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SPRING FLOWERING BULBS

CULTURAL INSTRUCTIONS

BRENT AND BECKY HEATH

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Dear Customers and Gardening Friends,

Congratulations on being one of many Americans who are making neighborhoods, towns, landscapes and cities more beautiful and colorful places to live and travel. And thank you for contributing to the improved moods of those who pass by and enjoy your garden!

When you consider how many books are written on only one type of bulb, we’re sure you realize that this little booklet of cultural instructions just begins to touch the ‘tip of the iceberg’! Just when we think we’ve figured out a definitive answer to a cultural question about a particular bulb, we find other variables that force us to answer in general terms or use a lot of ‘ifs’. One thing is for sure, there are no absolutes in nature or horticulture. That’s one of the things that makes gardening so much fun - it is full of surprises and most of them are positive ones!

The best general advice we can give you is; improve your soil! We have many garden areas on our farm, and the garden to which we added three dump truck loads of compost and horse manure is the one with the most flowers that stay in bloom longest, has the tallest cannas, the lushest dahlias, and the healthiest looking perennials. The spring flowering bulbs are re-blooming very nicely in this garden as well! The second best general advice, especially if you’re a beginning gardener is; try to choose the bulbs or plants that should give you the most success. In other words, try not to go against ‘Mother Nature’ by ordering items that originate in areas with totally different climatic conditions than yours! After you’ve had some experience and some successes, then it’ll be easier to branch out and try new adventures, ‘test the water’ in gardening and find all the exceptions to the rules! The third suggestion is; ‘most’ bulbs prefer to be relatively dry during their dormancy. So plant bulbs in well-drained soil or elevated beds. If you have clay soil, put 6" of compost on top of the ground; place the bulbs on top of the compost and cover the bulbs with 6" more of compost or other material easy to grow through. You’ll have made a luscious raised flower bed!

USDA, winter-hardy plant zones are not locked in stone, but they are a good starting point, so we’ve listed them below for your convenience. There are so many other variables involved...the heaviness or lightness and Ph of the soil; whether you’re planting in full sun, or full shade; whether or not you mulch, etc. You can sometimes extend the hardiness by a zone in either direction. For instance, if you live in the warmest edge of a plant zone and full sun is recommended, perhaps partial shade will make that plant happier in your garden. On the other hand, if you live on the cold edge of the hardiness zone, choosing a protected location and mulching might grant you more assured success!

Thank you for your order and for all the smiles you’ll create planting your bulbs. There is a smile included in each one!

Happy Gardening!

Brent and Becky

**USDA WINTER-HARDY CLIMATE ZONES**

Determined by the lowest winter temperatures in a ‘normal’ year.

<table>
<thead>
<tr>
<th>Zone 1</th>
<th>Zone 6</th>
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<tr>
<td>below -50°</td>
<td>-10° to 0°</td>
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<tr>
<td>Zone 2: -50° to -40°</td>
<td>Zone 7: 0° to 10°</td>
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<td>Zone 3: -40° to -30°</td>
<td>Zone 8: 10° to 20°</td>
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<td>Zone 4: -30° to -20°</td>
<td>Zone 9: 20° to 30°</td>
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<tr>
<td>Zone 5: -20° to -10°</td>
<td>Zone 10: 30° to 40°</td>
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General Instructions

Inspect your bulbs upon arrival. Small nicks, loose tunics or blue/gray mold do not affect the development of your bulbs. White mold and soft, light weight bulbs with a strong, moldy smell should be reported to us immediately.

Some bulbs like Eremurus, Erythronium, Fritillaria and Lilies have loose scales that make them feel 'pithy', but this is a natural occurrence for these bulbs.

If you must store your bulbs for a short period of time, take the bulbs out of the box or crate and store the bulbs in a dry, well ventilated area.

Plant your bulbs as soon as possible, for best results. We find that bulbs are normally happier if they are planted after the first frost but before the ground freezes. Once fall planted bulbs have made roots, they should not freeze. Please read the planting instructions for the particular bulb you are planting.

Tops and bottoms of bulbs are sometimes difficult to detect. Most of the time, it's advisable to plant 'pointy-side-up'. When in doubt, plant the bulb on its side!

Soil that is rich in humus, compost or other organic material should assure more gardening successes. In most cases, choose a well-drained location unless otherwise noted in the instructions for a specific bulb. If your soil is heavy, lighten it with any good organic material. 'Berming' or raising the bed should be helpful to ensure good drainage which is most important when heavy rains and downpours occur.

Exposure to full sun is important for those bulbs that require it because of the photosynthesis process that helps the flowers rebloom the next year. If your trees grow and provide more shade than desired, you can often 'limb-up' the branches, letting in more sunlight.

Applying a top-dressing of compost over your garden each and every fall actually helps feed the soil which enables your bulbs to take up necessary nutrients. Giving back to the soil will help everything grow better; bulbs, perennials, annuas & shrubs.

