

FALL PLANT NOW FOR SPRING COLOR



FALL BULBS ARE PERFECT PACKAGES FOR EASY PLANTING

- ❖ each bulb has the potential to create a flowering plant next spring given the right conditions



GEO
EARTH

GEOPHYTES

PHYTE
PLANT

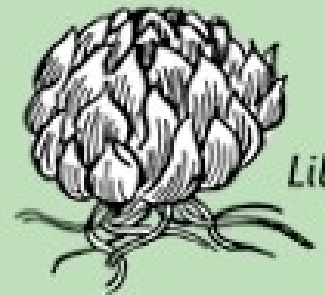
plants that shelter their resting bud in the soil when environmental conditions are not favorable; the structure also serves as underground storage to hold energy or water to grow when conditions are right

All bulbs are geophytes but
not all geophytes are bulbs



Daffodil

TRUE BULBS



Lily



Crocus

CORMS



Gladiolus



Potato

TUBERS



Caladium

TUBEROUS ROOTS

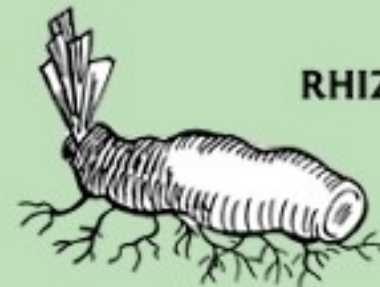


Sweet Potato



Dahlia

RHIZOMES



Iris



Canna



Rhizomes



Tubers



Tunicate



Non - tunicate



Tuberous
Roots

BULB HISTORY

- ❖ Origin of bulbs is lost in antiquity
- ❖ 300 B.C. it was mentioned in Greek writings
- ❖ Appears to from the regions of Greece and Turkey





Daffodils were brought to Britain by invading Romans (who thought that the sap from daffodils had healing powers) as early as 55 BC

Hyacinths came to Europe from Turkey. A German doctor named Leonhardt Rauwolf, collected samples of hyacinths when he visited Turkey in 1573. By the early 1700s hyacinths were very popular with more than 2,000 cultivars available.

Crocuses were brought to England from France by Jean Robin, a Director of Gardens in Paris. Crocuses came to the United States on ships by settlers who planted them around their cabins.

Julius Cesar invading Great Britain

TULIP HISTORY

- ❖ Botanical garden was raided and bulbs stolen on a regular basis
- ❖ between 1634 and 1637, a craze in Holland, called “tulip mania,” developed
- ❖ a single bulb of a mosaic type tulip sold for as much as \$880.00
- ❖ Discovery of grafting a highly prized bulb to a common bulb caused the market to collapse and fortunes were lost



TULIP HISTORY

- ❖ TULIP MANIA – the first known economic bubble
- ❖ Tulip breaking is caused by one or more viruses
- ❖ first described in 1576
- ❖ second oldest known viral disease of plants
- ❖ variegation (mosaic) in flower color pattern



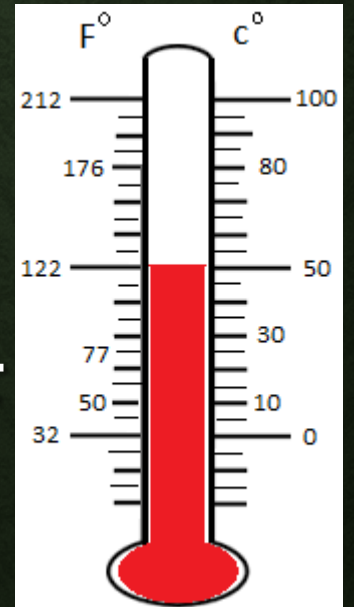
tulip of burgundy and ivory was traded for enormous sums

WHY DO WE PLANT SOME BULBS IN FALL?

