



### **About Bulbs**



- Hardy Bulbs and Tender Bulbs
- Fall blooming and summer blooming
- Most come from the middle east regions of Turkey and the highlands of Asia.
- Bulbs prefer sandy loam soils and when treated properly will bloom well for years.
- Through the hybridization process, many bulbs have lost the perennializing ability.

 <u>Bulb</u> – modified stems with a short fleshy vertical stem, covered by thick fleshy modified leaves, that enclose a bud for next seasons growth.

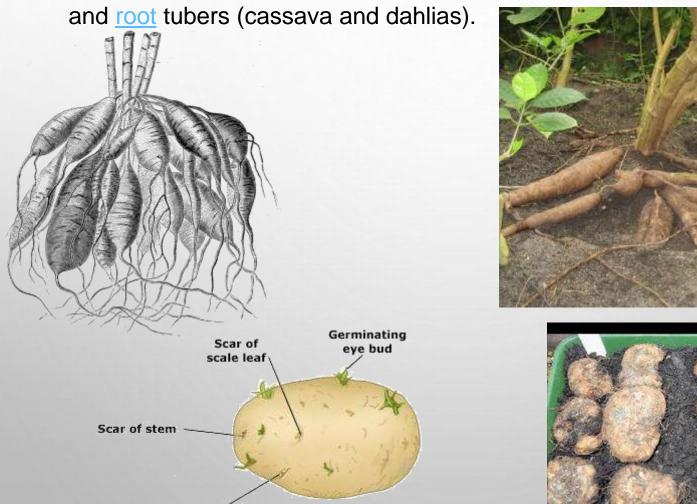


 <u>Corm</u> – modified stems covered by dry scale-like leaves called a tunic, differing from true bulbs by having distinct nodes and internodes. Includes:

arisaema, bessera, bananas, brodiaea, crocosmia, dichelostemma, dierama, fresia, gladiolus, liatris, montbretia, taro, etc.



 <u>Tuber</u>- various types of modified plant structures that are enlarged to store nutrients. They are used by plants to survive the winter or dry months and provide energy and nutrients for re-growth during the next growing season.
 Two different groups of tubers are: <u>stem</u> tubers (potatoes, yams, begonias),







# Tender Bulbs (won't tolerate freezing)

- Gladiolus
- Tuberous Begonia
- Dahlia
- Ismene (spider lily, basketflower or peruvian lily)
- Caladiums- (huge range of colors)
- Cannas
- Calla Lily
- Freesia
- Calocasia elephant ear (taro)

### **Tender Bulbs**

 Planted after ground is thawed and risk of freezing the bulb is over.

Gladiolas



Canna

Dahlia



Caladium



Calocasia



Freesia

### **Hardy Bulbs**

# (Bulbs that will survive the freezing soils during winter) many need a cold period for them to grow and do well.

- Galanthus (snow drop)
- Crocus
- Scilla (squill)
- Iris
- Anemone blanda
- Tulip (darwin hybrid, triumph, emperor, parrot, species, etc.)
- Lilies
- Fritillaria
- Daffodil (large cup, medium cup, short cup)
- Hyacinth
- Dutch iris
- Allium (ornamental onion)
- Grape hyacinth- (muscari)

### Hardy bulbs general info

- Plant when soil temps have cooled to 52 degrees, usually after killing frost has occurred. For wasatch front, typically mid to late october is best.
- Most prefer sandy loam soils with neutral ph.
- Fertilize 2 times per year (for best growth) with low nitrogen fertilizer typically in ration of 1:2:1 or 1:2:2 at a rate of four pounds per 1000 ft<sup>2</sup>.
- Most bulbs prefer a sunny spot with some shade during the hottest part of the day.