Mulching with a light substance helps retain moisture and cuts down on weeds. Pine needles, well chopped pine bark, buckwheat hulls or compost are excellent.

Please don't cut, tie or bend the bulb's leaves until they begin to turn yellow and flop over in which time they can be safely cut.

Water at least once after planting and at least once a week in the spring IF you do not receive 1/2" of rain per week during the growing season. Try to avoid planting bulbs in areas where there is a 'thoughtless irrigation' system that waters everyday whether it's needed it or not! More bulbs are lost when there is too much water when they don't want or need any! Damp, dormant bulbs are susceptible to fungal diseases.

Forcing, or bringing bulbs into bloom before they normally would in natural outdoor settings, can be accomplished with most spring flowering bulbs. Early bloomers are easiest. Most bulbs mentioned in these instructions need to receive some period of cold in order to trigger the bulb's blooming mechanism. One way is to pot the bulbs, water once and let drain; place the pots in a cool garage, mulch pile or refrigerator for 12 to 14 weeks; then place in a light, warm room and water once or twice a week when needed. (Some bulbs even respond to dry cooling in a box or bag in the refrigerator for 12-14 weeks before potting. After potting the bulbs, place in a 40-60° dark room for 2 weeks of rooting time - then move to light) After they bloom, keep the bulbs growing in the pot until it is warm enough to plant outside. If handled properly, these bulbs will bloom in your garden again next year and thereafter. However, it is difficult to give enough nutrients for the bulbs to force again in a pot.

Instructions for Daffodils/Narcissus

Bulb sizes are determined by the age of the bulb and also the division of the cultivar. Division 1-4 (Trumpet, Large Cup, Small Cup and Double) tend to be larger (14-16cm or 16-18cm in circumference) than Division 5-7 (Triandrus, Cyclamineus and Jonquilla) (12-14cm or 14-16cm). Of course, miniatures are normally smaller sized bulbs (8-10cm or 10-12 cm). With this in mind:

Spacing: Plant bulbs 3 times the width of the bulb apart or 4-6" on center, depending on the size of the bulb - Depth: 3 times the height of the bulb deep or 4-6" to the bottom of the hole, depending on the size of the bulb.

Exposure: Full sun is preferable, but partial shade (at least 1/2 day) is usually acceptable.

Digging and dividing is normally not necessary if the bulbs are planted in fertile soil, have sufficient water during the spring growing season and if they get plenty of sunlight for 6 weeks after the blooms are finished. However, if you feel like you still need to dig and divide them, just as soon as the foliage begins to turn yellow, dig under the whole clump with a spading fork. Shake off the loose soil and carefully separate the roots of the large bulbs from one another. If daughter bulbs are attached to the mother bulbs, it's best to
leave them together - they will separate underground when the time is right.

When Storing bulbs, if it’s absolutely necessary to keep the bulbs out of the ground over the summer, keep them dry - dry - dry in mesh bags or hose with plenty of air circulation around them. The best choice is to plant them right back in the ground after digging.

Removing spent flowers is nice for aesthetic reasons, but because most hybrid daffodils have very little nectar and have heavy, distasteful pollen which is seldom spread by the wind or insects, few are accidentally pollinated. Therefore, few produce real seeds which would drain the bulb’s energy needed to produce next year’s bloom...so it’s not really necessary to deadhead daffodils.

Pests are not normally a problem with daffodils because the bulbs and the foliage are poisonous to most insects and animals.

B & B Tip: Daffodils are very happy when combined with other bulbs and perennials. Plant the tall cultivars in the rear of the garden and the miniatures in the front. Perennials and other types of plants that bloom after the daffodils help to hide the maturing foliage and use the available moisture during summer showers.

Instructions for Tulips

Spacing: Plant bulbs 3 times the width of the bulb apart or 6” on center for standard tulips and 3-4” on center for small miscellaneous or species tulips. Depth: 3-4 times the height of the bulb deep or 8”-10” for standard tulips and 4-6” for small miscellaneous or species tulips.

Exposure: full sun is preferable; partial shade usually produces longer, weak stems and smaller flowers.

Deter pests by planting other distasteful or poisonous bulbs like daffodils, alliums, and fritillarias with your tulips. A handful of sharp, crushed gravel in each hole surrounding the bulb seems to help discourage voles from burrowing and finding the tasty tulip bulbs. There is a product that you can purchase in most garden centers called ‘Vole Bloc’, a sharp aggregate, that has been designed just for this purpose. We have put tulip bulbs in a plastic bucket and sprayed them with products like ‘Deer Off’, ‘Ropel’ and other bad tasting products before we planted them, which seemed to help for a year. Some people swear that spraying your garden with a castor oil-type product works. If deer are a problem, placing chicken wire around the edge of your tulips 6” off the ground before the tulips emerge seems to help keep them away. If you wait until they’ve had a taste, there is very little that can keep deer away.

Remove spent tulip blossoms. They do have nectar, are visited by insects and will make seeds which may take the up to 30% of the bulb’s energy needed to produce next season’s flower.