Bulbs must go through cold period for root development, growth and bloom



- SOIL TEMPERATURE -55-60°F
- NIGHT-TIME TEMPERATURES - 40-50°F



PLANTING

The best time of year to plant in Kentucky is the September through November – December

- Bulbs roots will begin to grow so allow 2-3 weeks before the ground freezes
- Choose bulbs that are large and firm
- Tunic should be intact as it protects the bulb
- No cuts, mold or mushy when you squeeze the bulbs
- Bulbs are graded by size, the bigger the bulb, the better the bloom next year

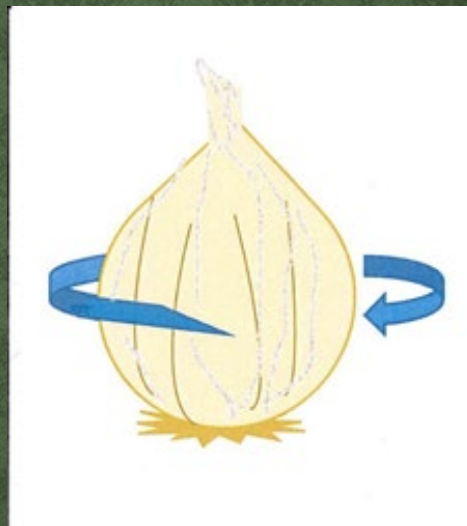


SIZE MATTERS

The Bigger the Better



Photo by Ben Rotteveel, Dutch Grown Bulbs



- Measured by the circumference around the largest part of the bulb
- Usually measured in centimeters (cm)
- Smaller bulbs - cheaper but may not be your best value
- Landscaper bulbs –smaller but can cover more area

Bulb	Geophyte Type	Size for Good to Top Grade
Allium - Large	bulb	20 cm+
Allium - Small	bulb	5-6 cm+
Anemone	corm	5 cm+
Crocus	corm	9-10cm
Daffodil	bulb	14-16 cm
Dutch Iris	bulb	8cm+
Hyacinths	bulb	16 cm For forcing 19cm+ best
Muscari	bulb	9cm
Tulips	bulb	10 cm +
Tulip, species	Bulb	7cm+

Table Created by Sharon Flynt, agent for horticulture, Scott Co. Cooperative Extension, Georgetown, KY from information from Dutch Grown Bulbs, West Chester, PA

PLANTING

- Plant in a sunny spot
- Remember most trees will not have leaves on them to provide shade when your bulbs are growing and blooming
- Well- Drained Soil
- Avoid Clay soils
- pH 6 to 7



PLANTING

- Excavate the area to be planted
- loosen the soil under the bulbs
- Place bulbs in bed/holes; space according to size
- Cover bulbs with soil using only one-half of the soil removed
- Water thoroughly!
- Finish covering bulbs with remaining soil
- Cover the bed with 2-3 inches of mulch
- If the fall is dry, water area as needed



