ANNUALS, PERENNIALS AND ROSES

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Annuals and herbaceous perennials are an increasingly important part of the retail nursery business. Success and customer satisfaction depend upon the plant professional knowing how to select good plant material, display it properly, care for it until it is sold, and give customers accurate advice on how to best use the plants.

By definition, annuals are plants that complete their entire life cycle in one growing season. They are grown from cuttings or seed sown early in the spring or the previous fall, flower during the summer, and are usually killed by frost in the fall. Most annuals will provide a long season of bloom and increase in size and beauty as the season progresses. Some annual plants are half-hardy and survive the winter to bloom a second year or readily go to seed and self-sow.

Herbaceous perennials are plants that flower in their first or second growing season. The main distinction from annuals is that the root ball remains viable over winter. Most freeze back to the ground during winter and produce new growth in the spring. While perennials usually have a shorter season of bloom, they can be chosen for consecutive bloom, spring through fall and for interesting foliage.

Biennials are plants that grow leaves the first year, winter over to bloom the second year and then usually die. They often perpetuate by self-seeding. Foxgloves and hollyhocks are common examples of biennials.

Nurseries start displaying and selling annuals and perennials in mid to late April. It's important to keep perennials cool and display them in a well-lighted area. When placed in the shade or in a heated greenhouse, they begin to produce soft new growth that is ahead of the season and may be injured or killed when planted outside. Most greenhouse grown annuals or perennials should be hardened off before planting out. Hardening off is the process of gradually acclimatizing a plant to the outdoors. The most hardened perennials are those grown in containers outside or in unheated cold frames. Most perennials can be planted out in mid- to late May if they have been hardened off. New plants should be covered if hard frosts are predicted.

Annuals sold in April are usually varieties that are cold tolerant and can withstand a light frost. Pansies are one example. May, however, is the peak month for the sale of annuals. June sales can be good if a retailer keeps high quality plants. Some retail garden centers and growers offer annuals in larger containers in order to extend sales well into summer. Since landscaping installations continue until the ground freezes it's important to offer color to customers throughout the summer and as late into the fall as possible.

Opinions differ on quality standards for annual plants. Ideally, if the plants are grown at cool temperatures with low levels of fertilization they are stocky and well branched. If growing conditions are too tough plants may become stunted and never regain a normal, vigorous growth rate. Symptoms of minimal fertilization and insufficient water are yellowing of the foliage and often loss or browning of lower leaves. Stems are thin and wiry and the growth rate is very slow.

On the other extreme are plants forced in warm greenhouses with high levels of fertility. These plants appear to be relatively attractive, are dark green in color, and have large leaves and long stems. These plants are too "soft" and problems can occur when they are suddenly exposed to cool temperatures and subjected to wind and rain, which breaks down the stems and causes spotting of the foliage. These plants often suffer severe shock when transplanted and take a long time to recover.

Plants should be grown at a moderate, balanced level of fertility. Annuals grown in this manner have dark green foliage and firm, thick stems. They can withstand changes in climate and provide the longest possible shelf life. Plants that have been hardened off are especially important for early spring sales. Later in the season, in May and June, plants taken directly from a warm green house adjust well to outside conditions if given regular watering.

Annuals and perennials displayed properly have great sales appeal. Many annuals, such as geraniums, can be sold in bloom. Attractive displays of flowering plants will draw people to other plants not yet in bloom. Because perennial plants are often not blooming in the nursery they should be clearly labeled and displayed with colored posters. Picture tags in packs and pots are valuable sales aids. The tags should contain descriptions of the plants, planting and cultural instructions, as well as zone hardiness ratings.

Not all annual and perennial plants should be displayed in full sun. Shade-loving plants should be displayed and sold under lath or other shade structures. These plants should also be given some protection if they are in a windy area. Keep in mind that young vigorous plants dry out quickly due to the limited quantity of soil in individual cell packs and small pots. It's important to keep plants well watered to prevent wilting. Wilted plants lose customers and cost sales. Probably no other nursery items require more diligent care than annuals and perennials, but when properly handled, the turnover is fast and profit is good.

