

Our Bulb Farm at 1880

Holland Bulbs Book - Meskers Bros - Lisse - Holland

# HINTS

FOR FORCING OF DUTCH BULBS and DESCRIPTIVE LIST OF TULIPS and DAFFODILS

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## Hints for Forcing

Hyacinths, Tulips, Daffodils, Narcissi, Bulbous Irises, Crocus, Muscari-

## General Rules

Hyacinths, Tulips, Daffodils and Narcissi.

#### 1. What to do when the bulbs arrive.

Unpack the bulbs immediately upon arrival and plant them as soon as possible. Prepared Hyacinths, Daffodils, Narcissi and Tulips for earliest forcing should be planted first. The rest of the bulbs according to their earliness.

If for some reason or other you cannot plant the bulbs at once, they should be stored as described below. This storing of the dry bulbs is also advisable, while you are busy planting.

Cool storage is essential for all bulbs required for early flowering. Heat

before planting will result in delaying the flowering.

The best spot for storing the bulbs is a dry, well-ventilated place; the temperature should be as close to 50 °F as possible. For Hyacinths 55 °F is best.

The best temperature for storing Hyacinths for February flowering is 60 to 65 °F and these should not be planted until the middle of October.

Hyacinths for later flowering can be planted still later and the temperature for these can be 70 °F, but not higher. (See further under Hyacinths, number 3, Late Forcing).

Hyacinths, which are not planted immediately upon arrival should be

spread out in trays.

When unpacking the Tulips, Daffodils and Narcissi, take one or two out of the centre of the case or bag and cut them in halves. When the bud inside the bulb is yellow, you may be sure that the bulbs are in good condition. If on the other hand, the bud is brownish or brown,

the bulbs — certainly those packed in the middle of the case — have suffered from heat and are therefore unfit for planting.

#### 2. Planting.

The best soil for bulbs is a well-drained sandy loam and it should be fresh soil. Never use soil direct out of your greenhouse benches, nor soil ever used for growing bulbs before. This counts expecially for tulips.

Never use soil containing fresh manure and don't cover the planted bulbs with fresh manure. It can be very harmful indeed for the development of the rootsystem.

If your soil is very poor, it is considered safe to add a little bone

meal or some phosphate to it.

When planting the bulbs the soil should be real moist and cool.

New pots or pans should never be used, unless they are thoroughly soaked in a water tank for, if possible, four weeks, to avoid burning of the roots. It is obvious that all receptables used, must have proper drainholes. When boxes are used, wide splits in the bottom for drainage are necessary. Flats and boxes should be deep enough to let the bulbs root freely. The top of the bulb, however, should be just above the rim of the flat or box.

If possible, flats or boxes for Daffodils and Narcissi should be 1 to

2 in deeper than those used for Tulips.

#### 3. Trenching or placing in rooting beds outdoors.

It is most important to place the planted bulbs where it is cool, not

too dry and well drained.

Take by preference a shady part of the grounds with a soil temperature between 48 and 50 °F. If warmer the growth will be delayed and if real cold it will cause a standstill.

Heat is detrimental. A place covered before with salt hay or straw to

keep the summerheat out, will suit very well.

If the place for the rooting beds is too dry; soak it first and fork it

well, keeping the soil loose.

The pots etc. should be covered first with 1 to 2 in. clean sand or grit, and next a layer of covering soil from 6 to 12 in. depending on the climate. The first layer prevents damage to the sprouts, when, during frost, the last layer has to be taken away before bringing the pots into the greenhouse.

In districts where severe winter frosts are prevalent, it is necessary to cover the top of the rooting beds with a layer of salt hay of straw (on no account fresh manure!). If using straw, watch out for mice and

rats. They can damage your bulb pit tremendously.

Spray the rooting-beds with cold water and repeat this once or twice a week during warm periods. Drainage must be good, make a trench alongside to carry off excess water.

If in your district winter in this period is so severe that you will be unable to get at the bulbs buried outdoors, the ideal way to store

them is in a cellar.

4. Storing in cellars.

A bulb cellar is a great convenience provided it is dark, well ventilated and can be kept at a temperature between 48 and 50 °F. During the fall you can regulate the temperature by opening doors and windows at night, as the bulbous plants need ventilation as much as coolness. Close the doors and windows early in the morning to preserve the cool air. Be sure to have good ventilation in the corners and especially along the floor.

Bulbs in a cellar should be kept watered regulary.

It is advisable to cover your bulbs in the cellar with a layer of sand to prevent the bulbs from being lifted out of the soil during the root formation.

When taking bulbs out of the cellar into the greenhouse it is advisable to give them a good splash of water, to settle the soil between the

roots.

Bulbs for later forcing should be stored in a lower temperature and if it is not possible to keep your cellar cool enough, the bulbs might be better buried outdoors until the weather is getting cold and you can then bring the bulbs into the cellar safely.

# Special rules for Hyacinths

Hyacinth bulbs are sold prepared and unprepared in different sizes: viz. 1st, 2nd, and 3rd size, "miniature" etc.

The large bulbs are planted singly, one in pot.

Those of the smaller sizes can be planted, 3 or more in a pot, but mostly pans or flats are used for these grades.

