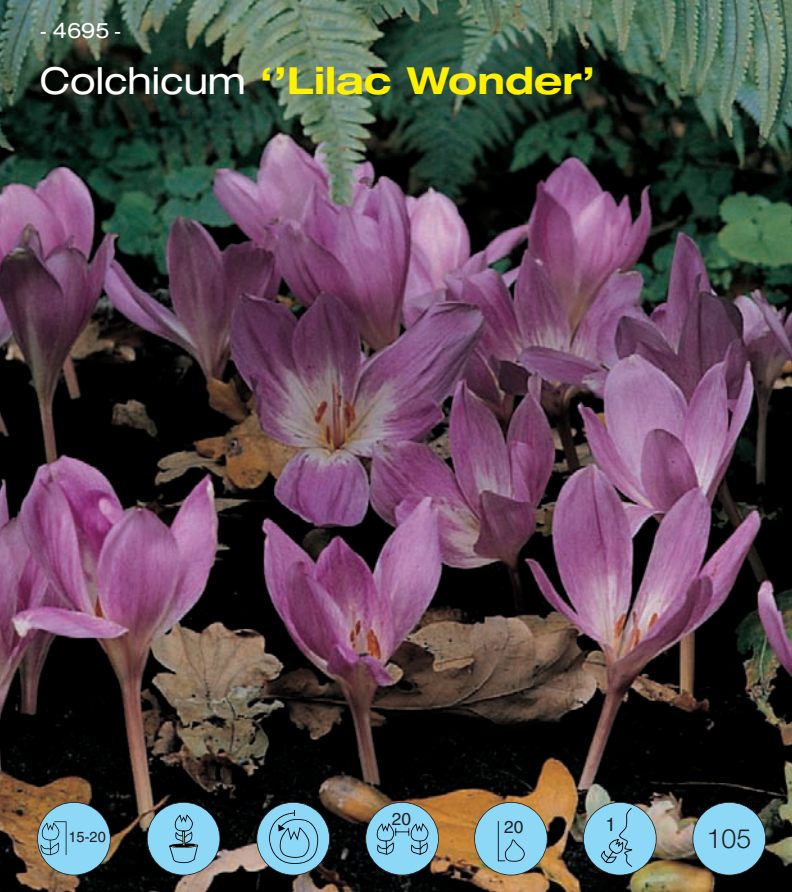
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting				planting	planting							
								sales	sales	sales	sales			sales	sales	sales							

january	february	march	april	may	june	planting	august	september	october	november	december	january	february	march	april	may	june	planting	august	september	october	november	december
						july	sales					july	sales					july	sales				



january	february	march	april	may	june	planting	august	september	october	november	december	january	february	march	april	may	june	planting	august	september	october	november	december
						july	sales					july	sales					july	sales				

january	february	march	april	may	june	planting	august	september	october	november	december	january	february	march	april	may	june	planting	august	september	october	november	december
						july	sales					july						july	sales				



january	february	march	april	may	june	planting	august	september	october	november	december	january	february	march	april	may	june	planting	august	september	october	november	december
						july	sales					july						july	sales				

january	february	planting			may	june			september	october	november	december	january	february	planting			may	june			september	october	november	december
		sales													sales										

- 8684 -

Commelina
tuberosa
mixed



- 8422 -

Commelina
tuberosa
blue



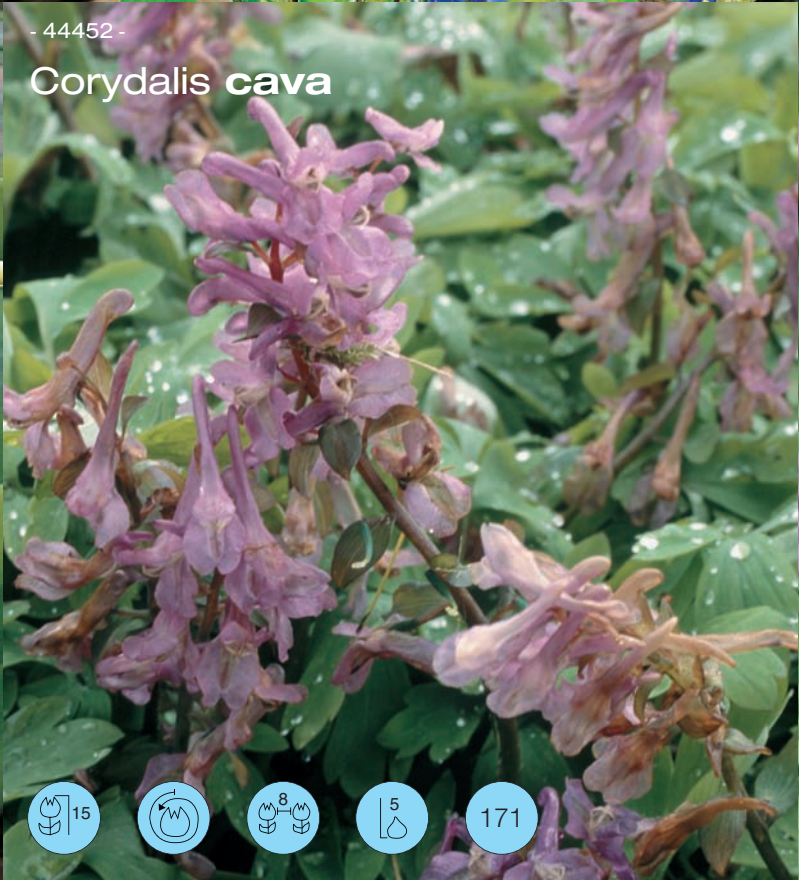
- 44030 -

Convallaria **majalis**



- 44452 -

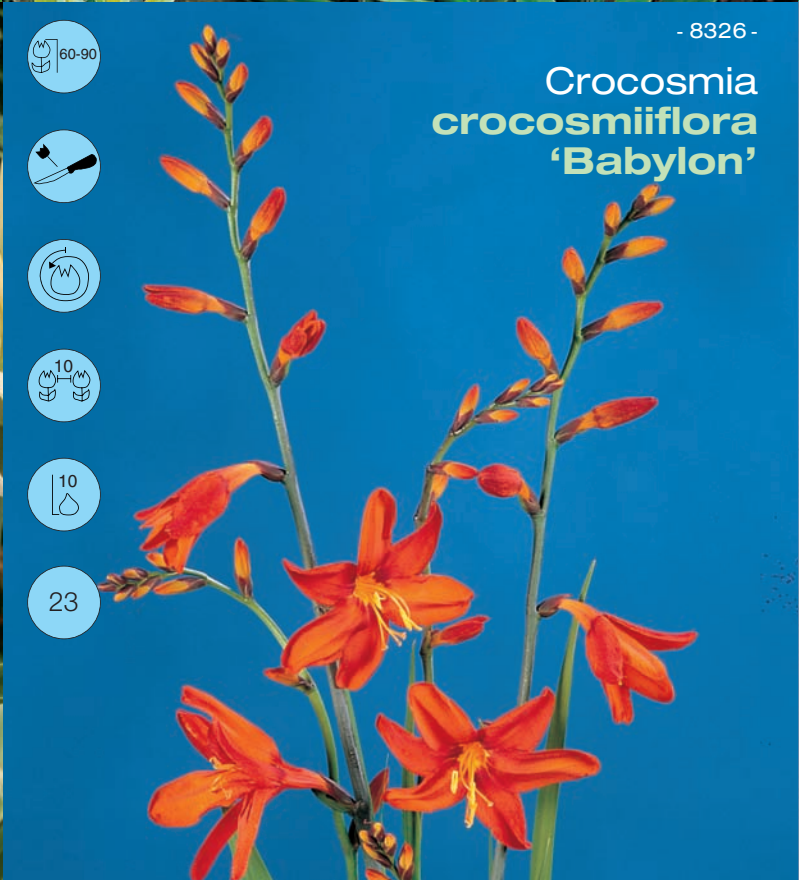
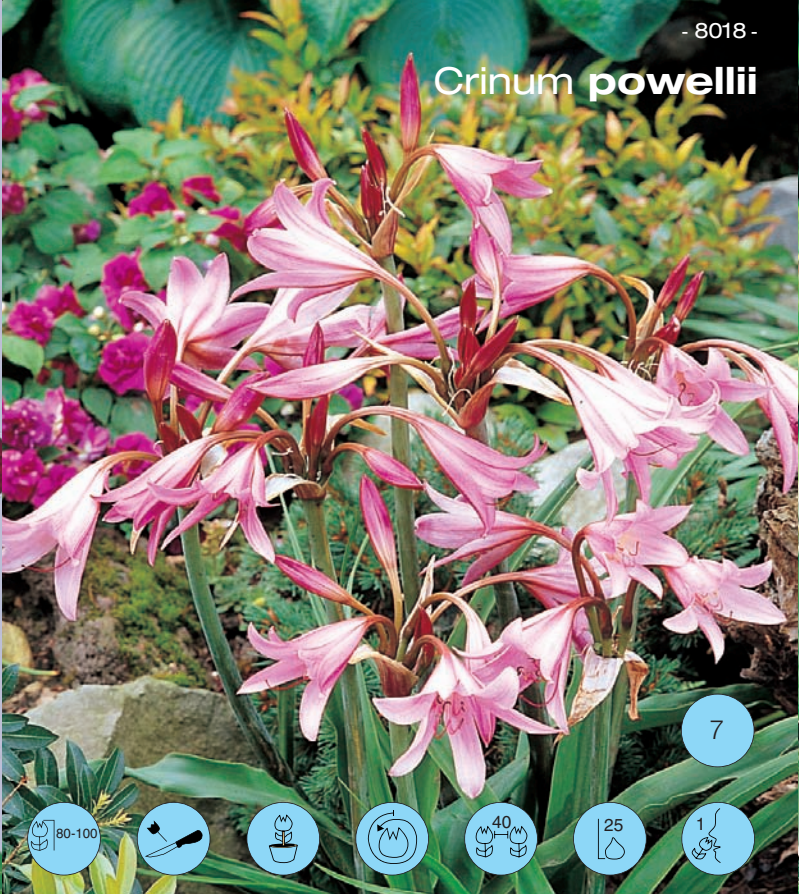
Corydalis **cava**



january	february	sales	sales	🌸	may	june	july	august	sales	sales	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	planting	
---------	----------	-------	-------	---	-----	------	------	--------	-------	-------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	--

january	february	planting sales	planting sales	may	june	july	august	planting sales	planting sales	november	december	january	february	planting sales	planting sales	may	june	july	august	planting sales	planting sales	november	december
---------	----------	-------------------	-------------------	-----	------	------	--------	-------------------	-------------------	----------	----------	---------	----------	-------------------	-------------------	-----	------	------	--------	-------------------	-------------------	----------	----------

january	february	march	planting	april	may	june	july	august	september	october	november	december	january	february	march	planting	april	may	june	july	august	september	october	november	december
				sales	sales												sales	sales							



january	february	march	planting	april	may	june	july	august	september	october	november	december	january	february	march	planting	april	may	june	july	august	september	october	november	december
				sales	sales												sales	sales							

january	february	march	planting			june	july	august	september	october	november	december	january	february	march	planting			june	july	august	september	october	november	december
		sales													sales										



january	february	march	planting			june	7	8	9	10	11	12	january	february	march	planting			june	7	8	9	10	11	12
		sales													sales										

january	february	march	planting		june	flower	flower							january	february	march	planting		june	flower	flower						
		sales														sales											

- 8954 -

Crocosmia
crocosmiiflora
‘John Boots’



60-90





10

10

23

- 8576 -

Crocosmia **crocosmiiflora**
‘Lucifer’



60-90





10

10

23

- 8223 -

Crocosmia
crocosmiiflora
‘Mistral’



60-90





10

10

23

- 8329 -

Crocosmia
crocosmiiflora ‘Météore’



60-90





10

10

january	february	march	planting			june	july	august	september	october	november	december	january	february	march	planting			june	july	august	september	october	november	december
		sales													sales										

Crocasmia
crocosmiiflora 'Red King'



Crocasmia
masonorum





This cormous plant originates from Southern and Southeastern Europe, Turkey and Iran. A distinction can be made between the large-flowering crocuses and the species crocuses. Crocuses are planted in the autumn (October/November). These corms will use their nutrients to produce flowers in the spring. This will be followed by the production of several new corms on top of the old withered corm.

Crocus

SPECIFIC CHARACTERISTICS

- *Large-flowered crocuses*

These are by far the most important group for commercial production. The cultivars in this group were developed by crossings and selections of *Crocus vernus*; *Crocus flavus* (Yellow crocus) also belongs to this group. Blue and purple are the most common colours. Corm sizes need to be 7-8, 8-9 and larger than 9 cm. to flower. Depending on the size of the corm, it will develop multiple shoots, each of which will produce one to three flowers.

- *Species crocuses*

This group contains both spring-flowering and autumn-flowering species and cultivars. The spring-flowering varieties are many in number and are characterised by their profusion of flowers, their wide range of colours, and flowers that are smaller than the large-flowering crocuses. Cultivars of *Crocus chrysanthus* are the most important representatives, but also produced in fairly large quantities are *Crocus ancyrensis*, *C. etruscus*, *C. sieberi* and *C. tommasinianus*. The most commonly available size is 5 cm.

The autumn-flowering crocuses are composed of just a few varieties and are comparable to *Colchicum* in regard to their uses. These corms are planted in September and will flower without any leaves about a month later. Leaves will not emerge until the next spring. *Crocus pulchellus* 'Zephyr' is an important representative from this group; *Crocus kotschyanus* (syn. *C. zonatus*) and *C. sativus* also flower in the autumn.

APPLICATIONS

- GARDEN PLANTING

Crocuses are used chiefly for garden planting and are excellent corms for perennialising; they are also frequently planted in lawns.

- POT PLANTS

The cultivars of *Crocus vernus* are recommended for this purpose. It is possible to obtain flowers starting in late December by applying a modified temperature treatment and the required cold period lasting 13-15 weeks to suitable cultivars such as 'Flower Record', 'Jeanne d'Arc' and 'Pickwick'. Minimum corm size is 8-9 cm. As soon as the corms are planted, the shoots begin to develop fairly quickly, thus giving the impression that the corms will soon be producing flowers, but this is possible only after a sufficiently long cold period. *Crocus flavus* and the species crocuses can be forced to produce flowers of good quality no earlier than late January.

Dit knolgewas komt oorspronkelijk voor in Zuid- en Zuidoost-Europa, Turkije en Iran. Er kan een onderscheid gemaakt worden in de soortcrocus of grootbloemige crocus en speciescrocus. Crocus wordt in het najaar, oktober-november, geplant, het zijn eenjarige knollen waarbij zich tijdens de groeiperiode na de bloei een of meerdere nieuwe knollen vormen boven op de oude 'leeggezogen' knol.

Crocus

ENKELE KENMERKEN

- *Soortcrocus*

Dit is verreweg de belangrijkste groep van grootbloemige typen. De cultivars uit deze groep zijn ontstaan door kruisingen en selecties uit *Crocus vernus*; ook *Crocus flavus* (gele crocus) behoort tot deze groep. Blauw en paars zijn de meest voorkomende kleuren, knolmaten 7-8, 8-9 en groter dan 9 cm. Afhankelijk van de grootte van de knol ontwikkelen zich meerdere spruiten of 'pennen' die per spruit 1 tot 3 bloemen produceren.

- *Speciescrocus*

Binnen deze groep onderscheidt men voorjaarsbloeiende en najaarsbloeiende species en cultivars. De voorjaarsbloeiende zijn een uitgebreide groep van species en cultivars die zich kenmerkt door bloeirijkheid, een brede kleurschakering maar kleinere bloemen dan de soortcrocus. Cultivars van *Crocus chrysanthus* zijn de belangrijkste vertegenwoordigers, daarnaast komen ook *Crocus ancyrensis*, *etruscus*, *sieberi* en *tommasinianus* voor. De meest gangbare knolmaat is 5 cm.

De najaarsbloeiende zijn slechts een heel kleine groep en zijn wat gebruik en toepassing betreft te vergelijken met *Colchicum*. De knollen worden geplant in september en ongeveer een maand later zonder blad; dit ontwikkelt zich pas in het voorjaar.

Crocus pulchellus 'Zephyr' is een belangrijke vertegenwoordiger uit deze groep; *Crocus kotschyanus* (zonatus) en *sativus* bloeien ook in het najaar.

GEBRUIKSMOGELIJKHEDEN

- TUINBEPLANTING

Crocus wordt voornamelijk gebruikt voor tuinbeplanting en is uitermate geschikt om te verwilderen; aanplanten in gazons wordt ook veelvuldig toegepast.

- POTPLANT

De cultivars van *Crocus vernus* zijn hiervoor aan te raden. Met een aangepaste temperatuurbehandeling is voor geschikte soorten zoals *Flower Record*, *Jeanne d'Arc* en *Pickwick* en een noodzakelijke koude periode van 13-15 weken, bloei vanaf eind december mogelijk; de minimale knolgrootte is 8-9 cm. Zodra de knollen opgeplant zijn ontwikkelen de spruiten zich vrij snel waardoor de idee kan ontstaan dat de knollen spoedig zouden kunnen gaan bloeien; alleen na een voldoende lange koude periode is dat mogelijk. *Crocus flavus* en de species crocussen kunnen gebroeid niet eerder dan eind januari in goede kwaliteit bloeien.

这种球茎植物原产于南欧和东南欧洲、土耳其和伊朗，其中大花型番红花和其它番红花有明显的区别。番红花通常在秋季种植(10月/11月)，这些球茎利用自身的营养物质到来年的春季开花。接下来，在枯萎老球的顶部会长出几个新球来。

番红花属

特征

• 大花型番红花

这是在商业化生产中最重要的一类。这些栽培品种是由该类别中的红宝石番红花和黄花番红花杂交后选育得到的。兰色和紫色是最常见的颜色。球茎的规格需要 7-8, 8-9 以及 9 厘米以上才能开花。根据球茎的大小，它们可生长出多个花枝，每个上面可以开一到三朵花。

• 其他番红花

该类别包括春季开花和秋季开花的品种和栽培品种。在数量上主要为春季开花的品种，它们的特点是品种多样、颜色丰富，但花比大花型的品种要小。金冬番红花是它们的重要代表，其它生产数量较多的有冬番红花、西伯番紫花、托马西尼番紫花。大多数球茎的规格为 5 厘米。

秋季开花番红花只有少数一些品种，它们的用途于秋水仙相似。这些球茎在九月份种植，一个月后在没有叶片的情况下就开花。它们的叶片在春季之前不会生长。*Crocus pulchellus* 'Zephyr' 是该类别的重要代表，另外象科齐番红花和藏红花也在秋季开花。

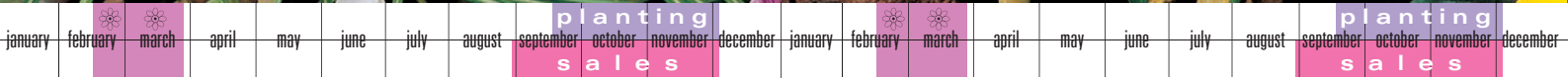
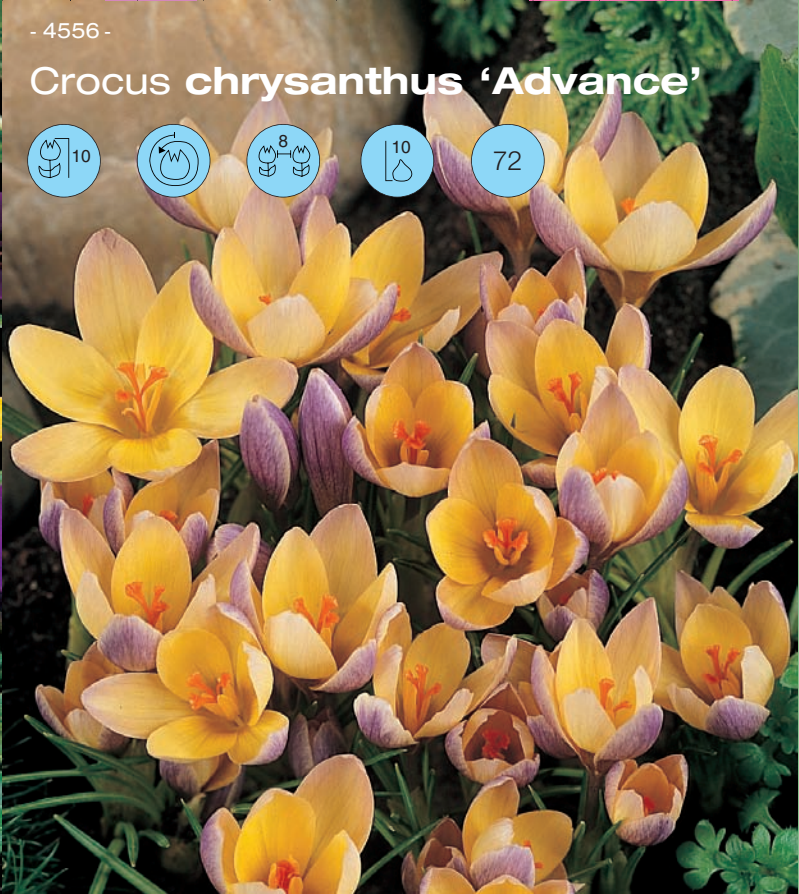
应用

• 花园种植

番红花主要用于花园种植，它们是理想的多年生球茎植物；它们还经常被种植于草坪中。

• 盆栽

红宝石番红花被建议用于该用途。通过给植株提供所需的 13-15 周的低温处理，它们可在 12 月底开花，适合的栽培品种有 'Flower Record'、'Jeanne d'Arc' 和 'Pickwick'。最小的球茎规格为 8-9 厘米。球茎种植后，它们的花茎会生长的非常快，给人的感觉它们马上就要开花，但是只有它们得到足够的冷阶段后才能开花。*Crocus flavus* 和其它类型番红花要促成栽培出高质量的花，在一月底以前不可能得到。





- 4350 -

Crocus **chrysanthus** 'Blue Pearl'



- 44289 -

Crocus **chrysanthus** 'Dorothy'



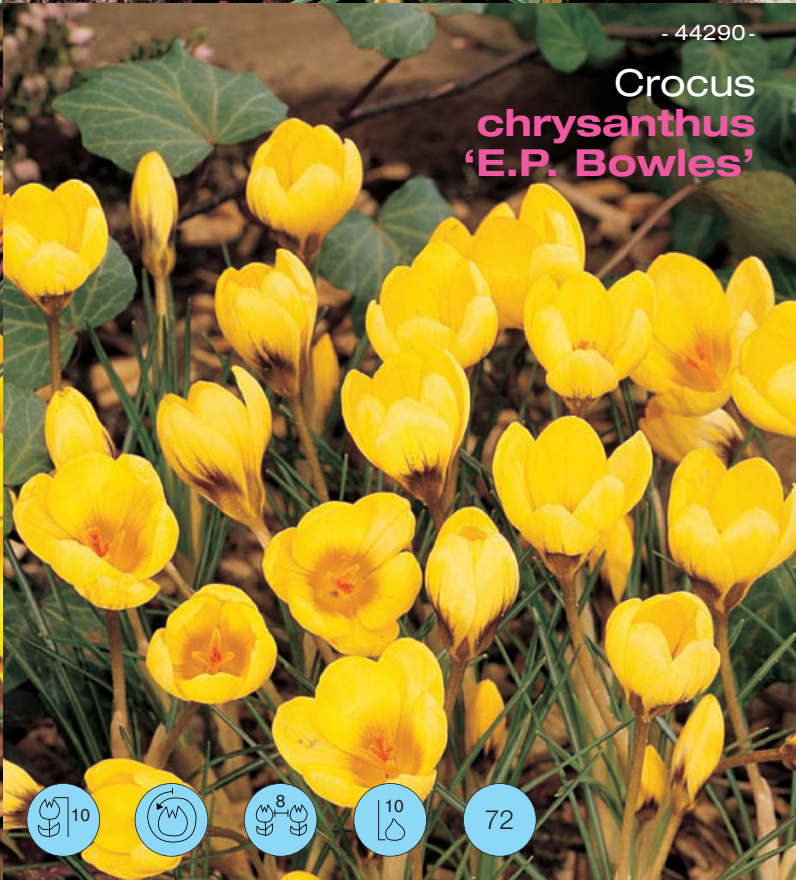
- 4975 -

Crocus **chrysanthus** 'Cream Beauty'



- 44290 -

Crocus **chrysanthus** 'E.P. Bowles'



Crocus **chrysanthus** 'Fuscotinctus'

january

february

🌸

🌸

march

april

may

june

july

august

planting

sales

september

october

november

december

- 44288 -

Crocus **chrysanthus** 'Fuscotinctus'

🌱10

🔄

🌱8

💧10

👉1

72

- 4602 -

Crocus **chrysanthus** 'Gipsy Girl'

january

february

🌸

🌸

march

april

may

june

july

august

planting

sales

september

october

november

december

Crocus **chrysanthus** 'Gipsy Girl'

🌱10

🔄

🌱8

💧10

72

Crocus **chrysanthus** 'Goldilocks'

january

february

🌸

🌸

march

april

may

june

july

august

planting

sales

september

october

november

december

Crocus **chrysanthus** 'Goldilocks'

🌱10

🔄

🌱8

💧10

72

- 4955 -

Crocus **chrysanthus** 'Ladykiller'

january

february

🌸

🌸

march

april

may

june

july

august

planting

sales

september

october

november

december

Crocus **chrysanthus** 'Ladykiller'

🌱10

🔄

🌱8

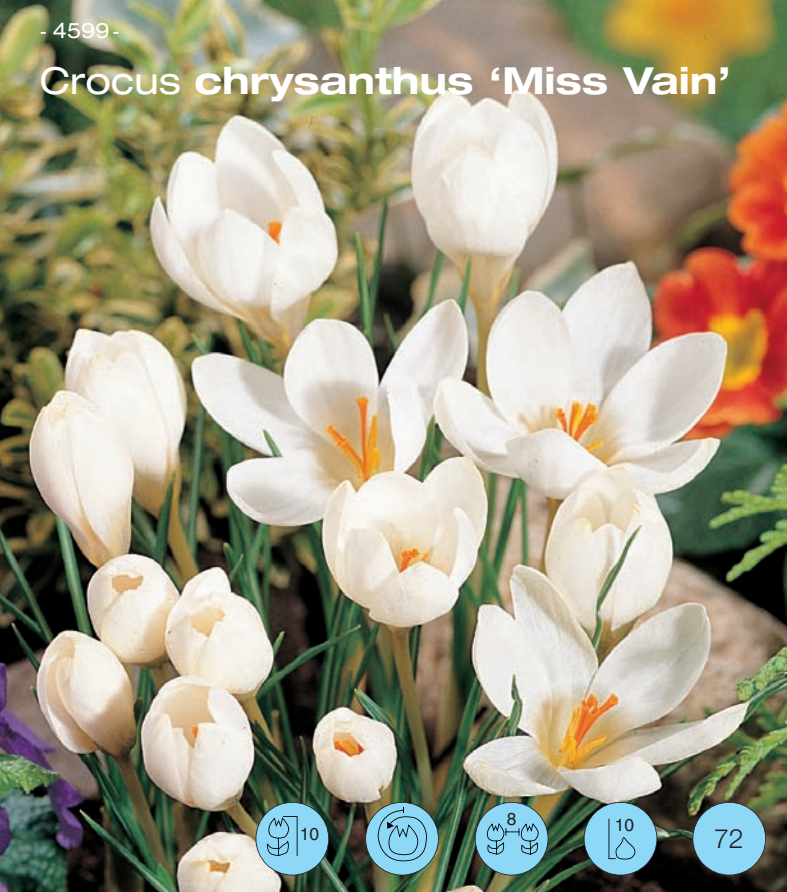
💧10

72

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

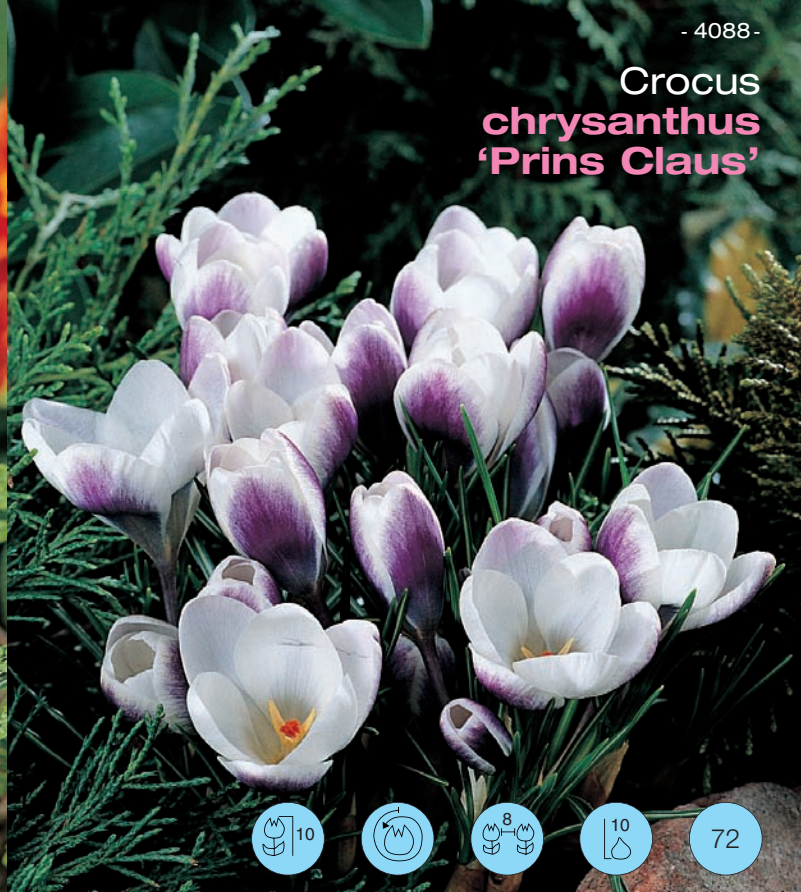
- 4599 -

Crocus **chrysanthus** 'Miss Vain'



- 4088 -

Crocus **chrysanthus** 'Prins Claus'



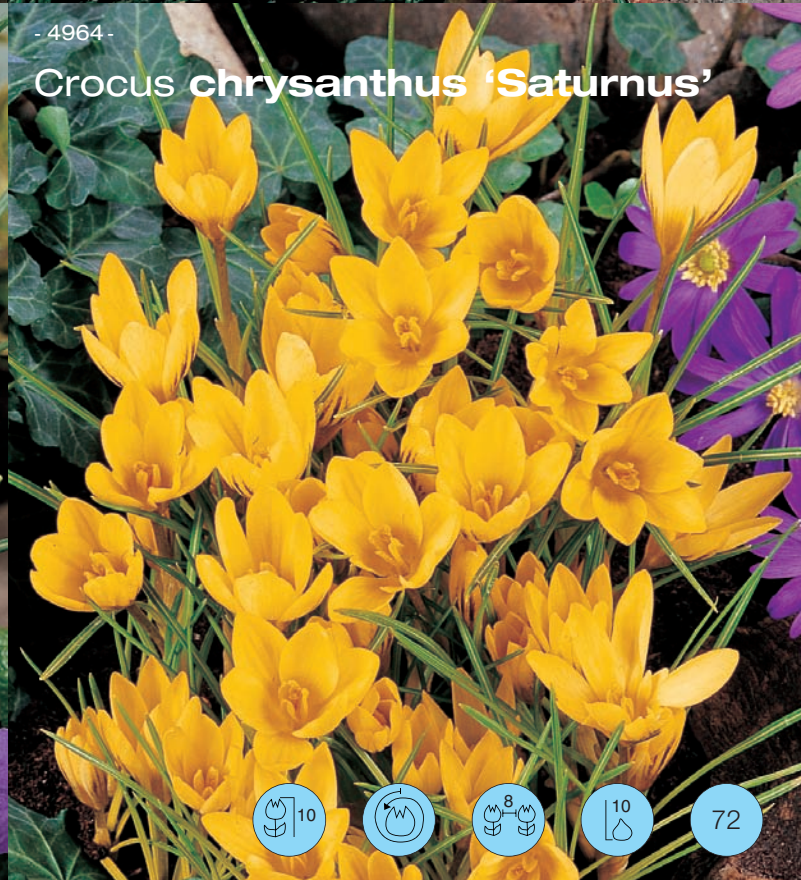
- 4601 -

Crocus **chrysanthus** 'Romance'



- 4964 -

Crocus **chrysanthus** 'Saturnus'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 4089 -

Crocus
chrysanthus
'Snowbunting'

10

10

72



4809 -

**Crocus
chrysanthus
'Zwanenburg
Bronze'**

10

8

10

1

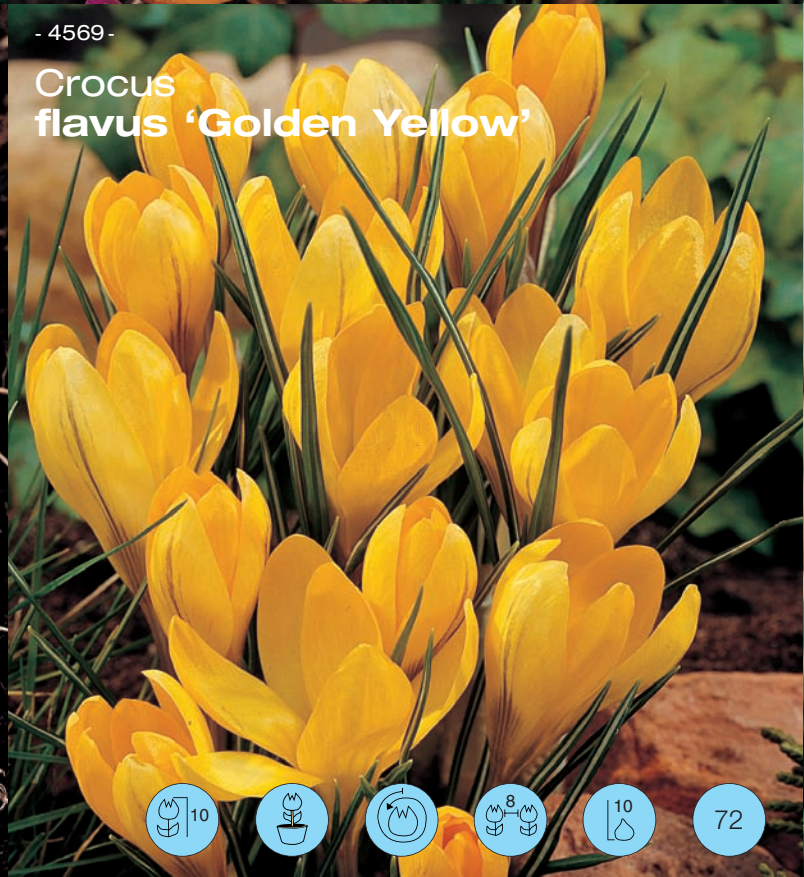
72



- 4353 -

Crocus **etruscus**
'Zwanenburg'

10 8 10 72



- 4569 -

**Crocus
flavus 'Golden Yellow'**

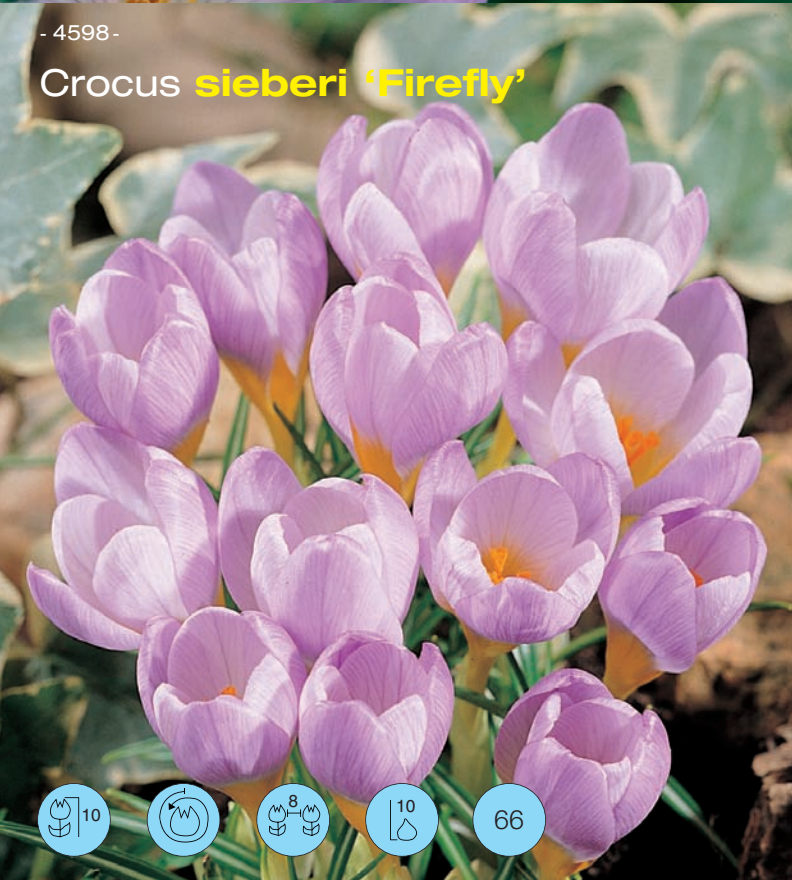
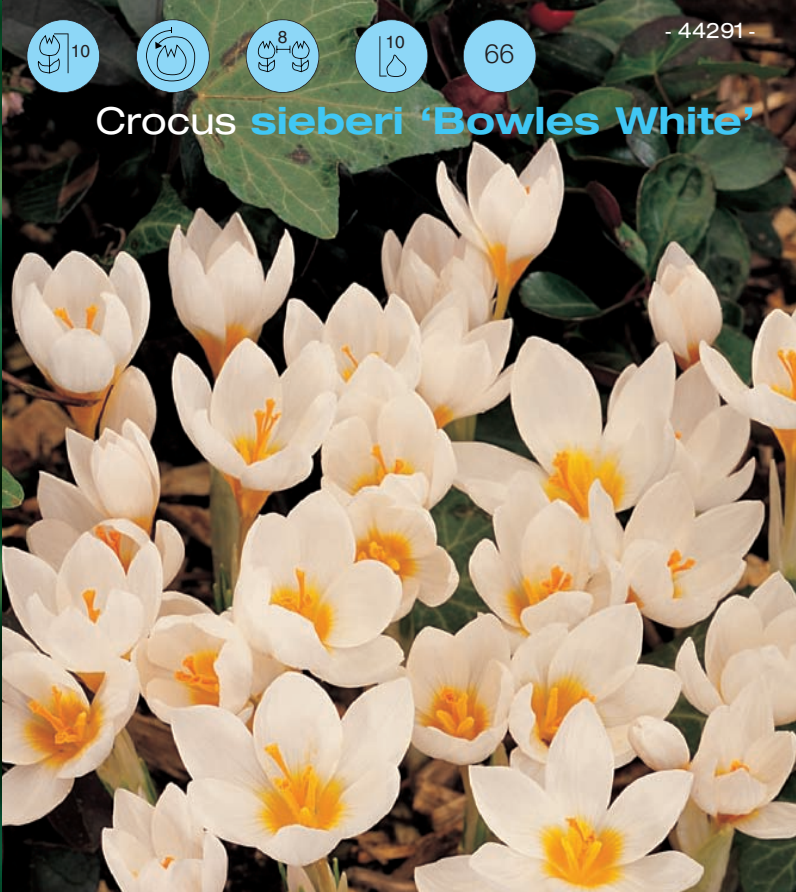
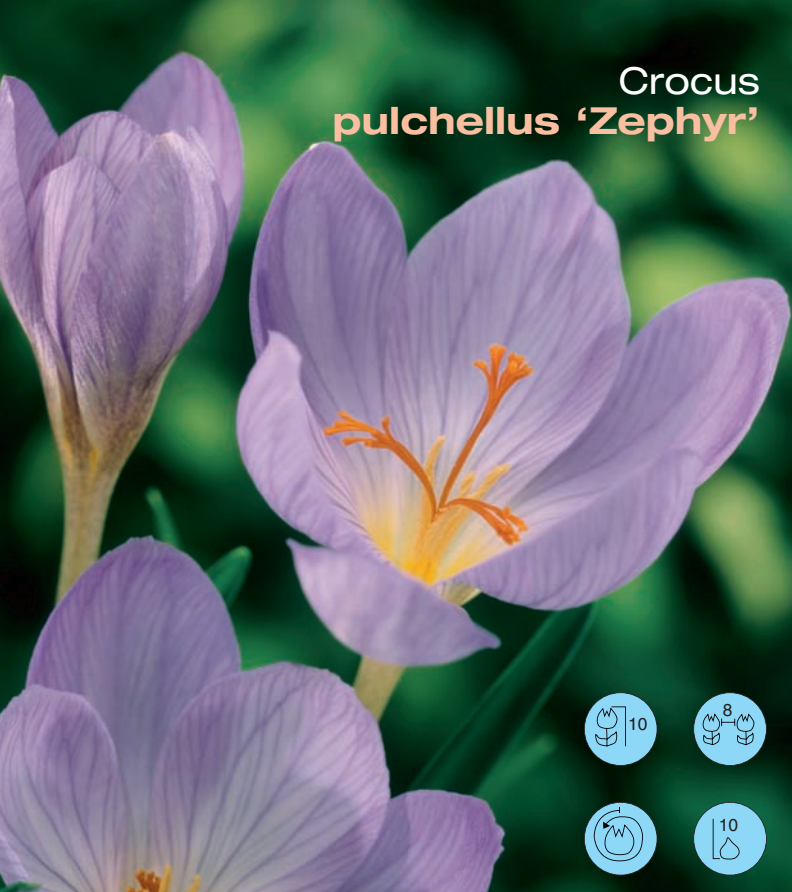
10

8

10

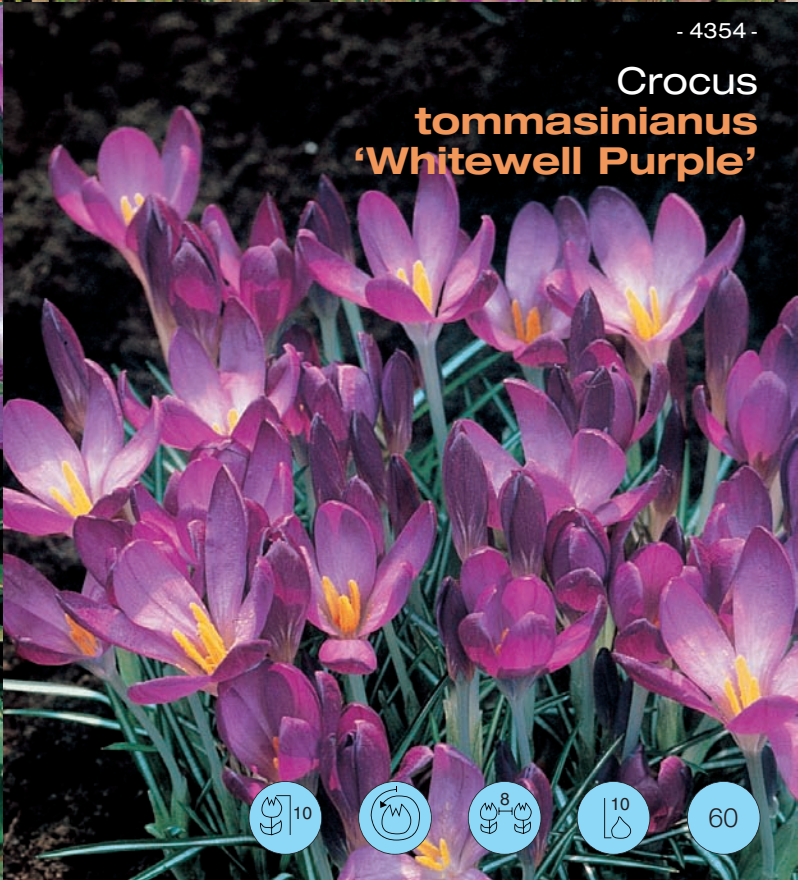
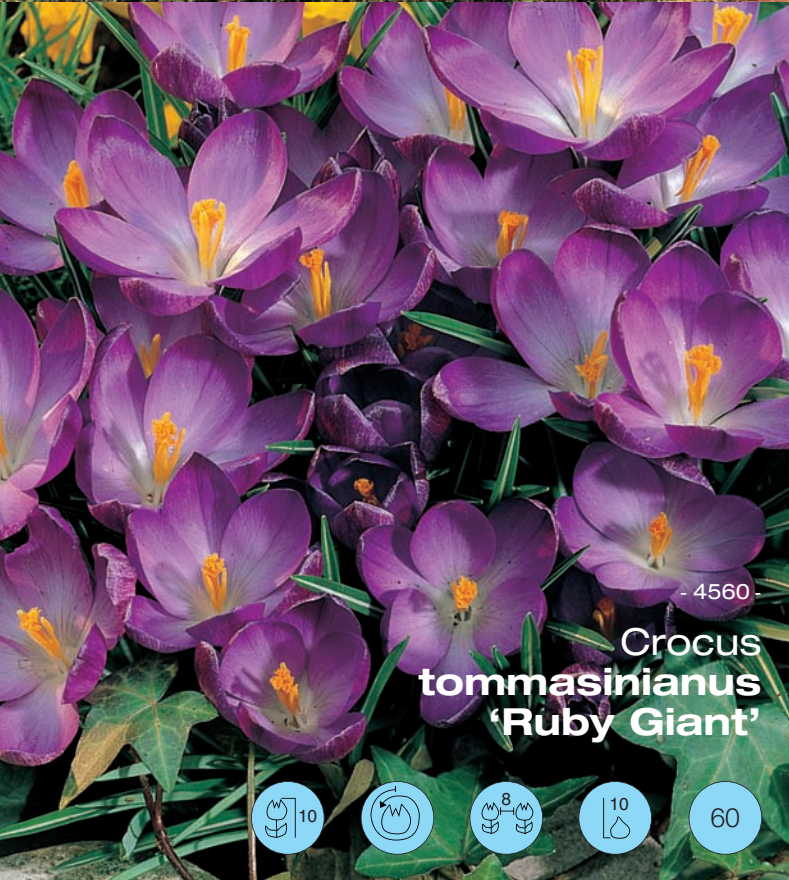
72

january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------



january	february	march	april	may	june	july	august	planting sales	september	october	november	december	january	february	march	april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------	---------	----------	-------	-------	-----	------	------	--------	-------------------	-----------	---------	----------	----------