B & B Tip: If you have voles, be careful about mulching tulips. You may create a warm, inviting winter home filled with tasty morsels for ‘underground bulb monsters’.

Spring Flowering Bulbs

ALLIUM (AL-ee-um) *Hardy Zones 3-8

Nickname: Ornamental Flowering Onion

Spacing: Giant, 1 per sq ft; Large, 4 per sq ft; Small, 10 per sq ft; Depth: 2-3 times the height of the bulb deep; Exposure: full sun to partial shade.

Alliums like sandy, well-drained soil, can tolerate somewhat dry conditions. A. neapolitanum, A. schubertii and A. karataviense seem to be suitable for growing in containers. *Check individual variety in catalog for specific zone recommendations.

Origin: Southern Europe, Asia Minor and Western North America

B&B Tip: Planting alliums among your ornamentals may help deter insects and black spot. We enjoy planting Alliums with Roses, Hostas and Peonies.

x AMARCRINUM (a-mar-KRYE-num) Zones 7-10

Alternate name: x Crinodonna

Spacing: 12”; 1 bulb per 8” pot; Depth: cover just to neck of bulb in soil; in pots leave top third of bulb exposed; Exposure: full sun, but tolerates partial shade in south. Appreciates well-drained soil. As growth begins, keep moist but not wet, tapering off in late summer or in the fall, depending on where you live. Provide 4-6” of winter mulch protection in Zone 7. In colder areas grow in containers.

Origin: Garden USA and England

B & B Tip: Superb planted with Asters, Chysanthemums and fall blooming annuals or perennials. Use in flower arrangements, as they are long lasting cut flowers.
**AMARYLLIS BELLADONNA** (am-ma-RIL-us bell-ah-DON-ah) Zones 8-10
Spacing: 8-10" apart of 1 bulb per 10" pot; **Depth**: 5-6" deep; neck deep in container; **Exposure**: full sun to partial shade.
Foliage appears in spring and dies back in early summer. Flowers appear on 'naked' stalks in late summer. Begin watering when foliage appears and withhold water when foliage dies back. Bulbs should be kept as dry as possible during their dormancy, otherwise they may not bloom. When flower stalk appears, resume watering and fertilizing. In colder areas, grow in containers.
**Winter Care**: Dig and store bulbs dry at 50-60 degrees F. Bring potted bulbs indoors before the first frost in the fall. Plants may be allowed to wither and be stored dry in their pots over winter. Repot (if necessary) in spring. **Origin**: South Africa
**B & B Tip**: These bulbs thrive in Mediterranean climates (California). In all other climates, they are best treated as a container plant where they can be kept from freezing in the winter and kept dry during their dormancy.

**ANEMONE BLANDA** (ah-NEM-oh-nee BLAN-duh) Zones 5-8
**Nickname**: Greek Windflower
**Spacing**: 2-4" (10-15 per sq.ft.); **Depth**: 2"; **Exposure**: full sun to half shade.
If soil is not moist, soak in tepid water the night before planting. It is very difficult to tell tops from bottoms on these tubers so plant them on their edge (see diagram) so that the roots can grow down and the plant can grow up easily.
**Origin**: Mediterranean
**B & B Tip**: Excellent 'carpet' or 'shoes and socks' plants for larger bulbs.

**ANEMONE CORONARIA** (kore-oh-NAR-ee-ah) Zones 7-9
**Nickname**: Greek Windflower or Poppy Anemone
**Spacing**: 4" (8-10 per sq.ft.); **Depth**: 2"; **Exposure**: full sun, partial shade
If soil is not moist, soak in tepid water the night before planting. It is very difficult to tell tops from bottoms on these tubers so plant them on their edge (see diagram) so that the roots can grow down and plant can grow up easily.
**Origin**: Southern Europe and Mediterranean
**B & B Tip**: A border of these planted in front of tulips, daffodils and Hyacinthus make a smashing display!

**ANEMONE SYLVESTRIS** (sil-VE5-tris) Zones 3-8
**Nickname**: Snowdrop anemone
**Spacing**: 8-12" on center or 1 per sq. ft.; **Depth**: crown just below soil surface; **Exposure**: part sun to part shade. Plant in good garden soil, add compost if necessary.
**Origin**: Eastern Europe
**B & B Tip**: Will spread by root suckers to form a nice colony in a couple of years.

**AQUILEGIA CANADENSIS** (Ak-quill-EE-jah Can-nah-DEN-sis) Zones 3-8
**Nickname**: Columbine
See Perennials

**ARUM** (AIR-um) Zones 5-9
**Nickname**: Arrowroot, Lords and Ladies
**Spacing**: 8-10"; **Depth**: 3-4"; **Exposure**: partial sun to full shade. Plant in humus-rich soil for best results. It is not normally necessary to fertilize unless the soil is poor. A yearly top dressing of compost is beneficial. It usually takes a year before the leaves develop their distinctive markings and size so do not disturb once established.
**Origin**: Southern Europe
**B & B Tip**: At the end of summer, scatter the berries and scratch them into the ground where you want the arum to naturalize.
BELLEVALIA PYCNANTHA (bell-VAL-ee-ah pick-NAN-thah)
Zones 5-8
Spacing: 2-3"; Depth: 2-3" (deeper in sandy soil); Exposure: full sun or partial shade. These little bulbs thrive in almost any soil. They like moisture during the growing season but prefers a dry dormancy.
Origin: Eastern Mediterranean
B & B Tip: Shows off best when contrasted with a lighter colored flower or leaf.