#### 1. Treatment of prepared hyacinths in the greenhouse.

Generally speaking it is advisable to bring the prepared hyacinths into the greenhouse about the 1st day of December. In districts where on account of the weather in the fall, the bulbs are retarded, it might

be better to wait until the middle of December.

In districts where as a rule early frosts can be expected and where at that date the soil might be frozen solid, another practice can be carried out. Bring the pots into a cold greenhouse, protected from frosts and keep the bulbs absolutely in the dark. Cover the pots and flats with a layer of soil, 4 in. thick, and leave them there until the beginning of December. The temperature in the place where they are buried should not be higher than 50 °F. Higher temperature in that period may cause premature development of the upper part of the flowerspike, so that the plants fail to produce normal flowers.

All bulbs must be well rooted before they can be forced.

The place where prepared hyacinths are being forced, should be kept dark or almost so, for the first 10 days. Starting them off in about 55 °F for the first two days, the temperature can be gradually raised till 75° F.

When the sprouts are about 4 in. long, the bulbs should be placed in

a partly shaded part of the greenhouse. They will soon be in bloom and

ready for sale.

Atmosphere in the greenhouse is to be kept moist, water freely at the time for forcing. A daily spray keeps the roots damp, especially when bottom heat is applied. It is recommendable to use water of about the same temperature as prevails in the forcing house, thereby avoiding chilling the soil, bulbs and pots with cold water.

#### 2. Unprepared (ordinary) Hyacinths.

Some of the earliest varieties can be brought into the greenhouse between Christmas and New-Year. They need the same treatment as the prepared bulbs.

All January and sometimes February forcing should take place in darkness until the sprouts reach about 4 inches growth. Later in the season the sprouts will have reached this height outside or in the bulb-cellar and can therefore be placed directly on the bench in the greenhouse.

Hyacinths to be used for cutflowers (prepared as well as unprepared) can be drawn up longer.

3. Late forcing.

When Easter is late or Hyacinths are wanted even later than Easter, the bulbs should not be planted at the same time as the other ones used for earliest or early forcing.

The bulbs should be kept in trays in a dry, warm place, at a temperature of preferably 70 °F. Make sure that the atmosphere is dry as the slightest bit of moisture in the air, will make them root prematurely.

For late forcing, hyacinths can be planted as late as the middle of January and than treated in the same way as all other hyacinths, planted and kept in a cool place of 48 to 50 °F, where they are kept moist. With 6 to 8 week they will have sufficient roots to be forced in the greenhouse

## 4. How to prevent spitting or casting off the buds ("Loose bud")

Some vatieties may show the phenomenon of spitting out the flower buds. Mostly the cause of this trouble has already developed during the time the bulbs remained in the plunging bed. The best ways to prevent the spitting out of the buds are:

1. do not plant too early.

2. prevent excessive water content of the plunging bed by good drainage.

prevent too high temperature (48°F. and higher) in the plunging bed, especially about 6-8 weeks after planting the bulbs.

To prevent damage, the transferring of the pots or flats during very cold weather from the trenches into the greenhouse should be done very quickly. Moreover, the bulbs should be covered during transport and after arrival in the greenhouse, the temperature should be brought higher gradually.

5. List of Hyacinths for forcing.

EARLIEST	EARLY	LATE
white Arentine Arendsen L'INNOCENCE Edelweiss	ditto	ditto  Queen of the Whites
blue BISMARCK Dr. Lieber Ostara	ditto	Queen of the whites
red Jan Bos	Myosotis Grand Maître Perle Brillante Duchess of Westminster dito	ditto " King of the Blues Queen of the Blues ditto
Rose and pink PINK PEARL Lady Derby	La Victoire ditto Gertrude	ditto ditto
yellow Yellow Hammer	ditto Prince Henry	Marconi Queen of the Pink  City of Haarlem

# Special rules for Tulips

#### When are the bulbs for earliest forcing to be brought into the greenhouse?

For an alphabetic and a descriptive list of all varieties we refer to the descriptive list of Tulips and Daffodils in this booklet. This list will also give you the dates at which the bulbs should be brought into the greenhouse.

These dates can only be followed if the bulbs have been rooted under conditions outlined in the general rules.

Needless to say that many unsatisfactory results experienced with early forcing, are caused by bringing in the stock too early and by applying too much or insufficient heat during a prolonged period.

#### 2. Treatment in the greenhouse.

## a. Early tulips (single and double) including Mendel tulips for early forcing.

These tulips for earliest forcing have to be forced in a completely dark place at a steady temperature of 65 to 70 °F to draw them up. This is necessary in order to get a good length of stem. After this

they can be taken to the bench and given a shaded situation at about 65 °F. They will soon colour up and gain in substance. When they are in full bloom, keep them at 55 to 60 °F, to get full colouring.

Bulbs brought in later, will not need the same drawing-up-treatment, as the sprouts will be longer by that time. They can be placed on the bench from the start, shaded with newspapers for a few days. After this they should be kept on the bench partly shaded.

#### b. Late tulips (including Darwin and Treumph tulips.)

The forcing varieties should be started off in a temperature of 55 to 60 °F. A lower temperature delays flowering, a higher temperature gives weak stems and soft flowers. A dark or shaded place will be necessary till the first ring or joint is out of the bulb, after which they can be given more heat up to 70 °F.