Crocus sieberi 'Violet Queen'



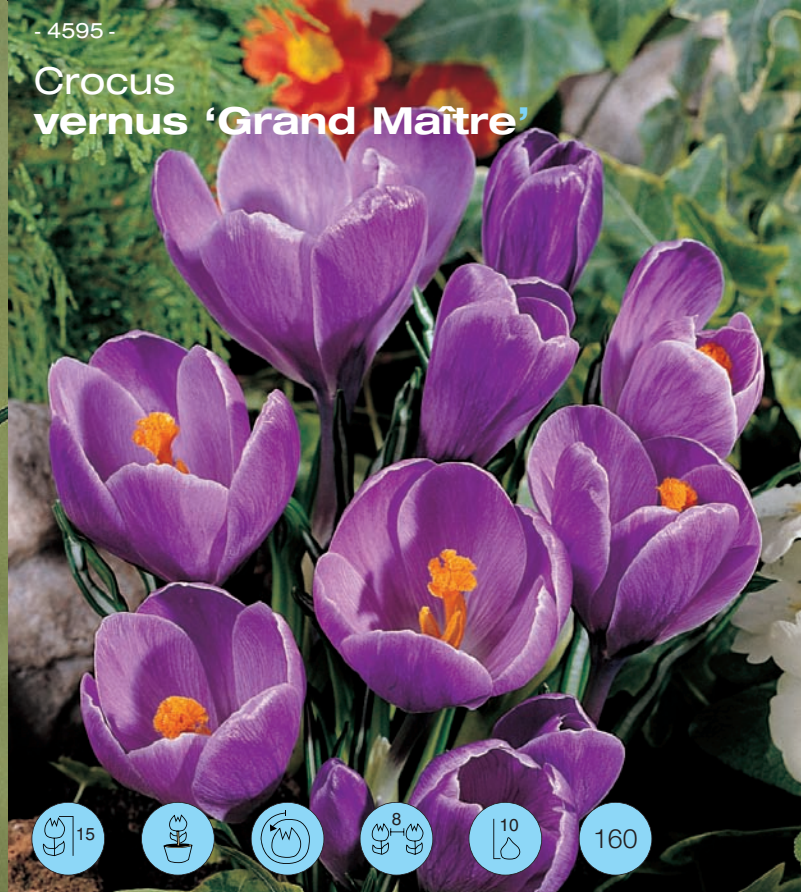
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales					planting	sales					planting	sales		

Crocus
vernus 'Flower Record'



- 4595 -

Crocus
vernus 'Grand Maître'



- 4808 -

Crocus
vernus 'Jeanne d'Arc'



- 44027 -

Crocus
vernus 'King of the Striped'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales					planting	sales					planting	sales		

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
		planting						planting						planting						planting			
		sales						sales						sales						sales			

- 4559 -

Crocus **vernus** 'Pickwick'



15

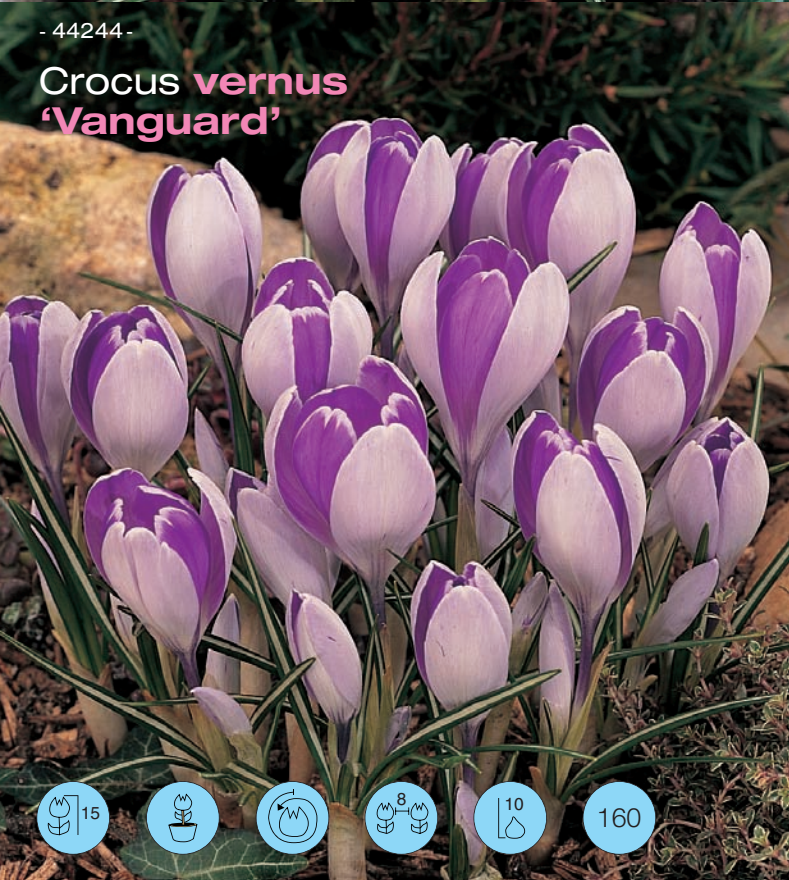
8

10

160

- 44244 -

Crocus **vernus** 'Vanguard'



15

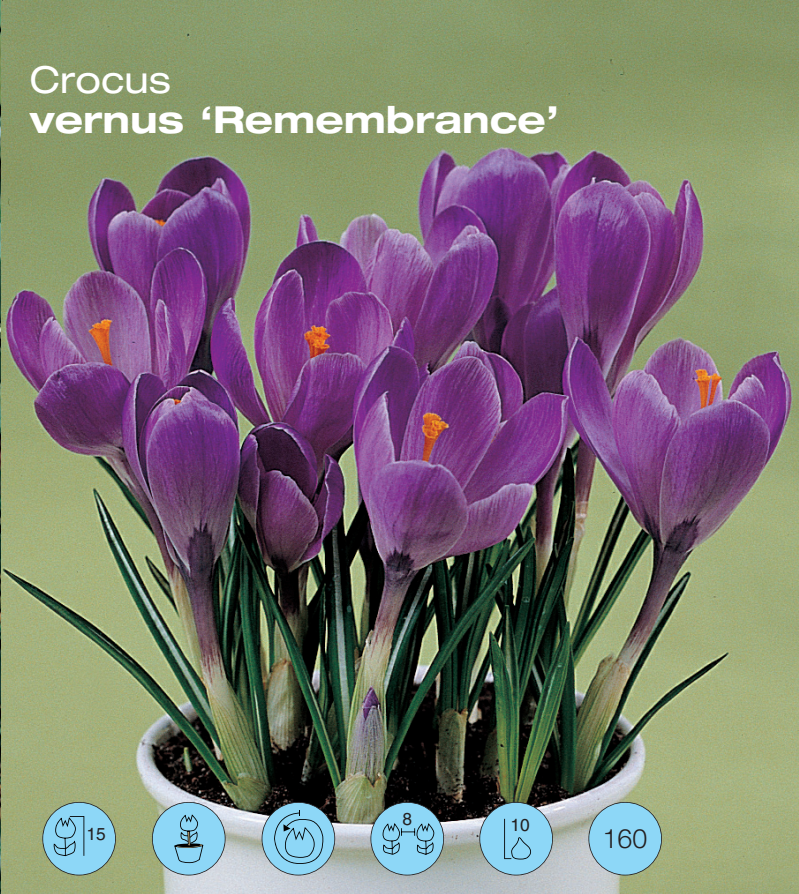
8

10

160

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
		planting						planting						planting						planting			
		sales						sales						sales						sales			

Crocus **vernus** 'Remembrance'



15

8

10

160

- 8413 -

Curcuma **alismatifolia**



60-80

25

5

- 8470 -

Cyclamen **coum** hybriden



- 8980

Cyclamen **hederifolium**

- 8982 -

Cyclamen hederifolium 'Album'

[illegible]

10

15

5

116

**Cyrtanthus
elatus
'Snow
White'**



35

15

20

15

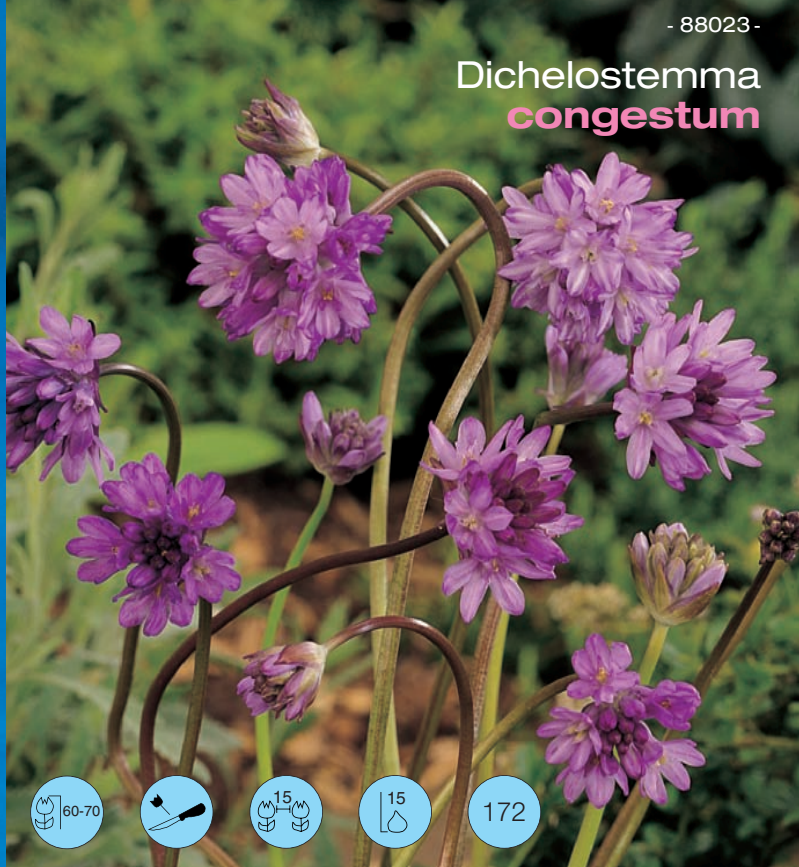
20

15

20

15

20



- 88023 -

Dichelostemma
congestum

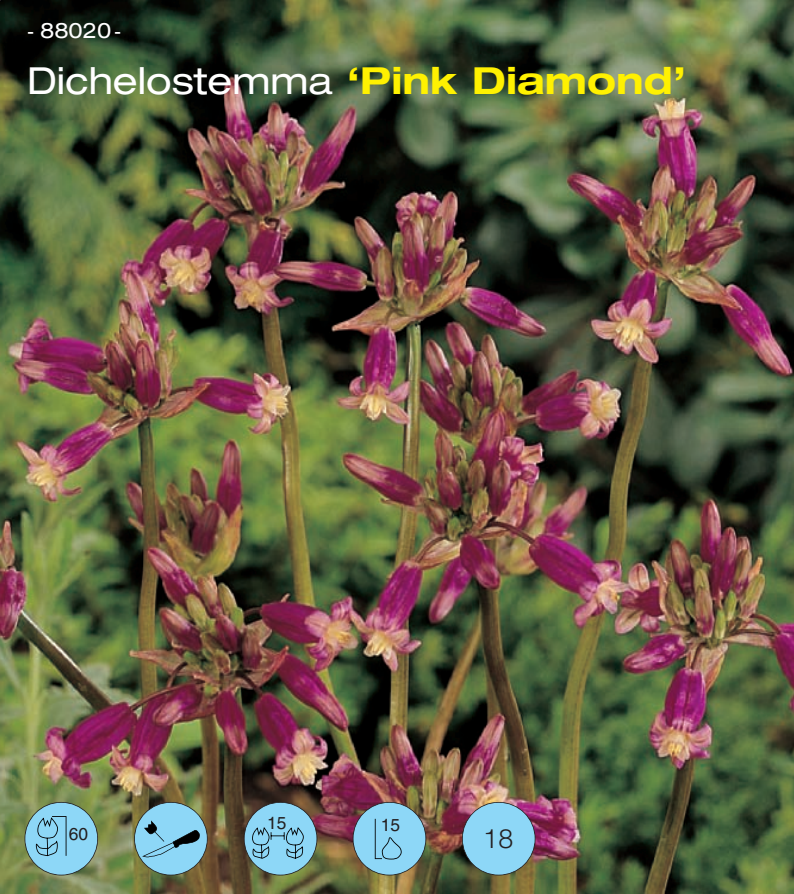
60-70

15

172

[illegible]

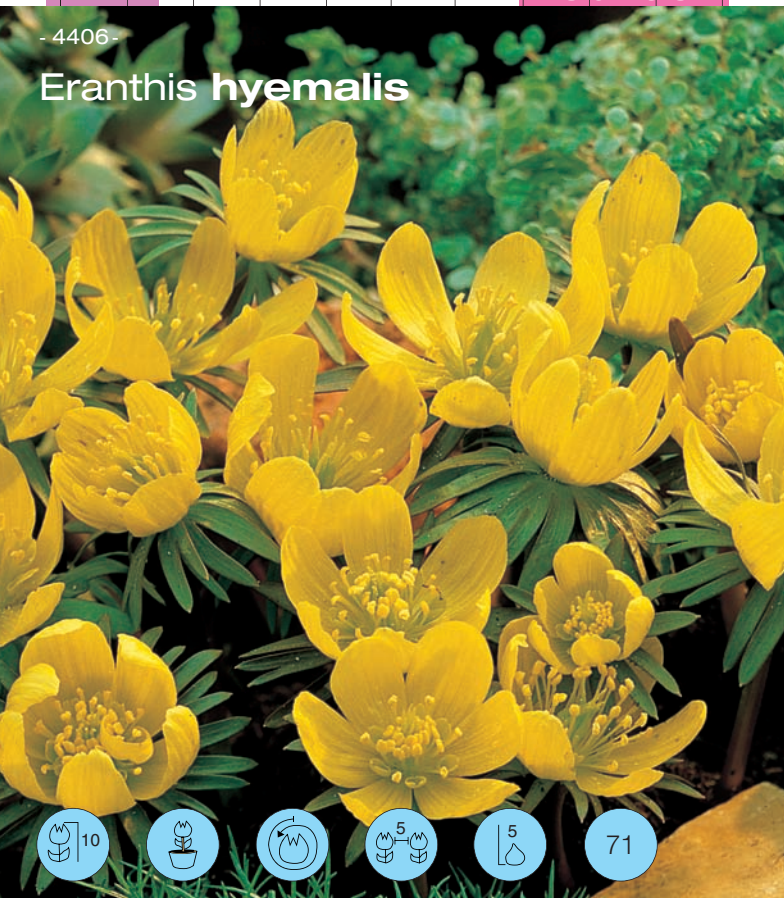
january	february	march	april	may	planting sales	august	planting sales	december	january	february	march	april	may	planting sales	august	planting sales	december
---------	----------	-------	-------	-----	-------------------	--------	-------------------	----------	---------	----------	-------	-------	-----	-------------------	--------	-------------------	----------



january	february	march	april	may	planting sales	august	planting sales	december	january	february	march	april	may	planting sales	august	planting sales	december
---------	----------	-------	-------	-----	-------------------	--------	-------------------	----------	---------	----------	-------	-------	-----	-------------------	--------	-------------------	----------

- 4406 -

Eranthis hyemalis



10

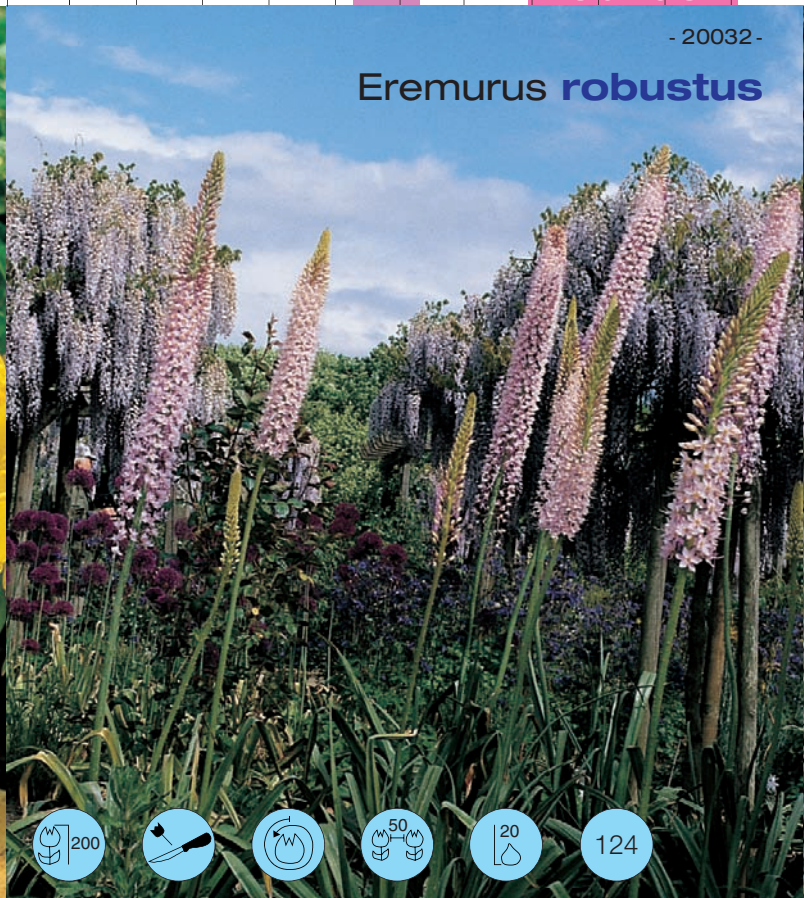
5

5

71

- 20032 -

Eremurus **robustus**



200

50

20

124

- 4555 -

Eremurus
stenophyllus



100

50

20

120

- 4856 -

Eremurus
'Cleopatra'



125

50

20

74

january	february	march	april	may	planting sales	july	august	planting sales	october	november	december	january	february	march	april	may	planting sales	july	august	planting sales	october	november	december
---------	----------	-------	-------	-----	-------------------	------	--------	-------------------	---------	----------	----------	---------	----------	-------	-------	-----	-------------------	------	--------	-------------------	---------	----------	----------

january	february	march	april	may		june	july	august	planting sales	september	october	november	december	january	february	march		april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	-------	-----	--------------	------	------	--------	---------------------------------	-----------	---------	----------	----------	---------	----------	-------	--------------	-------	-----	------	------	--------	---------------------------------	-----------	---------	----------	----------

- 44102 -

Eremurus 'Pinokkio'



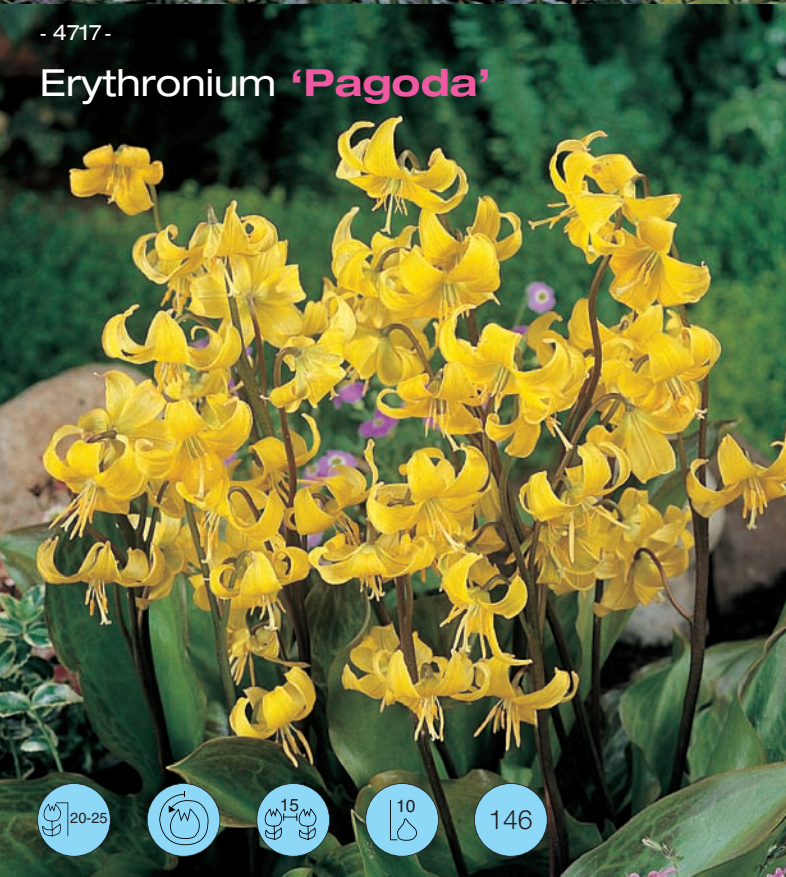
- 4007 -

Erythronium dens-canis



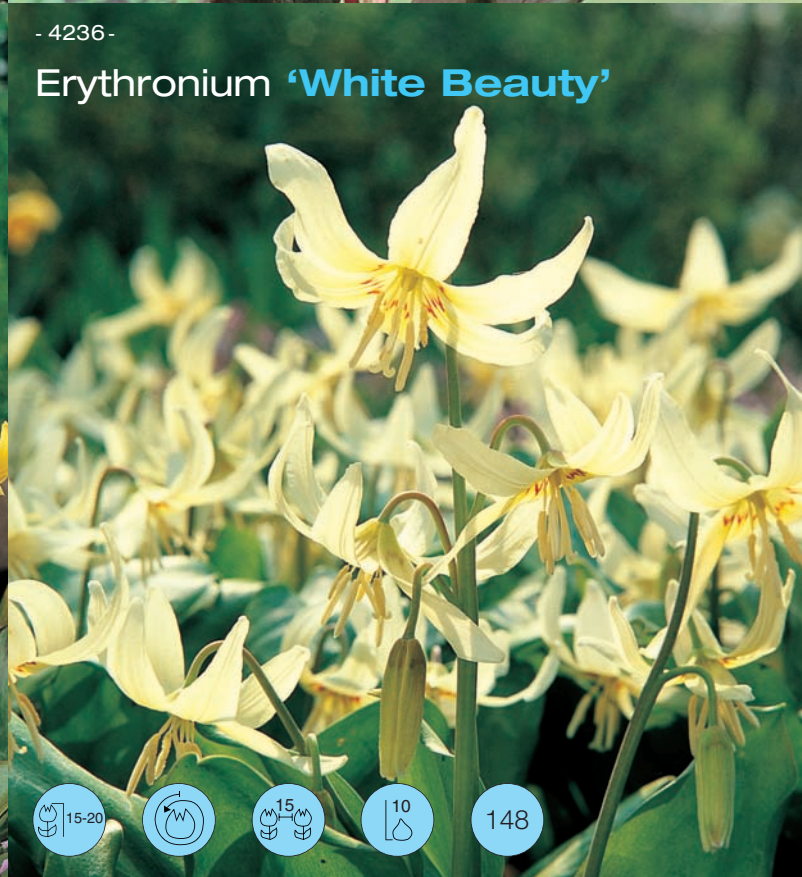
- 4717 -

Erythronium 'Pagoda'



- 4236 -

Erythronium 'White Beauty'



january	february	march		april	may	june	july	august	planting sales	september	october	november	december	january	february	march		april	may	june	july	august	planting sales	september	october	november	december
---------	----------	-------	--------------	-------	-----	------	------	--------	---------------------------------	-----------	---------	----------	----------	---------	----------	-------	--------------	-------	-----	------	------	--------	---------------------------------	-----------	---------	----------	----------

Eucomis autumnalis
'White Dwarf'

- 8118 -

Eucomis
bicolor

40

20

15

10



- 8712 -

**Eucomis
comosa**

40-50

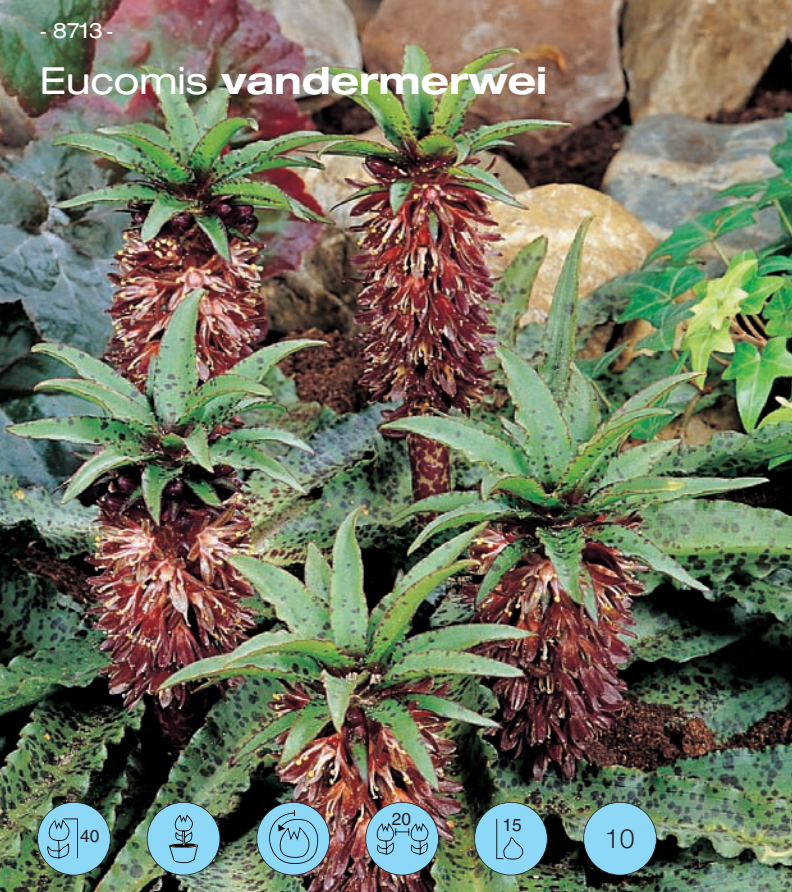
20

15

10

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
		sales												sales									

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting												planting								
		sales	sales	sales										sales	sales	sales							



january	february	march	april	may	june	july	august	september	october	november	december
			planting								
		sales	sales	sales							



This large genus is widely distributed in the Northern Hemisphere where it is found growing in both Asia and the western coast of North America. *Fritillaria imperialis* (Crown imperial), *Fritillaria persica* and *Fritillaria meleagris* (Chequered fritillary) are the most familiar. There are another 25 species in cultivation, however most are relatively unknown. All these species flower in the spring and have to be planted in the autumn. None of these fleshy bulbs have a protective tunic so they are extremely vulnerable to physical damage and desiccation.

Fritillaria

SPECIFIC CHARACTERISTICS

- *Fritillaria imperialis* (Crown imperial) is the most important species and has around 15 different cultivars. Their predominant colours are orange-red and yellow. Saleable bulbs should be 20-24 cm. or larger in diameter since a bulb size of 18-20 may not produce flowers. The plants, and especially their bulbs, emit a pungent, somewhat unpleasant odour. Breeding efforts focus on producing cultivars with a less irritating odour and, for cut flower production, ones that produce flowers of good quality when starting with a smaller bulb. Bulbs may develop roots during storage in September but this will not necessarily have an adverse effect on later growth.
- *Fritillaria persica* is a purple-coloured species with a bulb size requirement and scent similar to *F. imperialis*.
- *Fritillaria meleagris* (Chequered fritillary) produces a small bulb and needs to be only 5 cm. or more in circumference in order to flower. This species grows well in moist conditions. The bulbs are usually sold in mixed colours, 'Alba' being a white cultivar.
- The other 25 species and cultivars will usually need a bulb size of 5 or 6 cm. in order to flower. The exception is *F. pallidiflora* which will not flower until its bulb has reached a size of 10 cm.

APPLICATIONS

- **GARDEN PLANTING**
All species are suitable for garden planting and can remain undisturbed for several years in a warm, sunny location. As the musk-like odour of *Fritillaria imperialis* bulbs tends to deter the presence of such pests as moles and mice, these bulbs are often planted with this purpose in mind.
- **POT PLANTS**
Fritillaria meleagris is increasingly being used as a pot plant. Good flowering results can be had starting in late January, following a cold period of about 15 weeks.

Een uitgebreid geslacht dat wijd verspreid op het noordelijk halfrond voorkomt, van Azië tot de westkust van Amerika. *Fritillaria imperialis* (Keizerskroon), *Fritillaria persica* en *Fritillaria meleagris* (kievitseitje) zijn de meest bekende. Daarnaast worden er nog een 25-tal species geteeld waarvan de relatief meest bekende hier zijn opgenomen. Alle soorten bloeien in het voorjaar en moeten in het najaar worden geplant. Voor alle soorten geldt dat de ‘vlezige’ bollen geen beschermende huid bezitten en uiterst kwetsbaar zijn voor beschadiging en uitdroging.

Fritillaria

ENKELE KENMERKEN

- *Fritillaria imperialis* (Keizerskroon), dit is de belangrijkste groep met ongeveer 15 verschillende cultivars; hoofdkleuren oranje-rood en geel. Men hanteert een bolgrootte van 20-24 cm en 24 cm en groter, de maat 18-20 cm geeft niet altijd de zekerheid van bloei. Vooral de bollen maar ook de planten verspreiden een doordringende geur. Bij de veredeling van dit gewas wordt gelet op een minder irritante geur en op cultivars die al een goede kwaliteit bloem geven bij een kleinere bol die dan geschikt is voor snijbloementeel. In september tijdens de bewaring van de bollen kan al wortelvormig op gaan treden; dit hoeft niet nadelig te zijn voor de latere groei.
- *Fritillaria persica*, een purperkleurige species die wat betreft eigenschappen als geur en bolgrootte overeenkomt met *imperialis*.
- *Fritillaria meleagris* (kievitsbloem) een kleinbollijg type, bolgrootte 5 cm en groter. Dit soort groeit goed onder vochtige omstandigheden. De bollen worden doorgaans in gemengde kleuren aangeboden; ‘Alba’ is een witte cultivar.
- Overige species, een 25-tal species en cultivars; bolgrootte doorgaans 5 of 6 cm, uitgezonderd *pallidiflora* die pas bloeit bij een bolgrootte van 10 cm.

GEBRUIKSMOGELIJKHEDEN

• TUINBEPLANTING

Alle soorten zijn geschikt voor tuinbeplanting en kunnen meerdere jaren op dezelfde plaats blijven staan mits op een warme en zonnige plaats in de tuin.

De muskusachtige geur van *Fritillaria imperialis* bollen hebben een afschrikkende werking op de aanwezigheid van o.a. mollen en muizen; met dit doel worden ze vaak met opzet geplant.

• POTPLANT

Fritillaria meleagris wordt in toenemende mate gebruikt als potplant. Een goede kwaliteit is mogelijk vanaf eind januari na een koudeperiode van ongeveer 15 weken.

这个大属的植物广泛地分布于北半球的亚洲和北美洲的西海岸。皇冠贝母、波斯贝母和阿尔泰贝母是最常见的品种。另外还有其它的 25 个品种也有种植, 但是大多数都不为人所知。所有这些品种都需在秋季种植并于春季开花。所有这些品种新鲜的种球外面都没有表皮保护, 所以它们非常容易受到机械损伤或干枯。

贝母

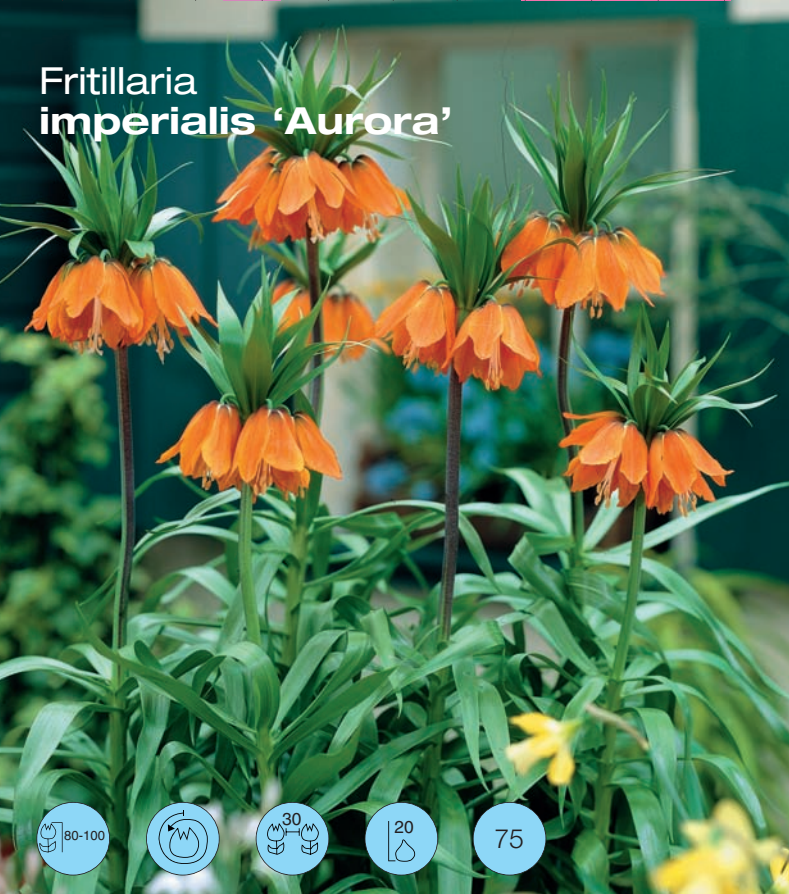
特征

- 皇冠贝母是最重要的品种, 它有 25 个不同的栽培品种。它们主要的颜色是橙红色和黄色。可销售种球的规格应达到直径 20-24 厘米或更大, 因为规格 18-20 厘米的种球可能不会开花。植株本身尤其是它们的种球会发出一种刺激性的、难闻的味道。育种的工作便致力于开发出尽量少味道的新品种。对于切花生产, 有人使用较小的种球可生产出高质量的产品。在九月份种球的储藏期间, 可能会有根长出, 但是这没有必要, 它对以后植株的生长有副作用。
- 波斯贝母是一个开紫花的品种, 种球的规格要求以及它们的味道与皇冠贝母相似。
- 阿尔泰贝母产生的种球较小, 它们开花只需要周长 5 厘米或以上的种球即可。这类种球在潮湿的环境中生长良好。它们的种球通常是混色销售, ‘Alba’ 是其中的一个白色品种。
- 其它的 25 个品种和栽培品种通常种球的规格在 5 或 6 厘米, 才能使植株开花, 但是伊贝母除外, 它们需要种球的规格达到 10 厘米, 植株才能开花。

应用

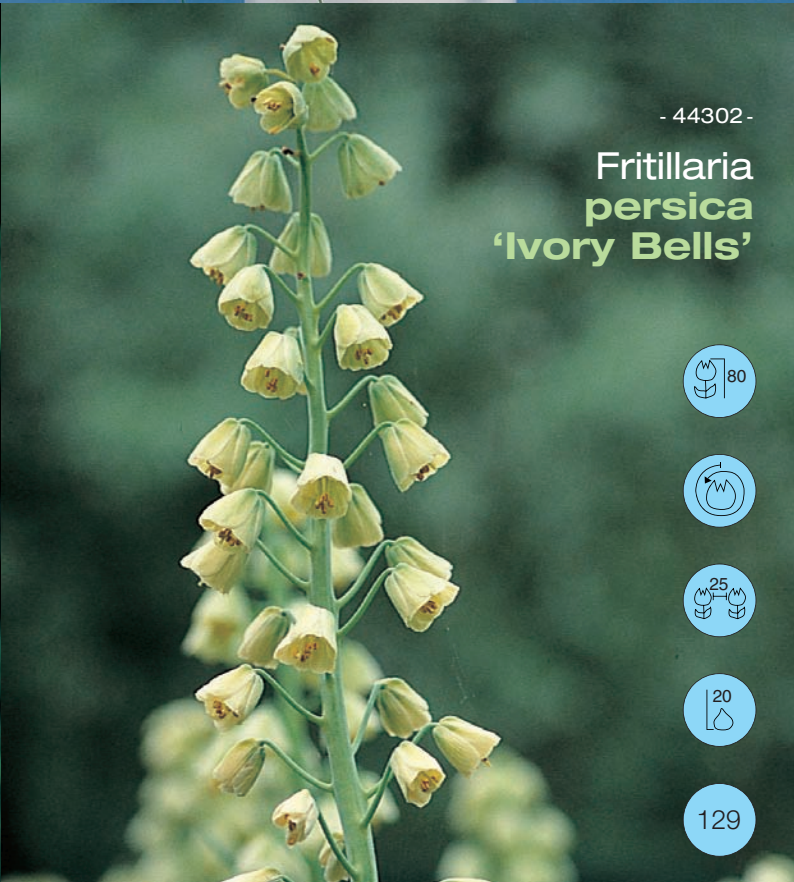
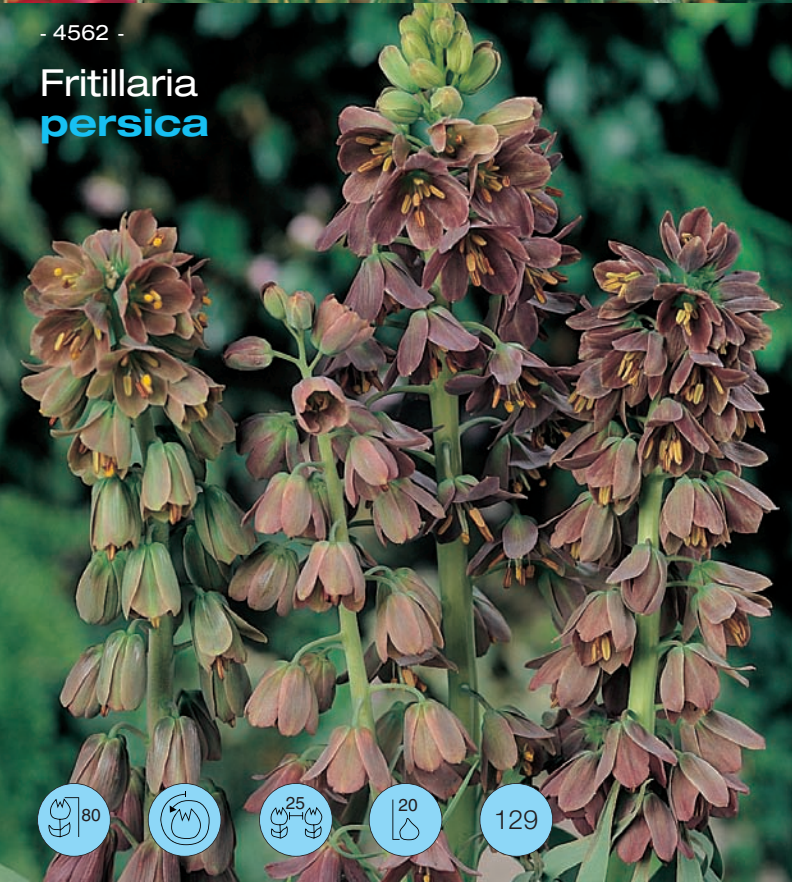
- 花园种植
所有的品种都适合在花园中种植, 并可在温暖、阳光充足的地方多年生长。
由于皇冠贝母刺激性的气味可阻止例如昆虫以及鼯鼠和老鼠的出现, 所以人们也经常有意种植这些植物。
- 盆栽
阿尔泰贝母越来越多地被用于盆栽。一月底开始可得到高质量的花, 可在低温下持续开 15 周。

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting							planting					planting			
			sales					sales							sales					sales			



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting							planting					planting			
			sales					sales							sales					sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales						planting					planting	sales		



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales						planting					planting	sales		



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales						planting	sales				planting	sales		

- 4733 -

Fritillaria 'Goldilocks'



- 44459 -

Fritillaria hermonis ssp amana



- 4093 -

Fritillaria michailovskyi



- 4090 -

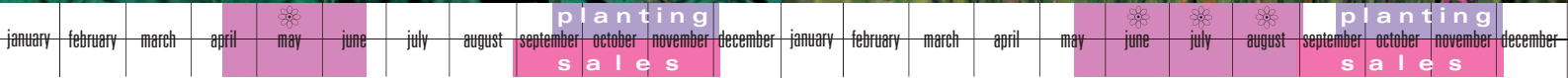
Fritillaria pallidiflora



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	sales						planting	sales				planting	sales		







january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting													planting							
		sales																		sales			



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting													planting							
		sales																					

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
		sales	planting											sales	planting								

- 6169 -

Gladiolus
ramosus
'Robinetta'

50

15

10

8

A photograph of Gladiolus ramosus 'Robinetta' flowers, which are bright red with yellow centers. The flowers are arranged in a dense, upright cluster on a green stem. The background is a soft-focus green.

- 6041 -

Gladiolus
tubergenii
'Charm'

40

15

10

8

A photograph of Gladiolus tubergenii 'Charm' flowers, which are pink with yellow centers. The flowers are arranged in a dense, upright cluster on a green stem. The background is a soft-focus green.

- 8378 -

Gloriosa
'Rothschildiana'

150

20

50

A photograph of Gloriosa 'Rothschildiana' flowers, which are bright red with yellow centers. The flowers are arranged in a dense, upright cluster on a green stem. The background is a soft-focus green.

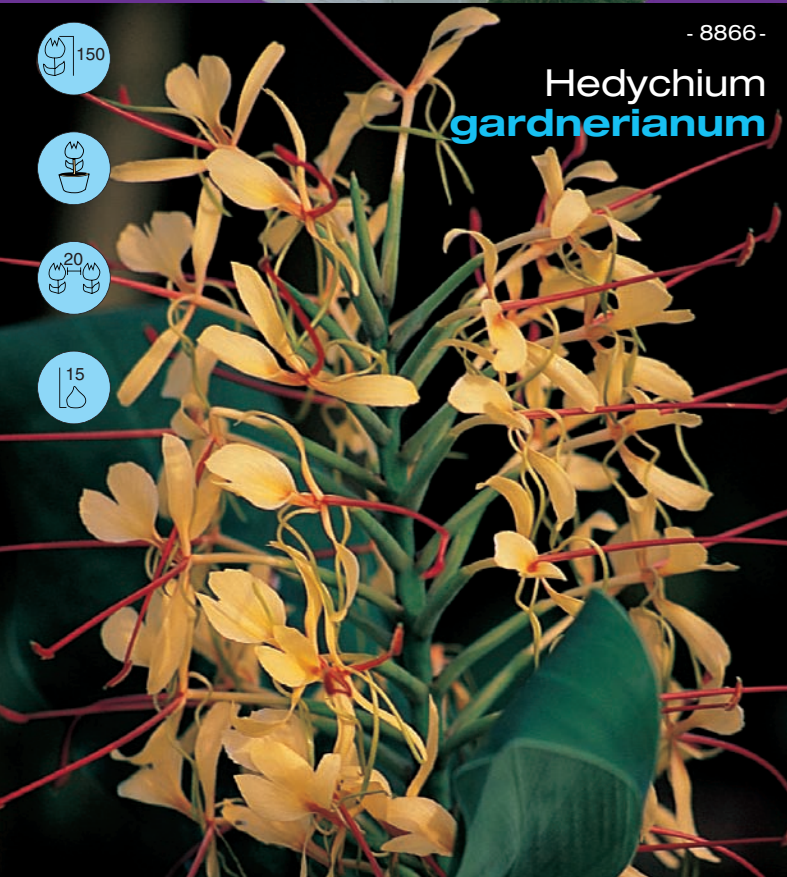
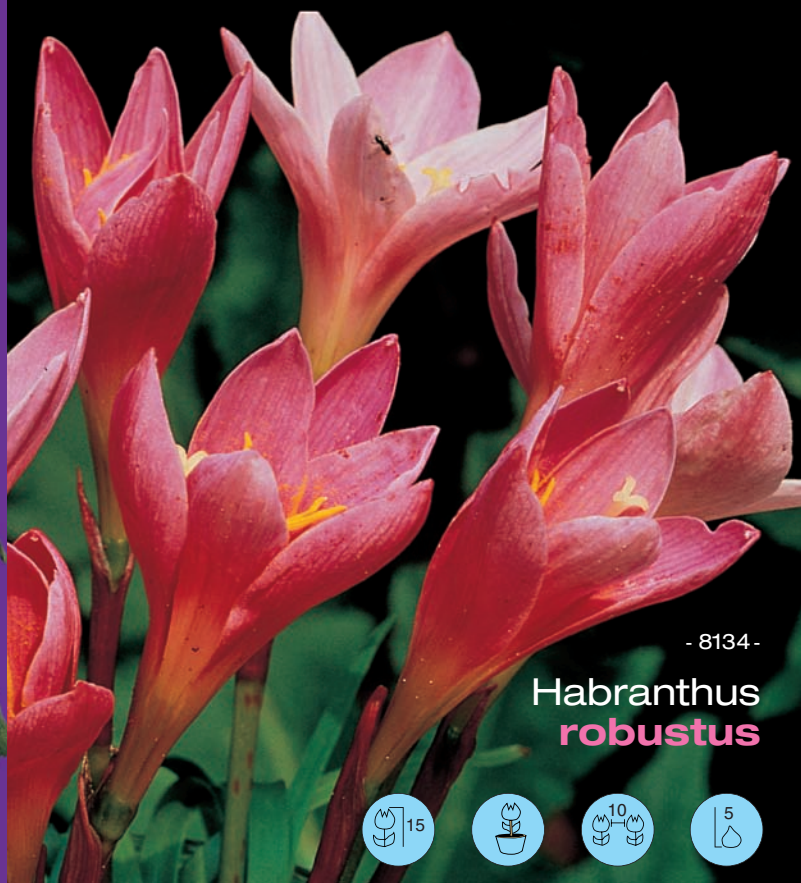
Gloxinia
'Mont Blanc'

25

10

A photograph of Gloxinia 'Mont Blanc' flowers, which are white with yellow centers. The flowers are arranged in a dense, upright cluster on a green stem. The background is a solid orange color.

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
		sales	planting											sales	planting								

[illegible]







This bulbous plant is still generally known by the name of *Amaryllis* and comes originally from South America. The 'real' *Amaryllis belladonna*, however, hails from South Africa, flowers in September after its leaves have withered back, and is not frost hardy. *Amaryllis belladonna* will often have to have been planted for two or three years before producing flowers and will have to be mulched in the Dutch climate to prevent frost damage. It will require a bulb size of at least 20 cm. to flower. Hippeastrum has a hollow stem whilst the stem of *Amaryllis belladonna* is solid. In Dutch climate conditions, Hippeastrum is cultivated in greenhouses at a soil temperature of at least 20°C.