### **Planting**

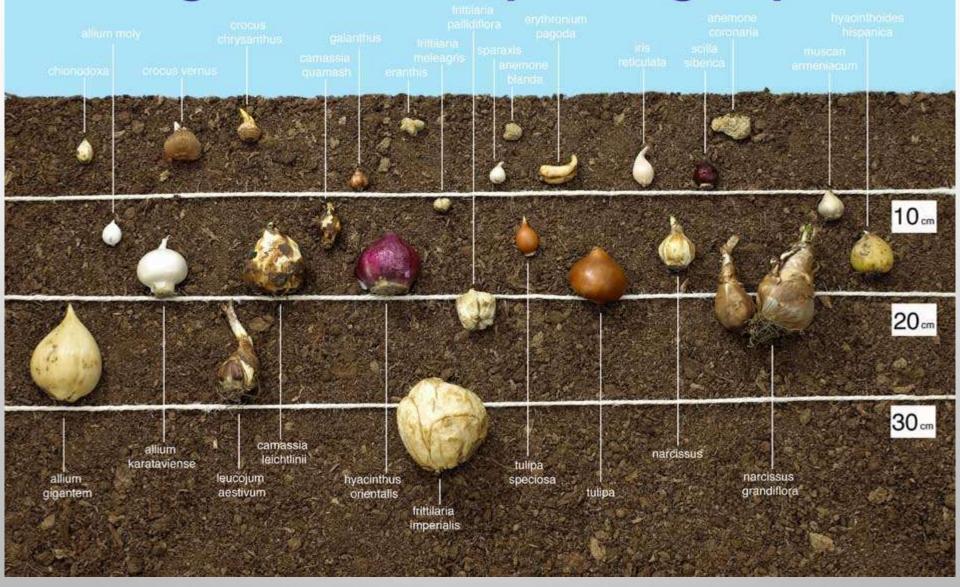
- Plant spring blooming bulbs when soil is cool.
- General rule: for bulbs 2" in diameter or larger, plant at a depth of 3 times the diameter. For bulbs smaller than 2" plant at a depth of 4 times the diameter. This will increase the life of the bulb and the size of the flowers.

Space bulbs at a distance equal to one and one half times the

normal depth.



# Visual guide to bulb planting depths



### Care for bulbs after bloom

- Most spring flowering bulbs require no special attention after they bloom.
- In the case of perennial tulips, removing the spent flower (developing seeds) will help stimulate the bulb to bloom the following year.
- For most bulbs, you must allow foliage to go brown before removing if you want flowers the following year (foliage produces needed energy stored for next year's bloom)
- No braiding or cutting- let them go dormant naturally.

### **Storing Bulbs**

- Tender summer blooming bulbs must be dug and stored if you don't want to buy new each year.
- Bulbs must be dried- moist bulbs will rot and result in a stinky, rotten mess.
  - Dry peat moss, dry sand, dry vermiculite work well.
- Store bulbs in a cool, well-ventilated area with low humidity.
  - Crawl spaces, basement cold storage, root cellars- try to simulate under ground temperatures.
- Storage temperature should be around 40 degrees. If bulbs are soft or damaged do not try to store them as they will probably rot and cause others to rot as well
- Dusting with sulfur will help to reduce fungal rot during storage.
- The best place to store a bulb is in the ground, you don't need to dig spring blooming bulbs (tulips, daffodils, etc.)

#### Moving and dividing

 Only done after they are in dormant stage- foliage brown and gone for spring bloomers, right after frost for summer (tender) bulbs. You can mark where they were with golf tees/ tooth picks.

#### Forcing bulbs

- Not discussed tonight but done all the time for early blooming
- Where to buy bulbs- what to look for.
  - Look for firm bulbs without damage or mold
  - Purchase bulbs at local nurseries/ home centers or by mail order
  - 1. John shcheepers,
  - 2. Van engelen inc.
  - 3. Color blends
  - 4. Many others- but most come from the same places in Holland. You will have more variety choices from mail order than local.



 There is nothing better after a long winter than to see the first crocus poking their heads through the soil. A terrific naturalizer, crocus may be planted in mass in lawns (that do not need early mowing), in rock gardens and as colorful drifts in early garden beds. The species crocus bloom about two weeks before the large flowering crocus vernus and flavus varieties depending on weather conditions. Height: 4" to 5". Bloom time: late march/april. Plant 4" to 5" deep and 3" to 4" apart. Horticultural zones 4-8.

# **Tulips**

 With current hybridization practices, most tulips are not going to perennialize. They will do better if site conditions are good, but the big bulbs will split into smaller bulbs that may not grow to full bloom size. You can dig the tulips each year and divide them and replant for longer life of the bulbs. The Darwin hybrids will last longer if treated properly (up to 3 years of nice displays).

### Species tulips

- Originally from the mediterranean, asia minor and the caucasus, species tulips offer unusual flowers in varying heights and dazzling colors. Known to perennialize better than most tulips, they are wonderful for rock gardens, clusters and naturalized drifts.
- Height: 4" to 16" depending on the variety.