For tulips in flats it is advisable to remove the small side shoots which grow from the outside of the bulbs.

#### 3. Watering of early forcing tulips.

The quantity of water and the time of watering plays an important part. As a rule too much water is given too frequently, especially when the plants are still short. Once a day and preferably in the morning so much water must be given as can be absorbed by the plants in 24 hours.

Definitely avoid splashing the water all over the foliage, particulary when the plants grow taller, and water only enough to moisten the soil properly.

Never apply water when the sun shines on the plants.

It is recommendable to use water of about the same temperature as prevails in the forcing house, thereby avoiding chilling the soil, bulbs and pots with cold water.

#### 4. Precooled bulbs.

Precooled tulips are treated the same way as uncooled ones; however, these stocks can be brought into the greenhouse a fortnight earlier, provided that the flowerbud has grown out of the bulb.

For the first week give them a temperature not higher than 55 °F, let it rise gradually to 70 °F, till the plants begin to flower.

#### Varieties suitable for precooling.

The varieties mentioned below are some of the varieties which are most recommended for precooling. Many other varieties, however, are also suitable for precooling.

Darwintulip Wm. Copland, Rose Copland and other Coplandsports. Darwintulip Wm. Pitt

Darwintulip Red Pitt

Cottagetulip Albino

Cottagetulip Carrara

Cottagetulip Golden Harvest

Mendeltulip Her Grace Mendeltulip Krelage's Triumph Mendeltulip Van der Eerden Mendeltulip Weber Mendeltulip White Sail Triumphtulip Telescopium

#### 5. How to prevent spots on tulips?

Spotting of tulips often occurs in late spring when the atmosphere in the greenhouse is very damp.

Ventilate freely in order to avoid high temperatures and excessive moisture. Water very carefully and never over the tops of the plants.

Whitewash the glass of your greenhouse to avoid strong sunlight. This can also be attained by using cloth over the top of your benches for shading.

The above rules also help prevent "flopping".

#### 6. How to treat Tulips after they have been cut.

There are different ways in which cut Tulips can be handled, depending on the use of these flowers. If they are to be shipped a short distance, they should have been in water for no longer than about three hours.

For shipping cut tulips long distance it would be best not to put them in water at all before shipping, but to advise the customer or wholesaler, who receives them, to cut a small piece of the stem, to roll them full length, straight in paper and to place them in deep pails with cold water in a cool place for about 5 to 6 hours.

Handled this way, they will arrive very soft and poorlooking, but they will come back to perfectly normal flowers, which definitely will last longer than the ones, which have been in water before shipping. Moreover it will help to prevent "spotting" of the flowers during transportation.

If at any time you have too many cut Tulips, it is much better to cut them, roll them in paper and lay them in the refrigerator dry, then to keep them in water. Five to six hours before you need them you can put the benches in pails with fresh water, after you have cut about 1/4-inch of the stems, and after this treatment, they will be as good as fr shly cut Tulips.

This way you can keep cut Tulips easily for a week or more.

## 7. Growing Tulips under cold glass or in frames.

Many Darwin and Late Tulips are suitable for this purpose and provide excellent cut blooms during the first weeks of spring, when planted under cold class or in frames.

# Special rules for Daffodils and Narcissi

Daffodils and Narcissi must be planted early, Of the different kinds, the Poeticus varieties are the first to be planted, next the small and medium-sized and as far as the trumpet Daffodils are concerned, the earliest flowering varieties should be planted first. One can take it as a rule that no first class results may be expected when the Daffodils and Narcissi are planted too late.

# When are the bulbs for earliest forcing to be placed in the greenhouse?

For an alphabetic and a descriptive list of all varieties we refer to the descriptive list of Tulips and Daffodils in this booklet. This list will also give you the dates in which the bulbs should be brought into the greenhouse.

#### 2. Teatment in the greenhouse.

If at the time of bringing your Daffodils and Narcissi bulbs into the greenhouse, you cannot yet see the flowerbuds out of the bulb, it is gecessary to place your flats or pots underneath the benches (but not nark) at a temperature of max. 50 °F. After the buds are out of the dulb, you can place them on top of the bench and for best results baise the temperature to max. 60 °F.

For Dalfodils and Narcissi it is advisable to remove the foliage of the small shoots which do not show a flowerbud.

When your Daffodils and Narcissi are starting to bloom, just before he buds open, water should be spread lightly over the buds and when they are in bloom, less water should be applied.

#### 3. Precooled Daffodils and Narcissi.

The treatment of precooled Daffodils and Narcissi in the greenhouse is about the same as of those not so treated. It must be emphasized, however, that precooled bulbs have to be planted promptly upon arrival end have to be plunged in the coolest possible spot, so that no advantage of cooling is lost.

precooled Daffodils and Narcissi respond to about 14 days earlier to forcing; one can have Daffodils and Narcissi in bloom already at Christmas f precooled bulbs are used.

Just the same as other Daffodils and Narcissi, precooled stock may not be brought into 60 °F until the flowerbud is out of the bulb.