HOW TO PLANT

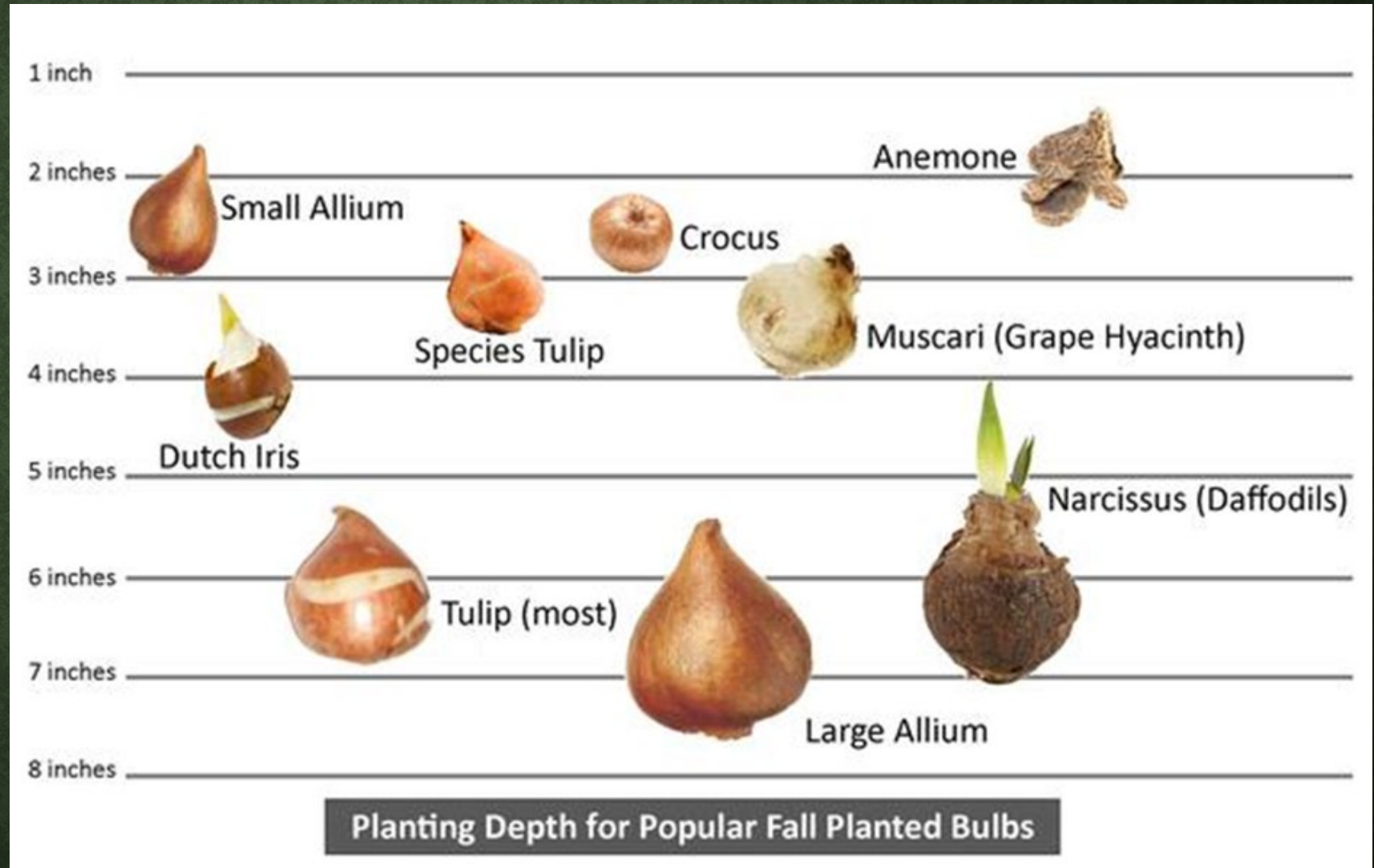
❖ PLANT BULB TIP UP

❖ POINTY END UP

❖ THINK OF A TRIANGLE



- planting at two to three times the diameter size of the bulb
- plant tulips in a hole at least 5" deep, especially if you're planning to leave them in the ground



SMART FLOWER BULBS

- 'Smart' flower bulbs pull themselves to deeper ground
- Bulbs dig deep in search of best growing conditions



DON'T TEMPT THEM!

Flowering Bulbs	Minimum Spacing (inches)	Bloom Time	Deer-Resistant
Snowdrops - Galanthus	3	Early spring	X
Crocus	4	Early spring	X
Scilla	4	Early spring	X
Daffodils	6-8	Spring	X
Grape Hyacinth	3-4	Spring	X
Fritillaria	6-8	Spring	X
Dutch Iris	4-5	Late spring	X
Allium	6-8	Late spring/summer	X
Giant Allium	12-18	Late spring/summer	X

Nothing on the Menu: Voles, chipmunks, squirrels, etc. don't eat all types of flower bulbs

Bulbs avoided daffodils and fritillaria, alliums, camassia, chionodoxa, muscaria and snowdrops

Natural Barriers: Planting bulbs beside a walkway, against the house, between the sidewalk and road, or inside a planter makes them less accessible to burrowing animals

Small garden beds, surrounded by lawn or backed up to a structure, are somewhat less appealing than large beds with soft, welcoming soil

Wire Cage

Flower Pot with bottom out

DISEASE AND PESTS

CHOOSE ONLY HEALTHY FIRM BULBS, KEEP GARDEN FREE OF WEEDS AND DEBRIS

- The most common pests of flowering bulbs
 - aphids, bulb mites, slugs and snails

[Clemson Extension Fact Sheet](https://hgic.clemson.edu/factsheet/flowering-bulb-insect-pests/#:~:text=The%20most%20common%20pests%20of,major%20pests%20of%20flowering%20bulbs)

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Fungal Diseases-

- Basal Rot (caused by *Fusarium oxysporum* F.sp. *narcissi*)
- Narcissus Smoulder
- Leaf Scorch (caused by *Stagonospora*)
- Narcissus Leaf Scorch

Viral Diseases-

- yellow stripe virus
- cucumber mosaic virus
- white streak virus and
- tobacco rattle virus
 - In some cases the flowers is also affected with “breaking” or light patches on the petals or dark streaks. In most cases even though the flowers are not affected there will be a loss of vigor and reduced yield in the plants involved.