Hippeastrum

SPECIFIC CHARACTERISTICS

The *Hippeastrum* cultivars now available have been developed by the efforts of plant breeders, the first hybrids having been introduced back in 1799. Today, Hippeastrum cultivars are being bred to create different types of flowers such as small-flowering, double-flowering and trumpet-shaped varieties with improved colours and colour combinations as well as specific qualities making them suitable for cut flower or pot plant production. The saleable bulb size of the most familiar large-flowering cultivars starts at 24 cm. and can reach 36 cm. or larger. A bulb of 24 cm. will not produce more than one flower stem having 3-4 calyxes. Larger bulbs can produce three flower stems that sometimes have six calyxes per stem. The small-flowering types with a smaller bulb size will usually produce good flowering results. The main flowering period runs from late December to April.

After being lifted and dried, the bulbs have to undergo a temperature treatment of 10 to 12 weeks at 13°C; in any case, flower initiation must already have occurred before starting to apply this temperature. The advantage of this treatment is that shoots will emerge from the bulb within about four weeks after planting and, depending on growing conditions, the bulb will flower within 6 to 8 weeks. These bulbs can also be stored for lengthy periods at a temperature of about 5°C. Bulbs are also produced in warmer climates and in the Southern Hemisphere, thus making it possible to sell them at times other than when they are being grown in the Netherlands. Prolonged storage and bulb production in other production regions make these bulbs available all year round. Planting after prolonged storage will produce accelerated growth with relatively short stems.

APPLICATIONS

• CUT FLOWER PRODUCTION

Hippeastrum production always involves a combination of cut flower and bulb production; in any case, flower harvesting has to be followed by a period of 6 to 8 months of growth in order to harvest bulbs capable of producing flowers again. Another requirement is a constant soil temperature of at least 20°C. The bulbs can also remain undisturbed in the greenhouse for flower production next year. This will require a soil temperature of about 13°C for 8-10 weeks previous to the next shoot emergence. Most flower production occurs from December through April.

• POT PLANTS

Amaryllis bulbs are sold chiefly during the winter as both dry bulbs and already planted as pot plants. Theoretically, nearly all varieties are suitable for these purposes. The choice of cultivar and the temperature treatment (preparation) applied to the bulb are major factors in the final results. The simultaneous development of leaves and flower stem is determined mainly by the preparation method applied. If the bulb is to be used to obtain flowers again next year, the plant will have to be left undisturbed for at least six months following flowering and be maintained as a 'green foliage plant' during that time.

• GARDEN PLANTS

In warmer climates, the Hippeastrum can also be used as a garden plant and an outdoor pot plant.

Dit bolgewas is nog steeds algemeen bekend onder de naam *Amaryllis* en komt oorspronkelijk uit Zuid-Amerika. De 'echte' *Amaryllis belladonna* komt oorspronkelijk uit Zuid-Afrika, bloeit na het afsterven van het blad in september en is niet winterhard. *Amaryllis belladonna* bloeit vaak pas in het tweede of derde jaar na opplanten en moet in het Nederlandse klimaat worden afgedekt om vorstschade te voorkomen. Bolmaat 20 cm en groter. *Hippeastrum* heeft een holle stengel in tegenstelling tot *Amaryllis belladonna* die een massieve steel heeft. *Hippeastrum* wordt in het Nederlandse klimaat in de kas geteeld bij een grondtemperatuur van minimaal 20°C.

Hippeastrum

ENKELE KENMERKEN

De *Hippeastrum cultivars* zoals die nu verhandeld worden zijn door veredeling ontstaan; de eerste hybriden al in 1799. Er wordt nog steeds veredeld, waarbij tegenwoordig veel belangstelling is voor een ander bloemtype, zoals kleinbloemig, dubbel en trompetvormig, verbeterde kleuren en kleurcombinaties en specifieke geschiktheid voor snijbloem of potplant. De leverbare bolmaat van de 'normale' grootbloemige cultivars is vanaf 24 cm en kan oplopen tot 36 cm en groter. Een bol van 24 cm zal niet meer dan één bloemsteel produceren met 3-4 bloemkelken. Grotere bollen kunnen tot 3 bloemstelen produceren met soms 6 kelken per steel. De kleinbloemige typen zijn doorgaans bij een kleinere bolmaat al goed bloeibaar.

De belangrijkste bloeiperiode is van eind december tot april. Na het rooien en drogen van de bollen moeten de bollen een temperatuurbehandeling ondergaan van 10 tot 12 weken bij 13°C; bij aanvang van deze temperatuur moet in ieder geval de bloem al in de bol zijn aangelegd. Het voordeel van deze behandeling is dat na het planten de bol binnen ongeveer 4 weken gaat uitlopen en afhankelijk van de groeiomstandigheden binnen 6 tot 8 weken zal bloeien. Bollen kunnen ook langdurig worden bewaard bij een temperatuur van ongeveer 5°C. Er worden ook bollen geteeld in warmere klimaten en op het zuidelijk halfrond waardoor bollen kunnen worden aangeboden op tijdstippen anders dan de in Nederland geteelde. Door langdurige bewaring en produktie in andere teeltgebieden zijn bollen het gehele jaar beschikbaar. Opplant na langdurige bewaring geeft een versnelde groei waardoor een gewas met relatief korte stelen ontstaat.

GEBRUIKSMOGELIJKHEDEN

• SNIJBLOEMENTEELT

Het is altijd een combinatie van snijbloementeel en bolproduktie, in ieder geval moeten de bollen na dat de bloemen geoogst zijn nog een periode van 6 tot 8 maanden groeien om weer bloeibare bollen te kunnen oogsten. Een constante grondtemperatuur van minimaal 20°C is wel een vereiste. Men kan ook de bollen in de kas laten staan voor bloemproduktie in het volgende jaar. Een grondtemperatuur van ongeveer 13°C gedurende 8 tot 10 weken voorafgaand aan het opnieuw uitgroeien is dan noodzakelijk. De belangrijkste bloemproduktie valt in de periode december tot in april.

• POTPLANT

Amaryllis wordt zowel als droge bol en als potplant, voornamelijk in de winterperiode, verhandeld. In principe zijn bijna alle soorten hiervoor geschikt. Cultivarkeuze en temperatuurbehandeling (preparatie) van de bol kunnen van grote invloed zijn op het resultaat. Vooral het gelijktijdig ontwikkelen van blad en bloemsteel wordt bepaald door de preparatie. Wil men een volgend jaar weer bloeiresultaat hebben van dezelfde bol zal de plant na het bloeien minimaal 6 maanden als een 'groene bladplant' moeten worden verzorgd.

• TUINPLANT

In warmere klimaten kan de *Hippeastrum* ook als tuinplant en potbeplanting buiten worden toegepast.

这种鳞茎植物通常被认为是孤挺花，它们的原产地在南美。而真正的孤挺花是来自于南非，在九月份它们的叶片开始枯萎后开花，不能耐受寒冷。孤挺花通常在种植第二或第三年后才开花，在荷兰的气候条件下，必须进行覆盖以防止冻害。它们要求种球的规格至少为 20 厘米才能开花。

朱顶红的茎为中空，而孤挺花的茎则是实心的。在荷兰的气候条件下，朱顶红在温室的土壤温度至少为 18-20℃ 的条件下栽培。

朱顶红属

特征

在育种人员的努力工作下，朱顶红的栽培品种现在已经可以得到，它们的第一个杂交品种是在 1799 年被引入的。现在朱顶红在栽培品种通过育种已经产生了许多种花型，例如小花型、重瓣型和喇叭型，而且用许多颜色，同时它们还有专门进行切花生产和盆花生产的品种。大多数大花型种球的销售规格从 24 厘米开始，一直到 36 厘米甚至以上。24 厘米的种球不会产生多于一枝的花茎，其上开 3-4 朵小花。大规格的种球可以产生三枝花茎，有时每枝花茎上有六朵小花。小花型的品种通常使用小规格的种球就可得到好的开花效果。朱顶红主要的开花阶段一般从 12 月到 4 月。在种球收获并干燥后，它们必须经过一个 10-12 周 13℃ 的温度处理；但是在温度处理必须在花芽已经开始形成后才能进行。这个温度处理的好处是，种球在种植 4 周后茎就开始生长，根据种植的条件，种球在 6-8 周内就可开花。这些种球也可在 5℃ 的条件下长期储藏。

朱顶红的种球在南半球温暖的气候条件下也可生产，这就使在荷兰进行种球生产的同时市场也有种球的销售。通过对种球长期储藏或在其它地区进行种球生产的方法，可以使朱顶红的生产周年化。使用长期储藏的种球生产会加快生长速度，但是茎会变短。

应用

• 切花生产

朱顶红的生产总是切花生产和种球生产的结合。

无论如何，在花采收后，接下来就是 6-8 个月养球的阶段，以便使种球可再次使用。另外一个要求就是土壤的温度应维持在至少 18-20℃。种球在温室中不采收也可在第二年进行切花的生产，这需要在第二次花茎长出之前，土壤温度要达到 8-10 周 13℃。大多数切花的生产是从 12 月到 4 月。

• 盆花生产

在冬季朱顶红的种球通常是以干球或种在盆中的形式进行销售，理论上来说，所有的品种都可这样使用。品种的选择以及对种球的温度处理（准备工作）是影响最终结果的主要因素。叶片的发育和花茎主要是由温度处理的方法决定的。如果要使种球在第二年再次开花，在种球开花后不要挖出，必须维持绿叶状态至少六个月。

• 花园种植

在温暖的气候条件下朱顶红也可作为花园植物或室外盆花使用。

planting						planting					
january	february	march	april	may	june	july	august	september	october	november	december
sales						sales					

Hippeastrum ‘Ambiance’®



- 9780 -

Hippeastrum ‘Amputo’

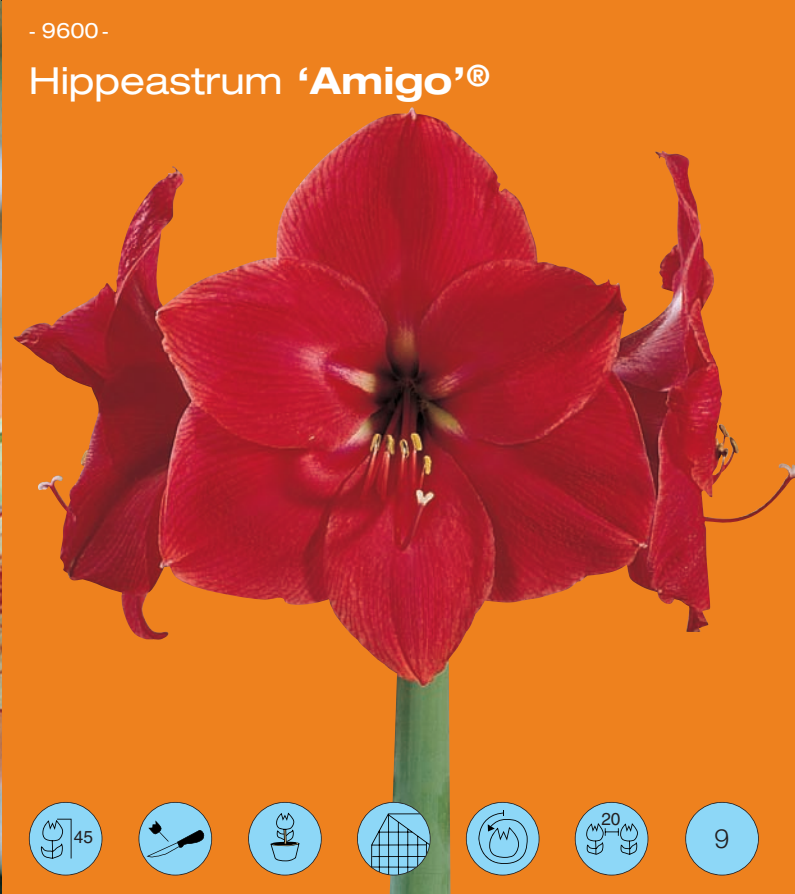


planting						planting					
january	february	march	april	may	june	july	august	september	october	november	december
sales						sales					

planting						planting					
january	february	march	april	may	june	july	august	september	october	november	december
sales						sales					

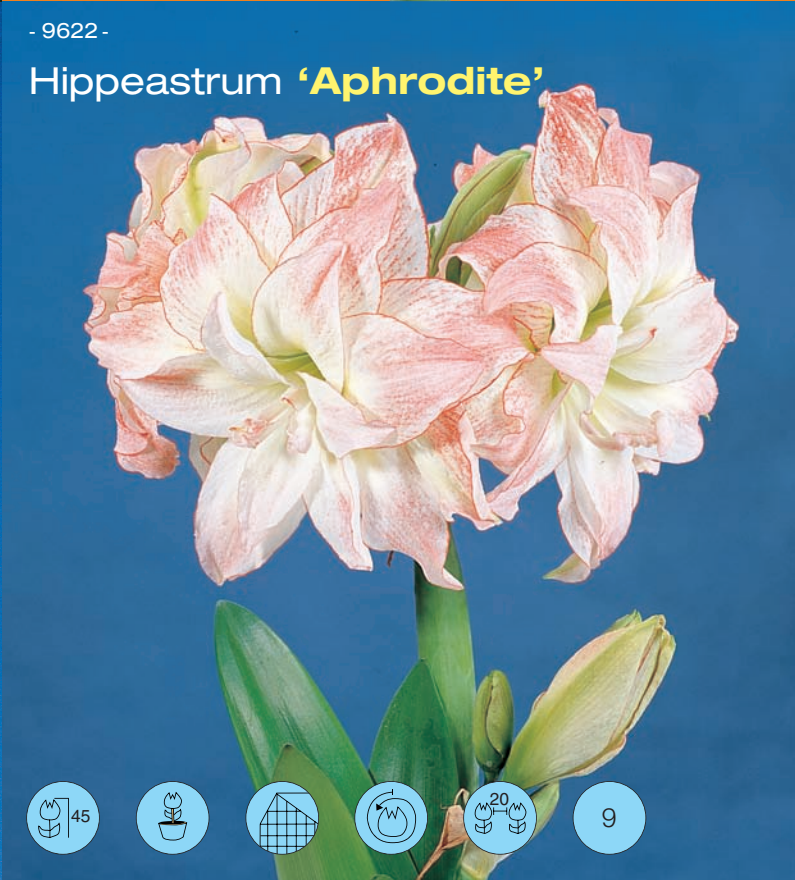
- 9600 -

Hippeastrum ‘Amigo’®



- 9622 -

Hippeastrum ‘Aphrodite’



planting						planting					
january	february	march	april	may	june	july	august	september	october	november	december
sales						sales					

Hippeastrum 'Apple Blossom'

45

20

9

- 9870 -

Hippeastrum 'Athene'®



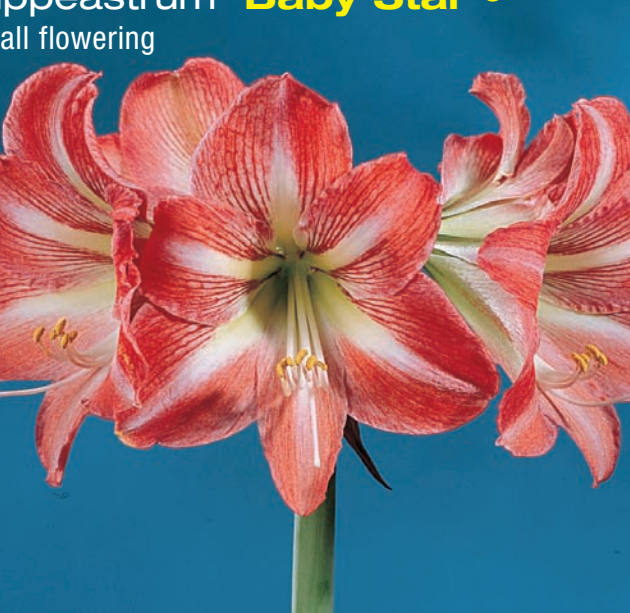
45

20

9

- 9588 -

Hippeastrum **'Baby Star'®**
small flowering





Hippeastrum 'Benfica'®

planting							planting						planting							planting															
january	february	march	april	may	june		july	august	september	october	november	december	january	february	march	april	may	june		july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october
sales										sales					sales										sales										

planting						planting						planting					
january	february	march	april	may	june	january	february	march	april	may	june	january	february	march	april	may	june
sales						sales						sales					

- 9720 -

Hippeastrum ‘Calimero’®
small flowering



- 9854 -

Hippeastrum ‘Charisma’®



- 9804 -

Hippeastrum
‘Chico’®



Hippeastrum
‘Christmas Gift’®



planting						planting						planting					
january	february	march	april	may	june	january	february	march	april	may	june	january	february	march	april	may	june
sales						sales						sales					

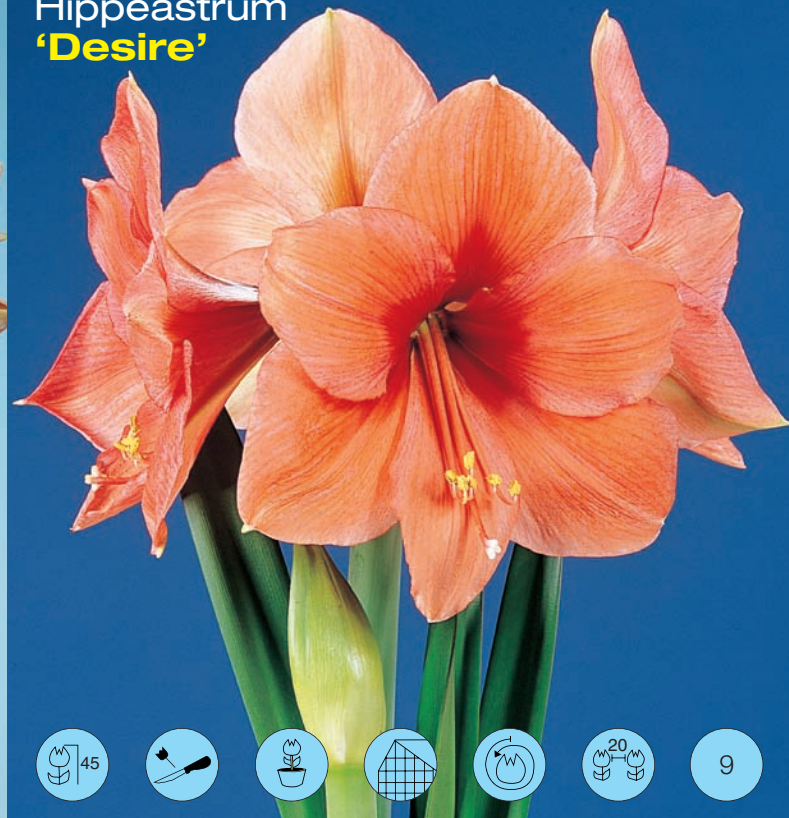
january	february	planting	sales	march	april	may	planting	sales	june	july	august	september	october	planting	sales	november	december

Hippeastrum 'Dancing Queen'®



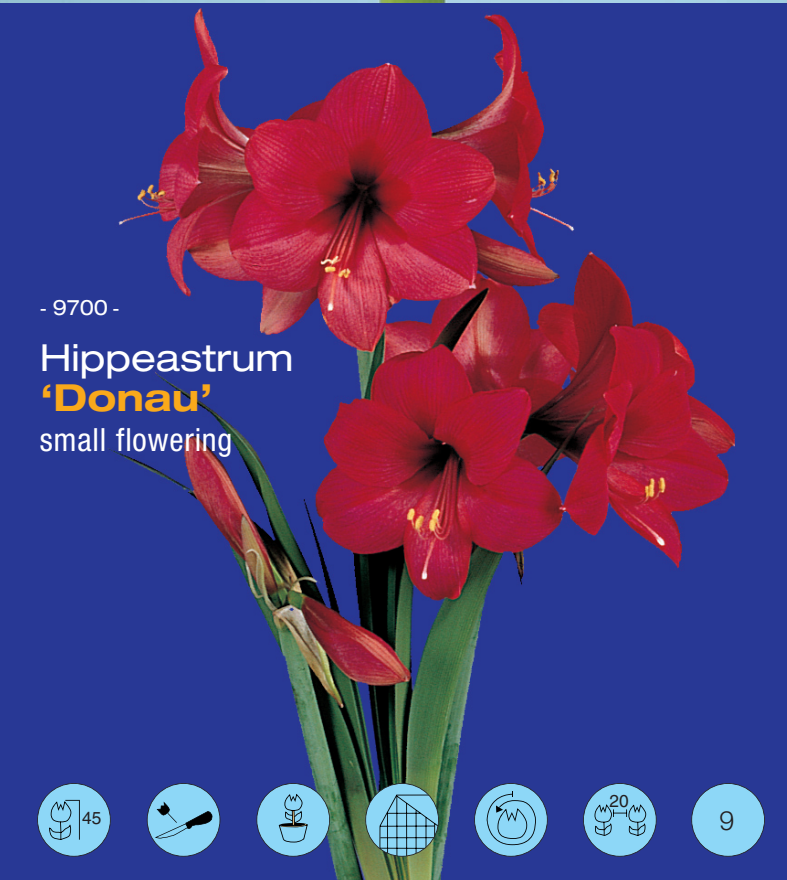
- 9771 -

Hippeastrum
'Desire'



- 9700 -

Hippeastrum
'Donau'
small flowering



- 9683 -

Hippeastrum 'Double Record'



january	february	planting	sales	march	april	may	planting	sales	june	july	august	september	october	planting	sales	november	december

hippeastrum
'Exposure'®



A close-up photograph of a Hippeastrum 'Exposure' flower. The flower is large and trumpet-shaped, with six petals. The petals are a deep pink color with prominent white or cream-colored streaks running from the base of the petals towards the tips. The center of the flower is a pale yellow-green color. The flower is surrounded by several long, green, sword-shaped leaves. A green flower bud is visible at the bottom right of the plant. The background is a solid, light blue color.

45

9



Hippeastrum
‘Fairytale’®
small flowering









Hippeastrum
'Ferrari'®



45

✂

🌱

🏠

🔄

20

9

	planting										planting			planting											planting												
j	f	m	a	m	j		j	a	s	o	n	d	j	f	m	a	m	j		j	a	s	o	n	d	j	f	m	a	m	j						
anuary	bruary	arch	pril	ay	une		uly	ugust	eptember	ctober	ovember	ecember	january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december	
	sales									sales			sales													sales											

january	february	planting	april	may	planting	october	november	december	january	february	planting	april	may	planting	october	november	december
		sales				sales					sales				sales		

- 9739 -

Hippeastrum 'Flair'®



- 9513 -

Hippeastrum 'Floriss Hekker'®



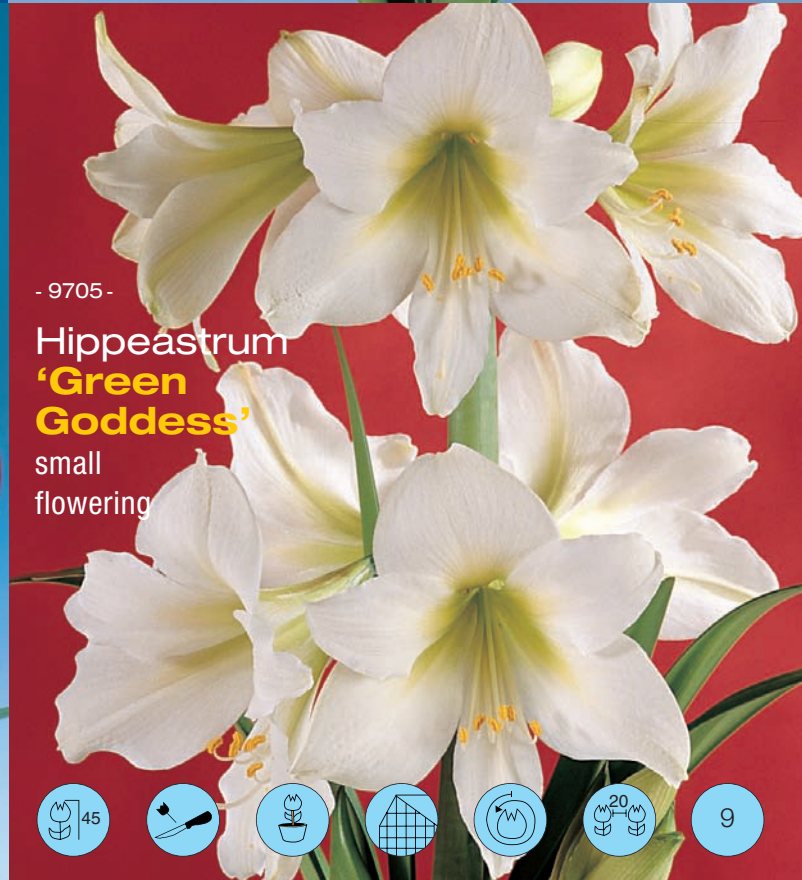
Hippeastrum 'Gran Cru'®



- 9705 -

Hippeastrum 'Green Goddess'

small
flowering



january	february	planting	april	may	planting	october	november	december	january	february	planting	april	may	planting	october	november	december
		sales				sales					sales				sales		

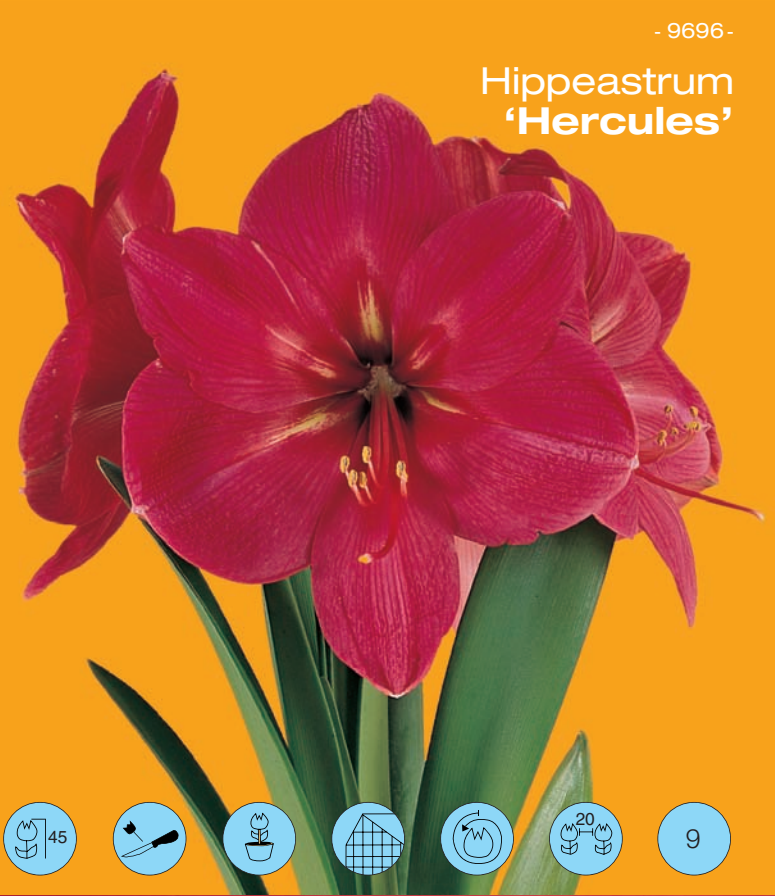
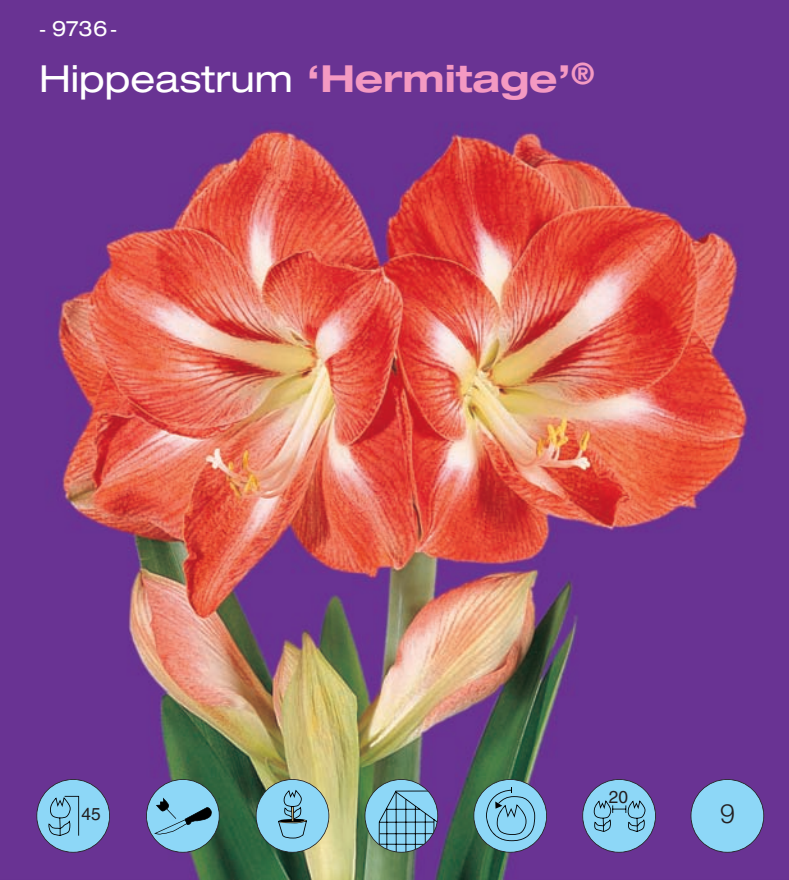
planting						planting						planting						planting					
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
sales									sales									sales					

Hippeastrum ‘Happiness’®



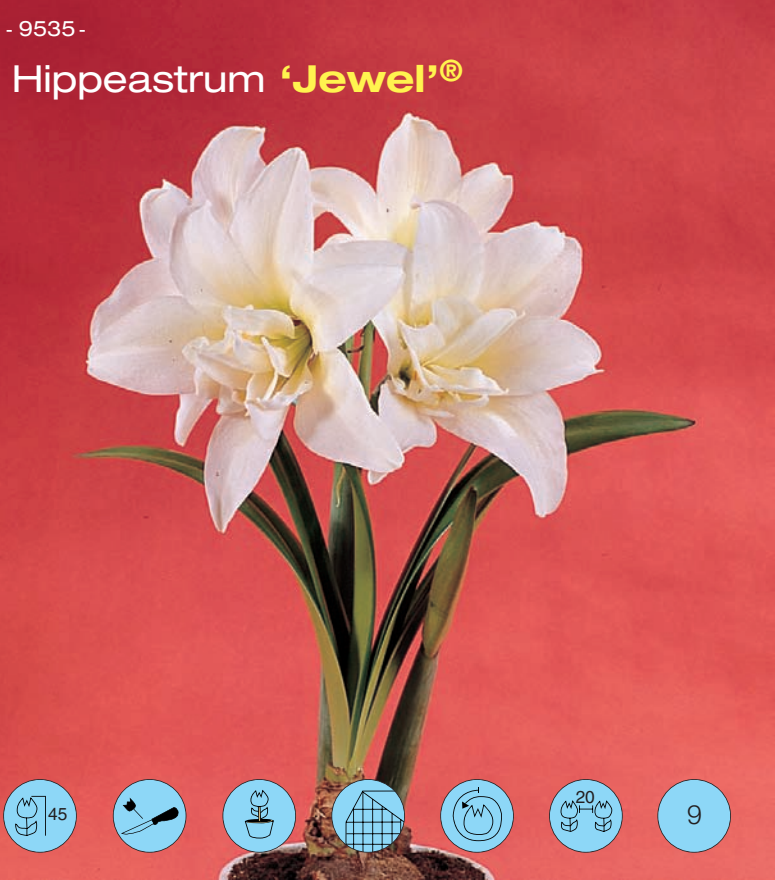
- 9736 -

Hippeastrum ‘Hermitage’®



- 9696 -

Hippeastrum ‘Hercules’

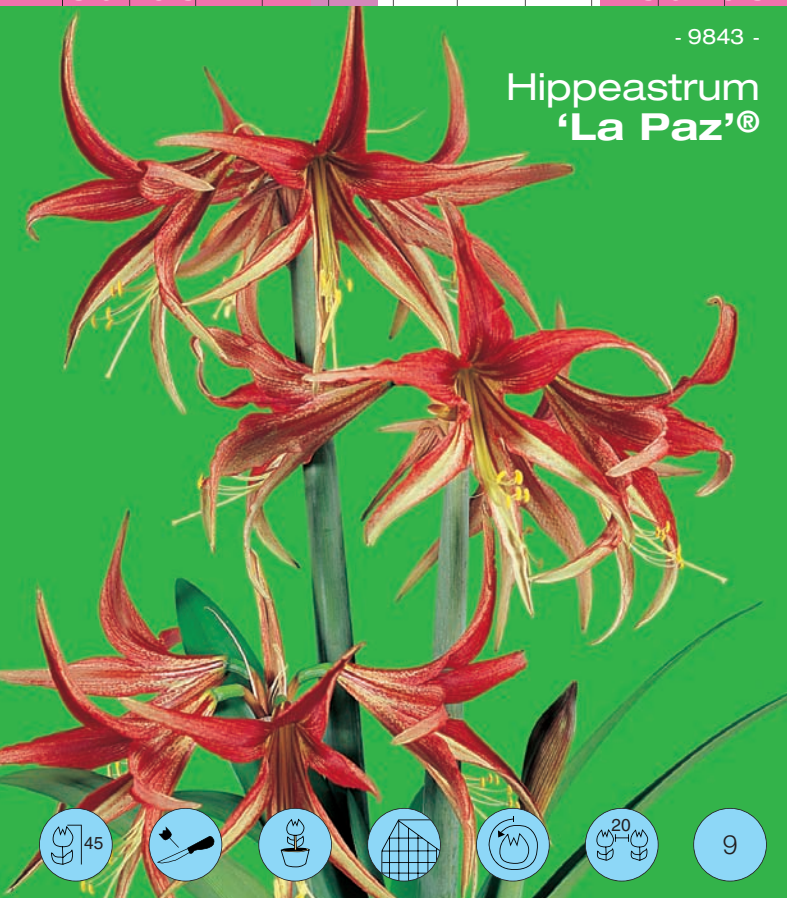


- 9535 -

Hippeastrum ‘Jewel’®

planting						planting						planting						planting					
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
sales									sales									sales					

january	february	planting	march	april	may	june	july	august	september	october	planting	november	december	january	february	planting	march	april	may	june	july	august	september	october	planting	november	december
		sales									sales					sales									sales		



january	february	planting	march	april	may	june	july	august	september	october	planting	november	december	january	february	planting	march	april	may	june	july	august	september	october	planting	november	december
		sales									sales					sales									sales		

planting
januaryfebruarymarchaprilmayjunejulyaugustseptemberoctobernovemberdecember
sales

- 9828 -

Hippeastrum
‘Lima’®

45

20

9

planting
januaryfebruarymarchaprilmayjunejulyaugustseptemberoctobernovemberdecember
sales

- 3013-

Hippeastrum
‘Limona’®

45

20

9

planting
januaryfebruarymarchaprilmayjunejulyaugustseptemberoctobernovemberdecember
sales

- 9853 -

Hippeastrum
‘Lovely Garden’

40

20

9

planting
januaryfebruarymarchaprilmayjunejulyaugustseptemberoctobernovemberdecember
sales

- 9658 -

Hippeastrum ‘Matterhorn’®

45

20

9

222 Narcissus, Hyacinth and Special Flower Bulbs Picture Book

january	february	planting	march	april	may	planting	june	july	august	september	october	planting	november	december	january	february	planting	march	april	may	planting	june	july	august	september	october	planting	november	december
		sales										sales				sales										sales			

- 9649 -

Hippeastrum
'Minerva'



- 9751 -

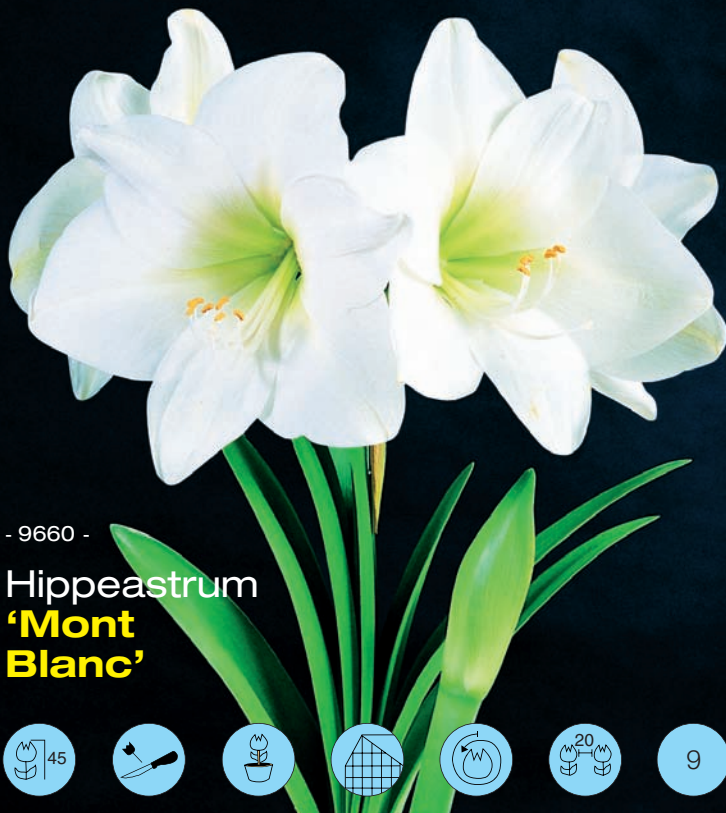
Hippeastrum 'Nymph'®



january	february	planting	march	april	may	planting	june	july	august	september	october	planting	november	december	january	february	planting	march	april	may	planting	june	july	august	september	october	planting	november	december
		sales										sales				sales										sales			

- 9660 -

Hippeastrum
'Mont
Blanc'



- 9716 -

Hippeastrum 'Orange Sovereign'



planting						planting						planting						planting					
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
sales									sales									sales					

- 9502 -

Hippeastrum ‘Pamela’
small flowering



- 9636 -

Hippeastrum ‘Pasadena’



planting						planting						planting						planting					
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
sales									sales									sales					

9565 -

Hippeastrum ‘Papillo’

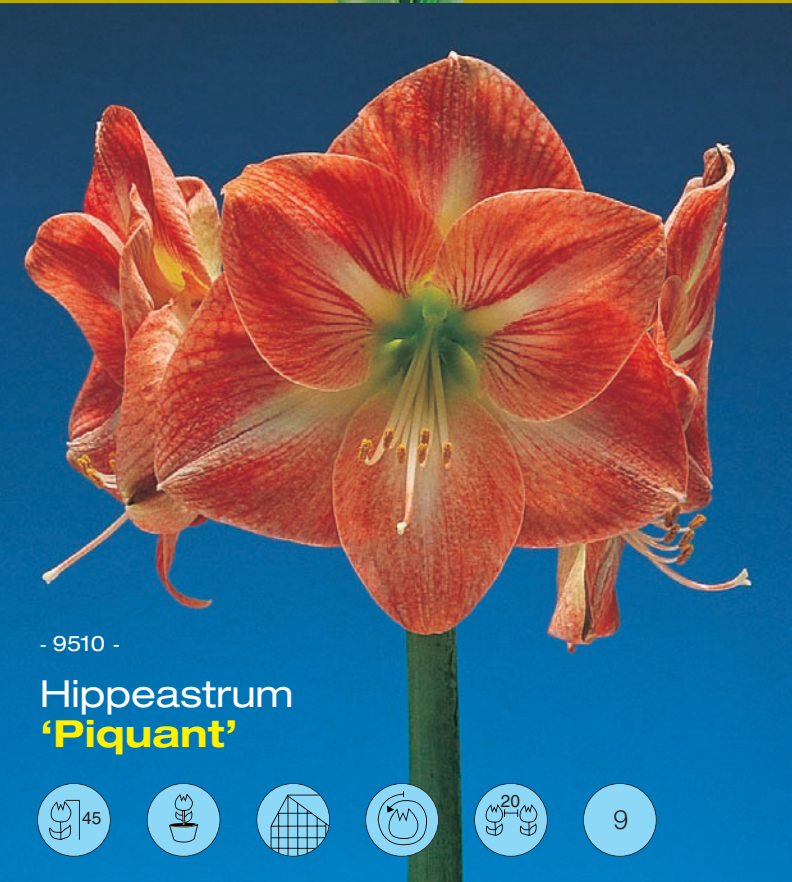
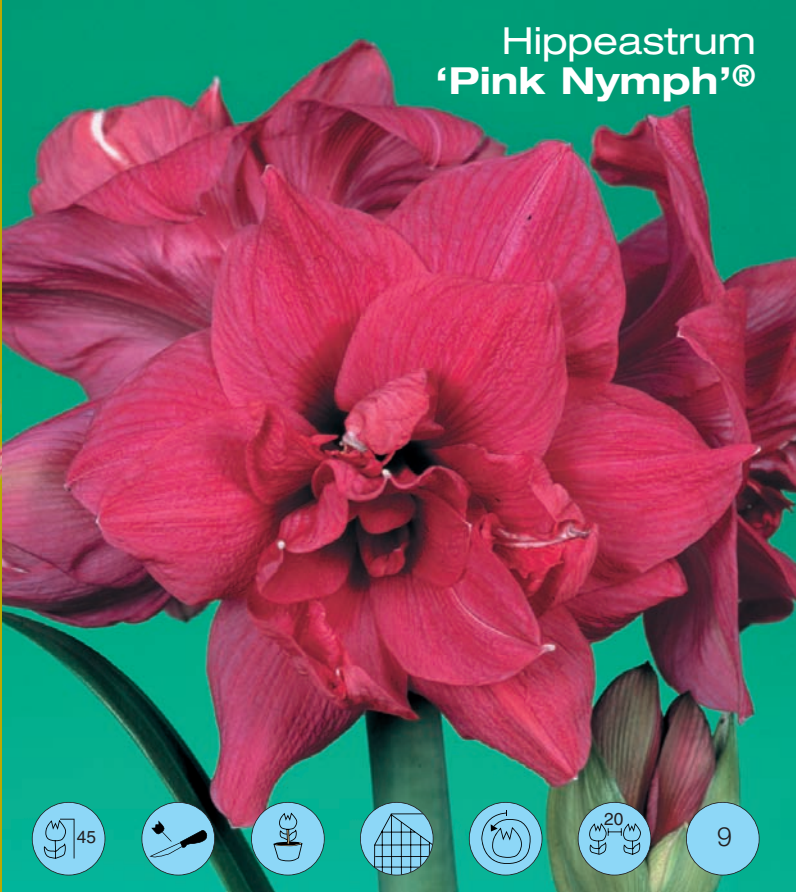
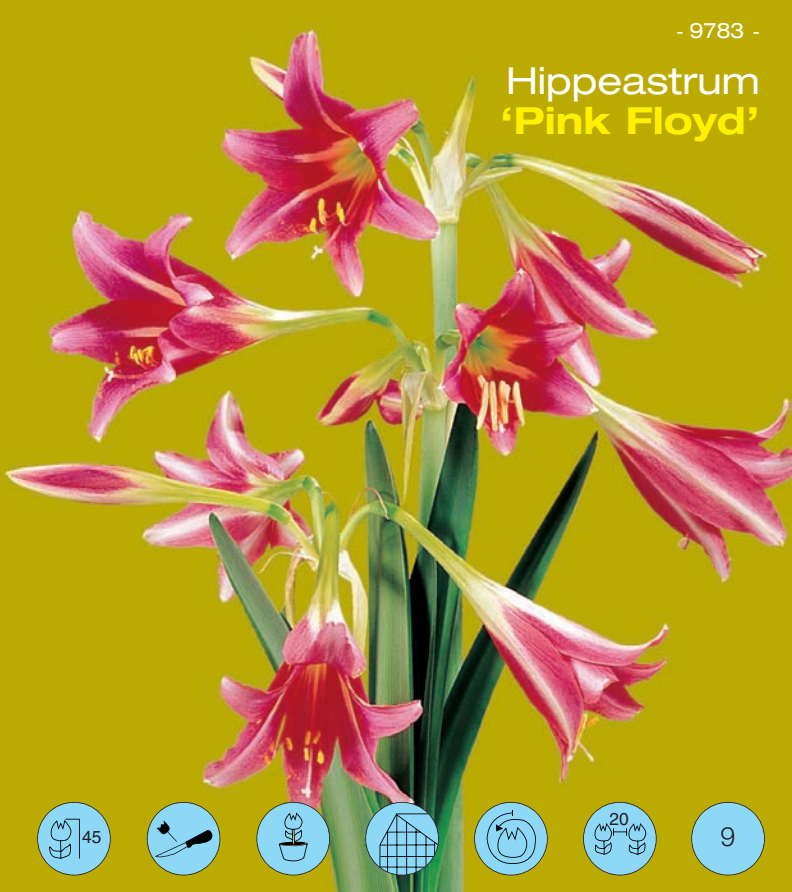


- 9570 -

Hippeastrum ‘Picotee’



planting						planting						planting													
january	february	march	april	may		june	july	august	september	october	november	december	january	february	march	april	may		june	july	august	september	october	november	december
sales						sales						sales						sales							



planting						planting						planting											
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
sales						sales						sales						sales					

planting						🌸	planting						🌸	planting									
january	february	march	april	may	june		july	august	september	october	november	december		january	february	march	april	may	june	july	august	september	october
sales							sales							sales									

- 9679 -

Hippeastrum ‘Red Peacock’®



- 9589 -

Hippeastrum ‘Roma’®



planting						🌸	planting						🌸	planting									
january	february	march	april	may	june		july	august	september	october	november	december		january	february	march	april	may	june	july	august	september	october
sales							sales							sales									

- 9693 -

Hippeastrum ‘Rilona’



- 9603 -

Hippeastrum ‘Royal Velvet’®



planting						planting						planting													
january	february	march	april	may		june	july	august	september	october	november	december	january	february	march	april	may		june	july	august	september	october	november	december
sales						sales						sales						sales							