Another advantage of precooled Daffodils and Narcissi is that in contrast to uncooled bulbs, which require four weeks to bloom, the precooled ones need as a rule only three weeks to flower.

#### Leading varieties suitable for precooling:

Golden Harvest
King Alfred
Magnificence

Yellow trumpet
Yellow trumpet
Yellow trumpet

Rembrandt Carlton Helios Early Perfection La Fiancee Yellow trumpet Incomparabilis Incomparabilis Poetaz Poetaz

# Hints for forcing bulbous Irises

The best Iris generally used for forcing, are Dutch Irises, including filifolia and tingitana hybrids.

These Irises are supplied in different sizes. The largest size are the most suitable for forcing, especially for early forcing.

#### 1. What to do upon arrival of the bulbs?

Unpack the Irises immediately upon arrival and, if you cannot plant those you need for early forcing at once spread them out on the trays. Put the trays in a dry, well ventilated place.

Irises wanted for late forcing, don't have to be planted immediately upon arrival, but can be planted later in the season, even as late as the 15th of December. These bulbs should be stored in trays in a fairly warm and dry place.

#### 2. The planting.

The best soil for Irises is a well-drained sandy loam and it should

be fresh and real moist soil.

New pots or pans should never be used, unless they are thoroughly soaked in a water tank for, if possible, four weeks to avoid burning of the roots. It is obvious that all receptables used, must have proper drainholes. Flats and boxes should be at least 6 in. deep.

Irises are often planted directly in the greenhouse benches (after other crops are finished). If this is done, these houses should be kept at a temperature of about 50 °F. to start with.

After the bulbs are planted, they should be well watered.

Irises in flats should be planted at least 2 in. apart; this counts especially for Wedgewood, other varieties can be planted slightly closer.

#### 3. What to do with Irises after planting?

If your Irises are not planted in the full ground benches, it is best to place the boxes and pots in a cool greenhouse, where these Irises

are to be forced (temperature about 50 °F.)

Once you have placed your pots or flats, it is necessary to leave them in the same spot. Never remove your pots or flats to another place, as the roots generally grow into the soil of the bench. This way you'll prevent serious disturbance of the roots, which is believed to be the main cause of blindness.

If you are forcing Wedgewood only, yau can raise the temperature after the middle of December up to about 60 °F (Other Irises will not stand such a high temperature at such an early date). They like plenty

of water and, if possible, this water should have greenhouse temperature. Best results are generally obtained if your Irises get plenty of light.

There should be, throughout the period of forcing, sufficient ventilation of the greenhouse. When the buds are showing, water very sparingly.

If you cannot place your Irises directly on the place where they are to be forced, it is also possible to store them in a bulbcellar or a roothouse. It is advisable to move them into a cool greenhouse as soon as you have space available.

If you have no other choice, they also can be buried outside but it is necessary to move them into a cool greenhouse not later than November. This is especially so for Wedgewood. The reason for this is

to avoid disturbance of the roots.

When digging in your bulbs outside, follow same rules as mentioned for other bulbs.

#### 4. Varieties suitable tor forcing.

Dutch Iris "Wedgewood" (which is also suitable for precooling) is recommended for earliest forcing, to be followed by:

Golden Emperor Golden Harvest H. C. van Vliet Imperator White Excelsior White Superior Yellow Queen

## 5. Culture of Irises in glasshouses without heating.

(in districts only where the climate is suitable!)

Bulbous Irises form splended material for growing in glasshouses in

the open ground without heating.

Plant rightaway on receipt of the bulbs, rather well spaced with regard to foliage formation. Varieties with much and broad foliage 2 inches apart (from heart to heart). Narrow leaved varieties may be planted a little closer.

The soil should be well prepared and nutritious (not used for Irises

before).

#### Crocus

Crocus offer a welcome material for pots, especially for retail florists. Do not bring Crocus into the greenhouse until the sprouts are about  $1^1/2$  in. and grow them cool. They do not stand heat.

Yellow Crocus are not recommended for this purpose.

## Muscari

Muscari armeniacum can easily be forced and with their bright blue flowers, which keep well, they are ideal for corsagework. Also recommendable for pots and small pans.

They can be precooled succesfully.

Abelard (incomparabilis) Medium size. Soft yellow, cup edged orange.

Medium early. Height 14". Can be forced after January 15th.

Abundance (poetaz) Medium size. Soft yellow, cup deep yellow. Medium early. Height 14". Can be forced after January 15th.

Actaea (poeticus) Large. Perianth broad and pure white, cup yellow fiery-red edged. Medium early. Height 16". Can be forced after January 25th.

Adventure (incomparabilis) Medium large. Uniform golden-yellow. Medium early. Height 14". Can be forced after January 15th.

Aeolus (bicolor trumpet) Large. Perianth white, trumpet buttercupyellow. Medium early. Height 14". Can be forced after February 1st.

Aerolite (Yellow trumpet) Medium large. Perianth primrose-yellow, trumpet bright yellow. Medium early. Height 14". Can be forced after January 15th.

Afterglow (Barrii) Medium size. Perianth pale yellow, orange cup. Medium late. Height 14". Can be forced after January 20th.