<https://thedaffodilsociety.com/a-guide-to-dafodils/pests-diseases/>

YOUR LANDSCAPE

- Spring flowering bulbs can be used in beds (annuals or perennials), borders, ground covers, rock gardens, and wooded areas
- can be interplanted in the same area based on time of flowering and plant heights
- Naturalized Bulb Planting



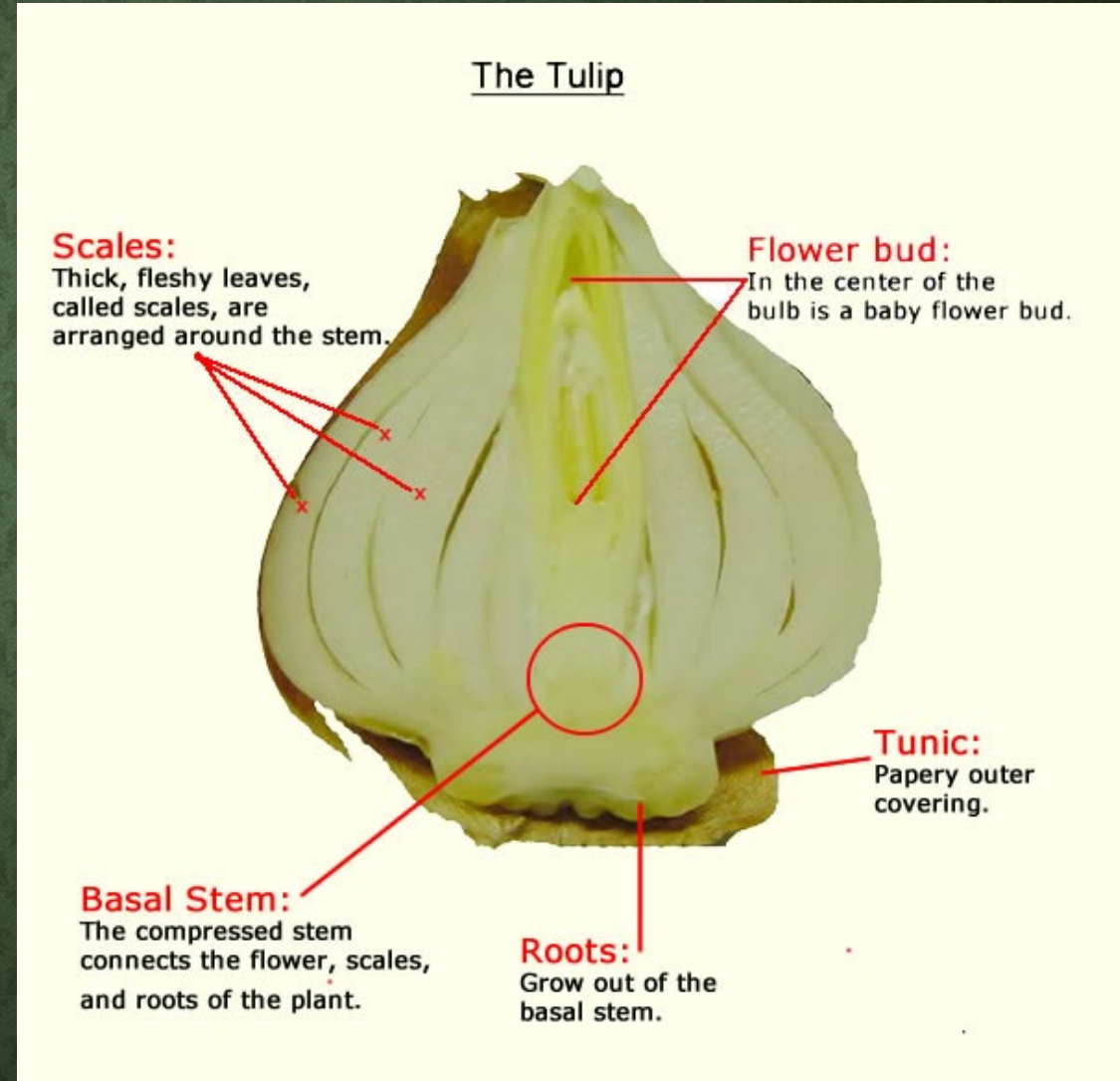
AFTER BLOOM



- Allow foliage to die naturally
- Once foliage is brownish yellowish, trim back
- if desired, overplant area with summer annuals

BULB LIES DORMANT

- The foliage dies back to the bulb, which contains a maturing flower bud for next season
- The bulb is dormant in response to
 - seasonal change (temperature) in climate
 - water availability