### **Darwin Hybrid Tulips**



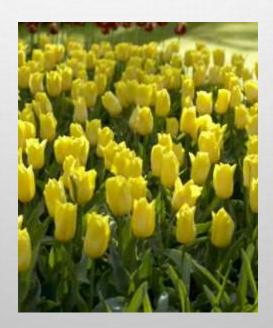
Introduced in 1951. Their huge, vibrant flowers on strong stems are known to return for multiple years when planted in a nice sunny spot with good drainage, fertilized regularly and not cut for bouquets. Flowering from mid-april into may. Can be arranged in any type of combination for a spectacular display in early spring.



### **Triumph Tulips**

 This cross between darwin and early tulips sports strong stems and large, shapely blooms which are as equally successful in the garden as in the greenhouse. Blooming in late April, triumph tulips are somewhat daintier than darwin hybrids with exquisite pastelcolored sheens. Terrific for forcing!









### **Double Early Tulips**

- For an arresting blanket of color, double early tulips are among the best bedding and forcing tulips available. They flower early so that later plantings of annuals may be started on time.
- Height: 12". Bloom time: midapril. Plant 6" to 8" deep and 6" apart. Horticultural zones 3-7.



## **Peony Flowering Tulips**

- Also known as double late tulips, these breathtaking, scented tulips closely resemble peonies with longlasting blooms. Their large, fully double blooms are superb for both the garden and for cut flower arrangements.
- Height: 14" to 22" depending on the variety. Bloom time: late april. Plant 6" to 8" deep and 6" apart. Horticultural zones 3-7.



### **Emperor Tulips**

- Emperor, or fosteriana, tulips are the earliest, mid-height tulips.
   Known for their remarkably huge flowers and bright colors, emperor tulips make a fantastic display planted in large drifts and are also terrific as a cut flower.
- Height: 14" to 18". Bloom time: mid april. Plant 6" deep and 6" to 8" apart. Horticultural zones 3-8





### **Parrot Tulips**

- The exotic parrot tulip begs to be the star of your garden with its showy, fringed and scalloped plumage and sensational striations. A flamboyant, late-blooming tulip with large blooms, the parrot tulip is a decorator's delight both outdoors and indoors.
- Height: 14" to 22". Bloom time: may.
   Plant 6" to 8" deep and 6" apart.
   Horticultural zones 4-7.



### **Lily Flowering Tulips**

- Belonging in every garden, lily flowering tulips are simply elegant. Reflexing, curved petals stand majestically atop strong, tall stems for a bold but graceful statement. Long-flowering, their colors are subdued, yet warm.
- Height: 16" to 24" depending on the variety. Bloom time: may.
   Plant 6" to 8" deep and 6" apart.
   Horticultural zones 3-7.



## **Fringed Tulips**

- Also known as "crispa" tulips, these spectacular fringed tulips will add an exciting dimension to your garden. Their exotic, lacy petals come in a variety of artistic forms, colors and crystalline fringes.
- Height: 18" to 26". Bloom time: may. Plant 6" to 8" deep and 6" apart. Horticultural zones 3-7.



# Daffodils Jonquils and Narcissus

Come in a variety of colors and sizes. Tend to perennialize much better than tulips. Still prefer well drained soil. Color selection is becoming more diversified.



# **Species and Miniature Daffodils**

- These dainty, heirloom species are nursery-grown (never collected in the wild!) and deserve a special spot along a path, in a garden border or in a rock garden.
- Height: 5" to 12" depending on the variety. Bloom time: April.
   Plant 4" to 5" deep and 4" to 5" apart. Horticultural zones 4-9.







# **Trumpet Daffodils**

- The most well-known group of Narcissi, Trumpet Daffodils naturalize extremely well and have a long blooming season with large, bold flowers. To classify as a Trumpet Daffodil, their flowers must have trumpets as long as, or longer than, the petals. They are also much loved for the fact that deer and rodents do not like to eat them! All narcissi tolerate a wide range of sunlight from full sun to semi-shade. They do, however, prefer well-draining soil, hate "wet feet" and love to be fed with a 4-10-6 flower bulb Fertilizer two times a year.
- Height: 18" to 20", depending upon variety. Bloom time: April. Plant
  6" to 8" deep and 6" apart. Horticultural zones 3-7.