If bedding plants are kept by a retail nursery professional any length of time, it's wise to fertilize to keep the plants looking green and healthy. Liquid fertilizers can easily be applied in the irrigation water. Plants may become root-bound and their growth stunted if they are kept too long in containers. Root-bound plants should be transplanted to larger pots or immediately sold to customers with instructions for transplanting. It is important when transplanting root-bound plants to make several shallow cuts in the root ball to stimulate new root growth. Instruct customers to water new plants every day if the weather is hot for the first week, and then gradually taper off to a regular watering schedule of a deep soak once or twice a week. Most container plantings, such as hanging baskets or window boxes, require daily watering.

Diseased, damaged, or dead plants should be immediately removed from displays. Carefully monitor plants and take immediate action when infestations occur. Many infestations can be treated with insecticidal soap or yellow sticky traps if noticed early. More serious outbreaks should be quarantined and treated with an appropriate pesticide following instructions and precautions on the label. If insects or disease are evident on incoming plant material, return infected stock to the supplier.

Sales people should learn about the plants they sell: how to identify them, know their growth habits under different conditions, their USDA zone hardiness rating, and the water, light, and nutrient requirements. They should also be prepared to answer customers' questions and have reference books handy. Many sources of information are available and customers often wish to purchase instructional books if offered for sale. Sales of annuals and perennials offer many opportunities for tie-in sales of compost, peat moss, potting soil, containers, and other gardening supplies.

The site for a new flowerbed should be thoroughly cleaned of weeds and grass before planting. If grass roots are not completely killed or removed the grass can quickly take over the new bed. Plastic, metal or wooden edging between turf and the bed will prevent the grass from encroaching. Beds are prepared for planting by adding peat moss and compost. Manure may be added but should be thoroughly composted to prevent the introduction of weeds. Deeply dig or till in the amendments before planting. The necessity and amount of amendments to use depends on the soil and varies from site to site. See Chapter 1 for more information on soil and Chapter 2 for more on the use of amendments. Mulching flowerbeds with fine bark or shredded cedar will help retain moisture and reduce the need for weeding. The mulch around the crown of the plants should be shallow or rot can become a problem.

Since perennials live from year to year in the landscape they require maintenance to keep them vigorous and healthy. Other than watering, weeding, and controlling pests, perennials generally need little extra care during the first growing seasons. Tall perennials may need support to prevent flower stems from breaking. Some perennials

need additional nutrients after a year or two, depending upon the soil and planting preparation. In general flowering plants benefit from a fertilizer higher in phosphorus. See Chapter 3 for more information on nutrition and fertilization.

After two or three years many perennials should be union. Some perennials, such as peonies, can go many years or longer without division. It's time to rejuvenate a plant if the center has died out, if the plants are overcrowded, or if blooming has diminished. The timing of division is often dictated by the flowering date. Perennials that bloom in the spring or early summer are usually divided in the fall or after the foliage dies back. Summer and fall-flowering types are divided in early spring before growth begins. Iris and daylilies are divided after they bloom in mid- to late summer. Perennials being divided should be replanted or potted as soon as possible. Use the opportunity to replenish the soil with organic matter or other amendments as needed. After divisions are planted they should be watered well and given some protection from the sun for a couple of days with shade cloth. If dividing in the late summer or fall, do it early enough so that the plants can establish themselves before winter, usually before mid-October. Mulch well after the ground freezes, usually late November, to prevent freezing and thawing which may heave the newly set plants from the ground.

Annuals and herbaceous perennials provide color and interest in a landscape. Businesses realize that bold colors attract attention to their locations. Homeowners like the way annuals and perennials give a finished look to their landscapes. Annuals and perennials are also used to blend landscapes into their natural surroundings. A natural look is achieved using a combination of shrubs, trees, flowers, and grasses.

Herbaceous perennial plantings are more complex than annual plantings because perennials don't bloom continuously throughout the spring, summer, and fall. In a hot summer some perennials may only bloom for a few days, especially if they do not have adequate water. In designing perennial plantings one of the main goals is continuous bloom through selection of plants that flower in different seasons. Since only some of the plants are blooming at any one time, it is helpful to choose perennials that have interesting foliage because of leaf texture or color. These include hostas, ferns and ornamental grasses. These plants tend to look nice all season and only need to be cut back in the spring before new growth emerges.