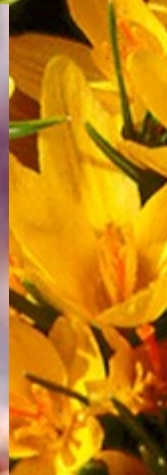
ALLIUMS



ANEMONE



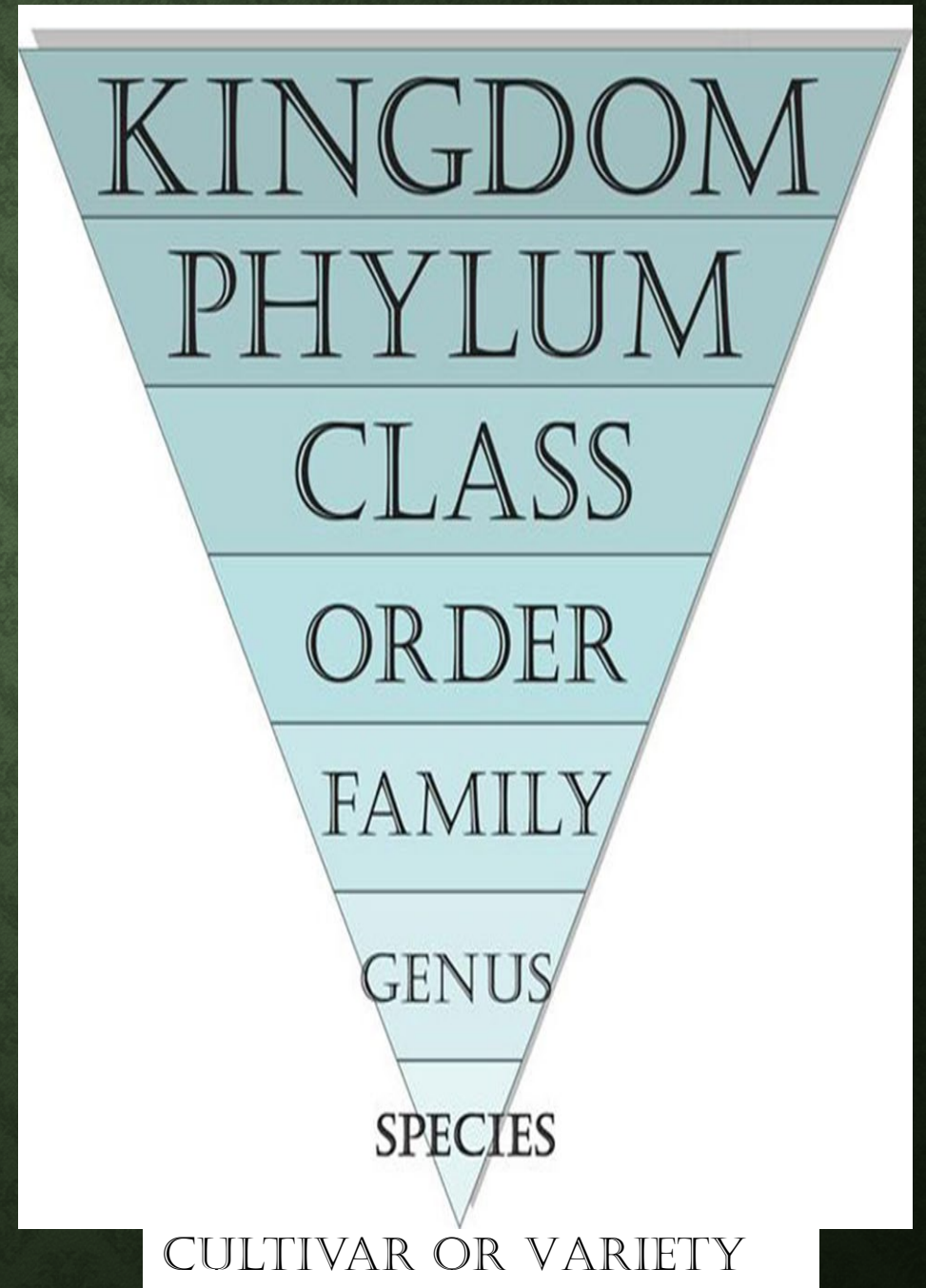
CROCUS



DAFFODIL

. . . or is Narcissus, Jonquil . . .