BULBOCODIUM VERNUM (bulb-oh-KOH-dee-um VER-num)
Zones 3-8
Spacing: 3-4" or 10-15 per sq. ft.; Depth: 3-4"; Exposure: full sun or light shade. Easy to grow, plant in any good well-drained garden soil. Withhold moisture during the summer. Best left undisturbed to allow plants to increase.
Origin: Southwest Alps to Southern Russia
B & B Tip: Plant in a spot where you will see and enjoy the very early flowers.

CALOCHORTUS (kal-oh-KOR-tus)
Zones 6-10
Nickname: Mariposa Lily, Globe Tulip, Fairy Tulip
Spacing: 3-6" or 8-10 per sq. ft.; Depth: 3-4"; Exposure: light shade in hotter part of day. Can be planted in poor, sandy soil. Provide moisture during growing season, allow a dry resting period in the late summer. Makes an excellent cutflower!
Origin: Western U.S.
B & B Tip: Great meadow plant where it can be seen 'dancing' in the late spring breezes.

CAMASSIA (ka-MASS-see-uh)
Zones 3-8
Nickname: Indian Hyacinth, Quamash
Spacing: 6-12"; Depth: 4-5"; Exposure: full sun or part shade
Plant in any garden soil where they can have abundant moisture. Ideal for bordering a pond because their roots can reach the moisture. Plant en masse for best results. Bulbs do not produce many offsets but can be propagated by seed.
Origin: Western North America
B & B Tip: Camassias show off best when planted with Peonies, Siberian Iris or Sweet William.

CARYOPTERIS
See Perennials

CHIONODOXA (key-on-oh-DOCK-sah)
Zones: 3-8
Nickname: Glory of the Snow
Spacing: 2-3" or 15-20 per sq. ft.; Depth: 2-3"; Exposure: full sun to medium shade
Plant in well-drained soil with good moisture in the winter and spring; if soil is sandy, add humus. Mass plantings are best, ideal for rock gardens. Seed sown when ripe, germinates readily and forms naturalized colonies.
Origin: Asia Minor
B & B Tip: Great 'shoes and socks' or 'carpet' plants for larger, early blooming bulbs.

CORYDALIS (ko-RID-a-lis)
Zones 5-8
Nickname: Fumewort
Spacing: 2-3" or 10-15 per sq. ft.; Depth: 2-3"; Exposure: part sun to shade, especially in warm climates. These plants thrive in rich, well-drained soil and in hot areas will do well in dense shade. Best planted in informal setting and allowed to spread. Lift and divide only when necessary to increase stock.
Origin: Northern Europe and Asia
B & B Tip: Wonderful woodland accent plants especially in a pocket of soil formed between roots of a large tree.

CROCUS (KROH-kus)
Zones 3-8
Spacing: 2-3" or 10-15 per sq. ft.; Depth: 2-3"; Exposure: full sun to part shade
Plant in well-drained soil that is moist during the growing season and dry the rest of the year. While most do well in full sun, some species will tolerate partial shade. If they need to be deeper, the corms will pull themselves down to the preferred depth. If pests are a problem, spray bulbs with a repellent prior to planting.
Origin: Central and Western Europe
B & B Tip: ’Painting’ pictures with different colors of crocus in the lawn or writing words creates great winter visual entertainment.
DICHELOSTEMMA (dike-loh-STEM-ah) Zones 5-8
Spacing: 2-4’; Depth: 4-6”; Exposure: full sun, partial shade.
Plant in well-drained, fertile, sandy loam where they receive plenty of moisture while growing but allow to dry during dormancy. Do not try to grow in an area of deep shade.
Origin: Western U.S.
B & B Tip: This is an excellent addition to a wildflower meadow.

DRACUNCULUS VULGARIS (dra-KUN-kew-lus vul-GAR-us) Zones 6-9
Nickname: Dragon Plant
Spacing: 12-16” or 1 per sq. ft.; Depth: 5-6”; Exposure: full sun, partial shade
Plant in rich soil with abundant moisture and good drainage. Do not water after foliage dies. Lift and divide every three or four years or overcrowding will reduce flowering. Choose planting location carefully as the flowers have an unpleasant smell that attracts flies, which in turn pollinate these dramatic, large flowers.
Origin: Central and Eastern Mediterranean
B & B Tip: This should be one of the focus plants in your Tropical Border for its dramatic flower and leaves.