Hippeastrum
'Santa Cruz'®
small flowering



45













- 9754 -

Hippeastrum 'Solomon'®



45













- 9768 -

Hippeastrum 'Sydney'®



45













Hippeastrum
'Stargazer'®



45













planting						planting						planting											
january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
sales						sales						sales						sales					

planting						planting						planting											
january	february	march	april	may	 june	july	august	september	october	november	december	january	february	march	april	may	 june	july	august	september	october	november	december
sales						sales						sales											



planting						planting						planting						planting					
january	february	march	april	may	☼ june	july	august	september	october	november	december	january	february	march	april	may	☼ june	july	august	september	october	november	december
sales						sales						sales						sales					





- 88115 -

Hyacinthoides

flaccida



50



10



10



- 8124 -

Hyacinthoides

ochroleuca



50



10



10



- 4130 -

Hyacinthoides

hispanica blue



25







10



10



1

67



- 4133 -

Hyacinthoides

hispanica pink



25







10

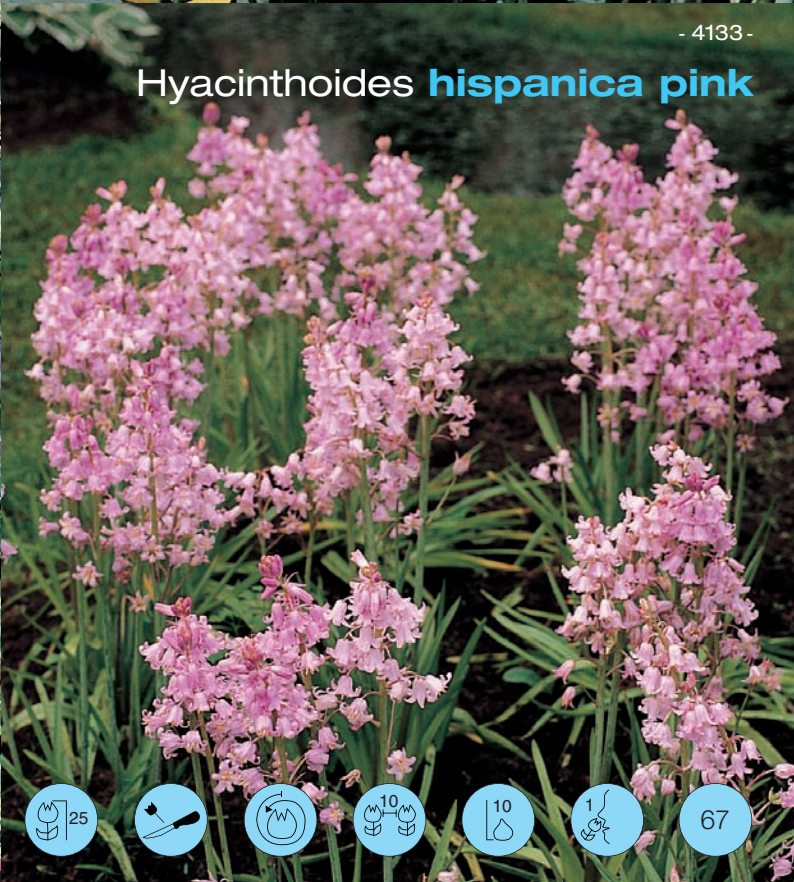


10



1

67



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				planting	sales											planting	sales						

Narcissus, Hyacinth and Special Flower Bulbs Picture Book 229

- 4763 -

Hyacinthoides **hispanica mixed**



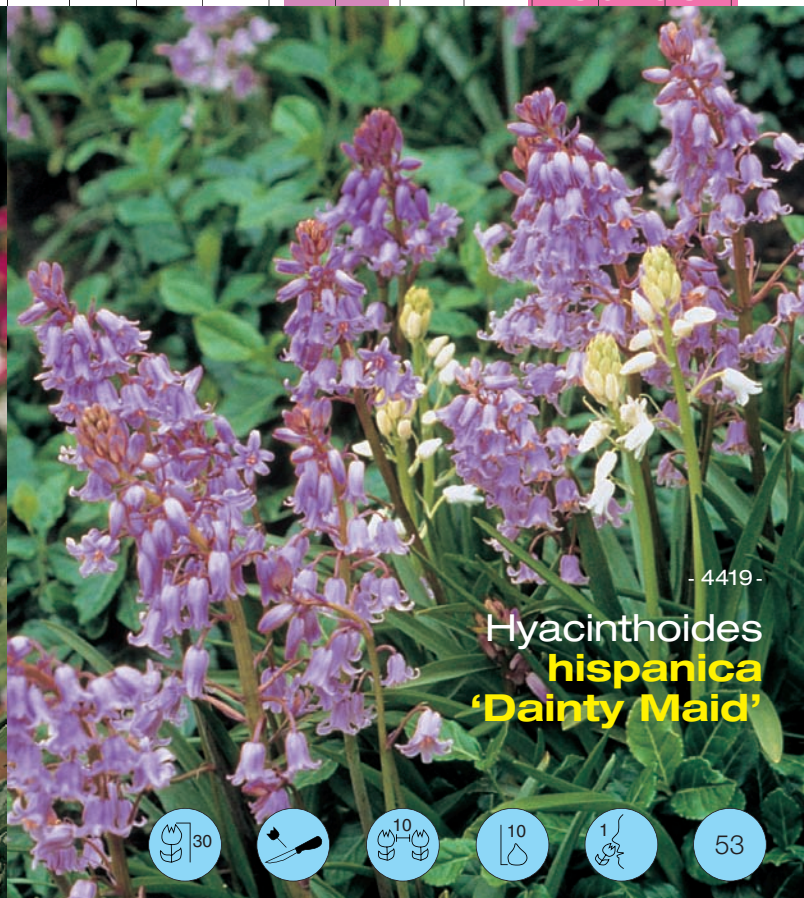
25

10

10

1

67



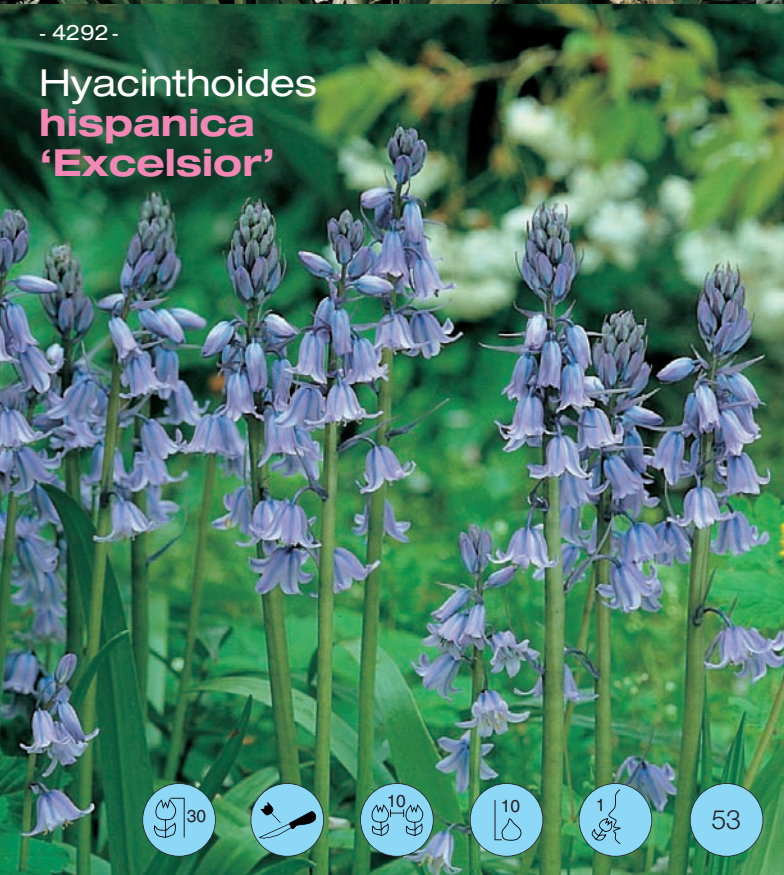
- 4419 -

Hyacinthoides
hispanica
'Dainty Maid'

30 10 10 1 53

- 4292 -

Hyacinthoides
hispanica
'Excelsior'



30

10

10

1

53

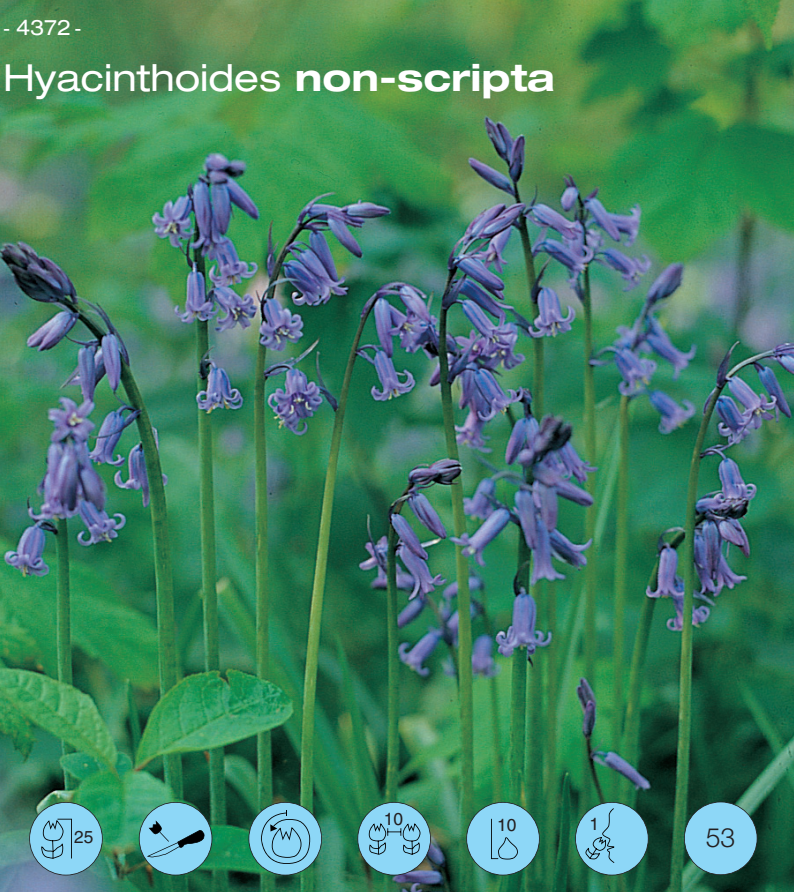


- 44449 -

Hyacinthoides
hispanica
‘Queen
of the Pinks’

30 10 10 1 53

[illegible]



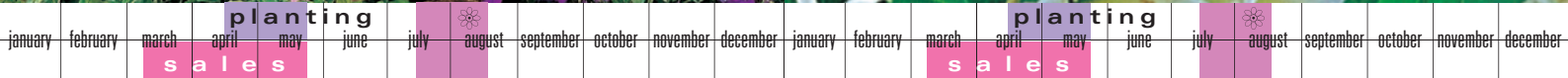
- 8212 -

Hymenocallis **festalis** 'Zwanenburg'



- 11152 -

Hymenocallis **festalis** 'Advance'



Hymenocallis ‘Sulphur Queen’



- 8809 -

Hymenocallis ‘Sulphur Queen’



- 8468 -

Incarvillea delavayi ‘Snowtop’



- 8818 -

Incarvillea delavayi



- 4771 -

Ipheion uniflorum





- 4891 -

Ipheion
uniflorum
'Rolf Fiedler'

10-15 5 5 162

- 4888 -

Ipheion
uniflorum
'Wisley Blue'

10-15 5 5 162

- 4094 -

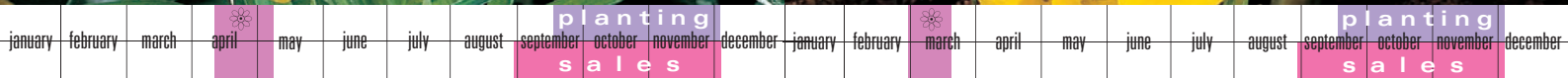
Iris
bucharica

25-30 10 10 179

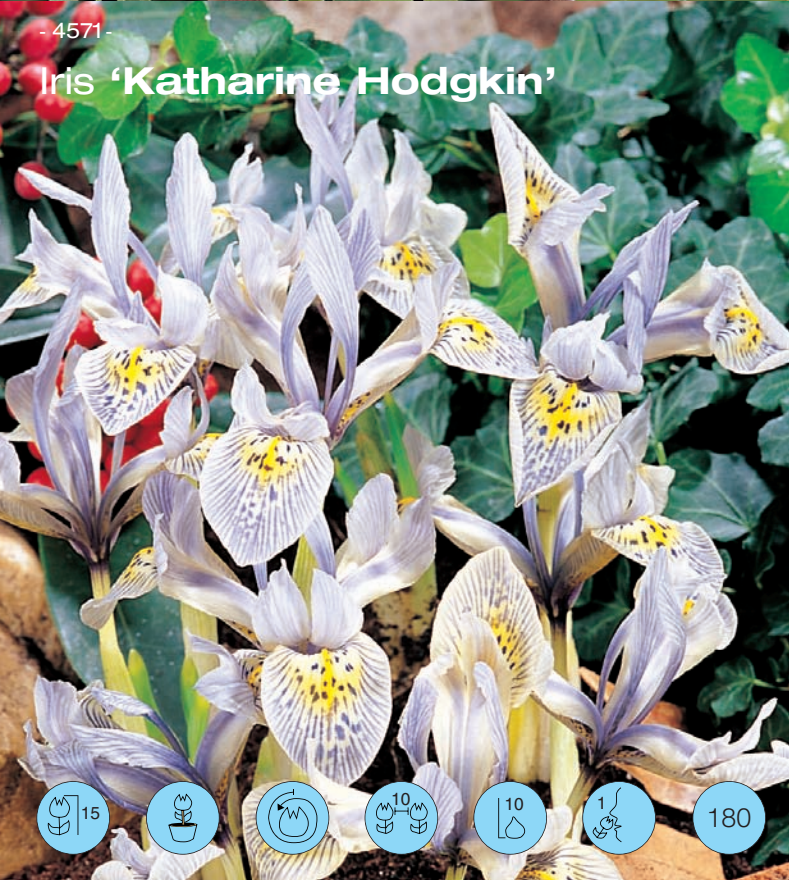
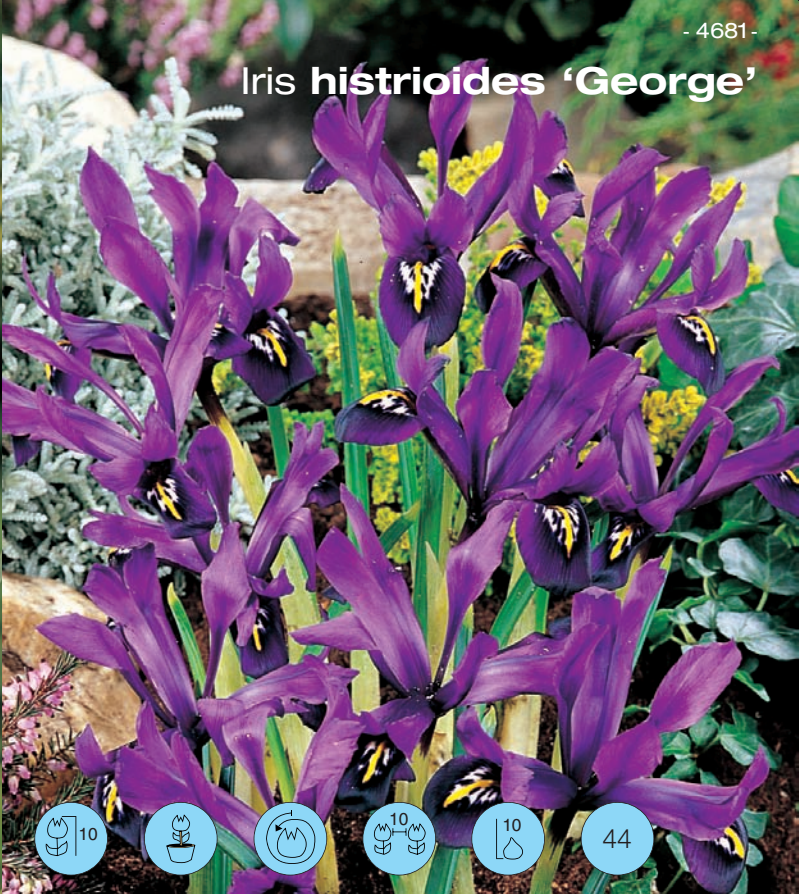
- 4612 -

Iris
danfordiae

10 10 10 10 73



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				planting				planting						planting						planting			
				sales				sales						sales						sales			



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
		planting						planting						planting						planting			
		sales						sales						sales						sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

- 4389 -

Iris **reticulata** 'Cantab'



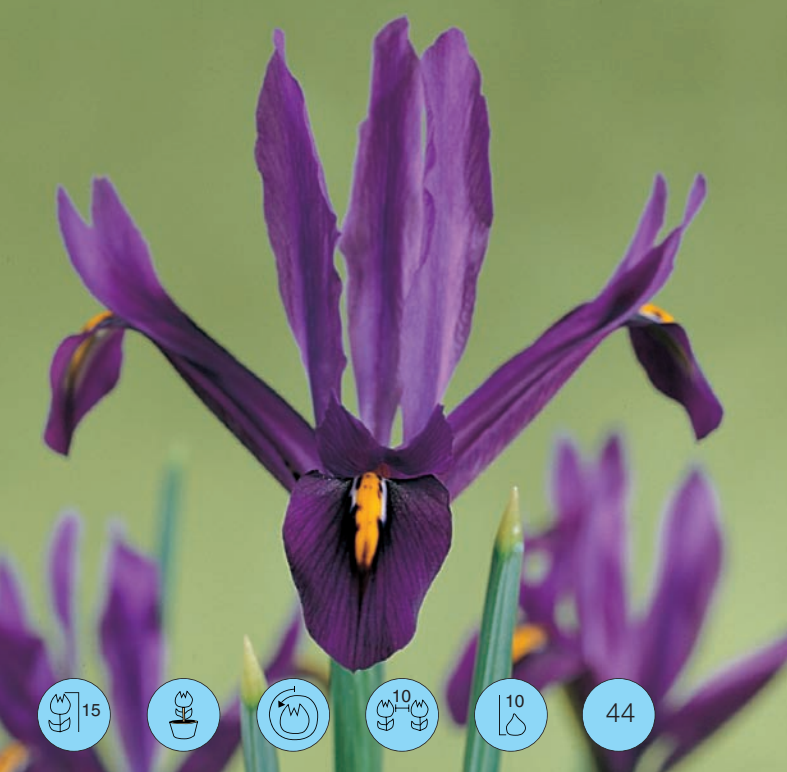
- 4791 -

Iris **reticulata** 'Harmony'



- 4608 -

Iris **reticulata** 'J.S. Dijt'



- 44048 -

Iris **reticulata** 'Pixie'®



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
								planting	planting	planting	planting									planting	planting	planting	planting
								sales	sales	sales	sales									sales	sales	sales	sales

Iris reticulata 'Pauline'

january	february	planting	april	may	june	july	august	planting	october	november	december	january	february	planting	april	may	planting	october	november	december
		sales						sales						sales			sales			

- 4391 -
Iris reticulata 'Pauline'



january	february	planting	april	may	june	july	august	planting	october	november	december	january	february	planting	april	may	planting	october	november	december
		sales						sales						sales			sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting				planting								planting				planting				
			sales				sales								sales				sales				

- 8803 -

Ixia 'Mabel'



- 8260 -

Ixia mixed



- 88039 -

Ixia 'Panorama'



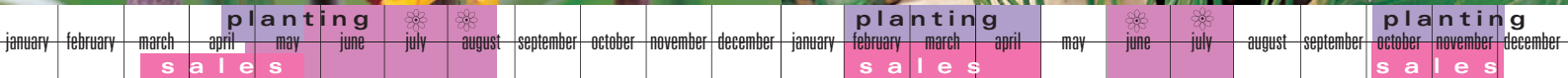
- 88041 -

Ixia 'Rose Emperor'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting				planting								planting				planting				
			sales				sales								sales				sales				

Ixia 'Yellow Emperor'



‘Caravelle’®



40

10

7

1

A large, vibrant cluster of pink and red flowers, likely a variety of Dianthus, with green foliage in the background.

‘Gravetye Giant’



40

12

10



- 4520 -

Leucojum **vernum**



- 8610 -

Liatris **spicata** 'Alba'



- 11258/8102 -

Liatris **spicata**

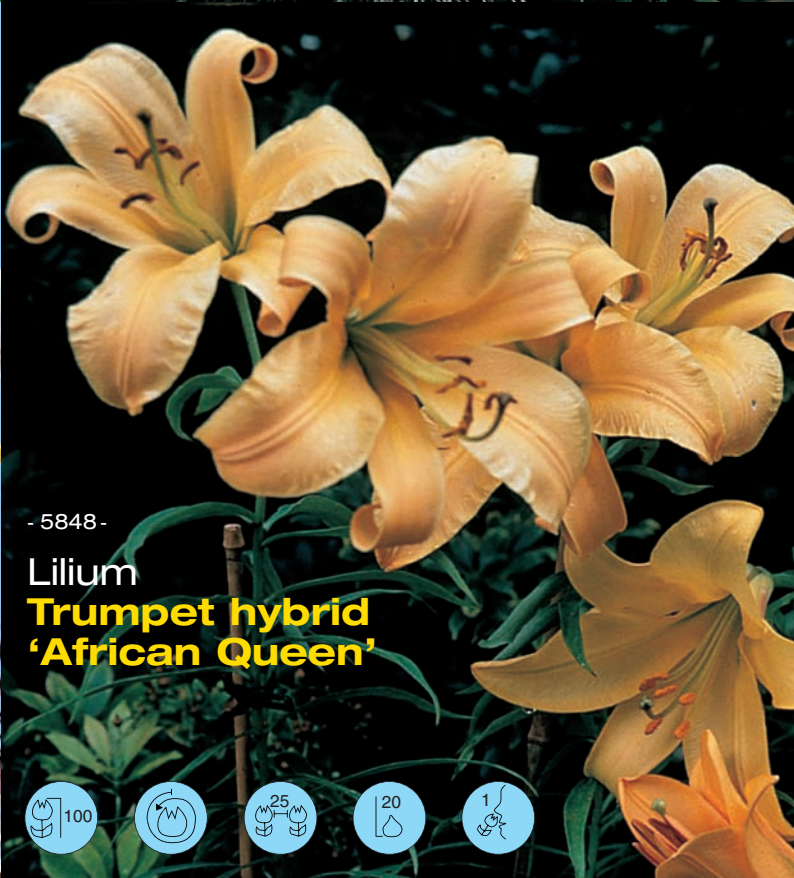


- 5983 -

Lilium **candidum**



january	february	planting sales	april	may	planting	august	september	october	november	december	january	february	planting sales	april	may	planting	august	september	october	november	december



january	february	planting sales	april	may	planting	august	september	october	november	december	january	february	planting sales	april	may	planting	august	september	october	november	december

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting												planting								
		sales												sales									



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting												planting								
		sales												sales									

january	february	march	planting	april	may	june	july	august	september	october	november	december
		sales										

- 8611 -

Mirabilis 'Jalapa'





A good number of species of this bulbous plant are found growing wild in Southern Europe, North Africa and Western Asia. Muscari are commonly known as grape hyacinths and their flower spikes are sometimes compared to the inflorescences of hyacinths. Closely related to Muscari are *Bellevalia* and *Hyacinthella*. *Muscari armeniacum* is the most commonly produced species whilst other important cultivars are *M. aucheri* 'Blue Magic', *M. armeniacum* 'Blue Spike', *M. armeniacum* 'Fantasy Creation', *M. botryoides* 'Album', *M. botryoides* 'Super Star' and *M. latifolium*. Various plant breeders have introduced new and improved cultivars in recent years. All varieties, which are frost hardy, have to be planted during the October-November period.

Muscari

SPECIFIC CHARACTERISTICS

- *Muscari armeniacum* is by far the most commonly cultivated species (in the Netherlands, 65% of the land dedicated to producing Muscari bulbs is used for the production of this species).
- *M. armeniacum* 'Fantasy Creation' is a double-flowering cultivar and greenish-blue in colour; its green seedpods extend the attractiveness of this plant in the garden.
- The double-flowering *M. armeniacum* 'Blue Spike' was obtained from a mutation and has to be maintained by a selection process.
Bulb sizes range from 6-7 cm. to 10 cm. and larger. This species and its cultivars have 5-7 narrow grassy leaves per plant that develop at an even faster rate after the flowering period. The smallest bulb size will produce only one flower stem with a relatively small flower spike. The largest bulb size will produce up to three flower stems per bulb.
- *Muscari aucheri* 'Blue Magic' is deep blue in colour, flowers early, and is the second most cultivated variety. Flower production requires a bulb size of 6-7 cm. to 9 cm. and larger.
- *Muscari botryoides* 'Album', is a pure white cultivar while *M. botryoides* 'Superstar' is blue. These cultivars produce smaller flowers and require a bulb size of 5-6 cm. and 6 cm. and larger.
- *Muscari latifolium* displays characteristics unlike other species in the genus in that the plant usually has just one broad leaf and the light blue flowers in the upper part of the inflorescence are sterile while the dark blue flowers below them are fertile. Bulb sizes are 5-6 cm. and 6 cm. and larger.

- The greenish-yellow flower colour of *Muscari macrocarpum* makes this an unusual species. It is available in limited quantities. Bulb sizes are 9 cm. and larger.

APPLICATIONS

• GARDEN PLANTING

All varieties are excellent for garden planting; when the bulbs are planted in a sunny location, they can produce flowers for several years in succession. A possible disadvantage is that the bulbs can start producing foliage again before the winter period. During the second year, the bulb will produce several small daughter bulbs (bulblets) that will also produce leaves but not flowers.

• POT PLANTS

Muscari armeniacum is most suited to this purpose. The development of excessively long leaves can cause problems but an adjusted temperature treatment and not planting the bulbs until 2-4 weeks before the desired flowering period can prevent this. Earliest flowering is possible in early December. It is also possible to obtain a protracted postponement of flowering by planting at a temperature just below 0°C.

• CUT FLOWERS

Muscari armeniacum is most suited to this purpose. Plants exhibiting sufficient height can be obtained by means of a sufficiently long cold treatment. When harvesting the flowers, the leaves are picked along with them. Extending the flowering period can be done by applying an adjusted temperature treatment and also by storing the bulbs after planting at a temperature just below 0°C.

Dit bolgewas komt in vrij veel soorten in de natuur voor in Zuid-Europa, Noord-Afrika en West-Azië. Muscari is algemeen bekend onder de naam *blauw druifje*; het trosje wordt wel vergeleken met de overeenkomstige bloeiwijze van de hyacint.

Nauw verwant aan Muscari zijn *Bellevalia* en *Hyacinthella*. *Muscari armeniacum* is de meest geteelde, andere belangrijke cultivars zijn *Muscari aucheri* 'Blue Magic', *Muscari armeniacum* 'Blue Spike' en 'Fantasy Creation', *Muscari botryoides album* en *botryoides* 'Super Star' en *Muscari latifolium*. De laatste jaren worden door verschillende veredelaars nieuwe en verbeterde cultivars op de markt gebracht. Alle soorten moeten in de periode oktober-november worden geplant; ze zijn winterhard.

Muscari

ENKELE KENMERKEN

- *Muscari armeniacum*, dit is verreweg de meest geteelde (ongeveer 65% van het totale areaal in Nederland).
- *Muscari armeniacum* 'Fantasy Creation' is gevuld bloemig en groenachtig blauw van kleur, na de bloei is de plant met zijn groene zaadknoppen nog zeer aantrekkelijk in de tuin.
- *Muscari armeniacum* 'Blue Spike' is een door mutatie verkregen gevuldbloemige vorm die door selectie op peil moet worden gehouden.
Bolmaten zijn vanaf 6-7 cm tot aan 10 cm en groter. Het gewas heeft smal grasachtig blad (5-7 stuks) dat zich vooral na de bloei sterk ontwikkelt. De kleinste bolmaat produceert slechts één bloemsteel met een relatief kleine boemtros. De grootste bolmaat produceert tot 3 bloemstelen per bol.
- *Muscari aucheri* 'Blue Magic' is diep-blauw van kleur, vroegbloeiend en na *armeniaceum* de meest geteelde; bolmaat van 6-7 tot 9 cm en op.
- *Muscari botryoides album*, is helder wit en 'Superstar' blauw van kleur; een meer kleinbloemig type met een bolmaat van 5-6 en 6 cm en groter.
- *Muscari latifolium*, een afwijkend gewas met doorgaans maar één breed blad, boven in de bloeiwijze lichtblauwe steriele bloempjes terwijl de donkerblauwe bloempjes daaronder fertiel zijn; bolmaten zijn 5-6 en 6 cm en op.
- *Muscari macrocarpum* is met zijn groenachtig gele bloemkleur sterk afwijkend en beperkt verkrijgbaar; 9 cm en op.

GEBRUIKSMOGELIJKHEDEN

- **TUINBEPLANTING**
Alle soorten zijn uitermate geschikt voor tuinbeplanting, mits de bollen op een zonnige plaats staan kunnen ze enkel jaren achtereen bloeien. Een nadeel kan zijn dat de bollen al weer voor de winterperiode blad gaan produceren. Het tweede jaar produceert de bol een reeks kleine dochterbolletjes (kralen) die ook uitlopen met blad en niet zullen bloeien.
- **POTPLANT**
Muscari armeniacum is hiervoor het meest geschikt, de ontwikkeling van te lang blad kan voor problemen zorgen; een aangepaste temperatuurbehandeling en pas opplanten 2-4 weken voor het gewenste bloeitijdstip kunnen dit voorkomen. Vroegste bloei is mogelijk vanaf december. Een langdurig uitgestelde bloei door middel van opplanten bij een temperatuur juist beneden 0°C is mogelijk.
- **SNIJBLOEM**
Muscari armeniacum is hiervoor het meest geschikt. Door middel van een voldoende lange koude behandeling kan een gewas van voldoende lengte worden verkregen. Bij het oogsten van de bloemen wordt ook blad mee geplukt. Bloeispreiding is mogelijk door middel van aangepaste temperatuurbehandelingen en ook bewaring in opgeplante toestand bij een temperatuur juist beneden 0°C.

该属较多品种的野生执著可在南欧、北非和西亚被找到。蓝壶花通常被称为葡萄风信子，它们的花序有时与风信子的相似，与它们比较接近的属有 *Bellevalia* 和 *Hyacinthella*。

亚美尼亚蓝壶花是最常见的生产品种。其它重要的栽培品种有 *M. aucheri* ‘Blue Magic’、亚美尼亚蓝壶花 ‘Blue Spike’、亚美尼亚蓝壶花 ‘Fantasy Creation’、丛毛葡萄风信子 ‘Album’、丛毛葡萄风信子 ‘Super Star’ 和 *Muscari latifolium*。

近些年，许多育种工作者培育出了不同的新品种和改良品种。所有的葡萄风信子品种不耐寒，必须在 10 月到 11 月种植，在来年的春天开花。

葡萄风信子属 (蓝壶花属)

特性

- 亚美尼亚蓝壶花到目前为止是最常见的栽培品种（在荷兰 65% 葡萄风信子种球生产的土地都是用于该品种的生产）。亚美尼亚蓝壶花 ‘Fantasy Creation’ 是一个复瓣品种，开蓝绿色花，它们的蓝色心皮使该品种在花园中非常吸引人。复瓣品种亚美尼亚蓝壶花 ‘Blue Spike’ 是通过变异而得到的，需要通过选育来保持它们的性状。

种球规格的范围从 6-7 厘米到 10 厘米以上。该品种每个种球可生长有 5-7 张窄小的、绿色叶片，它们在开花后会发育的更快。

小规格的种球只产生一枝花茎，花穗也相当较小。大规格的种球每球可以产生 3 个花茎。

- *Muscari aucheri* ‘Blue Magic’ 为深蓝色，开花较早，它是第二大栽培品种。花卉生产需要种球的规格从 6-7 厘米到 9 厘米以上。
- 丛毛葡萄风信子 ‘Album’ 为纯白色品种，而丛毛葡萄风信子 ‘Superstar’ 为蓝色品种。这些品种产生的花较小，需要的种球规格从 5-6 厘米到 6 厘米以上。
- *Muscari latifolium* 的特性与该属中其它的种有所不同，通常它们长一张宽的叶片，花序顶部浅蓝色的花不育，当它们下面深蓝色的花茂盛时。种球的规格从 5-6 厘米到 6 厘米以上。
- 黄绿色的花使 *Muscari macrocarpum* 与众不同。它们的数量非常有限。种球的规格为 9 厘米以上。

应用

- 花园栽培

所有的品种都非常适合于花园栽培使用。当种球种植在阳光充足的地方，它们的可以多年开花。但是一个缺点是它们可能在冬季来临之前开始长出叶片。第二年种球会产生几个小的子球，这样会导致种球只长叶片不开花。

- 盆栽生产

亚美尼亚蓝壶花非常适合这个目的。但是叶片过长会成为问题，我们可以通过调整处理温度和在需要开花前 2-4 周再种植来进行预防。它们最早的开花时间为 12 月初。我们也可以将它们种植在 0°C 以下的环境中，来延迟它们的开花时间。

- 切花生产

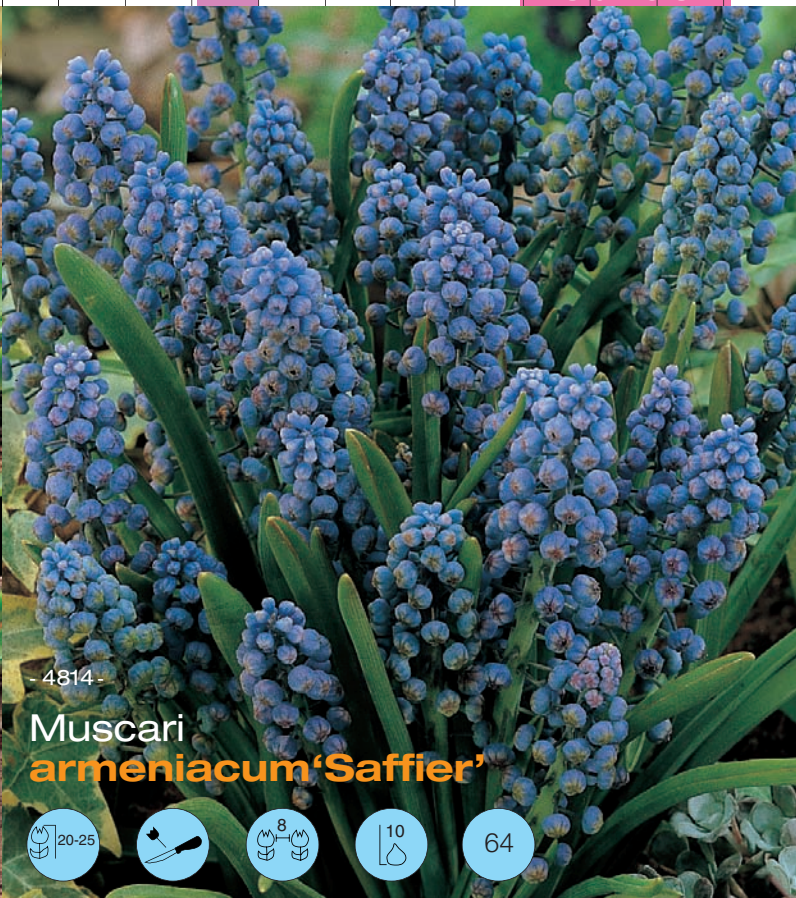
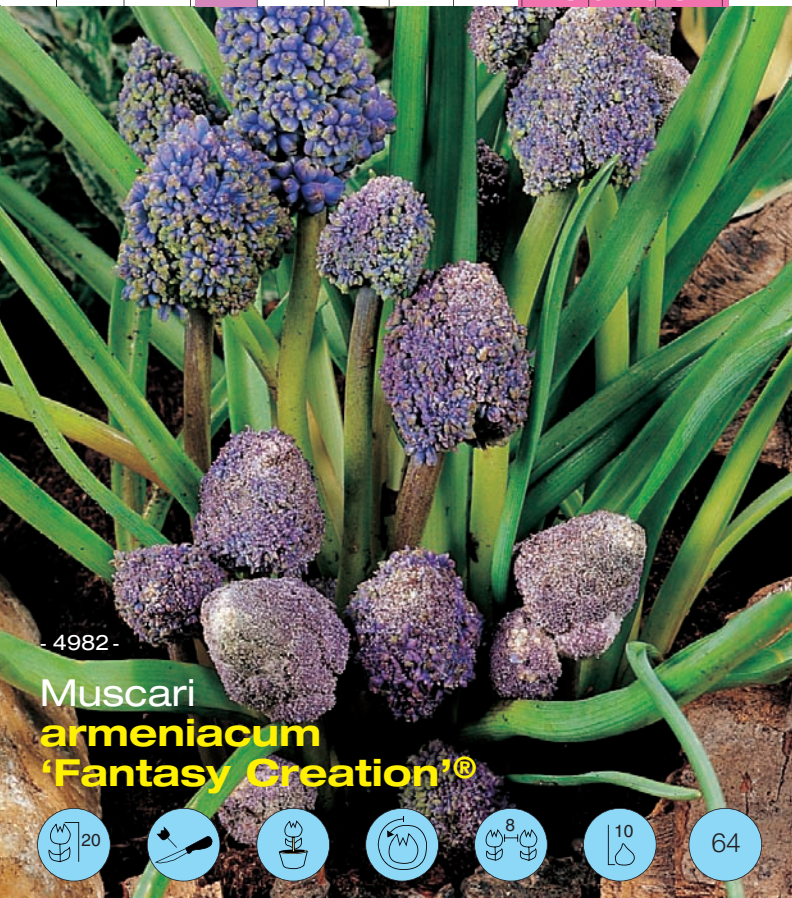
亚美尼亚蓝壶花最适合该目的。通过给种球提供足够长的冷处理，可以使它们达到所需要的高度。当收花时，带叶片一起采收。可以采用调整处理温度以及将种球储藏在 0°C 以下来延长开花的时间。

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales							planting					sales			



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales							planting					sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales						planting					planting	sales		



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					planting	sales						planting					planting	sales		

Muscari aucheri 'Dark Eyes'

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales							planting					sales			

- 44362 -

Muscari aucheri
'Dark Eyes'



20





8

10

64

- 44125 -

Muscari aucheri
'Mont Blanc'



15-20



8

10

64

- 44448 -

Muscari aucheri
'Mount Hood'®



15-20







8

10

64

- 44050 -

Muscari azureum



10-15



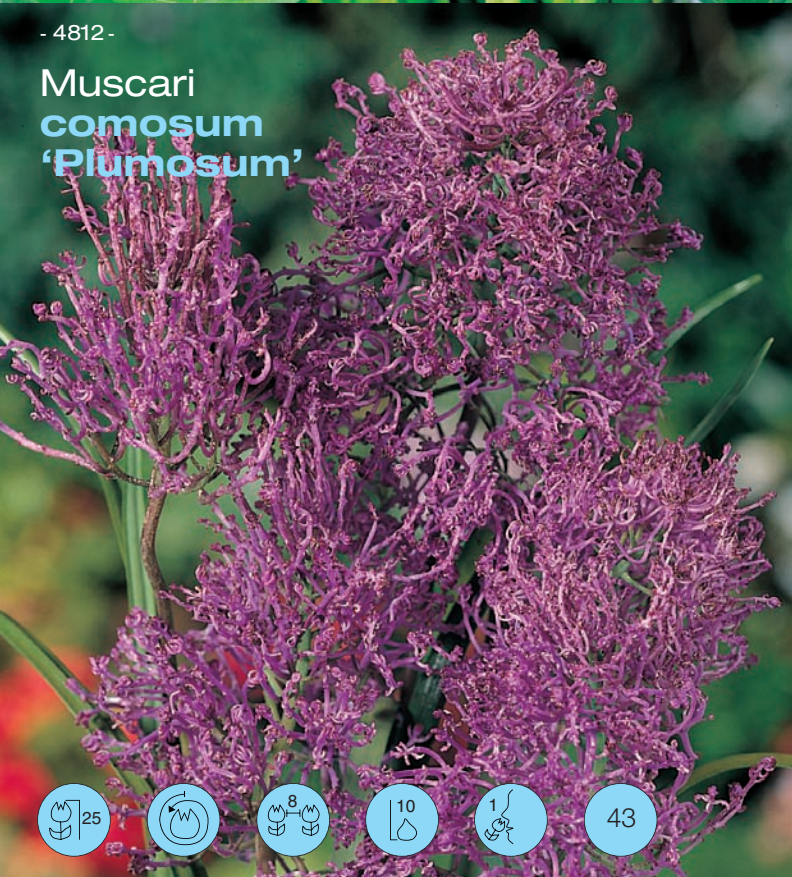
8

10

64

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting					sales							planting					sales			

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			🌸					planting								🌸	🌸				planting		
								sales													sales		



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
				🌸	🌸				planting							🌸					planting		
								sales													sales		



- 44402 -

Muscari **macrocarpum**



- 444126 -

Muscari **neglectum** 'Sky Blue'



- 4858 -

Nectaroscordum **siculum ssp bulgaricum**



- 8571 -

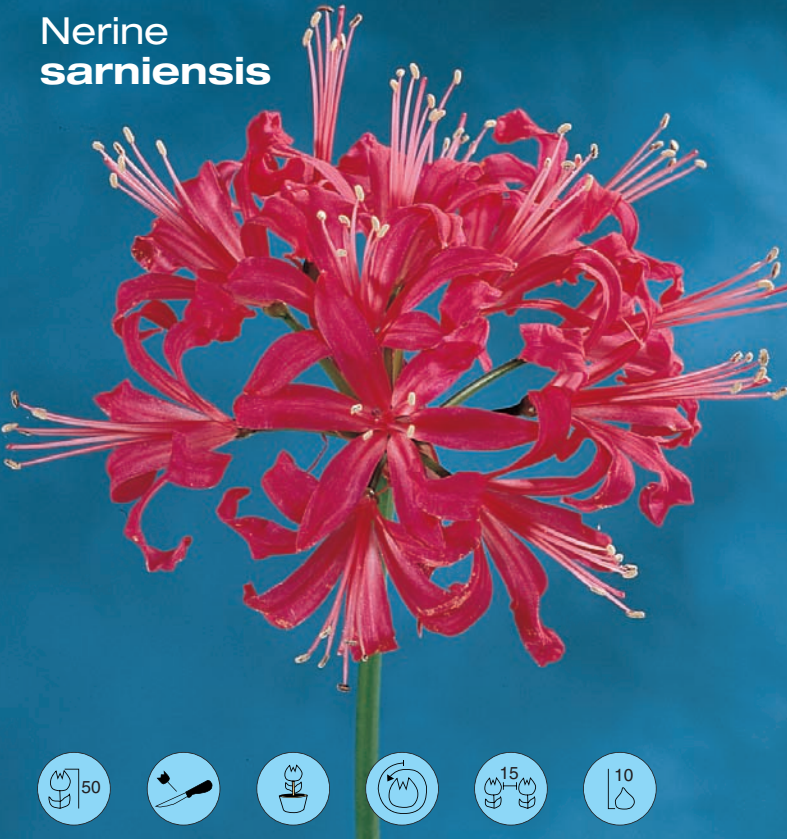
Nerine **bowdenii**



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting												planting								
		sales												sales									

- 8511 -

Nerine sarniensis



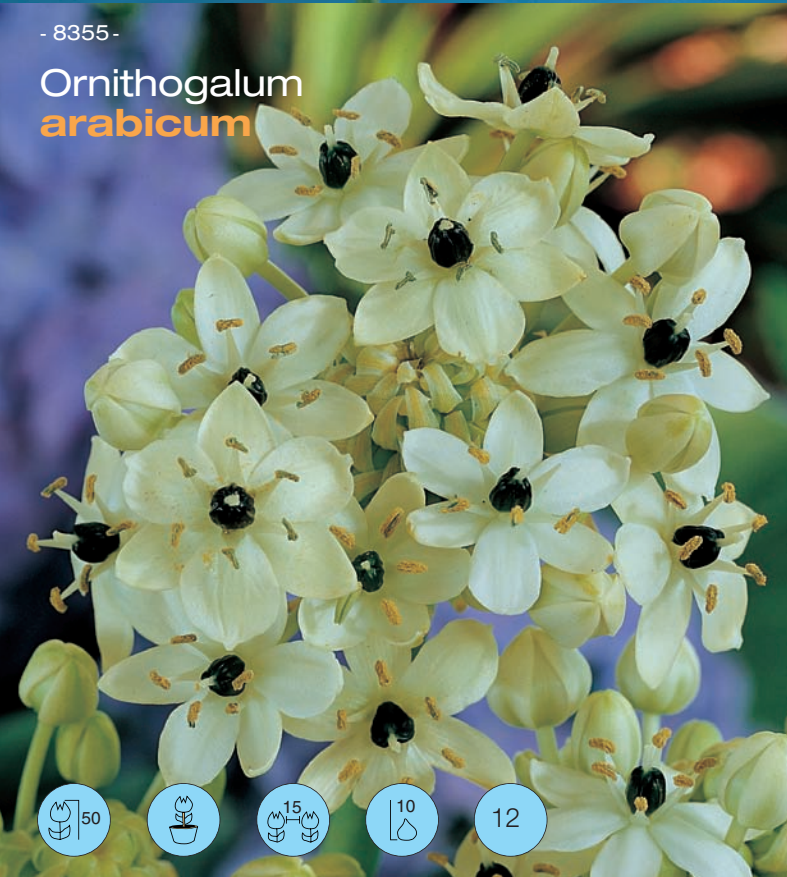
- 8267 -

Nerine undulata



- 8355 -

Ornithogalum arabicum

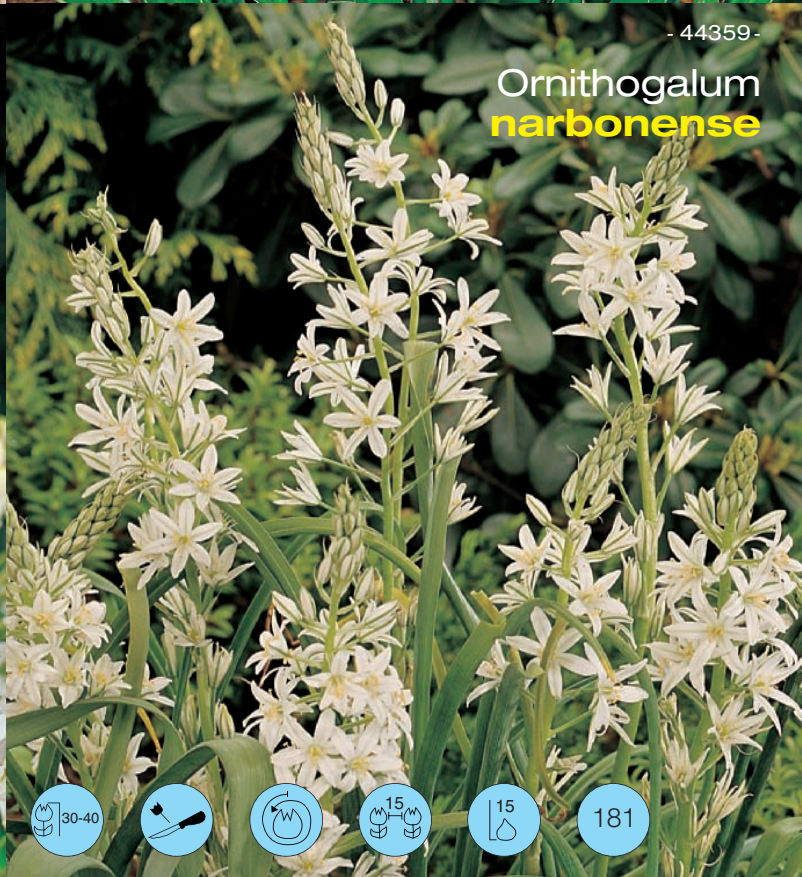


- 4859 -

Ornithogalum balansae



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting																				
		sales																					