- ❖ botanical name of the whole genus is Narcissus.
- ❖ Daffodil is the common name
- ❖ *Jonquil* is a "species name" within the *Narcissus* genus
- ❖ *Narcissus jonquilla*
- ❖ *Narcissus incomparabilis aurantius plenus* 'Butter and Eggs'
- ❖ 'Butter and Eggs' is the variety name



DAFFODIL



DUTCH IRIS





MUSCARI (GRAPE HYACINTH)



TULIPS



SPRING FLOWERING BULBS FOR KENTUCKY GARDENS

Robert G. Anderson, Extension Specialist in Floriculture

Spring flowering bulbs are an important part of the landscape in Kentucky. Crocus and daffodils tell us that spring is on its way and red tulips are a Derby Day tradition. These flowers are recognized by most people but there are many other spring flowering bulbs that can be used around your home.

Hundreds of different kinds of flower bulbs are available for fall planting. You may obtain them from mail order bulb companies, garden centers, supermarkets or department stores. Some are familiar and others have long, hard-to-pronounce names. Generally, spring flowering bulbs do very well the first spring after they are planted. Yet, many home gardeners want the bulbs to come back year after year or naturalize in their home landscape.

Continuing trials at the UK College of Agriculture's Arboretum and Horticulture Research Farm have focused on the naturalization of spring flowering bulbs. Bulbs planted in various sites and given different types of care have been observed through four spring flowering seasons. The following list of recommended bulbs for Kentucky landscapes is based on these trials.

Planting Site

Well-drained sites are essential. Established gardens and beds or newly cultivated areas are fine. The soil pH should be 6.0 to 7.0. Bulbs will not do well in heavy clay soils, so poor soils should be amended with compost, peat moss or other organic matter. Most bulbs prefer a site that does not receive full sunlight in the middle of the day. This reduces water stress on hot spring days to extend flower life and allows the bulbs to mature properly after flowering. Only bulbs that flower very early in the spring should be planted directly in the lawn. All other bulbs perform best and are easier to maintain when planted in mulched beds. Flower bulbs should be planted in groups so the mass of color increases visibility. Small bulbs should be planted in groups of at least 10 to 12 while large bulbs can be planted with as few as 5 to 6 bulbs in a group. Bulbs that flower at different times can be inter-planted in the same area. If you desire "perennialization" or naturalization of your bulbs, avoid planting near heated basements. Bulbs can be used as annuals or perennials in beds, in ground covers, in rock gardens or under trees and shrubs.

Fall Planting Techniques

Plan to plant spring flowering bulbs between October 15 and Thanksgiving. Start by cultivating and cleaning the planting site. Small sized bulbs (about 1 inch) should be planted in holes 5 inches deep and 1 to 4 inches apart. Large bulbs (2 inches or more) should be planted in holes 8 inches deep and 4 to 8 inches apart. These planting depths will help protect the bulbs from frost, animals and physical damage due



Wind Flower - 'Radar'



Grape Hyacinth

PLAN IN THE SPRING

- Photograph your spring garden to know where your bulbs need to be planted in the fall.
- Take note of existing perennials and growth and bloom time for underplanting strategies in the fall

Netherland Bulb Company

Your Direct Source for Flower Bulbs

2020 Fall Wholesale Price List

Tulip Blush Blend

See Page 17 & Back Cover

BEAUTY FROM BULBS

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Camassia leichtlinii Caerulea (page 62).



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QUESTIONS?



Photo by Sharon Flynt, Scott County, Kentucky



*CREATED BY Sharon P. Flynt, Scott Co. Cooperative Extension Horticulture Program,
Georgetown, KY 40324, September 2020*

SOURCES

The American Daffodil Society;
<https://thedaffodilsociety.com/a-guide-to-daffodils/pests-diseases/>

Your First Garden: What You Need to Know Before You Plant
Bulbs, Fan Winston, September 11, 2020
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What to Plant in Fall; Ohio State University Food and
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PUBLIC RELEASE: 2-DEC-2007

'Smart' flower bulbs pull themselves to deeper ground
Bulbs dig deep in search of best growing conditions
AMERICAN SOCIETY FOR HORTICULTURAL SCIENCE
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Dr. A. Carl Leopold, William H. Crocker Scientist Emeritus at
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Leaflet no: 611-Hints for fall-planted spring and early
summer flowering bulbs; M.A. (Kim) Powell extension
horticultural specialist; P.V. Nelson, professor
department of horticultural science; North Carolina
Cooperative Extension Service North Carolina State
University

<https://www.uaex.edu/yard-garden/resource-library/plant-week/geophytes-4-1-11.aspx>

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