EREMURUS (err-e-MEW-rus) Zones 5-8
Nickname: Foxtail Lily, Desert Candle
Spacing: 1-2’; Depth: Cover growing tip with 2-3” of soil; Exposure: full sun
This rootstock is thick with a number of tubers radiating from the bud, resembling an octopus. Handle carefully as tubers are brittle. Plant in rich, well-drained soil and provide ample moisture during growing season. Reduce water after blooming but do not allow to completely dry out. Elevate plant 2-3” above soil level to provide good drainage, if necessary. These grow tall and some will reach over 6 feet—provide protection from strong winds.
Origin: Western and Central Asia
B & B Tip: A cluster of Eremurus provide living sculpture in the garden. Position with a dark backdrop for best focal effect.

ERYTHRONIUM (err-ih-THROW-nee-um) Zones 3-8
Nickname: Dog-tooth violet, Trout Lily, Adder’s Tongue
Spacing: 4-6”; Depth: 3-4”; Exposure: partial shade to shade
Although they will grow in a variety of soils, this woodland plant performs best in rich, moisture-retentive soil. Provide adequate moisture when leaves are making growth, less moisture required in late summer and fall. Grow in an area where they will not be disturbed.
Origin: Northwestern U.S, Europe and Asia
B & B Tip: Ideal in a woodland meadow. Shows off well at the base of large trees and is easily forced with a short cold period.

FERNS (furns) See Perennials

FRITILLARIA, LARGE (frit-i-LAIR-ee-uh) Zones 4-8
Nickname: Crown Imperial
Spacing: 12-14”; Depth: 8”;
Exposure: full sun to partial shade. Fritillaria do not like hot, dry conditions. Plant in rich, well-drained soil and provide abundant moisture in spring and early summer; allow to dry out after flowering. Moisture must be present throughout life of the leaves and shade should be provided in hotter zones. In poor soil bulbs may benefit from a top-dressing of compost or organic fertilizer when growth begins.
Origin: Turkey
B & B Tip: Large Fritillaria make effective centerpieces in a flowerbed with either similar or contrasting colored flowers surrounding them.
GERANIUM TUBEROSUM (jeh-RAIN-ee-um tube-er-OH-sum) Zones 5-9
Spacing: 3-5" on center; Depth: 4" deep; Exposure: partial shade to sun. Plant in rich, well drained soil. Give plenty of moisture while in leaf. It is similar and should be treated like the spring form of the hardy perennial Geranium.
Origin: Mediterranean
B & B Tip: This is an excellent companion to late blooming, larger spring bulbs, providing a soft carpet around their ankles.

GLADIOLUS (glad-ee-OH-lus) Zones 5-10
Nickname: Sword Lily, Corn Lily; Spacing: 4-5"; Depth: 6-10", deeper in light soil; Exposure: full sun. Easy to grow, glad's prefer sandy, rich soil with good drainage. Plant corms deeper to help the flower stalks stand upright.
Origin: South Africa (G. carneus) and Southern Spain, Sicily (G. byzantinus)

HELIANTHUS AND HELIOPSIS
See Perennials

HELLEBORUS (hel-ah-BOOR-us) Zones 4-9
Nickname: Lenten Rose; Spacing: 8-12"; Depth: crowns just below soil level; Exposure: partial to full shade. These plants do best in rich soil with regular watering. Fertilize in early spring as new leaves are emerging. If left undisturbed, these will form clumps of new plants within a season or two.
Origin: Asia Minor, Greece
B & B Tip: A special treat in the late winter and early spring.

HEMEROCALLIS (hem-er-o-CAL-lis) Zones 3-9
Nickname: Daylily, Graveyard Lily; Spacing: 12-18", depending on height of plant; Depth: crown just below soil level; Exposure: full sun to partial shade. These plants tolerate a variety of soils. Once established they will withstand dry conditions, but perform better if summer moisture is provided.
Origin: East Asia, Japan and China
B & B Tip: These are ideal coverups for masking or hiding the sometimes ugly, maturing foliage of large daffodils and tulips.

HERMODACTYLUS (herm-o-DAC-ty-lus) Zones 6-9
Nickname: Snake's Head Iris; Spacing: 4-5" or 10 per sq. ft.; Depth: 3"; Exposure: full sun. An undemanding plant that asks only for lots of sun and well-drained soil. Provide moisture in the spring. In colder climates, plant in a groundcover to help protect the winter leaves. Origin: Southern Europe
B & B Tip: Plant with light colored flowers like Candytuft (Ibiris) to show it off better in the garden.

HIBISCUS (Hi-BISS-kus) Zones 4-9
See Perennials

HYACINTHOIDES (hye-uh-sin-THOI-dees) Zones 3-10
Nickname: Spanish Bluebells, Wood Hyacinths, Scilla Campanulata; Spacing: 4-6"; Depth: 4"; Exposure: full sun to shade. They love humus-rich soil and spring moisture. Try not to disturb so they can naturalize and multiply. Very tolerant of various locations, either full sun or shade.
Origin: Southwestern Europe and North Africa
B & B Tip: Hyacinthoides often take a year or two to get established and put on a good show but often naturalize once established.