#### **Double Narcissi**

- Double Narcissi are great for both the garden and cut flower arrangements because of their showy varieties and sweet fragrance.
   You may want to offer these flamboyant gems a bit of protection from the wind.
- Height: 12" to 20", depending upon variety. Bloom time: April/May. Plant
   6" to 8" deep and 6" apart. Horticultural zones 3-8



# **Split Cup Narcissi**

 Split-Cup, or Split-Corona, Narcissi generally fall in to three groups defined by form: Collar, Papillon (Butterfly) or combination types often with frilly, ruffled or whorled petal segments. Each of them have cups or coronas that are split into multiple sections.

Height: 14" to 16", depending on the variety. Bloom time: April. Plant 6"

to 8" deep and 6" apart. Horticultural Zone: 4-8







# Hyacinth

#### Hyacinthus orientalis

There is no surer sign of spring than the wonderful sight and intoxicating fragrance of Hyacinthus orientalis. These bulbs produce huge flower spikes, but normally do not require staking. They especially dislike "wet feet", so make sure they are planted in very well-draining soil. Normally deer-proof. April. 8" to 12". Plant 6" deep and 6" apart. Horticultural zones: 4-8.

Multi-Flowering Festival Hyacinths
 More loosely formed than Hyacinth
 orientalis with less compact florets,
 Festival Hyacinths are wonderfully
 fragrant, with up to six stalks per bulb.
 Reminiscent of the old Roman Hyacinths
 from France, these bulbs should be
 planted in clusters where you can best
 enjoy their fragrance in the garden. April.
 8" to 12". Plant 6" deep and 6" apart.
 Horticultural zones: 4-8.





#### Muscari (Grape Hyacinth)

- Muscari, or Blue Grape Hyacinths, naturalize beautifully and throw off stems in succession to provide flowers for weeks on end. They work beautifully as under plantings, are good for forcing and are wonderful in rock gardens!
- Height: 4" to 12" depending on the variety. Bloom time: variable, March through May depending on the variety. Plant 5" deep and 3" to 4" apart. Horticultural zones 4-8.



#### Iris

The early Spring blooming Rock
Garden Iris are best in rock gardens,
in clusters along garden borders or in
forced pots. Bloom Early April. Plant
4" deep and 4" to 5" apart.
Horticultural zones 5-9.



#### **Allium**

- Known as the "Flowering Onions", Allium are exotic, unique and great fun. They extend the flowering season with dramatic color, shapes and forms. A stunning cut or dried flower, they like rich, well-draining soil and good sunlight for optimum performance. They are also much loved for the fact that deer and rodents do not like to eat them!
- Plant the larger Allium bulbs 6" to 8" deep and 8" to 10" apart. Plant the smaller Allium bulbs 4" deep and 3" to 4" apart. Bloom time: May through August depending on the variety. Height: variable depending on the variety. Variable horticultural zones ranging from 3-10 depending on the variety.



#### **Anemone Blanda**

Also known as the "Grecian
Windflower", Anemone blanda makes
an attractive ground cover with daisylike flowers and fern-like foliage.

Height: 4". Bloom time: April/May.

Plant 4" deep and 3" to 4" apart.

Horticultural zones 5-9.