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			🌸					planting	planting	planting	planting				🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸
			sales					sales	sales	sales	sales				sales	sales	sales	sales	sales	sales	sales	sales	sales

- 4772 -

Ornithogalum **nutans**



- 8228 -

Ornithogalum **saundersiae**



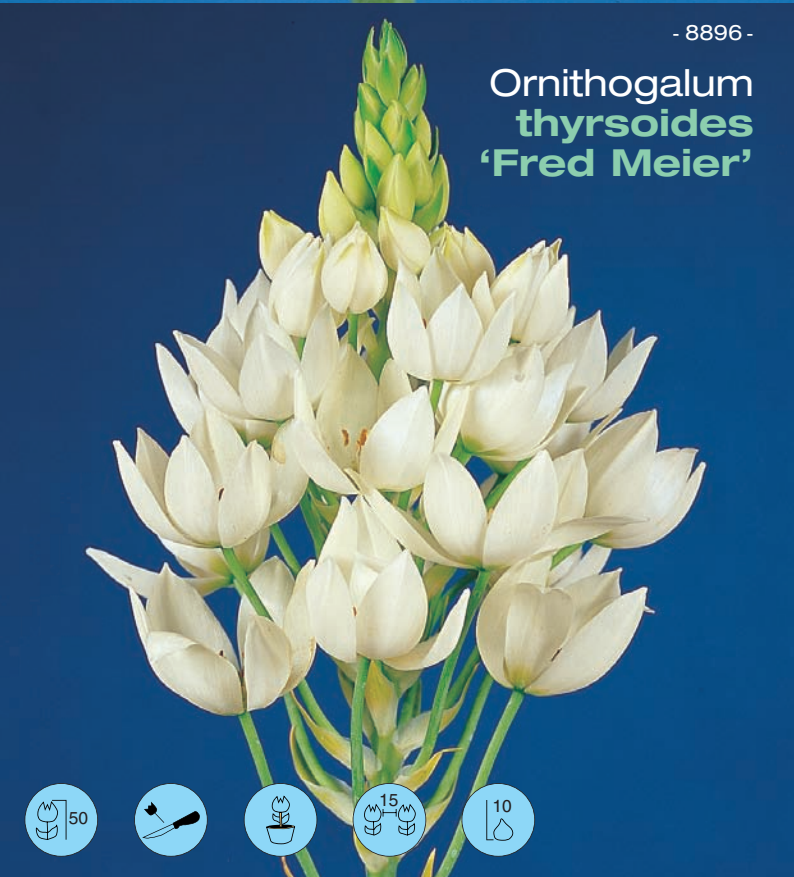
- 8186 -

Ornithogalum **thyrsoides**



- 8896 -

Ornithogalum **thyrsoides** 'Fred Meier'



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸				🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸	🌸
			sales	sales	sales	sales	sales	sales	sales	sales	sales				sales	sales	sales	sales	sales	sales	sales	sales	sales



- 8877 -

Ornithogalum **thyrsoides** ‘Starlight’

50

15

10

- 4251/8998 -

Ornithogalum **umbellatum**

15

10

10

169

- 4201 -

Oxalis **adenophylla**

8

15

10

138

- 8672 -

Oxalis **deppei** ‘Iron Cross’

15

5

5

13



january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting				sales								planting				sales				

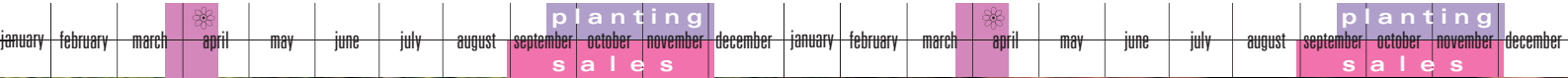


- 8660 -



- 8264 -

january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			planting				sales								planting				sales				



- 4139 -

Puschkinia scilloides var libanotica

10-15 7 10 50

- 4634 -

Puschkinia scilloides var libanotica 'Alba'

10-15 7 10

- 8557 -

Ranunculus asiaticus mixed

40 8 5 20

- 8590 -

Rhodohypoxis 'Stella'

10 5 5 27



Rhodohypoxis 'Picta'



Rhodohypoxis 'Tetraploid Red'



Roscoe
'Beesiana'



Roscoeacautleoides





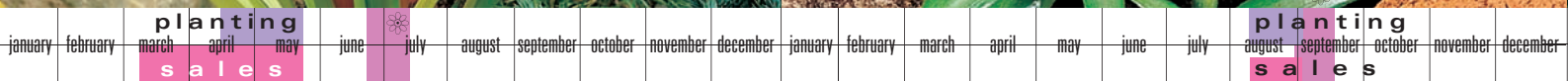
Scilla **bifolia**

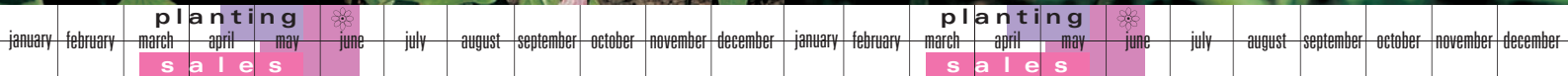


january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			✿					planting	planting	planting					✿					planting	planting	planting	
			sales					sales	sales	sales					sales					sales	sales	sales	

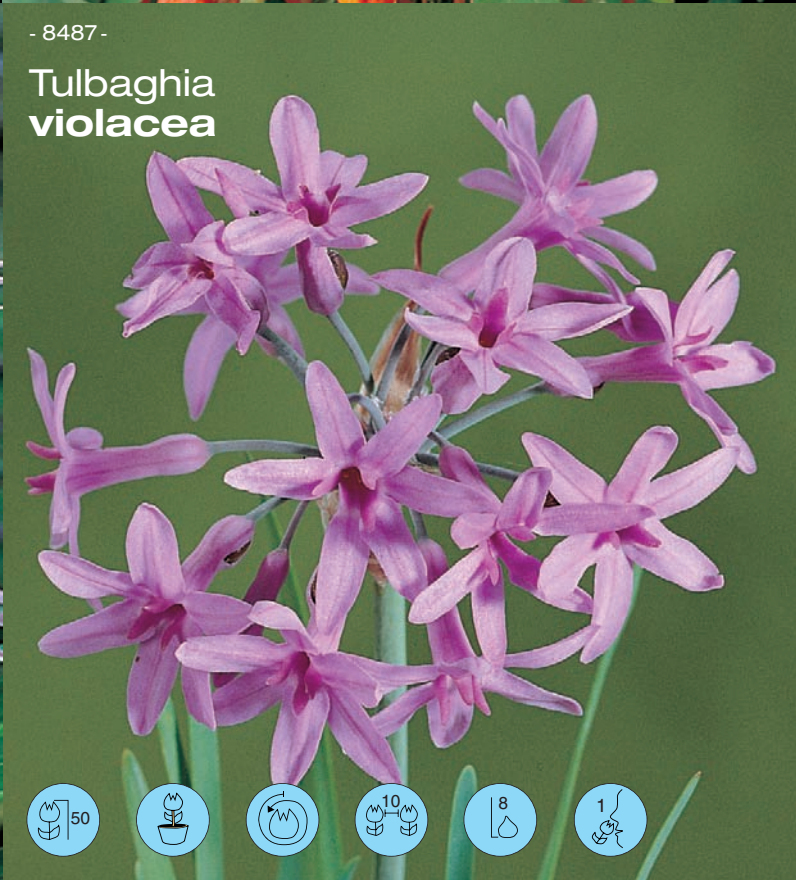


january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december
			✿					planting	planting	planting					✿	✿				✿	✿		
			sales					sales	sales	sales					sales	sales				sales	sales		









Uvalaria grandiflora

january	february	planting	april	may	june	july	august	september	october	november	december	january	february	planting	april	may	june	july	august	september	october	planting	november	december
		sales												sales								sales		

- 88123 -

Uvalaria grandiflora





40-60



1



25



10

- 8949 -

Watsonia





100



1



15



15



22

january	february	planting	april	may	june	july	august	september	october	november	december
		sales									

Veltheimia bracteata





50



1



1



1



1



25







Various species of this genus, also referred to as Calla, originally came from South Africa. All species produce a tuber except for *Zantedeschia aethiopica* which produces a rhizome. Crossing various species has resulted in many new cultivars. Originally this was done in New Zealand, but in recent years, breeders in the Netherlands have also introduced many promising cultivars. Breeding efforts have focused on producing cultivars with even better colours and colour combinations, suitability for cut flower or pot plant production, and a maximum of resistance to diseases including Erwinia.

These summer-flowering plants bloom from July-August after having been planted in the spring when soil temperatures reach 13-15°C. High light intensities are required for promoting optimum flower colour and discouraging excessive stem length. The crop is susceptible to virus infections, especially when grown outside. Controlling aphid infestations and virus infections are important aspects in production. What is often referred to as the 'flower' is actually a coloured spathe that largely encloses the club-shaped spadix. Saleable tuber sizes start at 12 cm. Each tuber has multiple growing points with the roots developing on top of the tuber around these growth points.

Zantedeschia

SPECIFIC CHARACTERISTICS

- *Zantedeschia aethiopica*, a rhizome that grows in damp locations in its natural environment, flowers predominantly from March to May. There are several selections of this species that differ in length of stem and flower shape. 'Pink Mist' is a unique cultivar with a pink throat.
- *Zantedeschia albomaculata*, *Z. elliotiana*, and *Z. 'Solfatare'* are large-flowering varieties: 'older' ones that are still used chiefly for garden planting.
- *Zantedeschia rehmannii* is a small-flowering species traditionally used for pot plant production.
- 'New cultivars' initially bred by crossing *Z. elliotiana* and *Z. rehmannii* have introduced a whole new generation of coloured zantedeschias. Propagating these cultivars is accomplished by producing daughter tubers and 'breaking' the main tuber. Tissue culture is frequently used to keep the planting material as healthy as possible; in this case, the tubers are referred to as T1 tubers (after one season of growth) and T2 tubers. Flower production can be increased from 2-3 flowers/tuber to sometimes 5-8 flowers/tuber by immersing the tubers in a growth regulator just prior to planting; the promotion of flower production, however, will tend to reduce tuber growth.

APPLICATIONS

- **GARDEN PLANTING**
All varieties can be used for garden planting and are also perfect for pots and containers. Tubers are not frost hardy.
- **CUT FLOWER PRODUCTION**
The 'new cultivars' are perfect for this purpose. Flower production can easily be extended by means of greenhouse and field production and by varying the planting times by applying various storage and preparation temperatures. It is also possible to grow the tubers in containers instead of planting directly in the soil.
- **POT PLANT PRODUCTION**
The varieties that are genetically somewhat shorter are especially recommended for this purpose.

Verschillende species van dit gewas, ook wel Calla genoemd, komen oorspronkelijk in Zuid-Afrika voor. Alle soorten hebben een knol met uitzondering van *Zantedeschia aethiopica* die over een wortelstok beschikt. Door kruisingen tussen diverse species zijn een groot aantal nieuwe cultivars ontstaan, aanvankelijk in Nieuw-Zeeland, maar sinds een aantal jaren worden vanuit Nederland veel belovende cultivars geïntroduceerd. Via veredeling is men op zoek naar nog betere kleuren en kleurcombinaties, specifieke geschiktheid voor snijbloementeel of potcultuur en naar zoveel mogelijk ziekte resistentie tegen onder andere Erwinia.

Het is een zomerbloeiend gewas dat in het voorjaar bij grondtemperaturen vanaf 13-15° C kan worden geplant; bloeiperiode juli-augustus. Hoge lichtintensiteit is optimaal om de bloemkleuring te bevorderen en het te lang worden van de steel tegen te gaan. Het gewas is vooral in de buitenteelt vatbaar voor virusbesmetting. Luisbestrijding en controle op virus zijn belangrijke teelttechnische aspecten. Wat aangemerkt wordt als de bloem is een 'gekleurd' schedebblad dat de eigenlijke bloem (bloeikolf) grotendeels omgeeft. Leverbare knolmaten vanaf 12 cm. Een knol heeft meerdere groeipunten, de wortels ontwikkelen zich boven op de knol, rond het groeipunt.

Zantedeschia

ENKELE KENMERKEN

- *Zantedeschia aethiopica*, een wortelstok die in de natuur op vochtige plaatsen groeit, bloeit vooral in de periode maart-mei. Er zijn meerdere selecties die zich onderscheiden in steellengte en bloemvorm. *Pink Mist* is een afwijkende cultivar met een roze 'keel'.
- *Zantedeschia albomaculata*, *elliottiana*, en *'Solfatare'* zijn grootbloemige typen; 'oudere' soorten die voornamelijk nog gebruikt worden voor tuinbeplanting.
- *Zantedeschia rehmannii*, is een kleinbloemig type dat van oudsher gebruikt werd voor pot-cultuur.
- 'Nieuwe cultivars', door veredeling waarbij aanvankelijk *elliottiana* en *rehmannii* zijn gebruikt is een geheel nieuwe generatie van 'kleur' Zantedeschia ontstaan. De vermeerdering van deze cultivars gaat via dochterknollen en 'breken' van de hoofdknol. Om het plantmateriaal zo gezond mogelijk te houden wordt regelmatig weefselkweek toegepast; men spreekt dan van T1 (één seizoen gegroeid van weefselkweek) en T2. De bloeibaarheid van de knollen kan van 2-3 bloemen per knol toenemen tot soms wel 5-8 bloemen door de knollen vlak voor het planten te dompelen in een groei-regulator; bloeibevordering gaat wel ten koste van de knolgroei.

GEBRUIKSMOGELIJKHEDEN

- **TUINBEPLANTING**
Alle soorten kunnen gebruikt worden, ze zijn ook prima geschikt voor bakken en potten. Knollen zijn niet winterhard.
- **SNIJBLOEMENTEELT**
De 'nieuwe cultivars' zijn uitermate geschikt, bloei-spreiding is goed mogelijk door kasteelt en buitenteelt en verschillende planttijdstippen en daaraan gekoppelde bewaar- en preparatie temperaturen. Het is ook mogelijk om de knollen op bakken te telen in plaats van in de volle grond.
- **POTCULTUUR**
Vooral de soorten die van nature wat korter blijven zijn hiervoor aan te raden.

该属的不同品种包括水芋，它们的原产地都在南非。除了水芋形成宿根外，其它的品种都形成块茎。通过不同品种间的杂交，得到了许多新的栽培品种。以前，这些工作是在新西兰进行的，但是近些年，荷兰的育种工作者也培育出了许多优良的品种。育种工作的重点主要集中于寻找颜色更丰富、适合切花生产或盆花生产以及最大程度抗病（如欧文氏杆菌）的品种。

这些夏季开花的植株在春季土壤温度达到 13-15℃ 种植后，于 7-8 月份开花。它们需要较多的光照以得到最佳的颜色以及防止植株的茎过长。

该植株比较容易感染病毒，特别是在室外栽培的时候。在生产中控制蚜虫的侵扰是重要的手段。

我们通常所说的花实际上是有颜色的佛焰苞，它包裹着棒状的肉穗花序。销售的块茎从 12 厘米开始，每个块茎上有多个生长点，以后根就从这些块茎顶部生长点的周围开始发育。

马蹄莲属

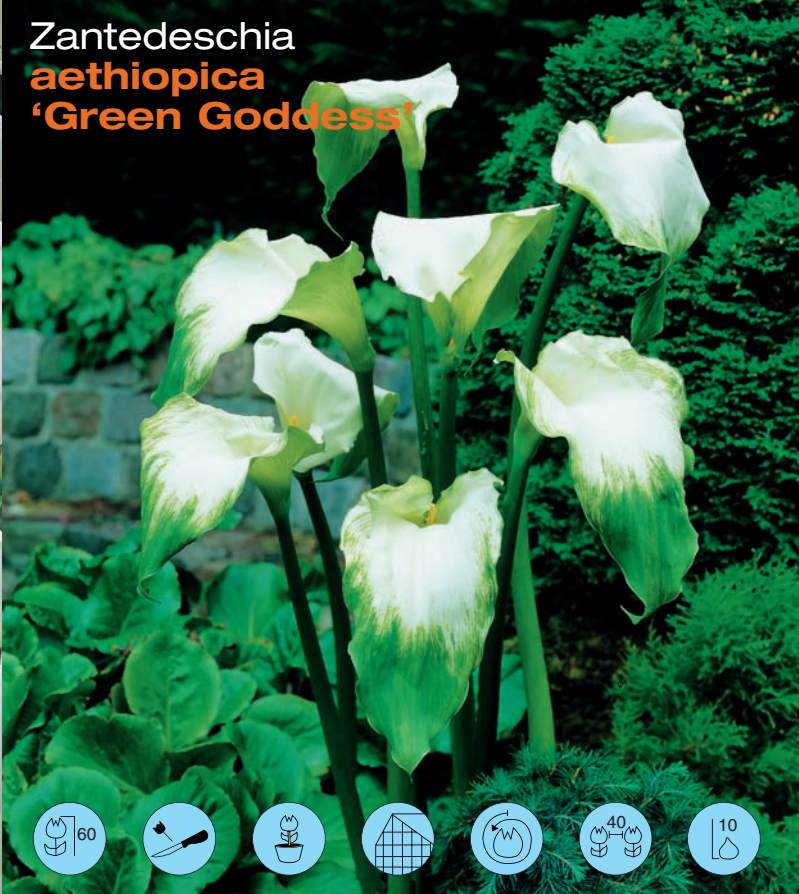
特征

- 水芋，它们的宿根在自然的条件下生长在潮湿的地区，在 3 月到 5 月开花。它们有许多栽培品种，在植株的长度和花型上有所区别。‘Pink Mist’ 是带有粉口的独特品种。
- 银星马蹄莲、黄花马蹄莲和 *Zantedeschia* ‘Solfatare’ 是大花型品种：它们还主要用于花园栽培。
- 红花马蹄莲是小花型品种，传统上主要用于盆花生产。
- 新品种主要通过对黄花马蹄莲和红花马蹄莲进行杂交而得到新的颜色的品种。这些品种的繁殖是通过生产子块茎，并从主块茎上分裂进行的。组织培养主要用于尽可能得到健康的栽培起始材料。这样，它们的块茎被分为 T1（经过一年的栽培）和 T2 块茎。在花卉的生产中，栽培前把它们的块茎在生长调节剂中浸泡，可使每个块茎开 2-3 朵花提高到 5-8 朵花。但是增加了花的产量，会减少块茎的生长。

应用

- 花园栽培
所有的品种可用于花园栽培，最好是种植在盆中或容器中。它们的块茎不耐寒。
- 切花生产
新的品种比较适合于这种用途。切花的生产可在温室或室外进行，可以通过使用不同的储藏和温度出来，在不同的时间栽培。也可将块茎种植在容器中，而不是直接种植在土壤中。
- 盆花生产
那些茎较短的品种通常可用于此用途。

Zantedeschia **aethiopica**



		planting										
july	august	september	october	november	december	january	february	march	april	may	june	july
								sales				

[illegible]

january february march april may june july august september october november december january february march april may june july august september october november december

planting planting

sales sales

- 8820 -

Zantedeschia
'Captain Rodin'®



60

10

108

- 8924 -

Zantedeschia 'Captain Romance'®



55

30

10

108

- 8755/8926 -

Zantedeschia
'Captain Tendens'®



65

10

30

108

Zantedeschia
'Captain Volante'®

65

10

108

			planting												planting								
june	july	august	september	october	november	december	january	february	march	april	may	june	july	august	september	october	november	december	january	february	march	april	may
			sales												sales								

[illegible]

			planting									
june	july	august	september	october	november	december						
			sales									

planting

sales

planting

sales

January February March April May June July August September October November December January February March April May June July August September October November December

- 8615 -

Zantedeschia 'Mango'



- 88137 -

Zantedeschia 'Mozart'®



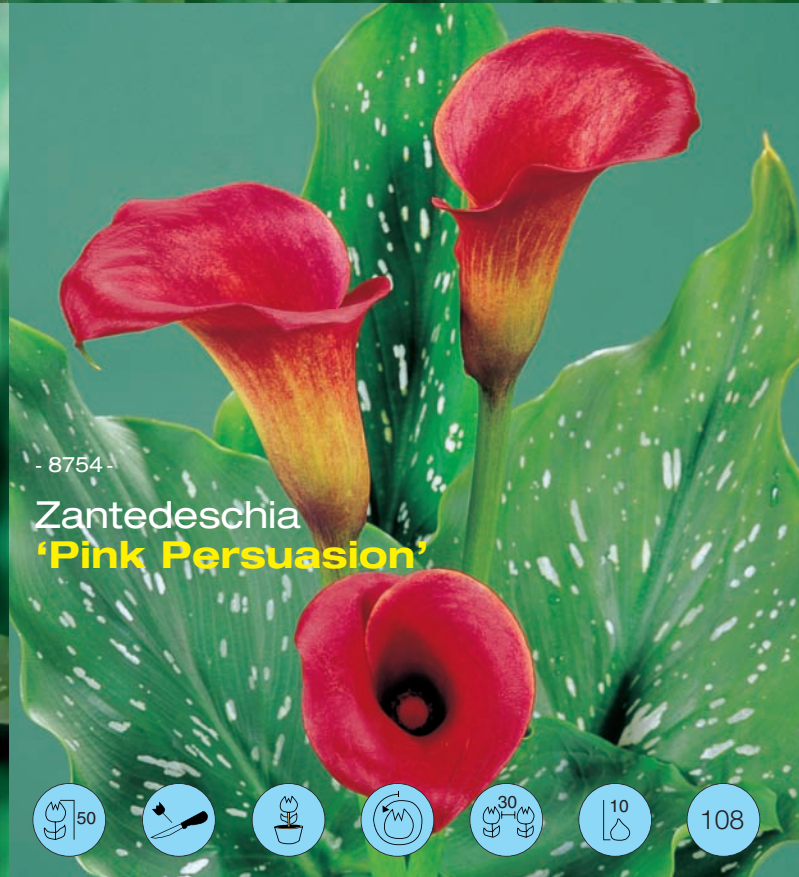
- 88134 -

Zantedeschia
'Picasso'®



- 8754 -

Zantedeschia
'Pink Persuasion'



		planting																	planting																
january	february	sales			march	april	may	june			august	september	october	november	december	january	february	sales			march	april	may	june			august	september	october	november	december				

A horizontal timeline for the 2022 growing season, divided into two identical 12-month segments. The months are labeled from January to December. The timeline is color-coded: January and February are light pink; March, April, and May are dark pink with the word 'sales' in white; June through September are purple with the word 'planting' in white. Small white flower icons are placed above the month labels for June, July, August, and September in each segment.

- 88157-
Zantedeschia
**'Pretty
Woman'®**



55
10
30
108

- 88136 -

Zantedeschia
'Purple Haze'®



60

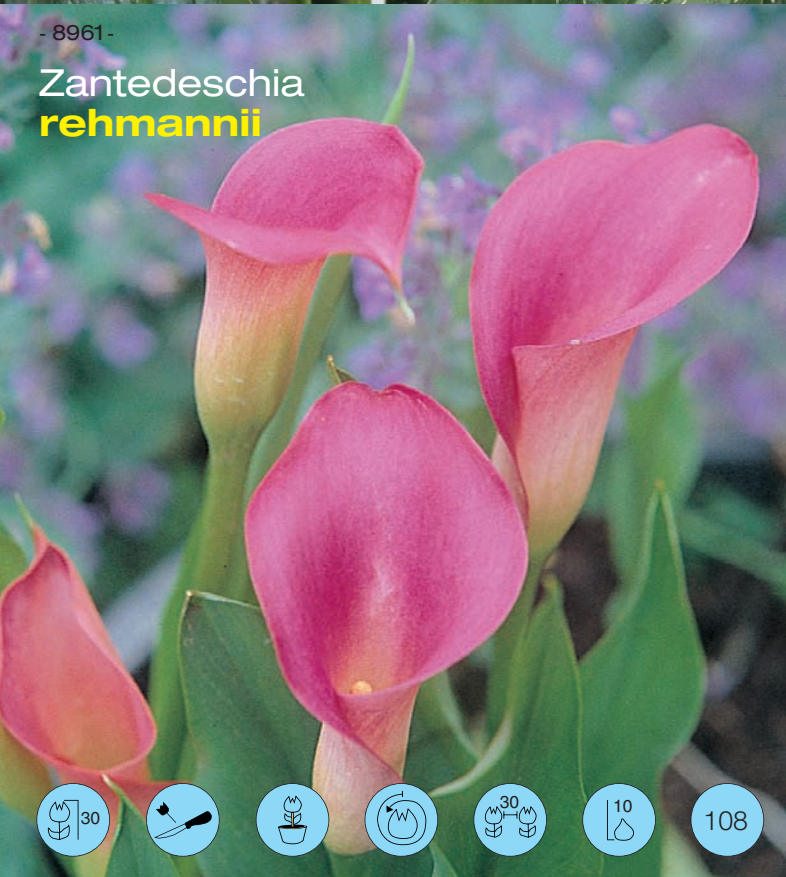
10

30

108

- 8961 -

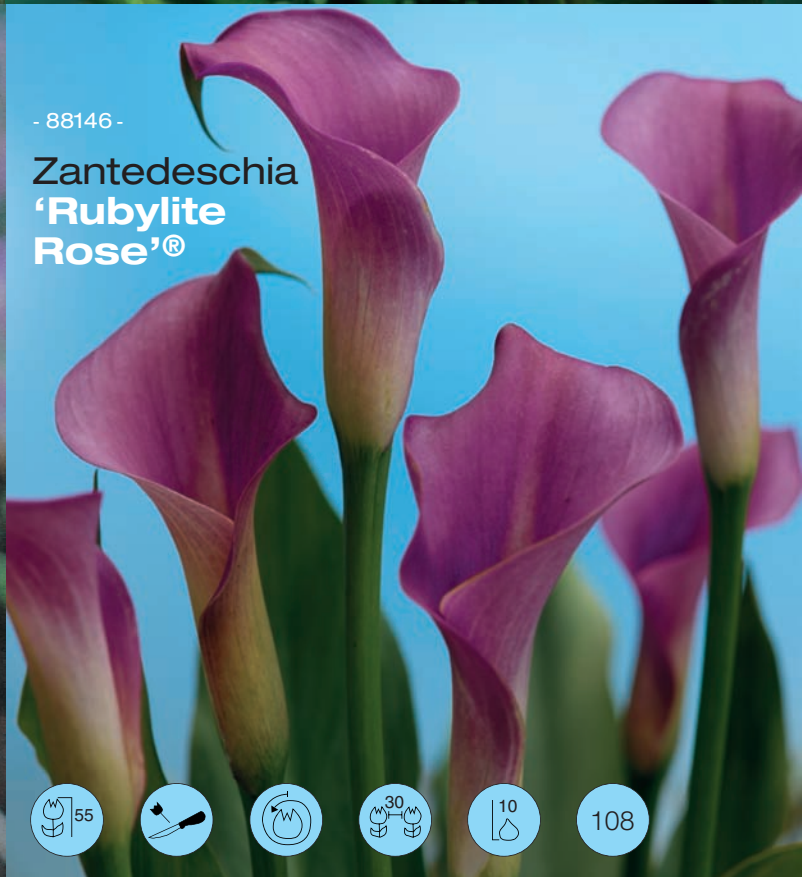
Zantedeschia
rehmannii



30

10

108

A close-up photograph of several Zantedeschia 'Rubylite Rose' flowers. The flowers are a vibrant magenta or deep pink color with a slightly ruffled, funnel-like shape. They are set against a clear, bright blue sky. The green stems and leaves are visible at the base of the flowers.

- 88146 -

Zantedeschia
'Rubylite
Rose'®

55

30

10

108

january	february	planting	april	may	june	july	august	september	october	november	december	january	february	planting	april	may	june	july	august	september	october	november	december
		sales												sales									

[illegible]



- 88138 -

Zantedeschia
'Schwarzwalder'®













- 88130 -

Zantedeschia **'Selina'**



55

108



- 88119 -

Zantedeschia
'Solfatare'

60

10

108

- 88143-

Zantedeschia
'Sunshine'®



55

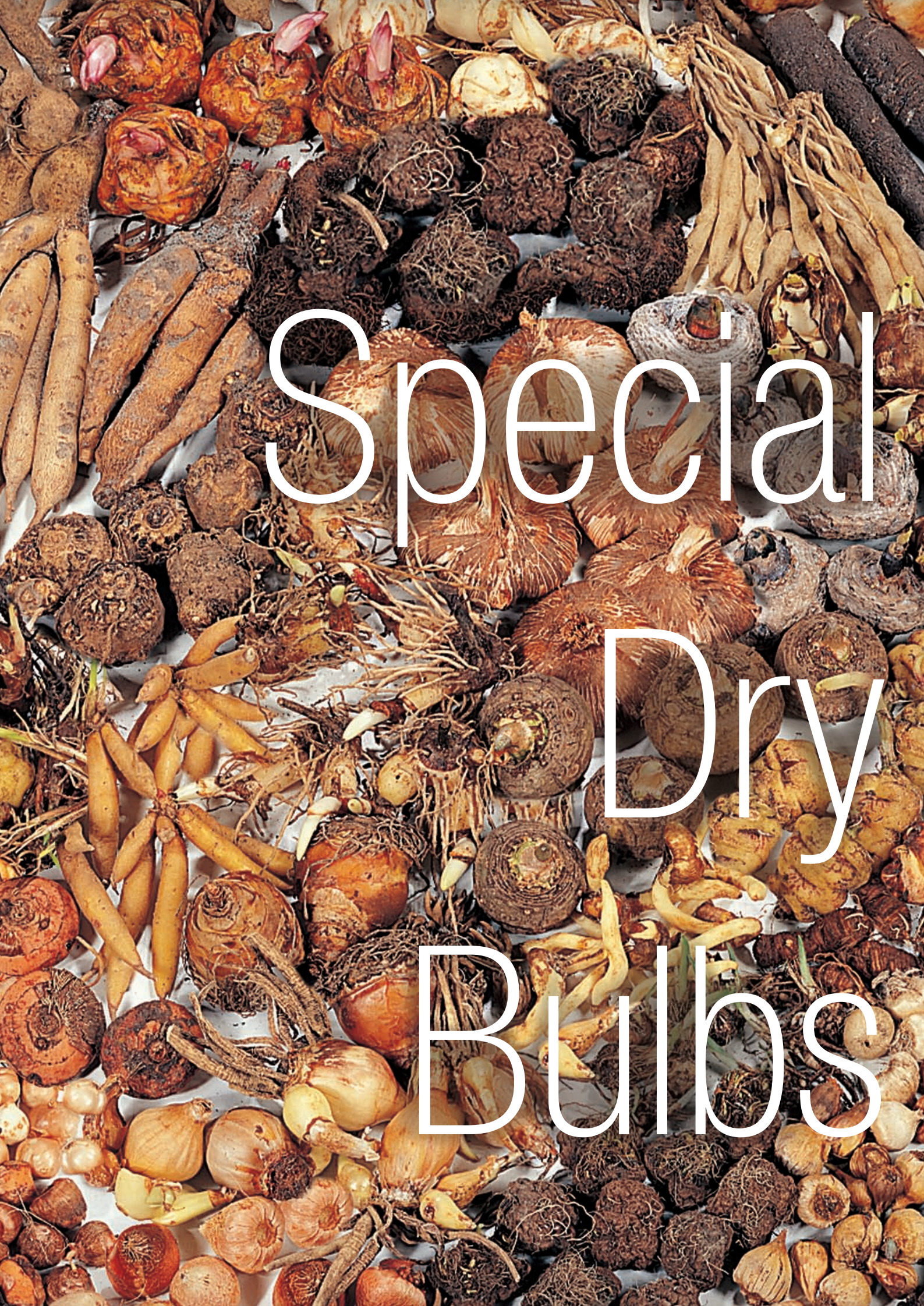
30

10

108

			planting											planting									
january	february	sales	april	may	june	july	august	september	october	november	december	january	february	sales	april	may	june	july	august	september	october	november	december



A dense, top-down view of a large assortment of dried botanical specimens, likely medicinal herbs or roots, arranged on a white surface. The specimens vary significantly in shape, size, and color, ranging from light tan to dark brown. Some are long, thin roots; others are thick, knobby tubers or bulbs. Some have small, dried flowers or seed pods attached. The overall composition is a rich, textured collage of natural plant matter.

Special Dry Bulbs

Special Dry Bulbs

Numbers correspond with preceding Special Flower Bulb pictures



1



2



3



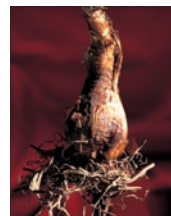
4



5



6



7



8



9



10



11



12



13



14



15



16



17



18



19



20



21



22



23



24



25



26



27



28



29



30



31



32



33



34



35



36



37



38



39



40



41



42



43



44



45



46



47



48



49



50



51



52



53



54



55



56



57



58



59



60



61



62



63



64



65



66



67



68



69



70



71



72



73



74



75



76



77



78



79



80



81



82



83



84



85



86



87



88



89



90



91



92



93



94



95



96



97



98



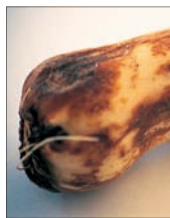
99



100



101



102



103



104



105



106



107



108



109



110



111



112



113



114



115



116



117



118



119



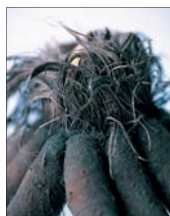
120



121



122



123



124



125



126



127



128



129



130



131



132



133



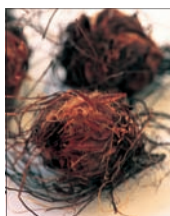
134



135



136



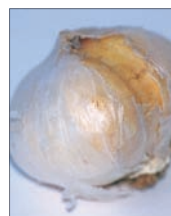
137



138



139



140



141



142



143



144



145



146



147



148



149



150



151



152



153



154



155



156



157



158



159



160



161



162



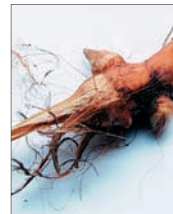
163



164



165



166



167



168



169



170



171



172



173



174



175



176



177



178



179



180



181



182



183



184



185



186



187



188



189



190



191



192



193



194



195



196

GUIDELINES FOR STORING FLOW

THIS TEMPERATURE STORAGE CHART HAS BEEN DRAWN UP FOR DRY SALES! MODIFIED PREPARATION TEMPERATURES CAN

AUTUMN

SPRING-FLOWERING BULBS

	STORAGE METHOD	TEMPERATURE UNTIL PLANTED
Allium (large and small-flowering)	dry and ventilated	23-20-17°C
Allium cernuum, flavum, carinatum, ursinum	ventilated, protect from drying out	9-5°C
Amacrinum	dry and ventilated	5°C
Amaryllis belladonna	dry and ventilated	5°C
Anemone blanda	dry and ventilated, provide air circulation	17°C
Brimeura (<i>syn. Hyacinthus amethystina</i>)	dry and ventilated	23-20°C
Camassia	dry and ventilated	20-17°C
Chionodoxa	dry and ventilated	23-20-17°C
Colchicum	as cool as possible, deliver early	9-(2)°C
Corydalis, cava, solida	dry and ventilated	9°C
Crocus	dry and ventilated	23-20-17°C
Crocus (autumn-flowering)	dry and ventilated, deliver early	9°C
Eranthis	dry and ventilated, prevent desiccation	9-5°C
Eremurus	protect from drying out	17-9-5°C
Erythronium dens-canis	protect from drying out	9-5°C
Erythronium (other varieties)	susceptible to mechanical damage	17-9°C
Fritillaria imperialis	ventilated, susceptible to mechanical damage	25-23-17°C
Fritillaria meleagris	protect from drying out, provide air circulation	17-9°C
Fritillaria michailovskyi	protect from drying out, provide moderate air circulation	17-9°C
Galanthus	protect from drying out	17°C
Hippeastrum (<i>syn. Amaryllis</i>)	dry and ventilated, 12 wks at 13°C, then 5°C (13°C is preparation, 5°C is storage)	13-5°C
Hyacinthus (prepared)	dry and ventilated	30-25-20-17°C
Hyacinthus (not prepared)	dry and ventilated	25-20-17°C
Hyacinthoides (<i>syn. Endymion/ syn. Scilla campanulata</i>)	highly ventilated, susceptible to mechanical damage	20°C
Iris latifolia (<i>syn. Iris anglica</i>)	dry and ventilated, control for aphids	20-17°C
Iris hollandica	dry and ventilated	(30)-25-20-17°C
Iris reticulata, danfordiae	dry and ventilated	23°C
Ipheion uniflorum	requires plenty of air circulation; store in shallow layers	20-17°C
Ixiolirion	dry and ventilated	23-17°C
Ixia	dry and ventilated	25-23°C
Leucojum aestivum	dry and ventilated	20-17°C
Leucojum vernum	protect from drying out	9-5°C
Muscari	dry and ventilated	23-20°C
Narcis	dry and ventilated	20-17°C
Ornithogalum (large-flowering), e.g. saundersiae, arabicum	dry and ventilated	25-23°C
Ornithogalum (small-flowering)	dry and ventilated	20-17°C
Oxalis adenophylla	dry and ventilated	20-17°C
Puschkinia	dry and ventilated	23-20-17°C
Scilla siberica	dry and ventilated	25-23-20°C
Scilla peruviana	dry and ventilated	23°C
Sparaxis	dry and ventilated	25-23°C
Tulipa	dry and ventilated	23-20-17°C
Triteleia (<i>syn. Brodiaea</i>)	dry and ventilated	23°C

GENERAL REMARKS

- Storage temperatures apply to properly dried, clean products.
- For the forcing sector and for different planting and flowering periods, modified temperature treatments may be necessary.
- It may be important to ask the supplier about previously applied storage temperatures.
- A decreasing series of temperatures means that the highest temperature should be applied at the beginning of the storage period and that the lower temperatures should be applied towards planting time.

VER BULBS

BE NECESSARY FOR PURPOSES OF FLOWER PRODUCTION IN ORDER TO TIME THE FLOWERING PERIODS.

SPRING

SUMMER-FLOWERING BULBS

- For spring-flowering bulbs, we assume a storage period lasting to planting time (no later than mid-December and, in any case, before freezing winter temperatures set in.
- If we mention protecting from desiccation, it would be advisable to use a filling material, and this should be added to the packaging in any case.
- 'Dry and ventilated' means to use ventilated packaging.
- Pay special attention to aphid control.

	STORAGE METHOD	TEMPERATURE UNTIL PLANTED
Anemone coronaria	dry and ventilated, constant temperature	17-15°C
Begonia	protect from drying out, provide air circulation	9-5°C
Canna	protect from drying out, no air circulation	12-8°C
Crocasmia (syn. Montbretia)	protect from drying out	5-2°C
Cyclamen	protect from drying out	9°C
Dahlia	keep from compacting, avoid draughts, no air circulation	9-7°C
Eremurus	protect from drying out	9°C
Eucomis	dry and ventilated	13-9°C
Freesia	airy, RH 80%	25°C
Galtonia candicans	dry and ventilated	20-17-13°C
Gladiolus	dry and ventilated	17-9-5°C
Gladiolus callianthus 'Murielae' (syn. Acidanthera)	dry and ventilated	20°C
Gloriosa rothschildiana	protect from drying out	20-17°C
Hippeastrum (syn. Amaryllis)	dry and ventilated	5°C
Hymenocallis (syn. Ismene)	dry and ventilated	25-23-17°C
Iris hollandica	dry and ventilated	30-17°C
Ixia	dry and ventilated, RH 70-80%	25-23°C
Liatris	if to be stored longer than 3 mo., freeze at -2°C	2-0°C
Lilium	if to be stored longer than 3 mo., freeze at -2°C	2-0°C
Nerine	dry and ventilated	9°C
Ornithogalum thyrsoides, dubium	dry with a highly ventilated container	30-25°C
Oxalis deppei, regnelli, triangularis	dry and ventilated	5-3°C
Ranunculus	dry and ventilated, constant temperature	17-15°C
Sauromatum venosum (syn. Arum cornutum)	dry and ventilated, store frost-free	5-2°C
Sparaxis	dry and ventilated, RH RV 70-80%	25-23°C
Sprekelia formosissima	dry and ventilated, 6 wks at 20°C, then 9°C (20°C is preparation, 9°C is storage)	20-9°C
Tigridia pavonia	dry and ventilated	5-2°C
Tritonia	dry and ventilated	25-23°C
Triteleia (syn. Brodiaea)	dry and ventilated, RH 70-80%	25-23°C
Zantedeschia aethiopica	provide a little air circulation	13-7°C
Zantedeschia (other varieites)	dry and ventilated	13-9°C
Zephyranthes	dry and ventilated	20°C

R.H. = Relative Humidity

The International Flower Bulb Centre accepts no liability whatsoever for the consequences that result from the use of this information.

RICHTLIJNEN VOOR DE BEWARIJ

DEZE TEMPERATUURBEWAARKAART IS OPGEZET VOOR DE DROOGVERKOOP! VOOR DE BLOEMPRODUCTIE IN VERBAND MET D

NAJAAR

VOORJAARSBLOEIERS

	WIJZE VAN BEWARING	TEMPERATUUR TOT PLANTEN
Allium grootbloemige en kleinbloemige	droog en luchtig	23-20-17°C
Allium cernuum, flavum, carinatum, ursinum	luchtig, beschermen tegen uitdrogen	9°C
Amarcrinum	droog en luchtig	5°C
Amaryllis belladonna	droog en luchtig	5°C
Anemone blanda	droog en luchtig, ventilatie	17°C
Brimeura (syn. Hyacinthus amethystina)	droog en luchtig	23-20°C
Camassia	droog en luchtig	20-17°C
Chionodoxa	droog en luchtig	23-20-17°C
Colchicum	zo koel mogelijk, vroeg verzenden	9-(2)°C
Corydalis cava, solida	droog en luchtig	9°C
Crocus	droog en luchtig	23-20-17°C
Crocus, najaarsbloeiend	droog en luchtig, vroeg verzenden	9°C
Eranthis	droog en luchtig, beschermen tegen uitdrogen	9-5°C
Eremurus	beschermen tegen uitdrogen	17-9-5°C
Erythronium dens-canis	beschermen tegen uitdrogen	9-5°C
Erythronium overig	gevoelig voor beschadiging	17-9°C
Fritillaria imperialis	luchtig, gevoelig voor beschadiging	25-23-17°C
Fritillaria meleagris	beschermen tegen uitdrogen, ventileren	17-9°C
Fritillaria michailovskyi	beschermen tegen uitdrogen, matig ventileren	17-9°C
Galanthus	beschermen tegen uitdrogen	17°C
Hippeastrum (syn. Amaryllis)	droog en luchtig, 12 weken 13°C, daarna 5°C (13°C=preparatie, 5°C=bewaring)	13-5°C
Hyacint, geprepareerd	droog en luchtig	30-25-20-17 °C
Hyacint, niet geprepareerd	droog en luchtig	25-20-17 °C
Hyacinthoides (syn. Endymion/ syn. Scilla campanulata)	zeer luchtig, gevoelig voor beschadiging	20°C
Iris latifolia (syn. Iris anglica)	droog en luchtig, luis bestrijden	20-17°C
Iris hollandica	droog en luchtig	(30)-25-20-17°C
Iris reticulata, danfordiae	droog en luchtig	23°C
Ipheion uniflorum	flink ventileren en in dunne lagen bewaren	20-17°C
Ixiolirion	droog en luchtig	23-17°C
Ixia	droog en luchtig	25-23°C
Leucojum aestivum	droog en luchtig	20-17°C
Leucojum vernum	beschermen tegen uitdrogen	9°C
Muscari	droog en luchtig	23-20°C
Narcis	droog en luchtig	20-17°C
Ornithogalum grootbloemige, o.a. saundersiae, arabicum	droog en luchtig	25-23°C
Ornithogalum kleinbloemige	droog en luchtig	20-17°C
Oxalis adenophylla	droog en luchtig	20-17°C
Puschkinia	droog en luchtig	23-20-17°C
Scilla siberica	droog en luchtig	25-23-20°C
Scilla peruviana	droog en luchtig	23°C
Sparaxis	droog en luchtig	25-23°C
Tulipa	droog en luchtig	23-20-17°C
Triteleia (syn. Brodiaea)	droog en luchtig	23°C

ALGEMENE OPMERKINGEN

- Bewaartemperaturen gelden voor goed gedroogde en schone producten.
- Voor de broeierij en voor afwijkende plant- en bloeitijdstippen kunnen aangepaste temperatuurbehandelingen noodzakelijk zijn.
- Het kan belangrijk zijn om bij de leverancier te informeren naar reeds gegeven bewaartemperaturen.
- Een aflopende temperatuurreeks betekent dat bij aanvang van de bewaring met de hoogste temperatuur kan worden begonnen en men gedurende de bewaring richting planttijd beter naar de lagere temperatuur kan gaan.