Agra (incomparabilis) Large. Perianth white, cup orange-red. Medium late. Height 14". Not recommended for forcing.

Alaska (yellow trumpet) Large. Bright golden-yellow. Medium early. Height 16". Can be forced after January 10th.

albus plenus odoratus (double) Small. Pure white. Very late. Height 14". Not recommended for forcing.

Alcida (Barrii) Medium large. Perianth creamy-white, cup yellow edged red. Medium late. Height 14". Can be forced after lanuary 25th.

Allard Pierson (poetaz) Medium size. Perianth white, cup yellow. Medium early. Height 14". Can be forced after January 1st.

Apotheosis (yellow trumpet) Large. Uniform soft yellow, outstanding form. Medium early. Height 12". Can be forced after January 20th.

Aranjuez (incomparabilis) Medium large. Light yellow perianth, large orange cup edged red. Medium early. Height 16". Can be forced after January 15th. Exceptionable fine form.

Bartizan (incomparabilis) Medium size. Perianth bright yellow, cup orange-red. Medium early. Height 14". Can be forced after lanuary 10th.

Beersheba (White trumpet) Large. Pure white of exceptionable fine form. Medium late. Height 12". Can be forced after lanuary 20th.

Bonython (bicolor trumpet) Welformed flower of medium size. Perianth white, trumpet sulphury-yellow. Medium early. Height 12". Can be forced after January 10th.

Caledonia (incomparabilis) Medium large. Perianth creamy-white, cup yellow with broad orange edge. Medium late. Height 14". Can be forced after lanuary 20th.

Camellia (Double) Large. Uniform pale yellow. Medium early. Height 14". Not recommended for forcing.

Canadian Beauty (yellow trumpet) Medium size flower. Perianth yellow, trumpet golden-yellow. Medium early. Height 14". Can be forced after February 20th.

Carlton (incomparabilis) Large. Perianth sulphur-yellow cup clear yellow. Medium early. Height 16". Can be forced after lanuary 10th.

Cheerfulness (poetaz) Medium size. Double creamy white. Late. Height 14". Can be forced after January 25th.

Clamor (incomparabilis) Medium size. Perianth white, cup yelloworange red edge. Medium early. Height 14". Can be forced after lanuary 10th.

Covent Garden (yellow trumpet) Medium size. Uniform yellow. Medium early. Height 17". Can be forced after January 15th.

Croesus (incomparabilis) Medium size. Perianth pale sulphur, cup orange. Medium late. Height 12". Not recommended for forcing.
 Daisy Schäffer (Leedsii) Large. Perianth white, large lemon-yellow

cup. Medium late. Height 16". Can be forced after January 15th.

Damson (incomparabilis) Medium large. Perianth creamy-yellow, cup dark orange. Medium early. Height 16". Can be forced after Ja-

nuary 20th.

X Daphne (double) Small white. Medium early. Height 12". Can be forced after January 25th.

Dawson City (yellow trumpet) Medium large. Uniform self yellow flower of fine form. Medium late. Height 12". Can be forced after January 25th.

Deanne Durbin (incomparabilis) Medium size. Perianth white, cup light-orange. Medium early. Height 12". Can be forced after January 15th.

Diana Kasner (Barrii) Medium large. Perianth creamy-white, cup yellow edged blood-red. Late. Height 14". Not recommended for forcing.

Dick Wellband (incomparabilis) Medium large. Perianth pure white, cup bright orange-red. Medium early. Height 14". Can be forced after January 20th.

Dorine (incomparabilis) Medium size. Creamy-white, large cup orange. Medium early. Height 15". Can be forced after January 20th.

Dulcimer (poeticus) Medium large. Pure white, large yellow eye edged red. Late. Height 14". Not recommended for forcing.

Early Beauty (yellow trumpet) Small. Perianth sulphur-white, yellow trumpet. Early. Height 12". Can be forced after January 1st.

\*\*Early Perfection (poetaz) Medium large. Perianth white, cup yellow. Medium early. Height 12". Can be forced after January 1st.

Edward Buxton (incomparabilis) Medium large Light yellow perianth, deep orange cup. Early. Height 16". Can be forced after January 10th.

Eldorado (incomparabilis) Medium size. Deep yellow, large cup orangered. Medium early. Height 14". Can be forced after January 15th.

K Elly Ney (Barrii) Medium large. Perianth pure white, yellow cup, edged red. Medium late. Height 16". Can be forced after

Emperor (yellow trumpet) Medium size. Perianth clear yellow, trumpet yellow. Medium Early. Height 14". Not recommended for forcing. Empress (bicolor trumpet) Medium size. White perianth, with yellow

trumpet. Medium early. Height 14". Not recommended for forcing. Feu de Joie (double) Medium large. White and orange-red. Medium early. Height 14". Can be forced after January 10th.

Flower Record (incomparabilis) Medium size. White, cup deep yellow, edged deep orange. Medium early. Height 12". Can be forced after January 10th.

Fortune (incomparabilis) Large. Perianth deep yellow, trumpet shaped orange cup. Early. Height 18". Can be forced after January 16th. Forerunner (yellow trumpet) Medium size. Bright yellow. Extremely

early. Height 14". Can be forced after December 15th.