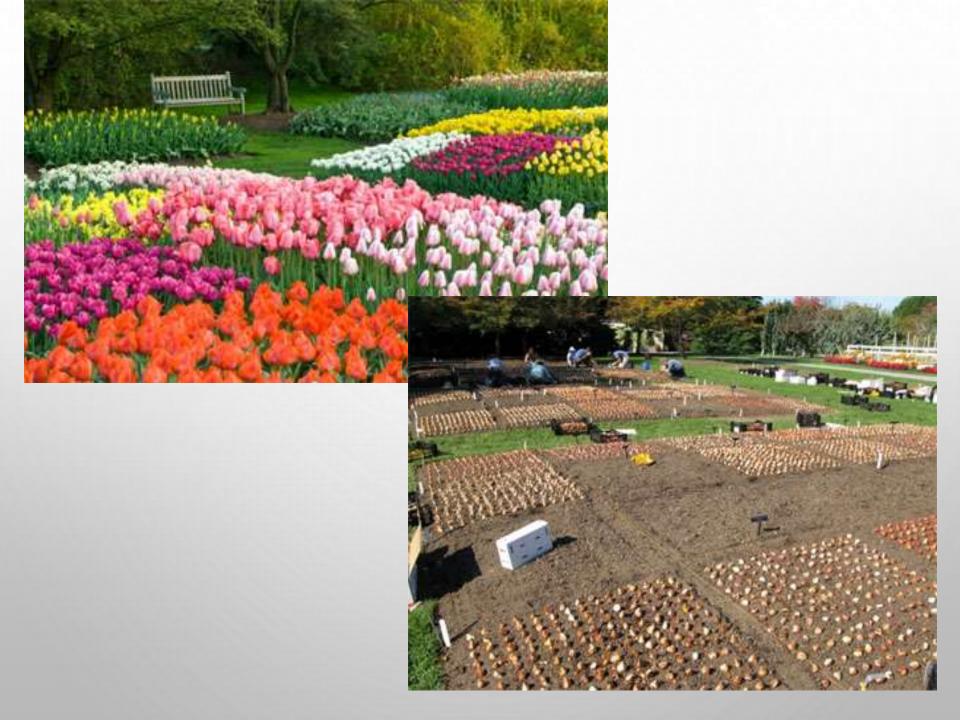
# **Designing with Bulbs**

- 1. Color choice is a personal preference.
- Chose 2-3 colors to work with- more than this can be overwhelming.
   Multiple colors in random combinations is more natural and informal while one color in mass is usually used in formal settings.
- 3. A small planting with many bulbs has more of an effect than a large area with sparsely and widely spaced bulbs.
- 4. Keep in mind bloom time. Choosing bulbs that bloom at different times can extend your bloom time and season of color. But your plan can be ruined if the colors you plan together don't bloom together.
- 5. Consider flower height as it can create a visual experience to have some bold colors come through shorter whites or yellows.
- 6. Bulb design can be changed each year by digging the bulbs and moving them to another location. Color combinations can create mood for the season (Pinks and purples to prolong cool while reds and yellow to create a warm feel).