NG VAN BLOEMBOLLEN

DE SPREIDING VAN HET BLOEITIJDS TIP KUNNEN Aangepaste (Preparatie) Temperaturen noodzakelijk zijn.

VOORJAAR

ZOMERBLOEIER

- Bij de voorjaarsbloei-ers gaan we uit van een bewaarperiode tot aan de planttijd, uiterlijk half december; in ieder geval voor de wintervorst.
- Indien we spreken over beschermen tegen uitdrogen is een vulstof, in ieder geval bij het verpakken, aan te raden.
- Droog en luchtig betekent een geventileerde verpakking.
- Besteedt veel aandacht aan luisbestrijding.

Anemone coronaria

droog en luchtig,
constante temperatuur

17-15°C

Begonia

uitdrogen voorkomen, ventileren

9-5°C

Canna

beschermen tegen
uitdrogen, geen ventilatie

12-8°C

Crocasmia (syn. Montbretia)

uitdrogen voorkomen

5-2°C

Cyclamen

uitdrogen voorkomen

9°C

Dahlia

in compacte massa en tocht
voorkomen, geen ventilatie

9-7°C

Eremurus

beschermen tegen uitdrogen

9°C

Eucomis

droog en luchtig

13-9°C

Freesia

luchtig, R.V. 80%

25°C

Galtonia candicans

droog en luchtig

20-17-13°C

Gladiolus

droog en luchtig

17-9-5°C

Gladiolus callianthus 'Murielae'
(syn. Acidanthera)

droog en luchtig

20°C

Gloriosa rothschildiana

beschermen tegen uitdrogen

20-17°C

Hippeastrum (syn. Amaryllis)

droog en luchtig (geremd)

5°C

Hymenocallis (syn. Ismene)

droog en luchtig

25-23-17°C

Iris hollandica

droog en luchtig, 30°C is remmen

30-17°C

Ixia

droog en luchtig, R.V. 70-80%

25-23°C

Liatris

langer dan 3 mnd: invriezen (-2°C)

2-0°C

Lilium

langer dan 3 mnd: invriezen (-2°C)

2-0°C

Nerine

droog en luchtig

9°C

Ornithogalum thyrsoides, dubium

droog en (zeer) luchtig

30-25°C

Oxalis deppei, regnelli, triangularis

droog en luchtig

5-3°C

Ranunculus

droog en luchtig,
constante temperatuur

17-15°C

Sauromatum venosum
(syn. Arum cornutum)

droog en luchtig, vorstvrij bewaren

5-2°C

Sparaxis

droog en luchtig, R.V. 70-80%

25-23°C

Sprekelia formosissima

droog en luchtig,
6 weken 20°C daarna 9°C
(20°C=preparatie, 9°C=bewaring)

20-9°C

Tigridia pavonia

droog en luchtig

5-2°C

Tritonia

droog en luchtig

25-23°C

Triteleia (syn. Brodiaea)

droog en luchtig, R.V. 70-80%

25-23°C

Zantedeschia aethiopica

iets ventilatie

13-7°C

Zantedeschia overig

droog en luchtig

13-9°C

Zephyranthes

droog en luchtig

20°C

R.V. = Relatieve Luchtvochtigheid

Het Internationaal Bloembollen Centrum aanvaardt geen enkele aansprakelijkheid voor gevolgen die voortvloeien uit het gebruik van deze informatie.

种球储藏指导

这个储藏温度表主要是用于干球销售使用的！在切花生产中，为了按计划开花所需的温度处理需要改动。

秋季种植

袋装的种球开花的时间表

	储藏方法	种植前的温度
Allium (large and small-flowering)	干燥并通风	23-20-17°C
Allium cernuum, flavum, carinatum, ursinum	通风, 防止干燥	9-5°C
Amacrinum	干燥并通风	5°C
Amaryllis belladonna	干燥并通风	5°C
Anemone blanda	干燥并通风, 提供空气流动	17°C
Brimeura (syn. Hyacinthus amethystina)	干燥并通风	23-20°C
Camassia	干燥并通风	20-17°C
Chionodoxa	干燥并通风	23-20-17°C
Colchicum	尽可能凉爽, 尽早发货	9-(2)°C
Corydalis, cava, solida	干燥并通风	9°C
Crocus	干燥并通风	23-20-17°C
Crocus (autumn-flowering)	干燥并通风, 尽早发货	9°C
Eranthis	干燥并通风	9-5°C
Eremurus	防止干燥	17-9-5°C
Erythronium dens-canis	防止干燥	9-5°C
Erythronium (other varieties)	对机械损伤敏感	17-9°C
Fritillaria imperialis	对机械损伤敏感	25-23-17°C
Fritillaria meleagris	干燥并通风, 提供空气流动	17-9°C
Fritillaria michailovskyi	防止干燥, 提供适量的空气流动	17-9°C
Galanthus	防止干燥	17°C
Hippeastrum (syn. Amaryllis)	干燥并通风	13-5°C
Hyacinthus (prepared)	干燥并通风	30-25-20-17°C
Hyacinthus (not prepared)	干燥并通风	25-20-17°C
Hyacinthoides (syn. Endymion/ syn. Scilla campanulata)	强通风, 对机械损伤敏感	20°C
Iris latifolia (syn. Iris anglica)	干燥并通风, 控制蚜虫	20-17°C
Iris hollandica	干燥并通风	(30)-25-20-17°C
Iris reticulata, danfordiae	干燥并通风	23°C
Ipheion uniflorum	需要充足的空气流动	20-17°C
Ixiolirion	干燥并通风	23-17°C
Ixia	干燥并通风	25-23°C
Leucojum aestivum	干燥并通风	20-17°C
Leucojum vernum	防止干燥	9-5°C
Muscari	干燥并通风	23-20°C
Narcis	干燥并通风	20-17°C
Ornithogalum (large-flowering), e.g. saundersiae, arabicum	干燥并通风	25-23°C
Ornithogalum (small-flowering)	干燥并通风	20-17°C
Oxalis adenophylla	干燥并通风	20-17°C
Puschkinia	干燥并通风	23-20-17°C
Scilla siberica	干燥并通风	25-23-20°C
Scilla peruviana	干燥并通风	23°C
Sparaxis	干燥并通风	25-23°C
Tulipa	干燥并通风	23-20-17°C
Triteleia (syn. Brodiaea)	干燥并通风	23°C

一般说明:

- 储藏温度是对清洗并适合干燥后的种球进行的
- 对于促成栽培和不同要求的种植和开花时间, 处理温度需要改动
- 需要向供货商了解以前所提供的温度处理
- 递减的温度是指最高的温度在储藏阶段的初期, 低温接近于栽培的时间



春季种植

球根花卉的种植

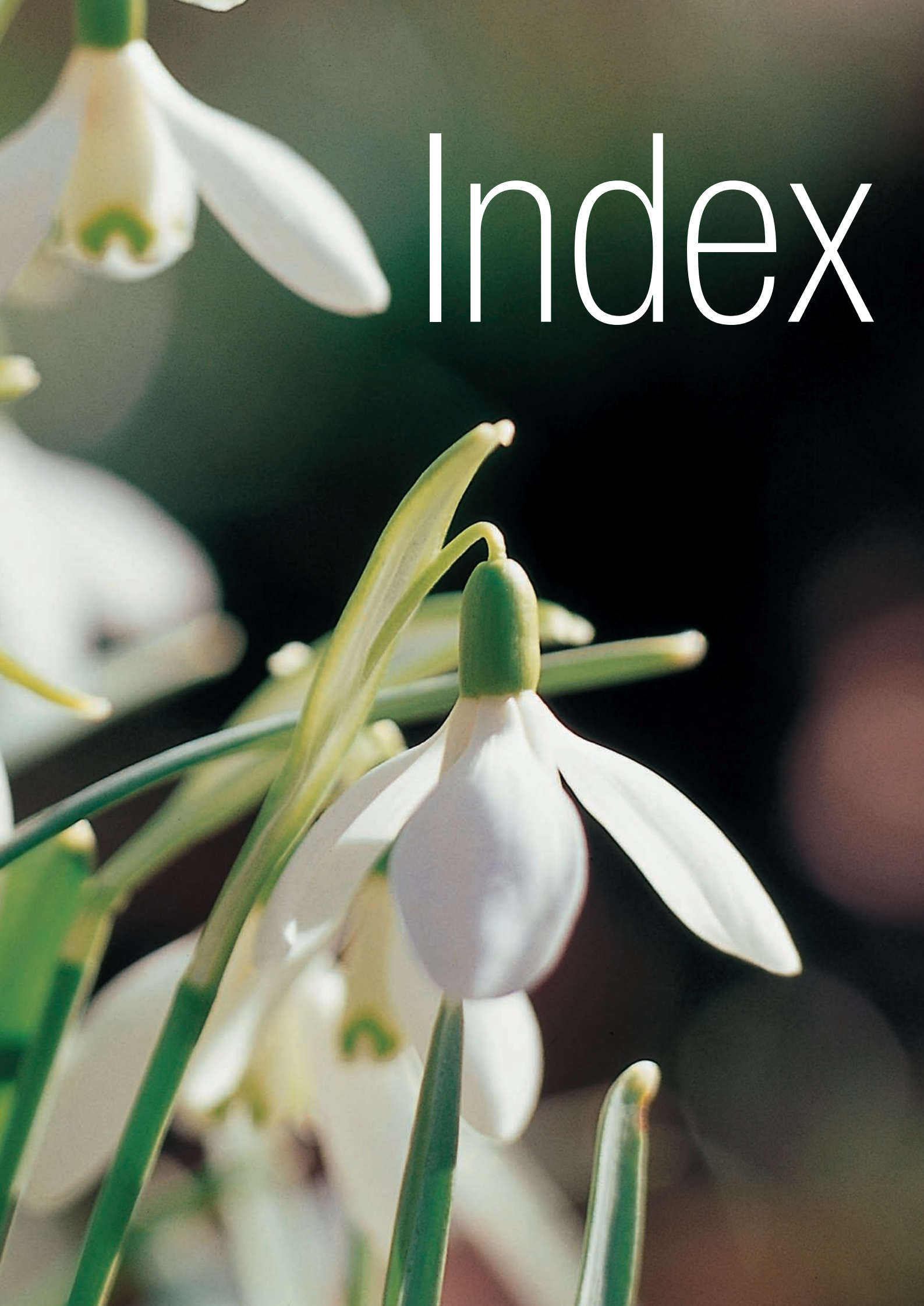
- 对于春季开花的种球，我们假设储藏阶段直到栽培前（不晚于12月中旬，无论如何在霜冻到来之前）
- 如果我们说需要防止干燥，这是指需要使用填充材料，有时需要在包装中
- “干燥并通风”是指使用通风的包装材料
- 特别注意控制蚜虫

	储藏方法	种植前的温度
Anemone coronaria	干燥并通风，温度恒定	17-15°C
Begonia	防止干燥，提供适量的空气流动	9-5°C
Canna	防止干燥，不需空气流动	12-8°C
Crocasmia (syn. Montbretia)	防止干燥	5-2°C
Cyclamen	防止干燥	9°C
Dahlia	防止堆压，避免水淹，不需空气流动	9-7°C
Eremurus	防止干燥	9°C
Eucomis	干燥并通风	13-9°C
Freesia	空气充足	25°C
Galtonia candicans	干燥并通风	20-17-13°C
Gladiolus	干燥并通风	17-9-5°C
Gladiolus callianthus 'Murielae' (syn. Acidanthera)	干燥并通风	20°C
Gloriosa rothschildiana	防止干燥	20-17°C
Hippeastrum (syn. Amaryllis)	干燥并通风	5°C
Hymenocallis (syn. Ismene)	干燥并通风	25-23-17°C
Iris hollandica	干燥并通风	30-17°C
Ixia	干燥并通风	25-23°C
Liatris	如果储藏时间超过3个月，在-2°C冰冻	2-0°C
Lilium	如果储藏时间超过3个月，在-2°C冰冻	2-0°C
Nerine	干燥并通风	9°C
Ornithogalum thyrsoides, dubium	干燥并通风	30-25°C
Oxalis deppei, regnelli, triangularis	干燥并通风	5-3°C
Ranunculus	干燥并通风，温度恒定	17-15°C
Sauromatum venosum (syn. Arum cornutum)	干燥并通风，避免霜冻	5-2°C
Sparaxis	干燥并通风	25-23°C
Sprekelia formosissima	干燥并通风	20-9°C
Tigridia pavonia	干燥并通风	5-2°C
Tritonia	干燥并通风	25-23°C
Triteleia (syn. Brodiaea)	干燥并通风	25-23°C
Zantedeschia aethiopica	提供少量的空气流动	13-7°C
Zantedeschia (other varieties)	干燥并通风	13-9°C
Zephyranthes	干燥并通风	20°C

荷兰国际球根中心对使用该资料所产生的相应结果不负任何责任



Index



Index Narcissus

CULTIVAR	GROUP	COLOUR CODE	PAG. NR.	HEIGHT (cm.)	CUT	POT	PLANTING (weeks)	FLOWERING (weeks)	SALES (weeks)	DISTANCE (cm.)	DEPTH (cm.)	SCENTED
Narcissus 'Abba'	Double	4 W-O	34	30	X		36-49	13-14	35-49	15	20	xx
Narcissus 'Accent'	Large-cupped	2 W-P	34	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Acropolis'	Double	4 W-O	34	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Actaea'	Poeticus	9 W-YYR	34	40	x		36-49	16-17	35-49	10	15	x
Narcissus 'Ambergate'	Large-cupped	2 O-R	35	35			36-49	16-17	35-49	15	20	
Narcissus 'Apotheose'	Double	4 Y-O	35	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Arctic Gold'	Trumpet	1 Y-Y	35	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Arkle'	Trumpet	1 Y-Y	35	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Audubon'	Large-cupped	2 W-WWP	36	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Avalon'	Large-cupped	2 Y-W	36	35	X	X	36-49	16-17	35-49	15	20	
Narcissus 'Baby Moon'	Jonquilla	7 Y-Y	36	20		x	36-49	17-18	35-49	5	10	x
Narcissus 'Ballade'	Trumpet	1 Y-Y	36	40	X	X	36-49	14-15	35-49	15	20	
Narcissus 'Barrett Browning'	Small-cupped	3 WWY-O	37	35	x	x	36-49	14-15	35-49	15	20	
Narcissus 'Belcanto'	Split-corona	11aW-Y	37	35	x		36-49	15-16	35-49	15	15	
Narcissus 'Bell Song'	Jonquilla	7 W-P	37	35			36-49	16-17	35-49	10	15	xx
Narcissus 'Bella Estrella'	Split-corona	11a W-Y	37	35	X	X	36-49	15-16	35-49	10	15	X
Narcissus 'Bella Vista'	Large-cupped	2 W-YYO	38	35	X		36-49	14-15	35-49	15	20	
Narcissus 'Berlin'	Large-cupped	2 Y-YYO	38	30			36-49	15-16	35-49	15	20	
Narcissus 'Birma'	Small-cupped	3 Y-O	38	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Bittern'	Others	12 Y-O	38	30		X	36-49	14-15	35-49	10	15	X
Narcissus 'Brackenhurst'	Large-cupped	2 Y-O	39	40	X	X	36-49	14-15	35-49	15	20	
Narcissus 'Bridal Crown'	Double	4 W-Y	39	25		x	36-49	16-17	35-49	15	20	x
Narcissus 'Broadway Star'	Split-corona (Papillon)	11b W-O/W	39	40	X		36-49	16-17	35-49	15	20	
Narcissus Bulbocodium conspicuus	Species	13 Y-Y	39	15		X	36-49	16-17	35-49	5	10	
Narcissus 'Cadena'	Trumpet	1 Y-Y	40	40		X	36-49	15-16	35-49	15	20	
Narcissus 'Cairngorm'	Large-cupped	2 YYW-WYY	40	35	X	X	36-49	16-17	35-49	15	20	
Narcissus 'California'	Large-cupped	2 Y-Y	40	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Camelot'	Large-cupped	2 Y-Y	40	40	X	X	36-49	16-17	35-49	15	20	
Narcissus 'Canaliculatus'	Tazetta	8 W-Y	41	15		x	36-49	16-17	35-49	10	10	x
Narcissus 'Carbineer'	Large-cupped	2 Y-O	41	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Carlton'	Large-cupped	2 Y-Y	41	35	x	x	36-49	15-16	35-49	15	20	
Narcissus 'Cassata'	Split-corona	11a W-W	41	35		X	36-49	14-15	35-49	15	20	
Narcissus 'Changing Colors'	Split-corona	11aW-WY	42	35			36-49	15-16	35-49	15	20	
Narcissus 'Chanterelle'	Split-corona	11a Y-Y	42	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Cheerfulness'	Double	4 W-Y	42	35	x	x	36-49	16-17	35-49	5	20	x
Narcissus 'Cherry Spot'	Small-cupped	3 W-O	42	40	X		36-49	16-17	35-49	10	15	
Narcissus 'Chinese Sacred Lily'	Tazetta (Paperwhite)	8 W-O	43	40	x	x	36-49	46-12	35-49			xx
Narcissus 'Cotinga'	Cyclamineus	6 W-P	43	25		x	36-49	14-15	35-49	10	15	
Narcissus 'Cragford'	Tazetta	8 W-O	43	30		X	36-49	13-14	35-49	10	20	xx
Narcissus 'Curllew'	Jonquilla	7 W-W	43	35			36-49	15-16	35-49	10	15	X
Narcissus 'Cyclope'	Trumpet	1 Y-Y	44	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Decoy'	Large-cupped	2 W-R	44	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Delibes'	Large-cupped	2 Y-YYO	44	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Delnashaugh'	Double	4 W-P	44	40	X		36-49	17-18	35-49	15	20	
Narcissus 'Delta'	Split-corona (Papillon)	11b W-OYW	45	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Desdemona'	Large-cupped	2 W-W	45	35	x		36-49	16-17	35-49	15	20	
Narcissus 'Dick Wilden'	Double	4 Y-Y	45	35	x		36-49	15-16	35-49	15	20	
Narcissus 'Dickcissel'	Jonquilla	7 Y-W	45	40	X	x	36-49	15-16	35-49	15	15	xx
Narcissus 'Doctor Alex Fleming'	Large-cupped	2 W-O	46	35	X	X	36-49	14-15	35-49	15	20	
Narcissus 'Double Campernelle'	Double	4 Y-Y	46	30	X	X	36-49	14-15	35-49	10	15	xx
Narcissus 'Double Fashion'	Double	4 Y-O	46	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Dutch Master'	Trumpet	1 Y-Y	46	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Early Bride'	Large-cupped	2 W-YOO	47	40	X	X	36-49	14-15	35-49	15	20	
Narcissus 'Easter Bonnet'	Large-cupped	2 W-YYP	47	30		X	36-49	14-15	35-49	15	20	
Narcissus 'Eastern Dawn'	Large-cupped	2 W-P	47	35	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Edna Earl'	Small-cupped	3 W-OOR	47	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Erlcheer'	Tazetta (Paperwhite)	4 W-Y	48	35		x	36-49	16-17	35-49	10	15	x
Narcissus 'Exception'	Trumpet	1 Y-Y	48	40	X	X	36-49	14-15	35-49	15	20	
Narcissus 'Falconet'	Tazetta	8 Y-O	48	35		X	36-49	15-16	35-49	10	15	xx
Narcissus 'February Gold'	Cyclamineus	6 Y-Y	48	30		x	36-49	13-14	35-49	10	15	
Narcissus 'February Silver'	Cyclamineus	6 W-Y	49	30		X	36-49	13-14	35-49	10	15	
Narcissus 'Flower Drift'	Double	4 W-OYO	49	35	X	X	36-49	15-16	35-49	15	20	

CULTIVAR	GROUP	COLOUR CODE	PAG. NR.	HEIGHT (cm.)	CUT	POT	PLANTING (weeks)	FLOWERING (weeks)	SALES (weeks)	DISTANCE (cm.)	DEPTH (cm.)	SCENTED
Narcissus 'Flower Record'	Large-cupped	2 W-YYO	49	35	x	x	36-49	15-16	35-49	15	20	
Narcissus 'Flyer'	Split-corona	11a Y-Y	49	40	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Foresight'	Trumpet	1 W-Y	50	35	X	X	36-49	14-15	35-49	15	20	
Narcissus 'Fortissimo'	Large-cupped	2 Y-O	50	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Fortune'	Large-cupped	2 Y-O	50	40	x	x	36-49	14-15	35-49	15	20	
Narcissus 'Fragrant Rose'	Large-cupped	2 W-GPP	50	40	X	X	36-49	16-17	35-49	15	20	X
Narcissus 'Frileuse'	Split-corona	11a W-Y	51	30		X	36-49	14-15	35-49	15	20	
Narcissus 'Full House'	Double	4 W-Y	51	35	x		36-49	14-15	35-49	15	20	x
Narcissus 'Gentle Giant'	Large-cupped	2 W-O	51	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Geranium'	Tazetta	8 W-O	51	40	X		36-49	15-16	35-49	15	20	xx
Narcissus 'Gigantic Star'	Large-cupped	2 Y-Y	52	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Goblet'	Trumpet	1 W-Y	52	35		X	36-49	15-16	35-49	15	20	
Narcissus 'Gold Medal'	Trumpet	1 Y-Y	52	35		X	36-49	15-16	35-49	15	20	
Narcissus 'Golden Bells'	bulbocodium	10 Y-Y	52	15		X	36-49	16-17	35-49	5	10	
Narcissus 'Golden Dawn'	Tazetta	8 Y-O	53	30		X	36-49	15-16	35-49	10	15	xx
Narcissus 'Golden Ducat'	Double	4 Y-Y	53	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Golden Harvest'	Trumpet	1 Y-Y	53	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Golden Quince'	Others (Cyclamineus)	12 Y-Y	53	15		X	36-49	13-14	35-49	10	15	
Narcissus 'Goldflake'	Large-cupped	2 Y-YYO	54	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Grand Soleil d'Or'	Tazetta	8 Y-O	54	40	x	x	36-49	46-12	35-49			xxx
8Narcissus 'Hawera'	Triandrus	5 Y-Y	54	20		x	36-49	17-18	35-49	5	10	x
Narcissus 'High Society'	Large-cupped	2 W-GWP	54	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Hillstar'	Jonquilla	7 YYW-YWW	55	35	X		36-49	16-17	35-49	10	15	
Narcissus 'Holland Sensation'	Trumpet	1 W-Y	55	40	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Hoopoe'	Tazetta	8 Y-O	55	30		X	36-49	15-16	35-49	10	15	xx
Narcissus 'Ice Follies'	Large-cupped	2 W-W	55	35	x	x	36-49	14-15	35-49	15	20	
Narcissus 'Ice King'	Double	4 W-Y	56	35	X		36-49	15-16	35-49	15	20	
Narcissus 'Ice Wings'	Triandrus	5 W-W	56	25		X	36-49	15-16	35-49	10	15	X
Narcissus 'Intrigue'	Jonquilla	7 Y-W	56	35	X		36-49	16-17	35-49	10	15	X
Narcissus 'Ipi Tombi'	Large-cupped	2 Y-O	56	30	X	X	36-49	13-14	35-49	15	20	
Narcissus 'Itzim'	Cyclamineus	6 Y-R	57	20		X	36-49	13-14	35-49	10	15	
Narcissus 'Jack Snipe'	Cyclamineus	6 W-Y	57	20		x	36-49	13-14	35-49	10	10	
Narcissus 'Jenny'	Cyclamineus	6 W-W	57	20		X	36-49	13-14	35-49	10	15	
Narcissus 'Jetfire'	Cyclamineus	6 Y-O	57	20		x	36-49	13-14	35-49	10	15	
Narcissus 'Johann Strauss'	Large-cupped	2 W-O	58	35	X	X	36-49	14-15	35-49	15	20	
Narcissus 'Juanita'	Large-cupped	2 Y-O	58	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Jumble'	Others (Cyclamineus)	12 Y-Y	58	15		X	36-49	13-14	35-49	10	15	
Narcissus 'Karelia'	Trumpet	1 W-Y	58	35	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Kaydee'	Cyclamineus	6 W-P	59	30		X	36-49	16-17	35-49	10	15	
Narcissus 'Kissproof'	Large-cupped	2 Y-O	59	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Largo'	Large-cupped	2 Y-YYO	59	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Las Vegas'	Trumpet	1 W-Y	59	40	x	x	36-49	15-16	35-49	15	20	
Narcissus 'Laurens Koster'	Tazetta	8 W-Y	60	30		X	36-49	15-16	35-49	10	15	xx
Narcissus 'Lemon Beauty'	Split-corona (Papillon)	11b W-Y/W	60	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Lemon Drops'	Triandrus	5 Y-Y	60	25		X	36-49	15-16	35-49	10	15	X
Narcissus 'Little Gem'	Trumpet	1 Y-Y	60	15		X	36-49	13-14	35-49	5	10	
Narcissus 'Little Witch'	Cyclamineus	6 Y-Y	61	20		X	36-49	13-14	35-49	10	15	
Narcissus lobularis	Species (trumpet)	1 W-Y	61	15		X	36-49	13-14	35-49	10	10	
Narcissus 'Louise de Coligny'	Large-cupped	2 W-YYP	61	40	X		36-49	15-16	35-49	15	20	X
Narcissus 'Manly'	Double	4 Y-O	61	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Margaret Mitchell'	Small-cupped	3 W-YYR	62	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Marie-José'	Split-corona (Papillon)	11b W-Y/OW	62	40	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Marieke'	Trumpet	1 Y-Y	62	40	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Martinette'	Jonquilla	7 Y-O	62	35		X	36-49	15-16	35-49	10	15	xx
Narcissus 'Mary Bohannon'	Large-cupped	2 Y-O	63	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Minnow'	Tazetta	8 W-Y	63	15		x	36-49	16-17	35-49	10	10	x
Narcissus 'Misty Glen'	Large-cupped	2 W-GWW	63	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Modern Art'	Large-cupped	2 Y-O	63	35			36-49	16-17	35-49	15	20	
Narcissus 'Mon Cheri'	Large-cupped	2 W-P	64	35		X	36-49	15-16	35-49	15	20	
Narcissus 'Monal'	Large-cupped	2 Y-R	64	40	X		36-49	13-14	35-49	15	20	
Narcissus 'Mondragon'	Split-corona	11a Y-O	64	40	X		36-49	15-16	35-49	15	20	xx
Narcissus 'Moneymaker'	Trumpet	1 W-Y	64	40	X		36-49	14-15	35-49	15	20	6
Narcissus 'Monza'	Double	4 Y-R	65	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Mount Hood'	Trumpet	1 W-W	65	40	X	x	36-49	15-16	35-49	15	20	
Narcissus 'Obdam'	Double	4 W-W	65	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Obvallaris'	Species	13 Y-Y	65	25		X	36-49	13-14	35-49	10	10	

CULTIVAR	GROUP	COLOUR CODE	PAG. NR.	HEIGHT (cm.)	CUT	POT	PLANTING (weeks)	FLOWERING (weeks)	SALES (weeks)	DISTANCE (cm.)	DEPTH (cm.)	SCENTED
Narcissus 'Odeur Regulosus'	Species	13 Y-Y	66	30	X	X	36-49	14-15	35-49	10	15	X
Narcissus 'Orange Progress'	Large-cupped	2 Y-O	66	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Orangery'	Split-corona	11a W-00Y	66	40	x	x	36-49	15-16	35-49	15	20	
Narcissus 'Osiris'	Trumpet	1 Y-Y	66	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Pacific Coast'	Tazetta	8 Y-Y	67	15		X	36-49	16-17	35-49	10	10	xx
Narcissus 'Palmares'	Split-corona	11a W-P	67	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Papillon Blanc'	Split-corona (Papillon)	11b W-W	67	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Paricutin'	Large-Cupped	2 Y-R	67	40	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Parisienne'	Split-corona	11a W-O	68	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Passionale'	Large-Cupped	2 W-P	68	35	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Peaches and Cream'	Large-cupped	2 W-YOP	68	40	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Peeping Tom'	Cyclamineus	6 Y-Y	68	30		X	36-49	13-14	35-49	10	15	
Narcissus 'Pencrebar'	Double	4 Y-Y	69	15		X	36-49	16-17	35-49	5	10	X
Narcissus 'Petit Four'	Double	4 W-PPY	69	35	X	X	36-49	16-17	35-49	15	20	
Narcissus 'Petrel'	Triandrus	5 W-W	69	25		X	36-49	17-18	35-49	10	15	xx
Narcissus 'Pick Up'	Split-corona	11a W-Y00	69	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Pink Charm'	Large-cupped	2 W-WWP	70	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Pink Paradise'	Double	4 W-P	70	30			36-49	16-17	35-49	15	20	
Narcissus 'Pink Pride'	Large-cupped	2 W-WPP	70	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Pinza'	Large-cupped	2 Y-YYO	70	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Pipit'	Jonquilla	7 YYW-W	71	35	X		36-49	15-16	35-49	10	15	X
Narcissus poeticus var. recurvus	Species	13 W-GYR	71	40	X		36-49	17-18	35-49	10	20	x
Narcissus 'Precocious'	Large-cupped	2 W-P	71	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Pretty in Yellow'	Split-corona	11aW-Y	71	35	x	x	36-49	13-14	35-49	15	20	x
Narcissus 'Primeur'	Trumpet	1 Y-Y	72	35	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Printal'	Split-corona	11a W-Y	72	40	X		36-49	13-14	35-49	15	20	
Narcissus 'Prizewinner'	Trumpet	1 Y-Y	72	40			36-49	14-15	35-49	15	20	
Narcissus 'Professor Einstein'	Large-cupped	2 W-R	72	35	X		36-49	14-15	35-49	15	20	
Narcissus 'Pueblo'	Jonquilla	7 W-W	73	35			36-49	16-17	35-49	10	15	X
Narcissus 'Quail'	Jonquilla	7 Y-Y	73	40	X		36-49	16-17	35-49	10	15	X
Narcissus 'Raffael'	Trumpet	1 Y-Y	73	40	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Raoul Wallenberg'	Large-cupped	2 Y-Y	73	35	X	X	36-49	14-15	35-49	15	20	
Narcissus 'Reggae'	Cyclamineus	6 W-GPP	74	25		X	36-49	15-16	35-49	10	15	
Narcissus 'Replete'	Double	4 W-P	74	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Rijnveld's Early Sensation'	Trumpet	1 Y-Y	74	30	X	X	36-49	13-14	35-49	10	20	
Narcissus 'Rip van Winkle'	Double	4 Y-Y	74	15		X	36-49	13-14	35-49	10	10	
Narcissus 'Romance'	Large-cupped	2 W-P	75	35	X		36-49	15-16	35-49	15	20	
Narcissus 'Rosy Cloud'	Double	4 W-P	75	40			36-49	16-17	35-49	15	20	
Narcissus 'Royal Gold'	Trumpet	1 Y-Y	75	35	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Sailboat'	Jonquilla	7 W-W	75	25		X	36-49	14-15	35-49	10	15	X
Narcissus 'Saint Keverne'	Large-cupped	2 Y-Y	76	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Salome'	Large-cupped	2 W-PPY	76	35	x	X	36-49	16-17	35-49	15	20	
Narcissus 'Scarlet Gem'	Tazetta	8 Y-O	76	35	X		36-49	16-17	35-49	10	15	X
Narcissus 'Scarlet Royal'	Large-cupped	2 Y-R	76	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Segovia'	Small-cupped	3 W-Y	77	20		X	36-49	15-16	35-49	10	15	
Narcissus 'Sempre Avanti'	Large-cupped	2 W-O	77	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Serola'	Large-cupped	2 Y-R	77	40	X		36-49	14-15	35-49	15	20	
Narcissus 'Sir Winston Churchill'	Double	4 W-O	77	40	x		36-49	15-16	35-49	15	20	x
Narcissus 'Slim Whitman'	Large-cupped	2 W-00Y	78	35	X		36-49	15-16	35-49	15	20	
Narcissus 'Soestdijk'	Large-cupped	2 W-YOW	78	35	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Sorbet'	Split-corona (Papillon)	11bW-YYO	78	35			36-49	16-17	35-49	15	20	
Narcissus 'Sound'	Large-cupped	2 W-YYO	78	40	X	X	36-49	14-15	35-49	15	20	
Narcissus 'Sovereign'	Split-corona	11a W-O	79	40	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Spellbinder'	Trumpet	1 Y-WWY	79	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Stainless'	Large-cupped	2 W-W	79	40	X		36-49	16-17	35-49	15	20	
Narcissus 'Standard Value'	Trumpet	1 Y-Y	79	35	x	X	36-49	15-16	35-49	15	20	
Narcissus 'Suada '	Large-cupped	2 Y-O	80	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Sugarbush'	Jonquilla	7 W-YYW	80	35	X	X	36-49	15-16	35-49	10	15	X
Narcissus 'Sun Disc'	Jonquilla	7 Y-Y	80	15		X	36-49	16-17	35-49	10	10	X
Narcissus 'Surfside'	Cyclamineus	6W-GPP	80	25		x	36-49	14-15	35-49	10	15	
Narcissus 'Suzy'	Jonquilla	7 Y-O	81	35	X		36-49	16-17	35-49	10	15	X
Narcissus 'Sweetness'	Jonquilla	7 Y-Y	81	40			36-49	16-17	35-49	10	15	X
Narcissus 'Tahiti'	Double	4 Y-O	81	40	X	x	36-49	15-16	35-49	15	20	
Narcissus 'Tête-à-Tête'	Others (Cyclamineus)	12 Y-Y	81	15		x	36-49	13-14	35-49	10	15	
Narcissus 'Texas'	Double	4 Y-O	82	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Thalia'	Triandrus	5 W-W	82	30	x	x	36-49	15-16	35-49	15	20	x

CULTIVAR	GROUP	COLOUR CODE	PAG. NR.	HEIGHT (cm.)	CUT	POT	PLANTING (weeks)	FLOWERING (weeks)	SALES (weeks)	DISTANCE (cm.)	DEPTH (cm.)	SCENTED
Narcissus 'Topolino'	Trumpet	1 W-Y	82	10		x	36-49	13-14	35-49	5	10	x
Narcissus 'Trepolo'	Split-corona (Papillon)	11b W-O/W	82	35			36-49	16-17	35-49	15	20	
Narcissus 'Trena'	Cyclamineus	6 W-Y	82	25		X	36-49	13-14	35-49	10	15	
Narcissus 'Tresamble'	Triandrus	5 W-W	83	30	X	X	36-49	15-16	35-49	10	20	X
Narcissus 'Trevithian'	Jonquilla	7 Y-Y	83	35	X		36-49	16-17	35-49	10	15	X
Narcissus 'Tricollet'	Split-corona	11aW-O	83	35			36-49	15-16	35-49	15	20	
Narcissus 'Tripartite'	Split-corona	11a Y-Y	83	40	X		36-49	16-17	35-49	10	15	X
Narcissus 'Unique'	Double	4 W-Y	84	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Valdrome'	Split-corona	11a W-Y	84	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Van Sion'	Double	4 Y-Y	84	30	x	x	36-49	14-15	35-49	15	20	
Narcissus 'Verger'	Small-cupped	3 W-R	84	40	X		36-49	15-16	35-49	15	20	
Narcissus 'W.P. Milner'	Trumpet	1 W-W	85	10		X	36-49	14-15	35-49	5	10	
Narcissus 'Warbler'	Cyclamineus	6 Y-Y	85	25			36-49	12-13	35-49	10	15	
Narcissus 'Waterperry'	Jonquilla	7 W-YY	85	35	X		36-49	16-17	35-49	10	15	X
Narcissus 'White Lion'	Double	4 W-WYY	85	40	X		36-49	15-16	35-49	15	20	
Narcissus 'White Medal'	Double	4 W-W	86	35			36-49	16-17	35-49	15	20	
Narcissus 'Yellow Cheerfulness'	Double	4 Y-Y	86	35	X	X	36-49	16-17	35-49	10	15	X
Narcissus 'Yellow River'	Trumpet	1 Y-Y	86	40	X	X	36-49	15-16	35-49	15	20	
Narcissus 'Yellow Sun'	Large-cupped	2 Y-Y	86	40	X		36-49	15-16	35-49	15	20	
Narcissus 'Ziva'	Tazetta (Paperwhite)	8 W-W	87	40	x	x	36-49	46-12	35-49	15	20	xxx



Index Hyacinth

CULTIVAR	COLOUR	PAGE NR.	HEIGHT (cm.)	CUT	POTS	PLANTING (weeks)	FLOWERING (weeks)	SALES (weeks)	DISTANCE (cm.)	DEPTH (cm.)	SCENTED
Hyacinthus 'Aiolos'	White	104	30	x	x	36-49	16-17	33-49	15	20	xxxx
Hyacinthus 'Amethyst'	Violet	104	25		x	36-49	17-18	33-49	15	20	xx
Hyacinthus 'Amsterdam'	Red	104	25		x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Anna Liza'	Pink	104	30	x	x	36-49	15-16	33-49	15	20	xxx
Hyacinthus 'Anna Marie'	Pink	105	30	x	x	36-49	15-16	33-49	15	20	xxx
Hyacinthus 'Antarctica' ®	White	105	30	x	x	36-49	15-16	33-49	15	20	xxx
Hyacinthus 'Apricot Passion' ®	Salmon	105	30	x	x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Atlantic' ®	Blue	105	30	x	x	36-49	15-16	33-49	15	20	xxx
Hyacinthus 'Blue Festival'	Blue	106	25			36-49	16-17	33-49	15	20	xx
Hyacinthus 'Blue Giant'	Blue	106	30			36-49	16-17	33-49	15	20	xx
Hyacinthus 'Blue Jacket'	Blue	106	25		x	36-49	17-18	33-49	15	20	xx
Hyacinthus 'Blue Pearl' ®	Blue	106	25		x	36-49	16-17	33-49	15	20	x
Hyacinthus 'Blue Star'	Blue	107	25		x	36-49	16-17	33-49	15	20	xxx
Hyacinthus 'Carnegie'	White	107	25	x	x	36-49	16-17	33-49	15	20	xxx
Hyacinthus 'China Pink'	Pink	107	30	x	x	36-49	15-16	33-49	15	20	xxxx
Hyacinthus 'City of Bradford'	Purple	107	30	x	x	36-49	15-16	33-49	15	20	xxxx
Hyacinthus 'City of Haarlem'	Yellow	108	25		x	36-49	17-18	33-49	15	20	xx
Hyacinthus 'Delft Blue'	Blue	108	25	x	x	36-49	15-16	33-49	15	20	xxxx
Hyacinthus 'Early Bird'	Pink	108	25		x	36-49	15-16	33-49	15	20	x
Hyacinthus 'Fondant'	Pink	108	25	x	x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Gipsy Princess'	Yellow	109	25	x	x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Gipsy Queen'	Orange	109	25		x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Hollyhock'	Red	109	20			36-49	17-18	33-49	15	20	xx
Hyacinthus 'Jan Bos'	Red	109	25		x	36-49	16-17	33-49	15	20	x
Hyacinthus 'Koh-I-Noor' ®	Light blue	110	35	x		36-49	15-16	33-49	15	20	xx
Hyacinthus 'Kronos'	Purple	110	25		x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Lady Derby'	Pink	110	35			36-49	17-18	33-49	15	20	xx
Hyacinthus 'L'Innocence'	White	110	30	x		36-49	16-17	33-49	15	20	xxx
Hyacinthus 'Marconi'	Pink	111	25		x	36-49	17-18	33-49	15	20	xx
Hyacinthus 'Marie'	Blue	111	25			36-49	16-17	33-49	15	20	xx
Hyacinthus 'Minos'	Blue	111	30	x	x	36-49	16-17	33-49	15	20	xxx
Hyacinthus 'Miss Saigon' ®	Purple	111	25	x		36-49	17-18	33-49	15	20	xx
Hyacinthus 'Multiflora'	Mixed	112	25		x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Odysseus'	Orange	112	25	x		36-49	16-17	33-49	15	20	xx
Hyacinthus 'Ostara'	Blue	112	25	x	x	36-49	15-16	33-49	15	20	xx
Hyacinthus 'Paul Hermann' ®	Violet	112	25		x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Peter Stuyvesant'	Violet	113	25		x	36-49	17-18	33-49	15	20	xxx
Hyacinthus 'Pink Festival'	Pink	113	25			36-49	16-17	33-49	15	20	xx
Hyacinthus 'Pink Pearl'	Pink	113	25		x	36-49	16-17	33-49	15	20	x
Hyacinthus 'Pink Surprise' ®	Pink	113	25		x	36-49	17-18	33-49	15	20	xx
Hyacinthus 'Purple Sensation' ®	Purple	114	25		x	36-49	16-17	33-49	15	20	x
Hyacinthus 'Purple Star' ®	Purple	114	25	x	x	36-49	15-16	33-49	15	20	xxxx
Hyacinthus 'Purple Voice' ®	Purple	114	25		x	36-49	17-18	33-49	15	20	xxx
Hyacinthus 'Sky Jacket'	Blue	114	30	x	x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Sky Line' ®	Blue	115	25	x	x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Splendid Cornelia'	Violet	115	25		x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Top White' ®	White	115	25		x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Vuurbaak'	Red	115	25		x	36-49	17-18	33-49	15	20	xx
Hyacinthus 'White Festival'	White	116	25			36-49	16-17	33-49	15	20	xx
Hyacinthus 'White Pearl'	White	116	25		x	36-49	16-17	33-49	15	20	x
Hyacinthus 'Woodstock' ®	Dark red	116	25	x	x	36-49	16-17	33-49	15	20	xx
Hyacinthus 'Yellow Queen'	Yellow	116	25	x	x	36-49	16-17	33-49	15	20	xx



Index Special Flower Bulbs

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Achimenes												
Achimenes 'Paul Arnold'	126	15-20	x	x	x		9-20	17-35	6-20	3	2	
Achimenes 'Prima Donna'	126	15-20		x	x		9-20	17-35	6-20	3	2	
Agapanthus												
Agapanthus 'Blue Triumphator'	126	80-100	x	x		x	13-20	27-37	10-20	50	10	
Agapanthus 'Donau'	126	80-100	x	x		x	13-20	27-37	10-20	50	10	
Agapanthus 'Intermedius'	127	60-80	x	x		x	13-20	27-37	10-20	50	10	
Agapanthus 'Polar Ice'	127	80-100	x	x		x	13-20	27-37	10-20	50	10	
Agapanthus umbellatus 'Album'	127	80-100	x	x		x	13-20	27-37	10-20	50	10	
Allium												
Allium aflatunense	132	80	x			x	38-48	18-24	35-48	25	20	
Allium aflatunense 'Purple Sensation'	132	80	x			x	38-48	18-24	35-48	25	20	
Allium atropurpureum	132	60-80	x			x	38-48	23-28	35-48	25	15	
Allium 'Beau Regard'	132	90-100	x			x	38-48	23-28	35-48	20	15	
Allium caeruleum (syn. azureum)	133	40				x	38-48	23-28	35-48	25	20	
Allium carinatum ssp pulchellum (syn. pulchellum)	133	40				x	38-48	26-32	35-48	8	1	
Allium carinatum ssp pulchellum 'Album'	133	40				x	38-48	26-32	35-48	8	10	
Allium cernuum	133	25				x	38-48	24-35	35-48	8	1	
Allium christophii (syn. albopilosum)	134	50		x		x	38-48	24-30	35-48	30	20	
Allium cowanii	134	40	x			x	38-48	14-18	35-48	8	10	
Allium 'Firmament'	134	80	x			x	38-48	18-24	35-48	25	20	
Allium flavum	134	30				x	38-48	23-32	35-48	8	10	
Allium giganteum	135	170	x			x	38-48	23-28	35-48	30	20	
Allium 'Gladiator'	135	80-90	x			x	38-48	23-28	35-48	30	20	
Allium 'Globemaster' ®	135	100	x			x	38-48	23-28	35-48	30	20	
Allium 'Hair' ®	135	50-70	x			x	38-48	26-32	35-48	10	10	
Allium hirtifolium var. 'Album'	136	120	x			x	38-48	18-24	35-48	25	20	
Allium 'His Excellency'	136	90	x			x	38-48	18-24	35-48	25	20	
Allium karataviense	136	25		x		x	38-48	18-24	35-48	20	15	
Allium karataviense 'Ivory Queen' ®	136	15-20		x		x	38-48	18-24	35-48	20	15	
Allium 'Mars'	137	120				x	38-48	18-24	35-48	25	20	
Allium moly (syn. luteum)	137	30	x	x		x	38-48	23-28	35-48	8	10	
Allium moly 'Jeannine'	137	35	x	x		x	38-48	23-28	35-48	8	10	
Allium 'Mont Blanc'	137	120	x			x	38-48	18-24	35-48	25	20	
Allium 'Mount Everest'	138	120				x	38-48	18-24	35-48	25	20	
Allium neapolitanum	138	30	x			x	38-48	14-20	35-48	8	10	
Allium nigrum (syn. multibulbosum)	138	70	x			x	38-48	18-28	35-48	20	1	
Allium oreophilum (syn. ostrowskianum)	138	20	x	x		x	38-48	18-24	35-48	8	10	
Allium rosenbachianum	139	60	x			x	38-48	18-24	35-48	20	20	
Allium rosenbachianum 'Album'	139	60	x			x	38-48	18-24	35-48	20	2	
Allium 'Round and Purple'	139	80-90	x			x	38-48	18-24	35-48	30	20	
Allium schubertii	139	40	x			x	38-48	18-26	35-48	30	15	
Allium sphaerocephalon	140	60	x			x	38-48	26-32	35-48	10	10	
Allium stipitatum	140	100	x			x	38-48	18-24	35-48	30	20	
Allium triquetrum	140	25-40				x	38-48	18-24	35-48	8	10	
Allium roseum	140	40	x			x	38-48	18-24	35-48	8	10	
Allium unifolium	141	30				x	38-48	18-24	35-48	10	10	
Allium ursinum	141	30				x	38-48	14-20	35-48	8	10	
Alstroemeria												
Alstroemeria mixed	141	100	x				10-17/36-43	23-34	8-17/34-43	20	20	
Alstroemeria aurea 'Orange King'	141	100	x		x	x	10-17/36-43	23-34	8-17/34-43	20	20	
Amaryllis												
Amaryllis belladonna	142	50-80	x			x	13-20	36-41	10-20	20	20	x
Amarcrinum												
Amarcrinum howardii	142	80-100	x			x	13-20	36-41	10-20	20	20	x
Amarine												
Amarine tubergenii 'Zwanenburg'	142	75	x			x	13-20	36-41	10-20	20	15	
Anemone												
Anemone blanda 'Blue Shades'	148	15		x		x	38-48	12-16	35-48	5	5	
Anemone blanda 'Charmer'	148	15		x		x	38-48	12-16	35-48	5	5	
Anemone blanda 'Pink Star'	148	15		x		x	38-48	12-16	35-48	5	5	
Anemone blanda 'Radar'	148	15		x		x	38-48	12-16	35-48	5	5	