Franciscus Drake (incomparabilis) Medium large. Perianth white, cup orange-red. Medium late. Height 14". Can be forced after January 25th.

Firetail (Barrii) Medium size. Perianth ivory-white, cup blood-red. Medium late. Height 16". Not recommended for forcing.

Geranium (poetaz) Large. Perianth pure white, cup deep orange-red. Medium late. Height 14". Can be forced after February 1st.

X Gertie Millar (Leedsii) Medium size. Perianth pure white, large cup creamy-white. Late. Height 14". Not recommended for forcing. Giant Perfection (yellow trumpet) Large. Bright butter-yellow. Me-

dium early. Height 14". Can be forced after January 15th.

Glory of Sassenheim (bicolor trumpet) Medium size. Perianth creamywhite trumpet bright yellow. Medium early. Height 14". Can be forced after January 10th.

Godolphin (yellow trumpet) Medium size. Uniform clear yellow. Early. Height 14". Can be forced after January 15th.

Gold Crest (incomparabilis) Medium size. Perianth bright yellow, large cup orange. Medium early. Height 14". Can be forced after January 10th.

Golden Brilliant (yellow trumpet) Medium large. Bright yellow perianth, trumpet deep yellow. Medium early. Height 14". Can be forced after January 10th.

Golden Harvest (yellow trumpet) Very large. Golden-yellow, flower of fine form. Early. Height 16". Can be forced after January 1st. Golden Perfection (jonquilla hybrid) Very large. Golden-vellow.

Medium late. Height 16". Not recommended for forcing. Golden Sceptre (jonquilla hybrid) Large. Golden-yellow. Medium late. Height 14". Can be forced after January 20th.

Golden Surprise (yellow trumpet) Medium large. Uniform yellow. Medium early. Height 16". Can be forced after January 15th.

Gulliver (Barrii) Medium size. Perianth yellow, yellow cup edged orange-red. Late. Height 14". Not recommended for forcing.

Halvose (poetaz) Medium size. Yellow perianth flushed apricot, red cup. Height 14". Can be forced after January 15th.

Havelock (incomparabilis) Medium large. Perianth bright yellow, cup golden-yellow. Medium early. Height 16". Can be forced after January 10th.

Helios (incomparabilis) Medium large. Perianth yellow, large cup, flushed orange. Early. Height 14". Can be forced after January 1st. Holland's Glory (double) Medium large. Double from of Emperor.

Indian Chief (double) Large. Yellow and orange. Medium early. Height 14". Can be forced after January 20th.

X Insulinde (double) Medium large. White, light yellow and orange. Medium late. Height 14". Can be forced after January 15th.

Imperator (white trumpet) Large. Creamy-white. Medium late. Height 14". Not recommended for forcing.

Inglescombe (double) Medium large. Yellow. Medium late. Height 16". Not recommended for forcing.

Insurpassable (yellow trumpet) Very large. Golden-yellow. Early. Height 16". Can be forced after January 10th.

Irene Copeland (double) Medium large. Creamy-white. Medium early. Height 14". Can be forced after January 15th.

X Iohn Dix (Barrii) Medium size. Perianth pure white. Cup deep red. Late. Height 14". Not recommended for forcing.

X John Evelyn (incomparabilis) Medium large. Perianth pure white, large finely frilled cup flushed apricot. Medium late. Height 12". Can be forced after January 25th.

John Farquhar (yellow trumpet) Medium size. Perianth sulphur-yellow, trumpet deep yellow. Medium early. Height 14". Can be forced after January 25th.

Jonquilla. Very small. Deep golden-yellow. Very late. Height 10". Not recommended for forcing.

Jonquilla var. flore pleno (double) Very small. Deep golden-yellow. Very late, Height 10". Not recommended for forcing.

Killigrew (incomparabilis) Medium size. Perianth yellow, cup light orange. Medium early. Height 18". Can be forced after Jan. 15th.

King Alfred (yellow trumpet) Medium large. Golden-yellow. Medium early. Height 16". Can be forced after January 15th.

Lady Diana Manners (Barrii) Medium large. Perianth white, yellow cup edged red. Medium late. Height 16". Can be forced after January 25th.

La Fiancée (poetaz) Medium large. Perianth white, light orange cup. Medium early. Height 14". Can be forced after January 1st. Lady Kesteven (Barrii) Medium large. Pure white perianth, solid red

eye. Medium late. Height 16". Not recommended for forcing. Lady Moore (Barrii) Small. Perianth white, yellow cup edged

orange red. Medium early. Height 14". Can be forced after January 15th.

La Riante (Barrii) Medium size. Perianth white, cup deep red. Medium early. Height 12". Can be forced after January 15th.

Latonia (Barrii) Medium large. Perianth white, cup deep red. Medium late. Height 16". Not recommended for forcing.

Laurens Koster (poetaz) Medium size. Perianth white, cup yellow. Medium late. Height 14". Can be forced after January 15th.

Laurentia (triandrus hybr.) Medium large. Creamy-white, 2-3 flowers to a stem. Medium late. Height 12". Suitable for rockery and late forcing.

L'Innocence (poetaz) Medium size. Perianth white, cup yellow. Medium early. Height 14". Can be forced after January 10th.