Bulbs offer another exciting way to bring color to the landscape. Many bulbs such as tulips and daffodils are planted in the fall for spring bloom. Some of the summer and fall blooming bulbs that are not winter hardy are planted each spring. Many of these can be lifted in the fall and stored for spring planting to over winter.

Annuals interplanted with perennials add more color, especially at the front of a bed or in a new bed. Since most annuals bloom constantly from early summer through frost, they can be used for areas where a bold color statement is wanted, such as entry plantings. Annuals complement other plants and maintain landscape color throughout the growing season. They help connect the bloom times of shrubs and perennials. Successful flowerbeds often have a good backbone of shrubs in the planting to provide winter interest and structure year round.

To use annuals and perennials successfully, you must know each plant variety individually and how each performs in your area and environment. Not all plants offered for sale are great in the landscape. Check the zone hardiness ratings, moisture and light requirements as a starting point to gauge how successful a particular plant might be. Advice from other gardeners and plant professionals will help identify aggressive or weedy plants to avoid.

Perennials should be deadheaded after flowering. Deadheading simply means pinching or cutting off the dead flowers. This practice prolongs blooming, reduces unwanted seeds, and enhances the look of a flowerbed. As the season progresses many annuals benefit from deadheading as well. The foliage of bulbs should be cut back only after it yellows. Cutting it back too soon may prevent the plant from flowering the following season.

Fall-blooming perennials supply interesting foliage most of the growing season, and a lovely and welcome surprise of blooms after long summer heat. Most begin blooming in late August and carry on well into the first hard frosts. Cleanup can be done in either late fall or early spring. Interesting seed heads may be left for birds, for winter interest, or for reseeding purposes. A few perennials like tall phlox should be cut in the fall to discourage disease. On dry sites it is probably best to leave the tops of most perennials for spring removal to provide mulch and protection for the plants.

Peonies are long-lived perennials that require some special cultural considerations. Peonies do best in a sunny, well-drained location. Space plants 3' apart. Potted peonies can be planted spring through fall. Peony roots are best planted in late fall. Soak the root if it is dry and plant with the eyes just an inch or two below the soil surface. Check where the stems meet the roots on a potted plant -- this is the "eye" level. If planted too deeply, peonies will take an extra year or two to bloom. Cultivate and amend the planting area well. Pack dirt around the roots to ensure that the root will not settle deeper when watered.

Mulching new roots the first winter is suggested. Peonies should not be over-fertilized as this may reduce flowering. Any complete garden fertilizer that is not too rich in nitrogen should be applied in spring when the foliage is 6" tall. Place out at the drip line, not on the crown. Rose food and conservative amounts of bone meal are ideal for peonies.

Botrytis fungus is the most common disease problem in peonies and is most prevalent during wet periods. Remove any infected leaves (rotted young shoots or dense gray mold) and clean up mulch in the spring. Peony foliage should be cut back in the fall to prevent disease from being carried over. Caging or staking is frequently required because of the large, heavy blooms. Ants are normally found eating the sap on peony buds and do not harm the plants.

Tea roses are a woody plant but can be either an "annual" or "perennial" in harsh climates. Tea roses should be planted deeply for best success. If the graft or bud union is well below the soil surface (2-4 inches) they are much more likely to winter over. Roses are heavy feeders and need rich soil and regular water. See Figure 12-1.

Good air circulation and full sun will both reduce disease and improve flowering in tea roses. Several pests and diseases can be problems. Aphids often congregate on new shoots, leaves and flower buds. Knock adults off with blasts of water or spray the plants with insecticidal soap and summer horticultural oil. Dormant oil in late winter and early spring will kill the eggs. A common fungal disease is black spot. This water borne fungus infects leaves during warm humid weather. Plant resistant varieties and leave plenty of space between plants as a preventive measure. At the first signs of black spot remove infected leaves and discard. Spray new growth twice weekly with a mixture of one-tablespoon baking soda and a few drops of summer horticultural oil in a gallon of water. This treatment is also effective against powdery mildew.