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Anemone blanda 'White Splendour'	149	15		x		x	38-48	12-16	35-48	5	5	
Anemone blanda mixed	149	15		x		x	38-48	12-16	35-48	5	5	
Anemone coronaria												
Anemone coronaria De Caen	149	20-25	x			x	36-43/16-17	17-32	35-17	10	5	
Anemone coronaria 'Hollandia' (syn. 'His Excellency')	149	20-25	x			x	36-43/16-17	17-32	35-17	10	5	
Anemone coronaria 'Mr. Fokker'	150	20-25	x			x	36-43/16-17	17-32	35-17	10	5	
Anemone coronaria 'Sylphide'	150	20-25	x			x	36-43/16-17	17-32	35-17	10	5	
Anemone coronaria 'Bride'	150	20-25	x			x	36-43/16-17	17-32	35-17	10	5	
Anemone Coronaria (dubbel)												
Anemone coronaria 'Admiral'	150	20-25	x				36-43/16-17	17-32	35-17	10	5	
Anemone coronaria 'Governor'	151	20-25	x				36-43/16-17	17-32	35-17	10	5	
Anemone coronaria 'Lord Lieutenant'	151	20-25	x				36-43/16-17	17-32	35-17	10	5	
Anemone coronaria 'Mount Everest'	151	20-25	x				36-43/16-17	17-32	35-17	10	5	
Anemone coronaria St. Brigid	151	20-25	x				36-43/16-17	17-32	35-17	10	5	
Anemone nemorosa												
Anemone nemorosa	152	20				x	38-48	13-18	35-48	15	5	
Anemone nemorosa 'Robinsoniana'	152	20				x	38-48	13-18	35-48	15	5	
Anemone nemorosa 'Vestal'	152	20				x	38-48	13-18	35-48	15	5	
Anemone ranunculoides												
Anemone ranunculoides	152	20				x	38-48	12-16	35-48	10	5	
Anomatheca												
Anomatheca laxa (syn. Lapeirousia cruenta)	153	10-25					13-20	32-38	10-20	10	5	
Arisaema												
Arisaema speciosum	153	40-60				x	12-20	18-24	10-20	25	10	
Arum												
Arum italicum	153	30	x			x	38-48/13-20	35-44	35-48/10-20	20	10	
Arum maculatum	153	30				x	38-48/13-20	35-44	35-48/10-20	20	10	
Babiana												
Babiana stricta	154	20-25					13-20	25-30	10-20	10	5	
Begonia												
Begonia cascade mixed	154	20-30		x			13-20	26-40	5-17	25	5	
Begonia Crispa	154	25		x			13-20	26-40	5-17	25	5	
Begonia Double	154	20-30		x			13-20	26-40	5-17	25	5	
Begonia fimbriata	155	20-30		x			13-20	26-40	5-17	25	5	
Begonia Grandiflora mixed	155	20-30		x			13-20	26-40	5-17	25	5	
Begonia Grandiflora	155	30		x			13-20	26-40	5-17	25	5	
Begonia Grandiflora	155	20		x			13-20	26-40	5-17	25	5	
Begonia Non Stop ® pink	156	20-25		x			13-20	26-40	5-17	25		
Begonia pendula	156	20-30		x			13-20	26-40	5-17	25	5	
Begonia picotee	156	25-30		x			13-20	26-40	5-17	25	5	
Bellevalia												
Bellevalia pycnantha (syn. Muscari paradoxum)	156	25					38-48	18-22	33-48	10	10	
Bellevalia romana (syn. Hyacinthus romanus)	157	25					38-48	18-22	33-48	10	10	
Bessera												
Bessera elegans	157	50-60	x				13-20	21-34	10-20	25	10	
Bletilla												
Bletilla striata (syn. hyacinthina)	157	30		x			13-20	26-34	10-20	10	5	
Bloomeria												
Bloomeria crocea var. aurea	157	40-45					13-20	27-30	11-20	10	5	
Brimeura												
Brimeura amethystina mixed (syn. Hyacinthus)	158	20				x	38-48	19-25	35-48	8	10	
Brodiaea												
Brodiaea californica 'Babylon' ®	158	70	x				38-48	28-33	35-48	8	10	
Bulbocodium												
Bulbocodium vernum (syn. Colchicum vernum)	158	10				x	38-48	36-48	35-48	8	10	
Colocasia												
Colocasia esculenta	158	80					13-20	15-40	10-20	20	20	
Caladium												
Caladium	159	50-70		x			13-20	15-40	10-20	20	10	
Calochortus												
Calochortus 'Golden Orb' ®	159	40-50					13-20	24-28	10-20	10	10	
Calochortus superbus ®	159	40					13-20	24-28	10-20	10	10	
Calochortus venustus ®	159	40					13-20	24-28	10-20	10	10	
Calochortus 'Violet Queen' ®	160	40					13-20	24-28	10-20	10	10	
Camassia												
Camassia cusickii	160	60-70	x			x	38-48	17-25	35-48	20	15	

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Camassia leichtlinii 'Alba'	160	60-70	x			x	38-48	17-25	35-48	20	15	
Camassia leichtlinii 'Caerulea'	160	80	x			x	38-48	17-25	35-48	20	15	
Camassia leichtlinii 'Semiplena'	161	80	x			x	38-48	22-26	35-48	20	15	
Camassia quamash (syn. esculenta)	161	35	x			x	38-48	17-25	35-48	10	10	
Camassia quamash 'Blue Melody'	161	20-30	x			x	38-48	22-26	35-48	10	10	
Canna												
Canna 'Brilliant'	161	90		x			13-20	31-43	10-20	40	8	
Canna 'Cleopatra'	162	90		x			13-20	31-43	10-20	40	8	
Canna 'Louis Cotton'	162	90		x			13-20	31-43	10-20	40	8	
Canna 'Lucifer'	162	60		x			13-20	31-43	10-20	40	8	
Canna Mixed	162	90		x			13-20	31-43	10-20	40	8	
Canna 'Pretoria'	163	90		x			13-20	31-43	10-20	40	8	
Canna 'Tirol'	163	90		x			13-20	31-43	10-20	40	8	
Canna 'Wyoming'	163	90		x			13-20	31-43	10-20	40	8	
Chasmanthe												
Chasmanthe floribunda	163	80					13-20	26-35	10-20	20	8	
Chasmanthe floribunda var. duckitii	164	80					13-20	26-35	10-20	20	8	
Chionodoxa												
Chionodoxa forbesii (missupplied luciliae)	164	15-20				x	38-48	6-13	35-48	8	10	
Chionodoxa forbesii 'Pink Giant' (missupplied luciliae)	164	15-20				x	38-48	6-13	35-48	8	10	
Chionodoxa luciliae (syn. gigantea)	164	15				x	38-48	6-13	35-48	8	10	
Chionodoxa luciliae 'Alba' (syn. gigantea 'Alba')	165	15				x	38-48	6-13	35-48	8	10	
Chionodoxa sardensis	165	10-12				x	38-48	6-13	35-48	8	10	
Chionoscilla												
Chionoscilla	165	15-20				x	38-48	6-13	34-48	8	10	
Chlidanthus												
Chlidanthus fragrans	165	30		x			13-20	26-35	10-20	10	10	x
Colchicum												
Colchicum autumnale (syn. var minor)	166	15-20		x		x	33-37	36-43	33-37	20	20	
Colchicum autumnale 'Album'	166	15-20		x		x	33-37	36-43	33-37	20	20	
Colchicum bornmuelleri	166	15-20		x		x	33-37	36-43	33-37	20	20	
Colchicum cilicicum 'Purpureum'	166	15-20		x		x	33-37	36-43	33-37	20	20	x
Colchicum 'Lilac Wonder'	167	15-20		x		x	33-37	36-43	33-37	20	20	x
Colchicum pannonicum	167	15-20		x		x	33-37	36-43	33-37	20	20	
Colchicum 'The Giant'	167	15-20		x		x	33-37	36-43	33-37	20	20	
Colchicum 'Waterlily'	167	15-20		x		x	33-37	36-43	33-37	20	20	
Commelina												
Commelina tuberosa mixed (syn. coelestis)	168	45		x		x	13-20	25-35	10-20	10	10	
Commelina tuberosa blue (syn. coelestis)	168	45		x		x	13-20	25-35	10-20	10	10	
Convallaria												
Convallaria majalis	168	20	x	x		x	36/43-10-17	18-22	8-17/34-43	5	2	x
Corydalis												
Corydalis cava (syn. bulbosa)	168	15				x	38-48	10-16	35-48	8	5	
Corydalis decipiens	169	25				x	38-48	10-16	35-48	8	5	
Corydalis flexuosa	169	15				x	38-48	10-16	35-48	8	5	
Corydalis solida	169	25				x	38-48	10-16	35-48	8	5	
Corydalis solida 'Alba'	169	25				x	38-48	10-16	35-48	8	5	
Cosmos												
Cosmos atrosanguineus	170	60	x				13-20	31-38	10-20	20	10	x
Crinum												
Crinum powellii	170	80-100	x	x		x	13-20	26-35	10-20	40	25	x
Crinum powellii 'Album'	170	80-100	x	x		x	13-20	26-35	10-20	40	25	x
Crocasmia												
Crocasmia crocosmiiflora 'Babylon' (syn. Montbretia)	170	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia crocosmiiflora 'Carmine Brilliant'	171	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia crocosmiiflora 'Columbus'	171	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia crocosmiiflora 'Emily Mckenzie'	171	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia crocosmiiflora 'George Davison'	171	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia crocosmiiflora 'John Boots'	172	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia crocosmiiflora 'Lucifer'	172	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia crocosmiiflora 'Mistral'	172	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia crocosmiiflora 'Météore'	172	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia crocosmiiflora 'Red King'	173	60-90	x			x	13-20	26-36	10-20	10	10	
Crocasmia masonorum	173	60-90	x			x	13-20	26-36	10-20	10	10	
Crocus												
Crocus ancyrensis 'Golden Bunch'	178	10				x	38-48	7-12	35-48	8	10	

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Crocus chrysanthus 'Advance'	178	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Ard Schenk'	178	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Blue Bird'	178	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Blue Pearl'	179	10				x	38-48	7-12	35-48	8	10	x
Crocus chrysanthus 'Cream Beauty'	179	10				x	38-48	7-12	35-48	8	10	x
Crocus chrysanthus 'Dorothy'	179	10				x	38-48	7-12	35-48	8	10	x
Crocus chrysanthus 'E.P.Bowles'	179	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Fuscotinctus'	180	10				x	38-48	7-12	35-48	8	10	x
Crocus chrysanthus 'Gipsy Girl'	180	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Goldilocks'	180	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Ladykiller'	180	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Miss Vain'	181	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Prins Claus'	181	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Romance'	181	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Saturnus'	181	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Snowbunting'	182	10				x	38-48	7-12	35-48	8	10	
Crocus chrysanthus 'Zwanenburg Bronze'	182	10				x	38-48	7-12	35-48	8	10	x
Crocus etruscus 'Zwanenburg'	182	10				x	38-48	7-12	35-48	8	10	
Crocus flavus 'Golden Yellow'	182	10		x		x	38-48	9-13	35-48	8	10	
Crocus pulchellus 'Zephyr'	183	10				x	33-37	36-43	33-37	8	10	
Crocus sieberi 'Bowles White'	183	10				x	38-48	7-12	35-48	8	10	
Crocus sieberi 'Firefly'	183	10				x	38-48	7-12	35-48	8	10	
Crocus sieberi ssp sublimis 'Tricolor'	183	10				x	38-48	7-12	35-48	8	10	
Crocus sieberi 'Violet Queen'	184	10				x	38-48	7-12	35-48	8	10	
Crocus tommasianus 'Barr's Purple'	184	10				x	38-48	5-10	35-48	8	10	
Crocus tommasianus 'Ruby Giant'	184	10				x	38-48	5-10	35-48	8	10	
Crocus tommasianus 'Whitewell Purple'	184	10				x	38-48	5-10	35-48	8	10	
Crocus vernus 'Flower Record'	185	15		x		x	38-48	9-13	35-48	8	10	
Crocus vernus 'Grand Maitre'	185	15		x		x	38-48	9-13	35-48	8	10	
Crocus vernus 'Jeanne d'Arc'	185	15		x		x	38-48	9-13	35-48	8	10	
Crocus vernus 'King of the Striped'	185	15		x		x	38-48	9-13	35-48	8	10	
Crocus vernus 'Pickwick'	186	15		x		x	38-48	9-13	35-48	8	10	
Crocus vernus 'Remembrance'	186	15		x		x	38-48	9-13	35-48	8	10	
Crocus vernus 'Vanguard'	186	15		x		x	38-48	9-13	35-48	8	10	
Curcuma												
Curcuma alismatifolia	186	60-80	x	x	x	x	3-22	15-38	3-22	25	5	
Cyclamen												
Cyclamen cilicicum	187	10		x		x	45-13	45-11	35-13	15	5	
Cyclamen coum hybriden	187	10		x		x	45-13	2-13	35-13	15	5	x
Cyclamen hederifolium (syn. neapolitanum)	187	10		x		x	45-13	5-13	35-13	15	5	
Cyclamen hederifolium 'Album' (syn. neapolitanum 'Album')	187	10		x		x	45-13	5-13	35-13	15	5	
Cyclamen persicum	188	10		x		x	45-13	10-17	35-13	15	5	
Cyrtanthus												
Cyrtanthus elatus 'Pink Diamond' (syn. Vallota speciosa)	188	35	x	x	x	x	5-15	28-35	1-15	15	20	
Cyrtanthus elatus 'Snow White' (syn. Vallota speciosa)	188	35	x	x	x	x	5-15	28-35	1-15	15	20	
Dichelostemma												
Dichelostemma congestum (syn. Brodiaea)	188	60-70	x				38-48	24-28	35-48	15	15	
Dichelostemma ida-maia (syn. Brodiaea coccinea)	189	60	x				38-48	24-28	35-48	15	15	
Dichelostemma 'Pink Diamond' (syn. Brodiaea)	189	60	x				38-48	24-28	35-48	15	15	
Dracunculus												
Dracunculus vulgaris (syn. Arum dracunculus)	189	60-80				x	38-48	22-30	35-48	25	20	
Eranthis												
Eranthis cilicica	189	10		x		x	38-48	4-10	35-48	5	5	
Eranthis hyemalis	190	10		x		x	38-48	4-10	35-48	5	5	
Eremurus												
Eremurus robustus	190	200	x			x	38-48	23-27	35-48	50	20	
Eremurus stenophyllus (syn. bungei)	190	100	x			x	38-48	23-27	35-48	50	20	
Eremurus 'Cleopatra'	190	125	x			x	38-48	23-27	35-48	50	20	
Eremurus 'Pinokkio'	191	100	x			x	38-48	23-27	35-48	50	20	
Erythronium												
Erythronium dens-canis	191	10				x	38-48	15-18	35-48	10	10	
Erythronium 'Pagoda'	191	20-25				x	38-48	14-19	35-48	15	10	
Erythronium 'White Beauty'	191	15-20				x	38-48	14-19	35-48	15	10	
Eucharis												
Eucharis amazonica (syn. grandiflora)	192	60	x	x	x	x	10-18	25-40	5-18	25	10	x

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Eucomis												
Eucomis autumnalis 'White Dwarf'	192	30		x		x	15-20	27-37	10-20	20	15	
Eucomis bicolor	192	40		x		x	15-20	27-37	10-20	20	15	
Eucomis comosa (syn. punctata)	192	40-50		x		x	15-20	27-37	10-20	20	15	
Eucomis vandermerwei	193	40		x		x	15-20	27-37	10-20	20	15	
Freesia												
Freesia single mixed	193	40	x	x			15-20	28-37	10-20	10	8	x
Freesia double mixed	193	40	x	x			15-20	28-37	10-20	10	8	x
Fritillaria imperialis												
Fritillaria imperialis 'Aurora'	198	80-100				x	38-48	15-18	35-48	30	20	
Fritillaria imperialis 'Maxima Lutea'	198	80-100				x	38-48	15-18	35-48	30	20	
Fritillaria imperialis 'Premier' (syn. The Premier)	198	80-100				x	38-48	15-18	35-48	30	2	
Fritillaria imperialis 'Rubra Maxima'	198	80-100				x	38-48	15-18	35-48	30	20	
Fritillaria meleagris mixed	199	25		x		x	38-48	15-18	35-48	5	10	
Fritillaria meleagris 'Alba'	199	25		x		x	38-48	15-18	35-48	5	1	
Fritillaria persica	199	80				x	38-48	15-18	35-48	25	20	
Fritillaria persica 'Ivory Bells'	199	80				x	38-48	15-18	35-48	25	20	
Fritillaria												
Fritillaria acmopetala	200	50				x	38-48	15-18	35-48	10	1	
Fritillaria 'Golden Flag'	200	10-15				x	38-48	15-18	35-48	10	10	
Fritillaria 'Martha Roderick' ®	200	15				x	38-48	15-18	35-48	10	10	
Fritillaria davisii	200	20				x	38-48	15-18	35-48	15	10	
Fritillaria 'Goldilocks'	201	20				x	38-48	15-18	35-48	15	10	
Fritillaria hermonis ssp amana	201	25				x	38-48	15-18	35-48	15	10	
Fritillaria michailovskyi	201	20		x		x	38-48	15-18	35-48	15	10	
Fritillaria pontica	201	25-35				x	38-48	15-18	35-48	15	15	
Fritillaria pallidiflora	202	30				x	38-48	15-18	35-48	15	15	
Fritillaria pudica	202	20-30				x	38-48	15-18	35-48	10	10	
Fritillaria uva-vulpis (syn. assyriaca)	202	25				x	38-48	15-18	35-48	15	15	
Fritillaria verticillata	202	40				x	38-48	15-18	35-48	15	15	
Galanthus												
Galanthus elwesii	203	15-20				x	38-48	3-6	35-48	5	10	
Galanthus nivalis	203	10-15				x	38-48	5-8	35-48	5	10	
Galanthus nivalis 'Flore Pleno'	203	10-15				x	38-48	5-8	35-48	5	10	
Galanthus woronowii (syn. ikariae)	203	15				x	38-48	5-8	35-48	5	10	
Galtonia												
Galtonia candicans (syn. Hyacinthus candicans)	204	100					15-20	32-38	10-20	20	15	
Galtonia viridiflora	204	100					15-20	32-38	10-20	20	15	
Geranium												
Geranium tuberosum	204	20-25				x	38-48	16-22	35-48	10	10	
Gladiolus												
Gladiolus communis ssp byzantinus	204	40-50					38-48	20-35	35-48	15	10	
Gladiolus callianthus 'Murielae'	205	80					15-20	32-36	10-20	12	10	x
Gladiolus carneus	205	50					38-48	16-19	35-48	15	10	
Gladiolus colvillei 'The Bride'	205	40	x				15-20	27-32	10-17	15	10	
Gladiolus nanus 'Nymph'	205	50	x				15-20	27-32	10-17	15	10	
Gladiolus ramosus 'Robinetta'	206	50	x				15-20	27-32	10-17	15	10	
Gladiolus tubergenii 'Charm'	206	40	x				15-20	27-32	10-17	15	10	
Gloriosa												
Gloriosa 'Rothschildiana'	206	150	x	x		x	15-25	27-37	10-25	50	10	
Gloxinia (syn. Sinningia)												
Gloxinia 'Etoile de Feu'	206	25		x	x	x	8-15	21-30	5-18	20	10	
Gloxinia 'Mont Blanc'	206	25		x	x	x	8-15	21-30	5-18	20	10	
Gloxinia 'Kaiser Wilhelm'	207	25		x	x	x	8-15	21-30	5-18	20	10	
Habranthus												
Habranthus robustus (syn. Zephyranthus)	207	15		x			15-20	30-36	10-20	10	5	
Hedychium												
Hedychium gardnerianum	207	150		x			15-20	28-35	10-20	20	15	
Hermodactylus												
Hermodactylus tuberosus (syn. Iris tuberosa)	207	25					38-48	18-21	35-48	10	10	
Hippeastrum (syn. Amaryllis)												
Hippeastrum 'Ambiance' ®	214	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Amigo' ®	214	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Amputo'	214	40	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Aphrodite'	214	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Apple Blossom'	215	45	x	x	x	x	44-20	50-25	40-20	20		

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Hippeastrum 'Athene' ®	215	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Baby Star' ® small flowering	215	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Benfica' ®	215	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Calimero' ® small flowering	216	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Charisma' ®	216	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Chico' ®	216	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Christmas Gift' ®	216	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Dancing Queen' ®	217	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Desire'	217	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Donau' small flowering	217	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Double Record'	217	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Exposure' ®	218	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Fairytale' small flowering	218	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Faro' ®	218	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Ferrari' ®	218	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Flair' ®	219	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Floris Hekker' ®	219	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Gran Cru' ®	219	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Green Goddess' small flowering	219	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Happiness' ®	220	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Hercules'	220	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Hermitage' ®	220	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Jewel' ®	220	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'La Paz' ®	221	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Lady Jane'	221	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Lemon Lime' small flowering	221	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Liberty'	221	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Lima' ®	222	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Limona' ®	222	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Lovely Garden'	222	40		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Matterhorn' ®	222	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Minerva'	223	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Mont Blanc'	223	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Nymph' ®	223	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Orange Sovereign'	223	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Pamela' small flowering	224	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Papillo'	224	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Pasadena'	224	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Picotee'	224	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Pink Floyd'	225	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Pink Nymph' ®	225	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Piquant'	225	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Red Lion'	225	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Red Peacock' ®	226	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Rilona'	226	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Roma' ®	226	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Royal Velvet' ®	226	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Santa Cruz' ® small flowering	227	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Solomon' ®	227	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Sydney' ®	227	45	x	x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Stargazer' ®	227	45	x		x	x	44-20	50-25	40-20	20		
Hippeastrum 'Toronto' ®	228	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Unique'®	228	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'Vera' ®	228	45		x	x	x	44-20	50-25	40-20	20		
Hippeastrum 'White Nymph' ®	228	45	x	x	x	x	44-20	50-25	40-20	20		
Homeria												
Homeria flaccida (syn. aurantiaca)	229	50					15-20	25-33	10-20	10	10	
Homeria ochroleuca	229	50					15-20	25-33	10-20	10	10	
Hyacinthoides (syn. Scilla campanulata)												
Hyacinthoides hispanica blue	229	25	x			x	38-48	19-25	35-48	10	10	x
Hyacinthoides hispanica pink	229	25	x			x	38-48	19-25	35-48	10	10	x
Hyacinthoides hispanica mixed	230	25	x			x	38-48	19-25	35-48	10	10	x
Hyacinthoides hispanica 'Dainty Maid'	230	30	x				38-48	19-25	35-48	10	10	x
Hyacinthoides hispanica 'Excelsior'	230	30	x				38-48	19-25	35-48	10	10	x
Hyacinthoides hispanica 'Queen of the Pinks'	230	30	x				38-48	19-25	35-48	10	10	x
Hyacinthoides hispanica 'White City'	231	30	x				38-48	19-25	35-48	10	10	x

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Hyacinthoides non-scripta (syn. Scilla nutans)	231	25	x			x	38-48	19-25	35-48	10	10	x
Hymenocallis												
Hymenocallis festalis 'Zwanenburg' (syn. Ismene)	231	60		x		x	15-20	28-32	10-20	20	10	
Hymenocallis 'Advance' (syn. Ismene calathina)	231	60		x		x	15-20	28-32	10-20	20	10	
Hymenocallis 'Sulphur Queen'	232	40		x		x	15-20	28-32	10-20	20	10	x
Incarvillea												
Incarvillea delavayi	232	30-45		x			15-20	25-35	10-20	20	10	
Incarvillea delavayi 'Snowtop'	232	30-45		x			15-20	25-35	10-20	20	10	
Ipheion (syn. Tritelleia uniflora)												
Ipheion uniflorum	232	10-15		x		x	38-48	15-22	35-48	5	5	
Ipheion uniflorum 'Rolf Fiedler'	233	10-15		x		x	38-48	15-22	35-48	5	5	
Ipheion uniflorum 'Wisley Blue'	233	10-15		x		x	38-48	13-19	35-48	5	5	
Iris												
Iris bucharica	233	25-30		x		x	38-48	15-18	35-48	10	10	x
Iris danfordiae	233	10		x			38-48	9-11	35-48	10	10	x
Iris regelio-cyclus 'Dardanus'	234	40				x	38-48	19-22	35-48	15	15	
Iris histrioides 'George'	234	10		x		x	38-48	10-12	35-48	10	10	
Iris 'Katharine Hodgkin'	234	15		x		x	38-48	10-12	35-48	10	10	x
Iris reticulata	234	15		x		x	38-48	10-12	35-48	10	10	
Iris reticulata 'Cantab'	235	15		x		x	38-48	10-12	35-48	10	10	x
Iris reticulata 'Harmony'	235	15		x		x	38-48	10-12	35-48	10	10	
Iris reticulata 'J.S. Dijt'	235	15		x		x	38-48	10-12	35-48	10	10	
Iris reticulata 'Pixie' ®	235	15		x		x	38-48	10-12	35-48	10	10	
Iris reticulata 'Pauline'	236	15		x		x	38-48	10-12	35-48	10	10	
Iris												
Iris hollandica mixed (syn. Dutch Iris)	236	50-60	x				38-48	22-24	35-48	10	10	
Iris latifolia mixed (syn. Iris anglica)	236	50	x				38-48	23-25	35-48	10	10	
Ixia												
Ixia 'Giant'	236	45	x				15-20 / 44-48	28-32	35-48 / 10-20	10	7	
Ixia 'Mabel'	237	45	x				15-20 / 44-48	28-32	35-48 / 10-20	10	7	
Ixia mixed	237	45	x				15-20 / 44-48	28-32	35-48 / 10-20	10	7	
Ixia 'Panorama'	237	45	x				15-20 / 44-48	28-32	35-48 / 10-20	10	7	
Ixia 'Rose Emperor'	237	45	x				15-20 / 44-48	28-32	35-48 / 10-20	10	7	
Ixia 'Yellow Emperor'	238	45	x				15-20 / 44-48	28-32	35-48 / 10-20	10	7	
Ixiolirion												
Ixiolirion tataricum (syn. Iedebourii, pallasii)	238	30				x	38-48	20-23	35-48	8	10	
Lachenalia												
Lachenalia mixed	238	20	x	x	x		15-20	17-33	10-20	10	3	
Leucocoryne												
Leucocoryne mixed	238	40	x				5-17 / 40-48	22-30	5-17 / 40-48	10	7	x
Leucocoryne 'Caravelle' ®	239	40	x				5-17 / 40-48	22-30	5-17 / 40-48	10	7	x
Leucocoryne 'Andes' ®	239	40	x				5-17 / 40-48	22-30	5-17 / 40-48	10	7	x
Leucocoryne 'Blue Ocean' ®	239	40	x				5-17 / 40-48	22-30	5-17 / 40-48	10	7	x
Leucojum												
Leucojum aestivum 'Gravetye Giant'	239	40		x		x	38-48	19-21	35-48	12	10	
Leucojum vernum	240	20				x	38-48	5-8	35-48	5	10	
Liatris												
Liatris spicata 'Alba'	240	70	x			x	15-20	30-35	10-20	10	10	
Liatris spicata	240	70	x			x	15-20	30-35	10-20	10	10	
Lilium												
Lilium candidum	240	80				x	10-20/35-48	23-27	10-20/35-48	30	10	x
Lilium martagon	241	80				x	10-20/35-48	23-27	10-20/35-48	25	15	
Lilium tigrinum mixed	241	80				x	15-20	30-35	10-20	25	15	
Lilium regale 'Album'	241	100				x	15-20	28-32	10-20	25	20	x
Lilium Trumpet hybrid 'African Queen'	241	100				x	15-20	30-35	10-20	25	20	x
Lilium Trumpet hybrid 'Golden Splendour'	242	100				x	15-20	30-35	10-20	25	20	x
Lilium Trumpet hybrid 'Pink Perfection'	242	100				x	15-20	30-35	10-20	25	20	x
Lilium henryi	242	125				x	15-20	30-35	10-20	25	20	
Lilium speciosum	242	100				x	15-20	34-37	10-20	25	20	
Mirabilis												
Mirabilis 'Jalapa'	243	60		x		x	13-20	32-42	10-20	20	10	
Muscari												
Muscari armeniacum	248	20	x	x		x	38-48	14-17	35-48	8	10	x
Muscari armeniacum 'Atlantic' ®	248	15		x			38-48	14-17	35-48	8	10	
Muscari armeniacum 'Blue Spike'	248	20		x		x	38-48	14-17	35-48	9	10	x
Muscari armeniacum 'Christmas Pearl'	248	20	x	x			38-48	14-17	35-48	8	10	

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Muscari armeniacum 'Fantasy Creation' ®	249	20	x	x		x	38-48	14-17	35-48	8	10	
Muscari armeniacum 'Saffier'	249	20-25	x				38-48	14-17	35-48	8	10	
Muscari armeniacum 'Valerie Finnis' ®	249	20				x	38-48	14-17	35-48	8	10	
Muscari aucheri 'Blue Magic' ®	249	15-20		x			38-48	13-17	35-48	8	10	
Muscari aucheri 'Dark Eyes'	250	20	x			x	38-48	14-17	35-48	8	10	
Muscari aucheri 'Mont Blanc'	250	15-20		x			38-48	14-17	35-48	8	10	
Muscari aucheri 'Mount Hood' ®	250	15-20	x	x		x	38-48	14-17	35-48	8	10	
Muscari azureum	250	10-15				x	38-48	11-14	35-48	8	10	
Muscari botryoides 'Album'	251	20	x	x		x	38-48	14-17	35-48	8	10	x
Muscari comosum	251	25				x	38-48	19-24	35-48	8	10	x
Muscari comosum 'Plumosum'	251	25				x	38-48	19-25	35-48	8	10	x
Muscari latifolium	251	25	x	x		x	38-48	14-17	35-48	8	10	x
Muscari macrocarpum	252	20				x	38-48	15-18	35-48	8	10	
Muscari neglectum 'Sky Blue'	252	25	x			x	38-48	11-14	35-48	8	10	
Nectaroscordum (syn. Allium siculum)												
Nectaroscordum siculum ssp bulgaricum	252	90	x			x	38-48	18-21	35-48	15	15	x
Nerine												
Nerine bowdenii	252	50	x	x		x	15-20	36-39	10-23	15	10	
Nerine sarniensis	253	50	x	x		x	15-20	36-39	10-23	15	10	
Nerine undulata	253	40	x	x		x	15-20	36-39	10-23	15	10	
Ornithogalum												
Ornithogalum arabicum	253	50		x			15-20	23-26	10-20	15	10	
Ornithogalum balansae	253	10-15		x		x	38-48	12-16	35-48	10	10	
Ornithogalum dubium	254	20-30	x	x			15-20	28-36	10-20	8	5	
Ornithogalum dubium 'Gold'	254	20-30	x	x			15-20	28-36	10-20	8	5	
Ornithogalum magnum	254	60	x			x	38-48	21-24	35-42	15	15	
Ornithogalum narbonense	254	30-40	x			x	38-48	22-25	35-48	15	15	
Ornithogalum nutans	255	20-30				x	38-48	14-18	35-48	10	10	
Ornithogalum saundersiae	255	100	x				15-20	27-36	10-20	20	5	
Ornithogalum thyrsoides	255	40	x	x			15-20	27-36	10-20	15	10	
Ornithogalum thyrsoides 'Fred Meier'	255	50	x	x			15-20	27-36	10-20	15	10	
Ornithogalum thyrsoides 'Starlight'	256	50	x	x			15-20	27-36	10-20	15	10	
Ornithogalum umbellatum	256	15				x	38-48	18-21	35-48	10	10	
Oxalis												
Oxalis adenophylla	256	8		x		x	38-48	24-38	35-48	15	10	
Oxalis deppei 'Iron Cross'	256	15		x			15-20	28-38	10-20	5	5	
Oxalis depressa (syn. inops)	257	10		x			15-20	30-36	10-20	5	5	
Oxalis lasiandra	257	25		x			15-20	30-36	10-20	5	5	
Oxalis purpurea 'Ken Aslet'	257	15		x			15-20	30-36	10-20	5	5	
Oxalis triangularis	257	20		x			15-20	25-35	10-20	5	3	
Oxalis triangularis ssp. papilionacea (syn. regnellii)	258	15		x			15-20	25-35	10-20	5	3	
Oxalis versicolor	258	15					15-20	25-35	10-20	5	5	
Pleione												
Pleione formosana	258	10		x			15-20	25-35	10-20	5	5	
Polianthes												
Polianthes tuberosa 'The Pearl'	258	60-80	x				15-20	30-35	10-20	15	15x	
Puschkinia												
Puschkinia scilloides var libanotica (syn. libanotica)	259	10-15		x		x	38-48	12-15	35-48	7	10	
Puschkinia scilloides var libanotica 'Alba'	259	10-15		x		x	38-48	12-15	35-48	7	10	
Ranunculus												
Ranunculus asiaticus mixed	259	40	x				15-20	25-35	10-20	8	5	
Rhodohypoxis												
Rhodohypoxis 'Stella'	259	10		x		x	10-20	20-30	10-20	5	5	
Rhodohypoxis 'Picta'	260	10		x		x	10-20	20-30	10-20	5	5	
Rhodohypoxis 'Tetraploid Red'	260	10		x		x	10-20	20-30	10-20	5	5	
Roscoea												
Roscoea 'Beesiana'	260	25		x		x	15-20	25-40	5-20	12	10	
Roscoea cauleoides	260	25		x		x	15-20	25-40	5-20	12	10	
Roscoea purpurea	261	25		x		x	15-20	25-40	5-20	12	10	
Sandersonia												
Sandersonia aurantiaca	261	70	x	x		x	15-20	32-36	10-20	15	10	
Sauromatum												
Sauromatum venosum (syn. Arum cornutum)	261	30		x			15-20	22-24	10-20	25	10	
Scadoxus												
Scadoxus multiflorus (syn. Haemanthus)	261	40		x	x	x	15-25	33-36	10-20	20		

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Scilla bifolia	262	10				x	38-48	10-14	35-48	5	10	
Scilla litardierei (syn. amethystina, pratensis)	262	15				x	38-48	12-15	35-48	7	10	
Scilla mischtschenkoana (syn. tubergeniana)	262	10		x		x	38-48	8-12	35-48	7	1	
Scilla peruviana	262	25		x		x	38-48	20-24	35-48	15	15	
Scilla siberica	263	15		x		x	38-48	12-15	35-48	5	10	
Scilla siberica 'Alba'	263	15		x		x	38-48	12-15	35-48	5	10	
Scilla siberica 'Spring Beauty'	263	15		x		x	38-48	12-15	35-48	5	10	
Schizostylis												
Schizostylis coccinea 'Mrs. Hegarty'	263	50		x		x	15-20	35-42	10-20	10	8	
Schizostylis coccinea	264	50		x		x	15-20	35-42	10-20	10	8	
Sparaxis												
Sparaxis tricolor mixed	264	25		x		x	15-20	25-32	10-20	10	8	
Sprekelia												
Sprekelia formosissima (syn. Amaryllis)	264	30		x			15-20	25-27	10-20	15	10	
Sternbergia												
Sternbergia lutea	264	15					32-35	35-37	32-35	10	15	
Tigridia												
Tigridia pavonia 'Canariensis'	265	45					15-20	32-38	10-20	10	10	
Tigridia pavonia 'Lilacea'	265	45					15-20	32-38	10-20	10	10	
Trillium												
Trillium grandiflorum	265	35				x	15-20	18-24	10-20	20	15	
Trillium luteum	265	35				x	15-20	18-24	10-20	20	15	
Trillium erectum	266	35				x	15-20	18-24	10-20	20	15	
Triteleia (syn. Brodiaea)												
Triteleia hyacinthina	266	50				x	38-48	20-25	35-48	7	10	
Triteleia 'Koningin Fabiola'	266	50	x			x	38-48	22-25	35-48	7	10	
Triteleia 'Starlight'	266	40	x			x	38-48	25-28	35-48	7	10	
Tritonia												
Tritonia crocata mixed	267	25		x			15-20	27-32	10-20	8	5	
Tropaeolum												
Tropaeolum tuberosum	267	150					15-20	37-48	10-20	20	15	
Tulbaghia												
Tulbaghia fragrans	267	50		x		x	15-20	24-42	10-20	10	8	x
Tulbaghia violacea	267	50		x		x	15-20	24-42	10-20	10	8	x
Uvularia												
Uvularia grandiflora	268	40-60				x	12-17	14-24	12-17	25	10-	
Veltheimia												
Veltheimia bracteata	268	50	x	x	x	x	35-40	4-12	35-44	25		
Watsonia												
Watsonia	268	100	x				15-20	32-35	10-20	15	15	
Zantedeschia (syn. Calla)												
Zantedeschia aethiopica	274	70	x	x		x	10-20	15-20	5-20	40	10	
Zantedeschia aethiopica 'Green Goddess'	274	60	x	x		x	10-20	15-20	5-20	40	10	
Zantedeschia aethiopica 'Pink Mist' ®	274	70	x	x		x	10-20	25-30-	5-20	30	10	
Zantedeschia albomaculata	274	65	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Black Eyed Beauty'	275	65	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Black Magic'	275	60	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Brilliant Black Star' ®	275	60	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Cameo'	275	65	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Captain Rodin' ®	276	60	x			x	10-20	24-36	5-20	30	10	
Zantedeschia 'Captain Romance' ®	276	55	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Captain Tendens' ®	276	65	x			x	10-20	24-36	5-20	30	10	
Zantedeschia 'Captain Volante' ®	276	65	x			x	10-20	24-36	5-20	30	10	
Zantedeschia 'Chrystal Blush'	277	50	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia elliottiana	277	60	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Flame' ®	277	55	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Florex Gold'	277	50	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Garmet Glow' ®	278	55	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Hot Shot'	278	50	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Indian Summer' ®	278	60	x			x	10-20	24-36	5-20	30	10	
Zantedeschia 'Majestic Red'	278	50	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Mango'	279	50	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Mozart' ®	279	55	x			x	10-20	24-36	5-20	30	1	
Zantedeschia 'Picasso' ®	279	55	x			x	10-20	24-36	5-20	30	10	
Zantedeschia 'Pink Persuasion'	279	50	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Pretty Woman' ®	280	55	x			x	10-20	24-36	5-20	30	10	

CULTIVAR	PAGE NR.	HEIGHT	CUT	POT	GREEN- HOUSE	PERENNIAL	PLANTING	FLOWERING (weeks)	SALES (weeks)	DISTANCE (weeks)	DEPTH	SCENTED
Zantedeschia 'Purple Haze' ®	280	60	x			x	10-20	24-36	5-20	30	10	
Zantedeschia rehmannii	280	30	x	x		x	10-20	24-36	5-20	30	10	
Zantedeschia 'Rubylite Rose' ®	280	55	x			x	10-20	24-36	5-20	30	10	
Zantedeschia 'Schwarzwaller' ®	281	55	x			x	10-20	24-36	5-20	30	10	
Zantedeschia 'Selina'	281	55	x			x	10-20	24-36	5-20	30	10	
Zantedeschia 'Solfatare'	281	60	x			x	10-20	24-36	5-20	30	10	
Zantedeschia 'Sunshine' ®	281	55	x			x	10-20	24-36	5-20	30	10	



Index

A

'Abba' Narcissus	34
'Accent' Narcissus	34
Achimenes 'Paul Arnold'	126
Achimenes 'Prima Donna'	126
'Acropolis' Narcissus	34
'Actaeal' Narcissus	34
Acidanthera 'Murielae'	
(Gladiolus callianthus 'Murielae')	205
'Admiral' Anemone coronaria	150
'Advance' Crocus chrysanthus	178
'Advance' Hymenocallis (syn. Ismene)	231
'African Queen' Lilium Trumpet hybrid	241
Agapanthus 'Blue Triumphator'	126
Agapanthus 'Donau'	126
Agapanthus 'Intermedius'	127
Agapanthus 'Polar Ice'	127
Agapanthus umbellatus 'Album'	127
'Aiolos' Hyacinth	104
'Alba' Camassia leichtlinii	160
'Alba' Chionodoxa luciliae (syn. gigantea)	165
'Alba' Corydalis solida	169
'Alba' Fritillaria meleagris	199
'Alba' Scilla siberica	263
'Album' Agapanthus umbellatus	127
'Album' Allium carinatum ssp pulchellum	133
'Album' Allium hirtifolium var.	136
'Album' Allium rosenbachianum	139
'Album' Colchium autumnale	166
'Album' Crinum powellii	170
'Album' Cyclamen hederifolium (syn. neapolitanum)	187
'Album' Muscari botryoides	251
Allium aflatunense	132
Allium albopilosum (Allium christophii)	134
Allium alfatunense 'Purple Sensation'	132
Allium atropurpureum	132
Allium azureum (Allium caeruleum)	133
Allium 'Beau Regard'	132
Allium cearuleum	133
Allium carinatum ssp pulchellum	133
Allium carinatum ssp pulchellum 'Album'	133
Allium cernuum	133
Allium christophii (syn. albopilosum)	134
Allium cowanii	134
Allium 'Firmament'	134
Allium flavum	134
Allium giganteum	135
Allium 'Gladiator'	135
Allium 'Globemaster' ®	135
Allium 'Hair' ®	135
Allium hirtifolium var. 'Album'	136
Allium 'His Excellency'	136
Allium karataviense	136
Allium kataraviense 'Ivory Queen' ®	136
Allium luteum (Allium moly)	137
Allium 'Mars'	137
Allium moly (syn. luteum)	137
Allium moly 'Jeannine'	137
Allium 'Mont Blanc'	137
Allium 'Mount Everest'	138
Allium multibulbosum (Allium nigrum)	138
Allium neapolitanum	138
Allium nigrum (syn. multibulbosum)	138
Allium oreophilum (syn. osterowskianum)	138
Allium ostrowskianum (Allium oreophilum)	138
Allium pulchellum (Allium carinatum)	133

Allium rosenbachianum	139
Allium rosenbachianum 'Album'	139
Allium 'Round and Purple'	139
Allium schubertii	139
Allium siculum	
(Allium Nectaroscordum siculum ssp bulgaricum)	252
Allium sphaerocephalon	140
Allium stipitatum	140
Allium triquetrum	140
Allium roseum	140
Allium unifolium	141
Allium ursunum	141
Alstroemeria mixed	141
Alstroemeria aurea 'Orange King'	141
Amarylilis (Hippeastrum)	214-228
Amarylilis belladonna	142
Amarylilis formosissima	
(Sprekelia formosissima)	264
Amarcrinium howardii	142
Amarine tubergenii 'Zwanenburg'	142
'Ambergate' Narcissus	35
'Amethyst' Hyacinth	104
'Ambiance' Hippeastrum	214
'Amigo' Hippeastrum	214
'Amputo' Hippeastrum	214
'Amsterdam' Hyacinth	104
'Andes' Leucocoryne	239
Anemone blanda 'Blue Shades'	148
Anemone blanda 'Charmer'	148
Anemone blanda 'Pink Star'	148
Anemone blanda 'Radar'	148
Anemone blanda 'White Splendour'	149
Anemone blanda mixed	149
Anemone coronaria 'De Caen'	149
Anemone coronaria 'Hollandia'	149
Anemone coronaria 'Mr. Fokker'	150
Anemone coronaria 'Sylphide'	150
Anemone coronaria 'Bride'	150
Anemone coronaria 'Admiral'	150
Anemone coronaria 'Governor'	151
Anemone coronaria 'Lord Lieutenant'	151
Anemone coronaria 'Mount Everest'	151
Anemone coronaria St Brigid	151
Anemone nemorosa	152
Anemone nemorosa 'Robinsoniana'	152
Anemone nemorosa 'Vestal'	152
Anemone ranunculoides	152
'Anna Liza' Hyacinth	104
'Anna Marie' Hyacinth	105
Anomatheca laxa (syn. Lapeirousia cruenta)	153
'Antarctica' Hyacinth	105
'Aphrodite' Hippeastrum	214
'Apotheose' Narcissus	35
'Apple Blossom' Hippeastrum	215
'Apricot Passion' Hyacinth	105
'Arctic Gold' Narcissus	35
'Ard Schenk' Crocus chrysanthus	178
Arisaema speciosum	153
'Arkle' Narcissus	35
Arum cornutum, Sauromatum guttatum	
(Sauromatum venosum)	261
Arum dracunculus (Dracunculus vulgaris)	189
Arum italicum	153
Arum maculatum	153
'Athene' Hippeastrum	215
'Atlantic' Hyacinth	105
'Atlantic' Muscari armeniacum	248
'Audubon' Narcissus	36
'Aurora' Fritillaria imperialis	198
'Avalon' Narcissus	36