Livia (double) Medium large. Sulphur-yellow and orange. Medium late. Height 14". Can be forced after January 15th.

Locarno (bicolor trumpet) Medium large. Perianth white, trumpet pale yellow. Medium early. Height 16". Can be forced after January 10th.

Lord Wellington (yellow trompet) Large, Bright yellow flower of good form. Medium early. Height 14". Can be forced after January 20th.

Lotta Svärd (bicolor trumpet) Medium large. Perianth white, trumpet canary-yellow. Medium early. Height 14". Can be forced after January 10th.

Louis Bouwmeester (yellow trumpet) Medium large. Very deep yellow.

Medium early. Height 14". Can be forced after January 15th.

Magnet (bicolor trumpet) Medium size. Perianth creamy-white, trumpet yellow. Medium early. Height 14". Can be forced after Jan. 15th. Magnificence (yellow trumpet) Medium size. Uniform deep goldenyellow. Very early. Height 14". Can be forced after December

yellow. Very early. Height 14". Can be forced after December 15th.

Marion Cran (Jupiter) (incomparabilis) Medium size. Perianth deep

yellow, cup pale orange. Medium late. Height 16". Can be forced

after January 15th.

Mary Copeland (double) Medium large. Pure white and deep orangered. Medium late. Height 14". Not recommended for forcing.

Monique (incomparabilis) Large. Perianth white, cup golden-yellow edged orange. Medium early. Height 16" Can be forced after January 15th.

Moonshine (triandrus hybr.) Large creamy white, 2-3 flowers to a stem. Medium late Height 12". Suitable for rockery and late

forcing.

Mount Hood (white trumpet) Large. White perianth, white trumpet.

Medium early. Height 14". Not recommended for forcing.

Mrs. R. O. Backhouse (Leedsii) Medium size. Perianth creamy-white, small trumpetshaped cup of pale apricot passing to pink. Medium early. Height 14". Can be forced after January 20th.

Mrs. Barclay (Barrii) Medium size. Perianth creamy-white, yellow cup with narrow red edge. Medium early. Height 14". Can be

forced after January 15th.

Mrs. Harding (yellow-trumpet) Medium large. Perianth pale yellow, trumpet golden-yellow. Medium early. Height 14". Can be forced after January 10th.

Mrs. E. H. Krelage (white trumpet). Medium size. Perianth white, trumpet sulphur-yellow passing to white. Medium late. Height 14". Can be forced after January 20th.

Mrs. Nette O'Melveny (Leedsii) Medium size. Perianth pure white, creamy-white cup. Late. Height 14". Can be forced after Ja-

nuary 20th.

Music Hall (bicolor trumpet) Medium early. Perianth white, trumpet, yellow. Medium large. Height 16". Can be forced after January 15th.

Norway (bicolor trumpet) Medium size. Perianth white, trumpet yellow. Medium early. Height 14". Can be forced after January 15th.

odorus (single Campernelli) (jonquilla hybrid) Small, Golden-yellow. Medium early. Height 12". Not recommended for forcing.

Medium late. Height 12". Not recommended for forcing.

odorus rugulosus (jonquilla hybrid) Small. Golden-yellow. Medium early. Height 14". Not recommended for forcing.

X odorus rugulosus plenus (double) Very small. Deep golden-yellow. Medium early. Height 14". Not recommended for forcing.

Oliver Cromwell (bicolor trumpet) Medium size. Perianth creamywhite, trumpet yellow. Medium early. Height 12". Can be forced after January 10th.

Olympia (yellow trumpet) Medium large. Yellow. Medium late. Height

14". Can be forced after January 25th.

Orange Glow (incomparabilis) Large. Perianth yellow, large pale orange cup. Medium early. Height 16". Can be forced after January 15th.

ornatus max (poeticus) Large form of ornatus. Can be forced after

January 10th.

President Lebrun (bicolor trumpet) Medium large. Perianth white, trumpet lemon-yellow passing to creamy white. Medium early. Height 14". Can be forced after January 15th.

Pride of Hillegom (yellow trumpet) Large. Perianth sulphur-white, trumpet yellow. Medium early. Height 16". Can be forced after

January 20th.

Producer (yellow trumpet) Medium large. Deep yellow. Medium early.

Height 14". Can be forced after January 10th.

Queen of Bicolors (bicolor trumpet) Medium large. Perianth pure white, trumpet canary-yellow. Medium early. Height 14". Can be forced after January 15th.

recurvus (Pheasant's Eye) (poeticus) Small. Very late. Height 14".

Not recommended for forcing.

Red Guard (poetaz) Medium large. Yellow perianth flushed apricot, cup deep orange red. Medium early. Height 14". Not recommended for forcing.

Red Rim (poeticus) Medium size. White perianth, large yellow eye, edged red. Medium late. Height 14". Not recommended for

forcing.





Rembrandt (vellow trumpet) Large. Golden-vellow. Medium early. Height 14". Can be forced after January 10th.

Richard Tauber (poetaz) Medium large. Perianth white, cup orange. Medium early. Height 14". Can be forced after January 20th.

Robert Sydenham (yellow trumpet) Large. Bright yellow. Medium

early. Height 16". Can be forced after January 15th.