HYACINTHUS (hye-uh-SIN-thus) Zones 4-8
Nickname: Hyacinth; Spacing: 4-5" or 4 per sq. ft.; Depth: 4-6"; Exposure: full sun. Plant in well-drained, rich garden soil. Well-rotted compost or manure can be added before planting. Hyacinths seldom produce the big, full flowers after the first year but they still make a nice, fragrant showing with a few less florets in subsequent years. Note: Avoid contact with skin when handling these bulbs as they can sometimes be irritating. Wash with soap and water after contact with the bulbs to help stop the initial itching.
Origin: West and Central Asia
B & B Tip: Plant near a walkway, a bench or in a large raised planter to benefit from the incredible, musky, sweet fragrance that these flowers produce.
IPHEION (IP-fee-ahn) Zones 4-9
Nickname: Star Flower
Spacing: 1-3” or 15-20 per sq. ft.; Depth: 2”; Exposure: sun to partial shade
Plant in well-drained soil. If left undisturbed, they will often form naturalized colonies.
Origin: South America
B & B Tip: These are wonderful lawn and meadow flowers whose dark green, thin, strap leaves blend right in with the grass. Or plant around other bulbs to use the fall-emerging leaves as a fertilization marker.

IRIS – DUTCH (EYE-ris) Zones 6-9
Spacing: 4-6” or 5-10 per sq. ft.; Depth: 4-5”; Exposure: full sun
Plant in well-drained soil with good humus content. If soil is sandy, plant deeper.
Origin: Holland
B & B Tip: These are superb cut flowers and also great companions to the Roses, Alliums, Camassias, Peonies and other early perennials.

IRIS – DWARF (EYE-ris) Zones 3-9
Spacing: 2-3” or 10-15 per sq. ft.; Depth: 3”; Exposure: full sun to part shade
Plant in well-drained soil with good humus content. Do not overfertilize.
Origin: Turkey, Iraq, Iran and Russia
B & B Tip: These are well suited to be planted in dwarf groundcovers, the lawn and in raised planters where they will be more easily seen and where their fragrance can be better appreciated.

LEUCOJUM (lew-KOH-jum) Zones 3-9
Nickname: Snowflake
Spacing: 5-6”; Depth: 4-6”; Exposure: full sun to shade
Plant in good, well-drained soil. Leucojum require moisture throughout the year, especially during the growing season in spring and early summer. Light shade needed in hotter areas.
Origin: Europe and Northern Africa
B & B Tip: These bulbs are very moisture tolerant and can be planted on the edge of a pond or stream. Their white bell shaped flowers combine nicely with any mid spring flowers.

LILIUM (LIL-ee-um) Zones 3-8
Includes Asiatic, Oriental, and Species Lilies
Special Note: Lily bulbs are not hard or firm like daffodil and tulip bulbs but are formed with many layers of scales. The outer scales are often loose and must be handled with care. Because of the scales and the spaces between them, they usually appear soft or ‘pithy’ to the touch, which means they are normal, healthy and are ready to be planted. If they are mushy or have ‘gushy’ brown spots, that’s not normal and we need to know about this right away - a rare occurrence for us - thank goodness! We often plant lily bulbs on their sides so the water from summer downpours won’t collect between the scales of the bulb. Spacing: 6”-8” apart (depending on variety), 3 per 12” pot; Depth: three to four times the height of bulb; Exposure: Full sun to partial shade. Plant in well-drained soil with compost worked in as deep as 12”-14” and mulch after planting. Lilies like their roots cool and requires moisture during the growing season. Plant taller varieties at the back of the border among branches of strong perennials for support. When picking flowers, remove only as much of stem and foliage as needed, since at least one half of the foliage is necessary to nurture the bulb. Lily bulbs should be handled with care—they are never dormant, there is always some activity going on. If they must be held for any reason, store the bulbs at 35º-40ºF, refrigerator crisper is ideal. Often in the Spring, lilies are anxious to grow and sprout. If the sprout is green, plant the bulb but don’t cover the sprout but as it grows taller, add additional soil around the stem to provide the normal planting depth. Lilies do exceptionally well in containers. Choose a pot at least 12” in diameter and 8”-10” deep. Add 3”-4” of potting mix, set the bulbs in place, cover with mix and water thoroughly. The tops of the bulbs should be at least 4” deep (plant at recommended depth if pot size allows). A 12” pot holds 3 bulbs.
Origin: North America, Asia and Europe
B&B Tip: Provide shade for the lily bulb’s roots by interplanting with ground covers or low-growing annuals and perennials.