B

Babiana stricta	154
'Babylon' Brodiaea californica	158
'Babylon' Crocosmia crocosmiiflora	170
'Baby Moon' Narcissus	36
'Baby Star' Hippeastrum	215
'Ballade' Narcissus	36
'Barr's Purple' Crocus tommasinianus	184
'Barrett Browning' Narcissus	37
'Beau Regard' Allium	132
'Beesiana' Roscoea	260
Begonia cascade mixed	154
Begonia Crispa	154
Begonia Double	154
Begonia fimbriata	155
Begonia Grandiflora mixed	155
Begonia Grandiflora	155
Begonia Grandiflora	155
Begonia Non Stop ®	156
Begonia pendula	157
Begonia picotee	156
'Belcanto' Narcissus	37
'Bell Song' Narcissus	37
'Bella Estrella' Narcissus	37
'Bella Vista' Narcissus	38
Bellevia pycnantha (syn. Muscari paradoxum)	156
Bellevia romana (syn. Hyacinthus romanus)	157
'Benfica' Hippeastrum	215
'Berlin' Narcissus	38
Bessera elegans	157
'Birna' Narcissus	38
'Bittern' Narcissus	38
'Black Eyed Beauty' Zantedeschia	275
'Black Magic' Zantedeschia	275
Bletilla hyacinthina (Bletilla striata)	157
Bletilla striata (syn. Bletilla hyacinthina)	157
Bloomeria crocea var. aurea	157
'Blue Bird' Crocus chrysanthus	178
'Blue Festival' Hyacinth	106
'Blue Giant' Hyacinth	106
'Blue Jacket' Hyacinth	106
'Blue Magic' Muscari aucheri	249
'Blue Melody' Camassia quamash	161
'Blue Ocean' Leucocoryne	239
'Blue Pearl' Crocus chrysanthus	179
'Blue Pearl' Hyacinth	106
'Blue Shades' Anemone blanda	148
'Blue Spike' Muscari armeniacum	248
'Blue Star' Hyacinth	107
'Blue Triumphator' Agapanthus	126
'Bowles White' Crocus sieberi	183
'Brackenhurst' Narcissus	39
'Bridal Crown' Narcissus	39
'Bride' Anemone coronaria	150
'Brilliant' Canna	161
'Brilliant Black Star' Zantedeschia	275
Brimeura amethystina mixed (syn. Hyacinthus)	158
'Broadway Star' Narcissus	39
Brodiaea californica 'Babylon' ®	158
Brodiaea congesta	
(Dichelostemma congestum)	188
Brodiaea coccinea (Dichelostemma ida-maia)	189
Brodiaea hyacinthina (Triteleia hyacinthina)	266
Brodiaea 'Koningin Fabiola'	
(Triteleia 'Koningin Fabiola')	266
Brodiaea 'Pink Diamond'	
(Dichelostemma 'Pink Diamond')	189
Brodiaea 'Starlight' (Triteleia 'Starlight')	266
Bulbocodium conspicuus, Narcissus	39
Bulbocodium vernum (syn. Colchium)	158

C			
'Cadena' Narcissus	40	'City of Haarlem' Hyacinth	108
'Caerulea' Camassia leichtlinii	160	'Cleopatra' Canna	162
'Cairngorm' Narcissus	40	'Cleopatra' Eremurus	190
'California' Narcissus	40	Colchicum autumnale (syn. autumnale var minor)	166
Caladium	159	Colchicum autumnale 'Album'	166
'Calimero' Hippeastrum	216	Colchicum bornmuelleri	166
Calla (Zantedeschia)	274-281	Colchicum cilicicum 'Purpureum'	166
Calochortus 'Golden Orb' ®	159	Colchicum 'Lilac Wonder'	167
Calochortus superbus ®	159	Colchicum pannonicum	167
Calochortus venustus ®	159	Colchicum 'The Giant'	167
Calochortus 'Violet Queen' ®	160	Colchicum vernum (Bulbocodium vernum)	158
Camassia esculenta (Camassia quamash)	161	Colchicum 'Waterlily'	167
Camassia cusickii	160	Colocasia esculenta	158
Camassia leichtlinii 'Alba'	160	'Columbus' Crocosmia crocosmiiflora	171
Camassia leichtlinii 'Caerulea'	160	Commelina coelestis (Commelina tuberosa)	168
Camassia leichtlinii 'Semplena'	161	Commelina tuberosa mixed (syn. coelestis)	168
Camassia quamash (syn. esculenta)	161	Commelina tuberosa blue (syn. coelestis)	168
Camassia quamash 'Blue Melody'	161	Convallaria majalis	168
'Camelot' Narcissus	40	Corydalis bulbosa (Corydalis cava)	168
'Cameo' Zantedeschia	275	Corydalis cava (syn. bulbosa)	168
'Canaliculatus' Narcissus	41	Corydalis decipiens	169
'Canariensis' Tigrida pavonia	265	Corydalis flexuosa	169
Canna 'Brilliant'	161	Corydalis solida	169
Canna 'Cleopatra'	162	Corydalis solida 'Alba'	169
Canna 'Louis Cotton'	162	Cosmos atrosanguineus	170
Canna 'Lucifer'	162	'Cotinga' Narcissus	43
Canna mixed	162	'Cragford' Narcissus	43
Canna 'Pretoria'	163	'Cream Beauty' Crocus chrysanthus	179
Canna 'Tirol'	163	Crinum powellii	170
Canna 'Wyoming'	163	Crinum powellii 'Album'	170
'Cantab' Iris reticulata	235	Crococsmia crocosmiiflora 'Babylon' (syn. Montbretia)	170
'Captain Rodin' Zantedeschia	276	Crococsmia crocosmiiflora 'Carmine Brilliant'	171
'Captain Romance' Zantedeschia	276	Crococsmia crocosmiiflora 'Columbus'	171
'Captain Tendens' Zantedeschia	276	Crococsmia crocosmiiflora 'Emily McKenzie'	171
'Captain Volante' Zantedeschia	276	Crococsmia crocosmiiflora 'George Davison'	171
'Caravelle' Leucocoryne	239	Crococsmia crocosmiiflora 'John Boots'	172
'Carbineer' Narcissus	41	Crococsmia crocosmiiflora 'Lucifer'	172
'Carlton' Narcissus	41	Crococsmia crocosmiiflora 'Mistral'	172
'Carmine Brilliant' Crocosmia crocosmiiflora	171	Crococsmia crocosmiiflora 'Météore'	172
'Carnegie' Hyacinth	107	Crococsmia crocosmiiflora 'Red King'	173
'Cassata' Narcissus	41	Crococsmia masonorum	173
'Changing colors' Narcissus	42	Crocus ancyrensis 'Golden Bunch'	178
'Chanterelle' Narcissus	42	Crocus chrysanthus 'Advance'	178
'Charisma' Hippeastrum	216	Crocus chrysanthus 'Ard Schenk'	178
'Charm' Gladiolus tubergenii	206	Crocus chrysanthus 'Blue Bird'	178
'Charmer' Anemone blanda	148	Crocus chrysanthus 'Blue Pearl'	179
Chasmanthe floribunda	163	Crocus chrysanthus 'Cream Beauty'	179
Chasmanthe floribunda var. duckitii	164	Crocus chrysanthus 'Dorothy'	179
'Cheerfulness' Narcissus	42	Crocus chrysanthus 'E.P. Bowles'	179
'Cherry Spot' Narcissus	42	Crocus chrysanthus 'Fuscotinctus'	180
'Chico' Hippeastrum	216	Crocus chrysanthus 'Gipsy Girl'	180
'China Pink'	107	Crocus chrysanthus 'Goldilocks'	180
'Chinese Sacred Lily' Narcissus	43	Crocus chrysanthus 'Ladykiller'	180
Chionodoxa forbesii	164	Crocus chrysanthus 'Miss Vain'	181
missupplied Chionodoxa lucilae		Crocus chrysanthus 'Prins Claus'	181
Chionodoxa forbesii 'Pink Giant'	164	Crocus chrysanthus 'Romance'	181
missupplied Chionodoxa lucilae 'Pink Giant'		Crocus chrysanthus 'Saturnus'	181
Chionodoxa gigantea (syn. Chionodoxa lucilae)	164	Crocus chrysanthus 'Snowbunting'	182
Chionodoxa gigantea 'Alba'		Crocus chrysanthus 'Zwanenburg Bronze'	182
(syn. Chionodoxa lucilae 'Alba')	165	Crocus etruscus 'Zwanenburg'	182
Chionodoxa lucilae (syn. gigantea)	164	Crocus flavus 'Golden Yellow'	182
Chionodoxa lucilae 'Alba' (syn. gigantea 'Alba')	165	Crocus pulchellus 'Zephyr'	183
Chionodoxa sardensis	165	Crocus sieberi 'Bowles White'	183
Chionoscilla	165	Crocus sieberi 'Firefly'	183
Chlidanthus fragrans	165	Crocus sieberi ssp. sublimis 'Tricolor'	183
'Christmas Gift' Hippeastrum	216	Crocus sieberi 'Violet Queen'	184
'Christmas Pearl' Muscari armeniacum	248	Crocus tommasinianus 'Barr's Purple'	184
'Chrystal Blush' Zantedeschia	277	Crocus tommasinianus 'Ruby Giant'	184
'City of Bradford' Hyacinth	107	Crocus tommasinianus 'Whitewell Purple'	184
		Crocus vernus 'Flower Record'	185
		Crocus vernus 'Grand Maître'	185
		Crocus vernus 'Jeanne d'Arc'	185
		Crocus vernus 'King of the Striped'	185
		Crocus vernus 'Pickwick'	186
		Crocus vernus 'Remembrance'	186
		Crocus vernus 'Vanguard'	186
		Curcuma alismatifolia	186
		'Curlew' Narcissus	43
		Cyclamen cilicicum	187
		Cyclamen coum hybridum	187
		Cyclamen hederifolium (syn. neapolitanum)	187
		Cyclamen hederifolium 'Album' (syn. neapolitanum)	187
		Cyclamen neapolitanum (Cyclamen hederifolium)	187
		Cyclamen neapolitanum 'Alba'	
		(Cyclamen hederifolium 'Alba')	187
		Cyclamen persicum	188
		'Cyclope' Narcissus	44
		Cyrtanthus elatus 'Pink Diamond'	
		(syn. Vallota speciosa)	188
		Cyrtanthus elatus 'Snow White'	
		(syn. Vallota speciosa)	188
D			
		'Dainty Maid' Hyacinthoides hispanica	230
		'Dancing Queen' Hippeastrum	217
		'Dardanus' Iris regelio-cyclus	234
		'Dark Eyes' Muscari aucheri	250
		'De Caen' Anemone coronaria	149
		'Decoy' Narcissus	44
		'Delibes' Narcissus	44
		'Delft Blue' Hyacinth	108
		'Delnashaugh' Narcissus	44
		'Delta' Narcissus	45
		'Desdemona' Narcissus	45
		'Desire' Hippeastrum	217
		Dichelostemma congestum (syn. Brodiaea)	188
		Dichelostemma ida-maia	
		(syn. Brodiaea coccinea)	189
		Dichelostemma 'Pink Diamond' (syn. Brodiaea)	189
		'Dick Wilden' Narcissus	45
		'Dickcissel' Narcissus	45
		'Doctor Alex Fleming' Narcissus	46
		'Donau' Agapanthus	126
		'Donau' Hippeastrum	217
		'Dorothy' Crocus chrysanthus	179
		'Double Campenelle' Narcissus	46
		'Double Fashion' Narcissus	46
		'Double Record' Hippeastrum	217
		Dracunculus vulgaris (syn. Arum dracunculus)	189
		Dutch Iris (Iris hollandica mixed)	236
		'Dutch Master' Narcissus	46
E			
		'Early Bird' Hyacinth	108
		'Early Bride' Narcissus	47
		'Easter Bonnet' Narcissus	47
		'Eastern Dawn' Narcissus	47
		'Edna Earl' Narcissus	47
		'Emily McKenzie' Crocosmia crocosmiiflora	171
		'E.P. Bowles' Crocus chrysanthus	179
		Eranthis cilicica	189
		Eranthis hyemalis	190
		Eremurus bungei (Eremurus stenophyllus)	190
		Eremurus 'Cleopatra'	190
		Eremurus 'Pinokkio'	191
		Eremurus robustus	190
		Eremurus stenophyllus (syn. Eremurus bungei)	190
		'Erlcheer' Narcissus	48
		Erythronium dens-canis	191
		Erythronium 'Pagoda'	191

Erythronium 'White Beauty'	191	Galanthus woronowii (syn. ikariae)	203	Hippeastrum 'Athene' ®	215
'Etoile de Feu' Gloxinia (syn. Sinningia)	206	Galtonia candicans (syn. Hyacinthus candicans)	204	Hippeastrum 'Baby Star' ®	215
Eucharis amazonica (syn. grandiflora)	192	Galtonia viridiflora	204	Hippeastrum 'Benfica' ®	215
Eucharis grandiflora (Eucharis amazonica)	192	'Garment Glow' Zantedeschia	278	Hippeastrum 'Calimero' ®	216
Eucomis autumnalis 'White Dwarf'	192	'Gentle Giant' Narcissus	51	Hippeastrum 'Charisma' ®	216
Eucomis bicolor	192	'George' Iris histrioides	234	Hippeastrum 'Chico' ®	216
Eucomis comosa (syn. punctata)	192	'George Davison' Crocosmia crocosmiiflora	171	Hippeastrum 'Christmas Gift' ®	216
Eucomis punctata (Eucomis comosa)	192	'Geranium' Narcissus	51	Hippeastrum 'Dancing Queen' ®	217
Eucomis vandermerwei	193	Geranium tuberosum	204	Hippeastrum 'Desire'	217
'Excelsior' Hyacinthoides hispanica	230	'Giant' Ixia	236	Hippeastrum 'Donau'	217
'Exception' Narcissus	48	'Gigantic Star' Narcissus	52	Hippeastrum 'Double Record'	217
'Exposure' Hippeastrum	218	'Gipsy Girl' Crocus chrysanthus	180	Hippeastrum 'Exposure' ®	218
F		'Gipsy Princess' Hyacinth	109	Hippeastrum 'Fairytale'	218
'Fairytale' Hippeastrum	218	'Gipsy Queen' Hyacinth	109	Hippeastrum 'Faro' ®	218
'Falconet' Narcissus	48	'Gladiator' Allium	135	Hippeastrum 'Ferrari' ®	219
'Fantasy Creation' Muscari armeniacum	249	Gladiolus byzantinus (Gladiolus communis)	204	Hippeastrum 'Flair' ®	219
'Faro' Hippeastrum	218	Gladiolus communis ssp byzantinus (syn. byzantinus)	204	Hippeastrum 'Floris Hekker' ®	
'February Gold' Narcissus	48	Gladiolus callianthus 'Murielae'		Hippeastrum 'Gran Cru' ®	219
'February Silver' Narcissus	49	(syn. Acidanthera 'Murielae')	205	Hippeastrum 'Green Goddess'	219
'Ferrari' Hippeastrum	219	Gladiolus carneus	205	Hippeastrum 'Happiness' ®	220
'Firefly' Crocus sieberi	183	Gladiolus colvillei 'The Bride'	205	Hippeastrum 'Hercules'	220
'Firmament' Allium	134	Gladiolus nanus 'Nymf'	205	Hippeastrum 'Hermitage' ®	220
'Flair' Hippeastrum	219	Gladiolus ramosus 'Robinetta'	206	Hippeastrum 'Jewel' ®	220
'Flame' Zantedeschia	277	Gladiolus tubergenii 'Charm'	206	Hippeastrum 'La Paz' ®	221
'Flore Pleno' Galanthus nivalis	203	'Globemaster' Allium	135	Hippeastrum 'Lady Jane'	221
'Florex Gold' Zantedeschia	277	Gloriosa 'Rothschildiana'	206	Hippeastrum 'Lemon Lime'	221
'Flower Drift' Narcissus	49	Gloxinia 'Mont Blanc' (syn. Sinningia)	206	Hippeastrum 'Liberty'	221
'Flower Record' Crocus vernus	185	Gloxinia 'Kaiser Wilhelm' (syn. Sinningia)	207	Hippeastrum 'Lima' ®	222
'Flower Record' Narcissus	49	'Goblet' Narcissus	52	Hippeastrum 'Limona' ®	222
'Floris Hekker' Hippeastrum	219	'Gold Medal' Narcissus	52	Hippeastrum 'Lovely Garden'	222
'Flyer' Narcissus	49	'Golden Bells' Narcissus	52	Hippeastrum 'Matterhorn' ®	222
'Fondant' Hyacinth	108	'Golden Bunch' Crocus ancyrensis	178	Hippeastrum 'Minerva'	223
'Foresight' Narcissus	50	'Golden Dawn' Narcissus	53	Hippeastrum 'Mont Blanc'	223
'Fortissimo' Narcissus	50	'Golden Ducat' Narcissus	53	Hippeastrum 'Nymph' ®	223
'Fortune' Narcissus	50	'Golden Flag' Fritillaria	200	Hippeastrum 'Orange Sovereign'	223
'Fragrant Rose' Narcissus	50	'Golden Harvest' Narcissus	53	Hippeastrum 'Pamela'	224
'Fred Meier' Ornithogalum thyrsoides	255	'Golden Orb' Calochortus	159	Hippeastrum 'Papillo'	224
Freesia single mixed	193	'Golden Splendour' Lilium Trumpet hybrid	242	Hippeastrum 'Passadena'	224
Freesia double mixed	193	'Golden Quince' Narcissus	53	Hippeastrum 'Picotee'	224
'Frileuse' Narcissus	51	'Golden Yellow' Crocus flavus	182	Hippeastrum 'Pink Floyd'	225
Fritillaria assyriaca (Fritillaria uva-vulpis)	202	'Goldilocks' Crocus chrysanthus	180	Hippeastrum 'Pink Nymph' ®	225
Fritillaria imperialis 'Aurora'	198	'Goldilocks' Fritillaria	201	Hippeastrum 'Piquant'	225
Fritillaria imperialis 'Maxima Lutea'	198	'Goldflake' Narcissus	54	Hippeastrum 'Red Lion'	225
Fritillaria imperialis 'Premier' (syn. The Premier)	198	'Governor' Anemone coronaria	151	Hippeastrum 'Red Peacock' ®	226
Fritillaria imperialis 'Rubra Maxima'	198	'Gran Cru' Hippeastrum	219	Hippeastrum 'Rilona'	226
Fritillaria meleagris mixed	199	'Grand Maître' Crocus vernus	185	Hippeastrum 'Roma' ®	226
Fritillaria meleagris 'Alba'	199	'Grand Soleil d'Or' Narcissus	54	Hippeastrum 'Royal Velvet' ®	226
Fritillaria persica	199	'Gravetye Giant' Leucojum aestivum	239	Hippeastrum 'Santa Cruz' ®	227
Fritillaria persica 'Ivory Bells'	199	'Green Goddess' Hippeastrum	219	Hippeastrum 'Solomon' ®	227
Fritillaria acmopetala	200	'Green Goddess' Zantedeschia aethiopica	274	Hippeastrum 'Sydney' ®	227
Fritillaria 'Golden Flag'	200	H		Hippeastrum 'Stargazer' ®	227
Fritillaria 'Martha Roderick' ®	200	Habranthus robustus (syn. Zephyranthus)	207	Hippeastrum 'Toronto' ®	228
Fritillaria davisii	200	Haemanthus multiflora (Scadoxus multiflorus)	261	Hippeastrum 'Unique' ®	228
Fritillaria 'Goldilocks'	201	'Hair' Allium	135	Hippeastrum 'Vera' ®	228
Fritillaria hermonis ssp amana	201	'Happiness' Hippeastrum	220	Hippeastrum 'White Nymph' ®	228
Fritillaria michailovskyi	201	'Harmony' Iris reticulata	235	'His Excellency' Allium	136
Fritillaria pontica	201	'Hawera' Narcissus	54	'His Excellency' ('Hollandia', Anemone coronaria)	149
Fritillaria pallidiflora	202	Hedychium gardnerianum	207	'Hollandia' Anemone coronaria	
Fritillaria pudica	202	'Hercules' Hippeastrum	220	(syn. 'His Excellency')	149
Fritillaria uva-vulpis (syn. assyriaca)	202	'Hermitage' Hippeastrum	220	'Holland Sensation' Narcissus	55
Fritillaria verticillata	202	Hermodactylus tuberosus (syn. Iris tuberosa)	207	'Hollyhock' Hyacinth	109
'Full House' Narcissus	51	'High Society' Narcissus	54	Homeria aurantiaca (Homeria flaccida)	229
'Fuscotinctus' Crocus chrysanthus	180	'Hillstar' Narcissus	55	Homeria flaccida (syn. aurantiaca)	229
G		Hippeastrum 'Ambiance' ® (syn. Amaryllis)	214	Homeria ochroleuca	229
Galanthus elwesii	203	Hippeastrum 'Amigo' ®	214	'Hoopoe' Narcissus	55
Galanthus ikariae (Galanthus woronowii)	203	Hippeastrum 'Amputo'	214	'Hot Shot' Zantedeschia	278
Galanthus nivalis	203	Hippeastrum 'Aphrodite'	214	Hyacinth 'Aiolos'	104
Galanthus nivalis 'Flore Pleno'	203	Hippeastrum 'Apple Blossom'	215	Hyacinth 'Amethyst'	104
				Hyacinth 'Amsterdam'	104
				Hyacinth 'Anna Liza'	104

	55
'Ice Follies' Narcissus	55
'Ice King' Narcissus	56
'Ice Wings' Narcissus	56
Incarvillea delavayi	232

L	
'Lady Derby' Hyacinth	110
Lachenalia mixed	238
'Lady Jane' Hippeastrum	221
'Ladykiller' Crocus chrysanthus	180

M	
'Mabel' Ixia	237
'Majestic Red' Zantedeschia	278
'Mango' Zantedeschia	279
'Manly' Narcissus	61
'Marconi' Hyacinth	111
'Margaret Mitchell' Narcissus	62
'Marie' Hyacinth	111
'Marie-José' Narcissus	62
'Marieke' Narcissus	62
'Mars' Allium	137
'Martha Roderick' Fritillaria	200
'Mary Bohannon' Narcissus	63
'Matterhorn' Hippeastrum	222
'Maxima Lutea' Fritillaria imperialis	198
'Météore' Crocosmia crocosmiiflora	172
'Minerva' Hippeastrum	223
'Minnow' Narcissus	63
'Minos' Hyacinth	111
Mirabilis 'Jalapa'	243
'Misty Glen' Narcissus	63
'Mrs Hegarty' Schizosrylis coccinea	263
'Miss Saigon' Hyacinth	111
'Miss Vain' Crocus chrysanthus	181
'Mistral' Crocosmia crocosmiiflora	172
'Modern Art' Narcissus	63
'Mon Cheri' Narcissus	64
'Monal' Narcissus	64
'Mondragon' Narcissus	64

'MoneyMaker' Narcissus	64	Narcissus 'Cheerfulness'	42	Narcissus 'Laurens Koster'	60
'Mont Blanc' Allium	137	Narcissus 'Cherry Spot'	42	Narcissus 'Lemon Beauty'	60
'Mont Blanc' Gloxinia (syn. Sinningia)	206	Narcissus 'Chinese Sacred Lily'	43	Narcissus 'Lemon Drops'	60
'Mont Blanc' Hippeastrum	223	Narcissus 'Cotinga'	43	Narcissus 'Little Gem'	60
'Mont Blanc' Muscari aucheri	250	Narcissus 'Cragford'	43	Narcissus 'Little Witch'	61
Montbretia (Crocospia crocosmiiflora)	170-173	Narcissus 'Curlew'	43	Narcissus lobularis	61
'Monza' Narcissus	65	Narcissus 'Cyclope'	44	Narcissus 'Louise de Coligny'	61
'Mount Everest' Allium	138	Narcissus 'Decoy'	44	Narcissus 'Manly'	61
'Mount Everest' Anemone coronaria	151	Narcissus 'Delibes'	44	Narcissus 'Margaret Mitchell'	62
'Mount Hood' Narcissus	65	Narcissus 'Delnashaugh'	44	Narcissus 'Marie-José'	62
'Mount Hood' Muscari aucheri	250	Narcissus 'Delta'	45	Narcissus 'Marieke'	62
'Mozart' Zantedeschia	279	Narcissus 'Desdemona'	45	Narcissus 'Martinette'	62
'Mr Fokker' Anemone coronaria	150	Narcissus 'Dick Wilden'	45	Narcissus 'Mary Bohannon'	63
'Multiflora' Hyacinth	112	Narcissus 'Dickissel'	45	Narcissus 'Minnow'	63
'Murielae' Gladiolus callianthus (syn. Acidanthera)	205	Narcissus 'Doctor Alex Fleming'	46	Narcissus 'Misty Glen'	63
Muscari armeniacum	248	Narcissus 'Double Campervelle'	46	Narcissus 'Modern Art'	63
Muscari armeniacum 'Atlantic' ®	248	Narcissus 'Double Fashion'	46	Narcissus 'Mon Cheri'	64
Muscari armeniacum 'Blue Spike'	248	Narcissus 'Dutch Master'	46	Narcissus 'Monal'	64
Muscari armeniacum 'Christmas Pearl'	248	Narcissus 'Early Bride'	47	Narcissus 'Mondragon'	64
Muscari armeniacum 'Fantasy Creation' ®	249	Narcissus 'Early Bonnet'	47	Narcissus 'MoneyMaker'	64
Muscari armeniacum 'Saffier'	249	Narcissus 'Easter Dawn'	47	Narcissus 'Monza'	65
Muscari armeniacum 'Valerie Finnis' ®	249	Narcissus 'Earl Edna'	47	Narcissus 'Mount Hood'	65
Muscari aucheri 'Blue Magic' ®	249	Narcissus 'Erlicheer'	48	Narcissus 'Obdam'	65
Muscari aucheri 'Dark Eyes'	250	Narcissus 'Exception'	48	Narcissus 'Obvallaris'	65
Muscari aucheri 'Mont Blanc'	250	Narcissus 'Falconet'	48	Narcissus 'Odorus Regulosus'	66
Muscari aucheri 'Mount Hood' ®	250	Narcissus 'February Gold'	48	Narcissus 'Orange Progress'	66
Muscari azureum	250	Narcissus 'February Silver'	49	Narcissus 'Orangery'	66
Muscari botryoides 'Album'	251	Narcissus 'Flower Drift'	49	Narcissus 'Osiris'	66
Muscari comosum	251	Narcissus 'Flower Record'	49	Narcissus 'Pacific Coast'	67
Muscari comosum 'Plumosum'	251	Narcissus 'Flyer'	49	Narcissus 'Palmares'	67
Muscari latifolium	251	Narcissus 'Foresight'	50	Narcissus 'Papillon Blanc'	67
Muscari macrocarpum	252	Narcissus 'Fortissimo'	50	Narcissus 'Paricutin'	67
Muscari neglectum 'Sky Blue'	252	Narcissus 'Fortune'	50	Narcissus 'Parisienne'	68
Muscari paradoxum (Bellevia pycnantha)	156	Narcissus 'Fragrant Rose'	50	Narcissus 'Passionale'	68
N		Narcissus 'Frileuse'	51	Narcissus 'Peaches and Cream'	68
Narcissus 'Abba'	34	Narcissus 'Full House'	51	Narcissus 'Peeping Tom'	68
Narcissus 'Accent'	34	Narcissus 'Gentle Giant'	51	Narcissus 'Pencrebar'	69
Narcissus 'Acropolis'	34	Narcissus 'Geranium'	51	Narcissus 'Petit Four'	69
Narcissus 'Actaea'	34	Narcissus 'Gigantic Star'	52	Narcissus 'Petrel'	69
Narcissus 'Ambergate'	35	Narcissus 'Goblet'	52	Narcissus 'Pick Up'	69
Narcissus 'Apotheose'	35	Narcissus 'Gold Medal'	52	Narcissus 'Pink Charm'	70
Narcissus 'Arctic Gold'	35	Narcissus 'Golden Bells'	52	Narcissus 'Pink Paradise'	70
Narcissus 'Arkle'	35	Narcissus 'Golden Dawn'	53	Narcissus 'Pink Pride'	70
Narcissus 'Audubon'	36	Narcissus 'Golden Ducat'	53	Narcissus 'Pinza'	70
Narcissus 'Avalon'	36	Narcissus 'Golden Harvest'	53	Narcissus 'Pipit'	71
Narcissus 'Baby Moon'	36	Narcissus 'Golden Quince'	53	Narcissus poeticus var. recurvus	71
Narcissus 'Ballade'	36	Narcissus 'Goldflake'	54	Narcissus 'Precocious'	71
Narcissus 'Barrett Browning'	37	Narcissus 'Grand Soleil d'Or'	54	Narcissus 'Pretty in Yellow'	71
Narcissus 'Belcanto'	37	Narcissus 'Hawera'	54	Narcissus 'Primeur'	72
Narcissus 'Bell Song'	37	Narcissus 'High Society'	54	Narcissus 'Printal'	72
Narcissus 'Bella Estrella'	37	Narcissus 'Hillstar'	55	Narcissus 'Prizewinner'	72
Narcissus 'Bella Vista'	38	Narcissus 'Holland Sensation'	55	Narcissus 'Professor Einstein'	72
Narcissus 'Berlin'	38	Narcissus 'Hoopoe'	55	Narcissus 'Pueblo'	73
Narcissus 'Birma'	38	Narcissus 'Ice Follies'	55	Narcissus 'Quail'	73
Narcissus 'Bittern'	38	Narcissus 'Ice King'	56	Narcissus 'Raffael'	73
Narcissus 'Brackenhurst'	39	Narcissus 'Ice Wings'	56	Narcissus 'Raoul Wallenberg'	73
Narcissus 'Bridal Crown'	39	Narcissus 'Intrigue'	56	Narcissus 'Reggae'	74
Narcissus 'Broadway Star'	39	Narcissus 'Ipi Tombi'	56	Narcissus 'Replete'	
Narcissus bulbocodium conspicuus	39	Narcissus 'Itzim'	57	Narcissus 'Rijnveld's Early Sensation'	74
Narcissus 'Cadena'	40	Narcissus 'Jack Snipe'	57	Narcissus 'Rip van Winkle'	74
Narcissus 'Cairngorm'	40	Narcissus 'Jenny'	57	Narcissus 'Romance'	75
Narcissus 'California'	40	Narcissus 'Jetfire'	57	Narcissus 'Rosy Cloud'	75
Narcissus 'Camelot'	40	Narcissus 'Johann Strauss'	58	Narcissus 'Royal Gold'	75
Narcissus 'Canaliculatus'	41	Narcissus 'Juanita'	58	Narcissus 'Sailboat'	75
Narcissus 'Carbineer'	41	Narcissus 'Jumble'	58	Narcissus 'Saint Keverne'	76
Narcissus 'Carlton'	41	Narcissus 'Karelia'	58	Narcissus 'Salome'	76
Narcissus 'Cassata'	41	Narcissus 'Kaydee'	59	Narcissus 'Scarlet Gem'	76
Narcissus 'Changing Colors'	42	Narcissus 'Kissproof'	59	Narcissus 'Scarlet Royal'	76
Narcissus 'Chanterelle'	42	Narcissus 'Largo'	59	Narcissus 'Segovia'	77
		Narcissus 'Las Vegas'	59	Narcissus 'Sempre Avanti'	77

Narcissus 'Serola'	77	Oxalis adenophyllia	256	'Prins Claus' Crocus chrysanthus	181
Narcissus 'Sir Winston Churchill'	77	Oxalis deppel 'Iron Cross'	256	'Printal' Narcissus	72
Narcissus 'Slim Whitman'	78	Oxalis depressa (syn. inops)	257	'Prizewinner' Narcissus	72
Narcissus 'Soestdijk'	78	Oxalis inops (Oxalis depressa)	257	'Professor Einstein' Narcissus	72
Narcissus 'Sorbet'	78	Oxalis lasiandra	257	'Pueblo' Narcissus	73
Narcissus 'Sound'	78	Oxalis purpurea 'Ken Aslet'	257	'Purple Haze' Zantedeschia	280
Narcissus 'Sovereign'	79	Oxalis regnellii		'Purple Sensation' Allium aflatumense	132
Narcissus 'Spellbinder'	79	(Oxalis triangularis ssp papilionacea)	258	'Purple Sensation' Hyacinth	114
Narcissus 'Stainless'	79	Oxalis triangularis	257	'Purple Star' Hyacinth	114
Narcissus 'Standard Value'	79	Oxalis triangularis ssp papilionacea (syn. regnellii)	258	'Purple Voice' Hyacinth	114
Narcissus 'Suada'	80	Oxalis versicolor	258	'Purpureum' Colchium cilicicum	166
Narcissus 'Sugarbush'	80			Puschkinia libanotica (scilloides var. libanotica)	259
Narcissus 'Sun Disc'	80	P		Puschkinia libanotica 'Alba'	
Narcissus 'Surfside'	80	'Pacific Coast' Narcissus	67	(scilloides var. libanotica 'Alba')	259
Narcissus 'Suzy'	81	'Pagoda' Erythronium	191	Puschkinia scilloides var. libanotica	
Narcissus 'Sweetness'	81	'Palmares' Narcissus	67	(syn. libanotica)	259
Narcissus 'Tahiti'	81	'Pamela' Hippeastrum	224	Puschkinia scilloides var. libanotica 'Alba'	
Narcissus 'Tête-à-Tête'	81	'Panorama' Ixia	237	(syn. libanotica Alba)	259
Narcissus 'Texas'	82	'Papillo' Hippeastrum	224		
Narcissus 'Thalia'	82	'Papillon Blanc' Narcissus	67	Q	
Narcissus 'Topolino'	82	'Paricutin' Narcissus	67	'Quail' Narcissus	73
Narcissus 'Trepolo'	82	'Parisiennne' Narcissus	68	'Queen of the Pinks' Hyacinthoides hispanica	230
Narcissus 'Tresable'	83	'Pasadena' Hippeastrum	224		
Narcissus 'Trevithian'	83	'Passionale' Narcissus	68	R	
Narcissus 'Tricollet'	83	'Paul Arnold' Achimenes	126	'Radar' Anemone blanda	148
Narcissus 'Tripartite'	83	'Paul Hermann' Hyacinth	112	'Raffael' Narcissus	73
Narcissus 'Unique'	84	'Pauline' Iris reticulata	236	Ranunculus asiaticus mixed	259
Narcissus 'Valdrome'	84	'Peaches and Cream' Narcissus	68	'Raoul Wallenberg' Narcissus	73
Narcissus 'Van Sion'	84	'Peeping Tom' Narcissus	68	'Red King' Crocosmia crocosmiiflora	173
Narcissus 'Verger'	84	'Pencrebar' Narcissus	69	'Red Lion' Hippeastrum	225
Narcissus 'W.P. Milner'	85	'Peter Stuyvesant' Hyacinth	113	'Red Peacock' Hippeastrum	226
Narcissus 'Warbler'	85	'Petit Four' Narcissus	69	'Reggae' Narcissus	74
Narcissus 'Waterperry'	85	'Petrel' Narcissus	69	'Remembrance' Crocus vernus	186
Narcissus 'White Lion'	85	'Picasso' Zantedeschia	279	'Replete' Narcissus	74
Narcissus 'White Medal'	86	'Pickwick' Crocus vernus	186	Rhodohypoxis 'Stella'	259
Narcissus 'Yellow Cheerfulness'	86	'Pick Up' Narcissus	69	Rhodohypoxis 'Picta'	260
Narcissus 'Yellow River'	86	'Picotee' Hippeastrum	224	Rhodohypoxis 'Tetraploid Red'	260
Narcissus 'Yellow Sun'	86	'Picta' Rhodohypoxis	260	'Rijnveld's Early Sensation' Narcissus	74
Narcissus 'Ziva'	87	'Pink Charm' Narcissus	70	'Rilona' Hippeastrum	226
Nectaroscordum siculum ssp bulgaricum		'Pink Diamond' Cyrtanthus elatus (syn. Vallota)	188	'Rip van Winkle' Narcissus	74
(syn. Allium siculum)	252	'Pink Diamond' Dichelostemma (syn. Brodiaea)	189	'Robinetta' Gladiolus ramosus	206
Nerine bowdenii	252	'Pink Festival' Hyacinth	113	'Robinsoniana' Anemone nemorosa	152
Nerine sarniensis	253	'Pink Floyd' Hippeastrum	225	'Rolf Fiedler' Ipheion uniflorum	233
Nerine undulata	253	'Pink Mist' Zantedeschia aethiopica	274	'Roma' Hippeastrum	226
'Nymph' Gladiolus nanus	205	'Pink Nymph' Hippeastrum	225	'Romance' Crocus chrysanthus	181
'Nymph' Hippeastrum	223	'Pink Giant' Chionodoxa forbesii	164	'Romance' Narcissus	75
		'Pink Paradise' Narcissus	70	Roscoea 'Beesiana'	260
O		'Pink Pearl' Hyacinth	113	Roscoea cauleoides	260
'Obdam' Narcissus	65	'Pink Perfection' Lilium Trumpet hybrid	242	Roscoea purpurea	261
'Obvallaris' Narcissus	65	'Pink Persuasion' Zantedeschia	279	'Rose Emperor' Ixia	238
'Odonus Regulosus' Narcissus	66	'Pink Pride' Narcissus	70	'Rosy Cloud' Narcissus	75
'Odysseus' Hyacinth	112	'Pink Star' Anemone blanda	148	'Rothschildiana' Gloriosa	206
'Orange King' Alstroemeria aurea	141	'Pink Surprise' Hyacinth	113	'Round and Purple' Allium	139
'Orange Progress' Narcissus	66	'Pinokkio' Eremurus	191	'Royal Gold' Narcissus	75
'Orange Sovereign' Hippeastrum	223	'Pinza' Narcissus	70	'Royal Velvet' Hippeastrum	226
'Orangery' Narcissus	66	'Pipit' Narcissus	71	'Rubra Maxima' Fritillaria imperialis	198
Ornithogalum arabicum	253	'Piquant' Hippeastrum	225	'Ruby Giant' Crocus tommasinianus	184
Ornithogalum balansae	253	'Pixie' Iris reticulata	235	'Rubylite Rose' Zantedeschia	280
Ornithogalum dubium	254	Pleione formosana	258		
Ornithogalum dubium 'Gold'	254	'Plumosum' Muscari comosum	251	S	
Ornithogalum magnum	254	poeticus var. recurvus, Narcissus	71	'Saffier' Muscari armeniacum	249
Ornithogalum narbonne	254	'Polar Ice' Agapanthus	127	'Sailboat' Narcissus	75
Ornithogalum nutrans	255	Polianthes tuberosa 'The Pearl'	258	'Saint Keverne' Narcissus	76
Ornithogalum saundersiae	255	'Precocious' Narcissus	71	'Salome' Narcissus	76
Ornithogalum thyrsoides	255	'Premier' Fritillaria imperialis	198	Sandersonia aurantiaca	261
Ornithogalum thyrsoides 'Fred Meier'	255	'Pretoria' Canna	163	'Santa Cruz' Hippeastrum	227
Ornithogalum thyrsoides 'Starlight'	256	'Pretty in Yellow' Narcissus	71	'Saturnus' Crocus chrysanthus	181
Ornithogalum umbellatum	256	'Pretty Woman' Zantedeschia	280	Sauromatum venosum (syn. Arum cornutum)	261
'Osiris' Narcissus	66	'Prima Donna' Achimenes	126	Scadoxus multiflorus (syn. Haemanthus multiflora)	261
'Ostara' Hyacinth	112	'Primeur' Narcissus	72	'Scarlet Gem' Narcissus	76

'Scarlet Royal' Narcissus	76	'Tirol' Canna	163	'Yellow Emperor' Ixia	238
'Schwarzwald' Zantedeschia	281	'Topolino' Narcissus	82	'Yellow Queen' Hyacinth	116
Scilla amethystina, pratensis (Scilla litardierei)	262	'Top White' Hyacinth	115	'Yellow River' Narcissus	86
Scilla bifolia	262	'Toronto' Hippeastrum	228	'Yellow Sun' Narcissus	86
Scilla campanulata (Hyacinthoides hispanica)	229-231	'Trena' Narcissus	82		
Scilla litardierei (syn. Scilla amethystina, pratensis)	262	'Trepolo' Narcissus	87	Z	
Scilla mischtschenkoana (syn. tubergeniana)	262	'Tresamble' Narcissus	83	Zantedeschia aethiopica	274
Scilla nutans (Hyacinthoides non-scripta)	231	'Trevithian' Narcissus	83	Zantedeschia aethiopica 'Green Goddess'	274
Scilla peruviana	262	'Tricollet' Narcissus	83	Zantedeschia aethiopica 'Pink Mist' ®	274
Scilla siberica	263	'Tricolor' Crocus sieberi ssp sublimis	183	Zantedeschia albomaculata	274
Scilla siberica 'Alba'	263	Trillium grandiflorum	265	Zantedeschia 'Black Eyed Beauty'	275
Scilla siberica 'Spring Beauty'	263	Trillium luteum	265	Zantedeschia 'Black Magic'	275
Scilla tubergeniana (Scilla mischtschenkoana)	262	Trillium erectum	266	Zantedeschia 'Brilliant Black Star' ®	275
Schizostylis coccinea	264	'Tripartite' Narcissus	83	Zantedeschia 'Cameo'	275
Schizostylis coccinea 'Mrs. Hegarty'	263	Triteleia hyacinthina (syn. Brodiaea)	266	Zantedeschia 'Captain Rodin' ®	276
'Segovia' Narcissus	77	Triteleia 'Koningin Fabiola' (syn. Brodiaea)	266	Zantedeschia 'Captain Romance' ®	276
'Selina' Zantedeschia	281	Triteleia 'Starlight' (syn. Brodiaea)	266	Zantedeschia 'Captain Tendens' ®	276
'Semiplena' Camassia leichtlinii	161	Triteleia uniflora (Ipheion uniflorum)	232	Zantedeschia 'Captain Volante' ®	276
'Sempre Avanti' Narcissus	77	Triteleia uniflora 'Rolf Fiedler'		Zantedeschia 'Chrystal Blush' ®	277
'Serola' Narcissus	77	(Ipheion uniflorum 'Rolf Fiedler')	233	Zantedeschia eliottiana	277
Sinningia (Gloxinia)	206-207	Triteleia uniflora 'Wisley Blue'		Zantedeschia 'Flame' ®	277
'Sir Winston Churchill' Narcissus	77	(Ipheion uniflorum 'Wisley Blue')	233	Zantedeschia 'Florex Gold'	277
'Sky Blue' Muscari neglectum	252	Tritonia crocata mixed	267	Zantedeschia 'Garnet Glow' ®	278
'Sky Jacket' Hyacinth	114	Tropaeolum tuberosum	267	Zantedeschia 'Hot Shot'	278
'Sky Line' Hyacinth	115	Tulbaghia fragrans	267	Zantedeschia 'Indian Summer' ®	278
'Slim Whitman' Narcissus	78	Tulbaghia violacea	267	Zantedeschia 'Majestic Red'	278
'Snowbunting' Crocus chrysanthus	182			Zantedeschia 'Mango'	279
'Snowtop' Incarvillea delavayi	232	U		Zantedeschia 'Mozart' ®	279
'Snow White' Cyrtanthus elatus (syn. Vallota)	188	'Unique' Narcissus	84	Zantedeschia 'Picasso' ®	279
'Soestdijk' Narcissus	78	'Unique' Hippeastrum	228	Zantedeschia 'Pink Persuasion'	279
'Solfatare' Zantedeschia	281	Uvularia grandiflora	268	Zantedeschia 'Pretty Woman' ®	280
'Solomon' Hippeastrum	227			Zantedeschia 'Purple Haze' ®	280
'Sorbet' Narcissus	78	V		Zantedeschia rehmannii	280
'Sound' Narcissus	78	'Valdrome' Narcissus	84	Zantedeschia 'Rubylite Rose' ®	280
'Sovereign' Narcissus	79	'Valerie Finnis' Muscari armeniacum	249	Zantedeschia 'Schwarzwald' ®	281
Sparaxis tricolor mixed	264	'Vanguard' Crocus vernus	186	Zantedeschia 'Selina'	281
'Spellbinder' Narcissus	79	'Van Sion' Narcissus	84	Zantedeschia 'Solfatare'	281
'Splendid Cornelia' Hyacinth	115	Vallota speciosa (Cyrtanthus elatus)	188	Zantedeschia 'Sunshine' ®	281
Sprekelia formosissima (syn. Amaryllis)	264	Veltheimia bracteata	268	'Zephyr' Crocus pulchellus	183
'Spring Beauty' Scilla siberica	263	'Vera' Hippeastrum	228	Zephyranthus robustus (Habranthus robustus)	207
'Stainless' Narcissus	79	'Verger' Narcissus	84	'Ziva' Narcissus	87
'Standard Value' Narcissus	79	'Vestal' Anemone nemorosa	152	'Zwanenburg' Amarine tubergenii	142
'Starlight' Ornithogalum thyrsoides	255	'Violet Queen' Calochortus	160	'Zwanenburg' Crocus etruscus	182
'Starlight' Triteleia (syn. Brodiaea)	266	'Violet Queen' Crocus sieberi	184	'Zwanenburg Bronze' Crocus chrysanthus	182
'St Brigid' Anemone coronaria	151	'Vuurbaak' Hyacinth	115	'Zwanenburg' Hymenocallis festalis	231
'Stargazer' Hippeastrum	227				
'Stella' Rhodohypoxis	259	W			
Sternbergia lutea	264	'W.P. Milner' Narcissus	85		
'Suada' Narcissus	80	'Warbler' Narcissus	85		
'Sugarbush' Narcissus	80	'Waterlily' Colchium	167		
'Sulphur Queen' Hymenocallis	232	'Waterperry' Narcissus	85		
'Sun Disc' Narcissus	80	Watsonia	268		
'Sunshine' Zantedeschia	281	'White Beauty' Erythronium	191		
'Surfside' Narcissus	80	'White City' Hyacinthoides hispanica	231		
'Suzy' Narcissus	81	'White Dwarf' Eucomis autumnale	192		
'Sweetness' Narcissus	81	'White Festival' Hyacinth	116		
'Sydney' Hippeastrum	227	'White Lion' Narcissus	85		
'Sylphide' Anemone coronaria	150	'White Medal' Narcissus	86		
		'White Nymph' Hippeastrum	228		
T		'White Pearl' Hyacinth	116		
'Tahiti' Narcissus	81	'White Splendour' Anemone blanda	149		
'Tête-à-Tête' Narcissus	81	Whitewell Purple' Crocus tommasinianus	184		
'Tetraploid Red' Rhodohypoxis	260	'Wisley Blue' Ipheion uniflorum (syn. Triteleia)	233		
'Texas' Narcissus	82	'Woodstock' Hyacinth	116		
'Thalia' Narcissus	82	'Wyoming' Canna	163		
'The Bride' Gladiolus colvillei	205				
'The Pearl' Polianthes tuberosa	258	X			
'The Giant' Colchium	167				
Tigrida pavonia 'Canariensis'	265	Y			
Tigrida pavonia 'Lilacea'	265	'Yellow Cheerfulness' Narcissus	86		