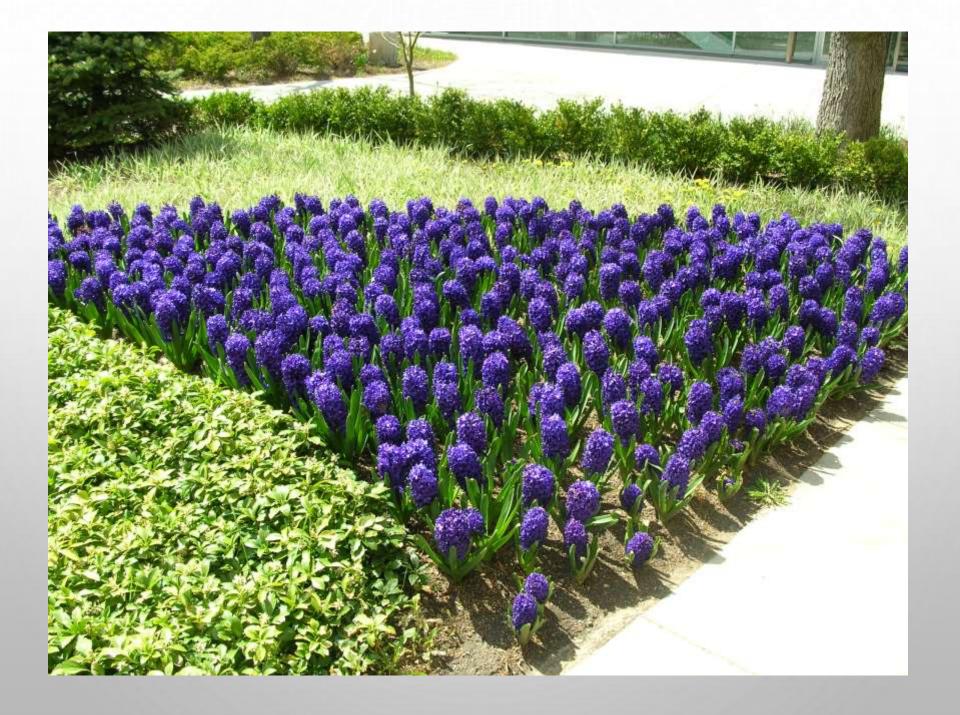


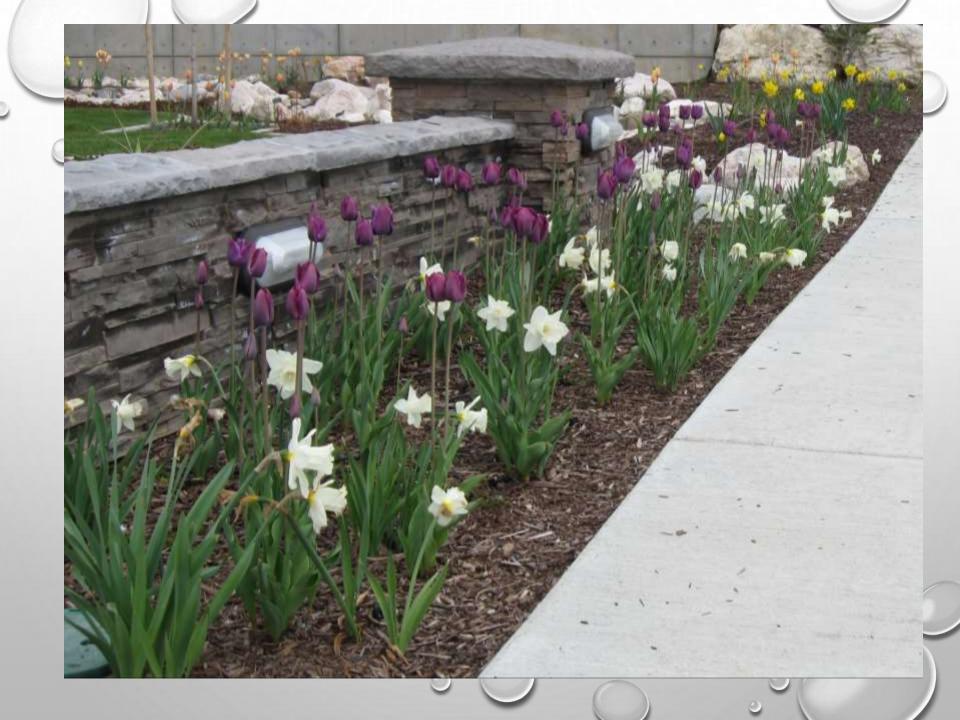




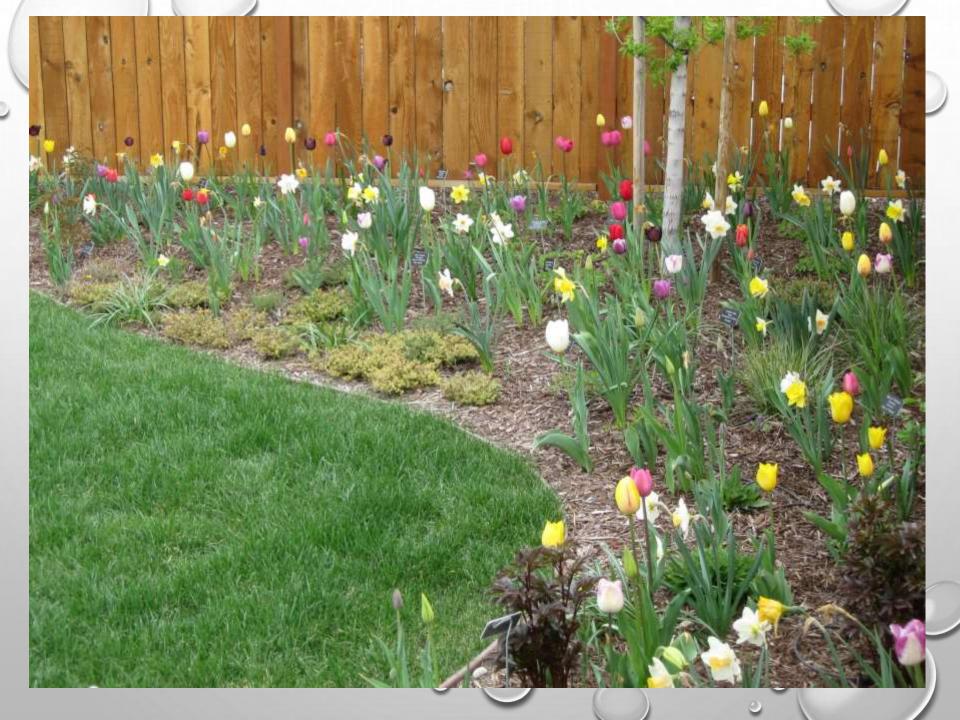












































# **Questions?**