Most items we offer have a distinct top and bottom, like this Leucojum. The top is often pointy and sometimes shows a green or white sprout. The bottom is normally rough, flat and will often have a few of last years dry roots still attached. If you have ordered something that doesn’t fall into this category, it is always a good idea to plant it on its side, allowing the roots to grow down, and the flower to grow up.
MUSCARI (mus-CAR-ee)  Zones 4-9
Nickname: Grape Hyacinth
Spacing: 2-3” or 10-15 per sq. ft.; Depth: 2-3”; Exposure: full sun or partial shade. These little bulbs thrive in almost any soil; plant deeper if in very sandy soil. They like moisture during the growing season. If foliage becomes untidy after flowers have bloomed, it can be raked in one direction to make it less unsightly.
Origin: Southern Europe, Northern Africa and Western Asia
B & B Tip: Since Muscari send up foliage in the fall, this is the perfect plant to place around natural areas of larger bulbs like daffodils and tulips so you'll know where to fertilize in the fall.

NATURAL CAMP MEADOW MIX
Zones 5-8
See Perennials

NECTAROSCORDUM SICULUM SSP. BULGARICUM (nek-tar-ah-SKOR-dum SIK-kew-lum bul-GAR-ik-um)  Zones 4-8
Nickname: Sicilian Honey Garlic, Allium Bulgaricum
Spacing: 6” or 4 per sq. ft.; Depth: 2”; Exposure: full sun
These bulbs will grow in almost any garden soil as long as there is good drainage. Once established, they should not be disturbed.
Origin: France and Italy
B & B Tip: Plant with light colored flowers like Bearded Iris, Peonies or Camassias to help show off the luscious plum-purple bell shaped flowers.

ORNITHOGALUM (or-ni-tho-GAH-lum)  Zones 5-8
Spacing: 3-4” or 10 per sq. ft.; Depth: 2-3”; Exposure: full sun to part shade.
Plant in clumps for best effect in well-drained soil and provide moisture when leaves are growing. O. nutans can take partial shade and may naturalize in woodland situations.
Origin: Europe and S.W. Asia
B & B Tip: Excellent long lasting cut flower. Pull instead of cut for a longer stem.

PANICUM (PAN-eh-kum)  Zones 3-9
See Perennials

PENNISETUM (Pen-eh-SEE-tum)  Zones 5-9
See Perennials

PERENNIALS  Zones vary
Spacing: 1'-2' apart; Depth: crown just below the soil’s surface OR if you have received your perennial in a pot and growing, plant it at the same level of the soil in the pot;
Exposure: full sun to part shade;
Most perennials benefit from being grown in compost enriched soil with good drainage. In order to help newly planted perennials establish themselves in their ‘new home’, water well and although it doesn’t want to stay wet, don’t let it dry out. Perennials seems to have more success overwintering if the dead foliage of winter remain until the early spring garden clean-up.
Origin: various
B & B Tip: Perennials can be planted right on top of your spring flowering bulbs, if that is the spot you’d like to have them. They help use the available moisture from the summer thunder storms, shield from the extreme heat of the summer and help to mask the linear foliage of spring flowering bulbs while they mature. It’s a win-win situation!

PUSCHKINIA (push-KIN-ee-ah)  Zones 3-8
Nickname: Striped Squill: Spacing: 1-2”; Depth: 2”; Exposure: sun or partial shade
Plant in enriched soil with moisture-holding capacity but do not allow to become waterlogged. After plants have died down, bulbs can be a little drier but do not allow to dry out completely. Best if left undisturbed.
Origin: Asia Minor
B & B Tip: These are wonderful additions to a woodland meadow, often happy naturalizers.
SCILLA (SILL-ah) Zones 2-8
Nickname: Bluebell, Squill; Spacing: 1-2” or 10-15 per sq. ft.; Depth: 3-4”; Exposure: sun to shade. Plant in fast-draining soil with good humus content; plant deeper than recommended depth if soil is sandy. Provide moisture during spring and up until foliage fades.
Origin: Russia and Europe
B & B Tip: Scilla often naturalize freely in a lawn or in a woodland planting.

TRITELEIA (trit-ah-LAY-ah) Zones 5-9
Spacing: 1-2” or 10-15 per sq. ft.; Depth: 4-5”; Exposure: full sun to partial shade
Plant in well-drained soil, add moisture in winter, spring and early summer, allow to dry in later summer and fall. Leave undisturbed, divide only when overcrowded.
Origin: Western U.S.
B & B Tip: When these starry flowers bloom, they soon become the stars of the garden because they are drop-dead-gorgeous alone while making everything around them look more special. They are especially wonderful in a meadow garden.

Indoor or Bulbs for Warmer Climates
Most of the bulbs in this section cannot withstand much if any frost and should be planted in pots or containers and enjoyed indoors where they have the warmth they need in order to perform their best. If you live in a frost free location, you’re lucky enough to be able to have them in your garden AND in your home!