With diligent care tea roses may be successfully carried over from year to year. In late fall cut the canes back to ~1' and mound each bush with soil to a depth of several inches and cover with mulch. Cones can also be used to cover roses after mounding with soil, but care must be taken to ventilate or remove them during warm spells.

Hardy shrub roses are becoming popular as an alternative to the more tender tea roses. Shrub roses generally require less care and little or no winter protection after the first year. Many are grown on their own root (meaning they are not grafted) so if they should die back in a hard winter they will often come back.

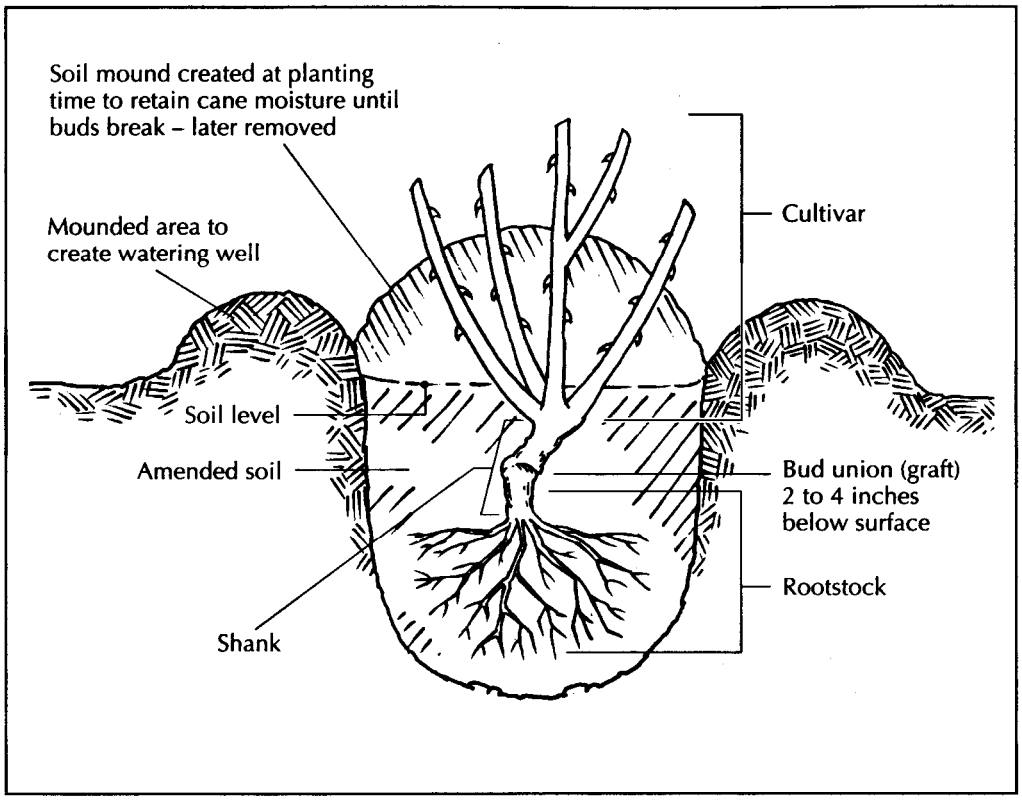

Figure 12-1. Roses.

Annuals and perennials offer an exciting way to add color to the landscape. With good site preparation, thoughtful plant selection, and routine care beautiful flowers can grace the landscape for three seasons of the year. All the nuances and possibilities for using annuals and perennials in the landscape are beyond the scope of this manual, but many wonderful books have been written on the subject. See the reference list that follows for a few suggestions. Chapter 21 gives a list of suggested perennials.

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Chapter Review

A. What are the differences between an annual and an herbaceous perennial? _____

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B. Define a biennial, and give two examples. _____

C. How should perennials or annuals be hardened off? Why? _____

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D. Explain ways to create continuous bloom in a flowerbed. _____

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E. What is deadheading and why is it a good practice? _____

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F. In what season should an herbaceous perennial be divided?

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G. Peony roots should be planted so that the eyes are at what depth? _____

H. How can tea roses be planted and protected to minimize winter injury? _____

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