Robin Hood (yellow trumpet) Medium size. Perianth yellow, trumpet orange-yellow, Medium early, Height 12". Can be forced after January 20th.

Romaine (white trumpet) Large. Creamy-white. Medium early. Height

14". Can be forced after January 10th.

Roxane (white trumpet) Large. Creamy-white. Medium late. Height

12". Can be forced after January 20th.

Sarchedon (poeticus) Large. Pure white perianth, yellow eye with broad red edge. Medium early. Height 16". Can be forced after January 25th.

Scarlet Elegance (incomparabilis) Medium size. Perianth deep yellow, cup deep orange-red. Medium-early. Height 14". Can be forced

after January 15th.

Scarlet Gem (poetaz) Medium size. Perianth deep golden-yellow, cup brilliant red. Medium late. Height 14". Can be forced after January 15th.

Scarlet Leader (incomparabilis) Large. White perianth, large bright red cup. Medium early. Can be forced after January 15th.

Sempre Avanti (incomparabilis) Large. Perianth creamy-white, large bright orange cup. Medium late. Height 14". Can be forced after January 15th.

X Sir Henry Deterding (bicolor trumpet) Medium size. Perianth creamywhite, trumpet yellow. Medium early. Height 12". Can be forced

after January 15th.

Solario (incomparabilis) Medium large. Perianth pure white, large canary-yellow cup. Medium early. Height 16". Can be forced after January 15th.

Sole Mio (yellow trumpet) Medium size. Deep yellow. Early. Height

16". Can be forced after January 5th.

Sparkling Eye (poetaz) Medium size. Creamy-white, filled cup orange.

Late. Height 12" Can be forced after February 1st.

Spring Glory (bicolor trumpet) Medium size. Perianth white, trumpet yellow. Medium early. Height 14". Can be forced after lanuary 15th.

X St. Agnes (poetaz) Medium large. Perianth creamy-white, cup bright orange. Medium early. Height 16". Can be forced after January 10th.

Stresa (white trumpet) Medium large. Creamy-white. Medium early. Height 14". Can be forced after January 15th.

Suda (Leedsii) Medium large. Perianth white, large amber cup flushed pink. Medium late. Height 14". Can be forced after January 20th.

Texas (double) Large. Yellow and fiery orange. Medium early. Height

16". Can be forced after January 15th.

Thalia (triandrus hybr.) Large. Snow-white. 3-4 flowers to a stem. Medium late. Height 12". Suitable for late forcing.

The First (yellow trumpet) Medium size. Perianth pale yellow, trumpet vellow, Early, Height 14", Can be forced after lanuary 10th.

The Sun (poeticus) Medium size. White, yellow eye, edged red. Medium early. Height 14". Can be forced after January 25th.

Tredore (Barrii) Medium size. Perianth pale yellow, orange-red cup Medium late, Height 14". Can be forced after January 20th.

X Trevithian (jonquilla hybrid) Large. Pale lemon-yellow clear yellow cup. Medium early. Height 16". Can be forced after January 10th.

Y Tunis (Leedsii) Large. Perianth white, large yellow cup flushed copperygold. Medium late. Height 16". Can be forced after January 15th.

Twink (double) Medium large. White and orange. Medium early. Height 14". Can be forced after January 10th.

Van Sion (double) Medium size. Yellow. Early. Height 12". Can be

forced after January 1st.

van Waveren's Giant (vellow trumpet) Large. Perianth pale yellow, trumpet bright yellow. Medium early. Height 14". Can be forced after January 25th.

Verger (Barrii) Medium large. Perianth pure white, deep red cup. Medium late. Height 14". Can be forced after January 25th.

Victoria (bicolor trumpet) Medium size. Perianth white, trumpet claer vellow. Medium early. Height 12". Can be forced after January 15th.

Village Beauty (Barrii) Small. Perianth white yellow edged, cup orange red. Medium early. Height 14". Can be forced after la-

nuary 15th.

Winter Gold (yellow trumpet) Small. Golden-yellow. Early. Height 14". Can be forced after January 5th.

Winter Pride (poetaz) Medium large. Perianth white, cup deep goldenyellow. Medium early. Height 14". Can be forced after January 15th.

Whistler (yellow trumpet) Large. Perianth sulphur, trumpet-yellow. Medium early. Height 14". Can be forced after January 20th.

XWhiteley Gem (incomparabilis) Medium size. Bright yellow perianth and fiery orange-red cup. Height 16". Can be forced after January

W. P. Milner (yellow trumpet) Very small. Sulphur-white. Medium early. Height 8". Can be forced after January 15th. Extra fine for rockery and garden.

Wrestler (yellow trumpet) Medium size. Yellow. Medium early.

Height 14". Can be forced after January 10th.

Yellow Cheerfulness (poetaz) Medium size. Double. Soft yellow. Sport of Cheerfulness.

Yellow Cloud (yellow trumpet) Medium large. Golden-yellow. Medium

early. Height 16". Can be forced after January 25th.

Yellow Poppy (incomparabilis) Medium size. Uniform pale yellow, cup with narrow red edge. Medium early. Height 14". Can be forced after January 15th.