FREESIA (FREE-zha ) Zones 8-9
Spacing: 3” apart, side by side in pot or 10 per sq. ft.; Depth: 2”; Exposure: full sun
Best potted up in well-drained soil. For best results, keep at 40°F to get them started. Then raise the temperature to 50°F when the leaves are actively growing. Keep between 50-60°F for best flowering. Supplement with a liquid organic fertilizer as soon as shoots appear. Water adequately while foliage is visible and continue liquid feeding once a month. Stop feeding and slowly withhold water when foliage begins to turn brown. Begin cycle again in late August.
Origin: South Africa
B & B Tip: Treat these inexpensive bulbs as annuals and start with fresh strong bulbs each season.

GLADIOLUS TRISTIS (glad-ee-OH-lus TRIS-tus) Zones 8-10
Spacing: 3-4” apart; Depth: 4”; Exposure: full sun
This winter growing, spring blooming gladiolus is hardy in zones 8-10, but it can also bloom as an indoor container plant in cooler regions. For indoor bloom, plant corms at same depth and spacing noted above in a 6” pot (the larger the pot, the better). Give full sun and feed often with any water-soluble fertilizer.
Origin: South Africa

HIPPEASTRUM (hip-ee-AY-strum) Zones 8-10
Nickname: Amaryllis
Spacing: 1 per 8” pot; Depth: Pot with top third of bulb above soil; Exposure: full sun or additional grow lights.
Best potted up firmly in a soil mixture of good topsoil, leaf mold, and crushed gravel, or sharp sand. Apply bottom heat, if possible and water sparingly until foliage emerges, water more often when blooming stalks appear. After flowering, deadhead. Foliage will begin to mature and a weekly feeding of organic liquid fertilizer can be given until foliage matures (usually late July). At this time, watering should slow down and cease by early August when the bulbs should be kept dormant for 6-8 weeks. Or the bulb can be planted in your garden for the summer. However, be sure to take it up and put it in a dark, dry spot to rest for 6-8 weeks. To store, keep 40-50°F for future planting. When it’s time to start the process again, pot up the bulb as you did before and water adequately to wet the soil. Don’t water again until you see the beginning signs of growth. Continue as you did the previous year.
Origin: South Africa
B & B Tip: We have good luck planting them deep (8-10”) in a micro climate in our zone 7 garden for summer bloom the year after forcing.
NARCISSUS  
ZONES 8-10  
SPACING: 5 bulbs per 6” pot or 9 bulbs per 10” pot; DEPTH: neck exposed; EXPOSURE: full sun and grow lights.

Bulbs are best kept dry and at room temperature (70°F) until potted. If they are stored for longer than 4 weeks, they may begin to sprout and sometimes their sprouts appear very crooked. However, once they are potted and begin to grow, their stems normally straighten themselves right up! Paperwhites can be grown in almost any container and almost any medium, like pebbles or marbles. The recommended container however, is a bulb pan, which is a shorter, broader version of a nursery pot, and the recommended medium is a coarse peat/bark/sand mix. Soil should cover the shoulders of the bulbs, and a layer of gravel should cover bulbs to their necks. This will add stability when the flower stalks emerge. Soak pot and allow to drain. Water again only when sprouts emerge and try not to allow any part of the actual bulb to sit in water, as they could become too wet and rot. Once potted and watered, give a short cool period (45°-60°) for rooting. Once bulbs have sprouted, bottom heat (radiator, refrigerator top, or seedling heat mat) is beneficial to speed up blooming once the bulbs have sprouted. As the bulbs grow and flower stalks emerge, good light and extra day length using florescent or grow lights 1’ above, will help flower stalks from getting too tall and will reduce the need for staking. After blooming, these bulbs are usually tossed in the compost heap by all but the most diligent gardeners with a sunroom or greenhouse, or those who live in zones 8-9 where the bulbs can sometimes be carefully transplanted to the garden or landscape.

ORIGIN: Mediterranean

B & B TIP: Plant pots in succession, one week apart, starting in October for blooms from Thanksgiving until Easter.

ORNITHOGALUM  
ZONES 8-10  
SPACING: 3-4” apart (closer in containers), 3 per 6” pot; DEPTH: 2-3” (more shallow in pots); EXPOSURE: full sun

Best potted up in well-drained loamy soil. Water adequately when foliage becomes visible. Slowly withhold water when foliage begins to turn brown, cease watering when totally brown. Begin cycle again in fall.

ORIGIN: South Africa (O. dubium) and Mediterranean (O. narbonense)

B & B TIP: Ornithogalum dubium is one of the longest lasting flowers in the greenhouse.

OXALIS  
ZONES are variable; most 7-10  
NICKNAME: Wood Sorrel, Shamrock

SPACING: 2-3” or 10-15 per sq. ft.; DEPTH: 1”; EXPOSURE: full sun to part shade

Plant in well-drained soil. Oxalis plants can grow in poor soil if it is sandy but dislike heavy clay. They can survive dry conditions but perform better with some moisture.

ORIGIN: South and Central America and Mexico

B & B TIP: These are wonderful alone in pots or ‘shoes and socks plants’ in larger containers filled with larger plants and are great accents around the base of potted Hippeastrums (Amaryllis) and Paper Whites.