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Petunias

This is a practical guide to sowing, transplanting and caring for petunias.

Dale T. Lindgren, Extension Specialist -- Horticulture

Petunias are a popular, reliable flowering ornamental plant for use in Nebraska landscapes. This versatile annual can be used in flower beds, hanging baskets, window boxes and other types of containers. They also can be used as cut flowers. The blossoms of petunias come in many colors with petal edges that are straight or ruffled.

Two general classes of petunias are *Grandiflora* and *Multiflora*. *Grandiflora* petunias are characterized by having fewer, but larger, showy flowers. A number of *Grandifloras* are cascade selections, well suited to growing in hanging baskets, window boxes and other types of planters. *Multiflora* petunias have a more compact growth habit and have smaller but more numerous blossoms. *Multifloras* generally withstand wind and hard rains better than the *Grandiflora* types.

Both *Grandiflora* and *Multiflora* types may have single flowers, having one set of petals on each flower, or double with multiple sets of petals on each flower.

Varieties (Cultivars)

There are hundreds of petunia varieties available in the nursery industry. Local landscape nurseries and other retail stores usually handle those varieties that are best suited to local environmental conditions.

Seed Germination

Petunias are normally propagated from seed. Petunia seed is best sown indoors four to six weeks prior to planting outdoors. Sow the seed in a moistened, well drained, pasteurized medium. Commercially prepared mixes work best to germinate seed. Do not cover the seed when sowing.

Water with a fine mist from above or sub-irrigate from below by setting the germination container in a shallow container of water. Excessive water should be allowed to drain. The germinating medium can be kept from drying out by covering the container with a pane of glass or with a plastic bag. Keep the container in a location with bright light, but not in direct sunlight, until germination begins. Maintain a minimum soil temperature of 70°F and maximum of 80°F. Seedlings can emerge in three to four days under optimum conditions. During germination try to avoid conditions (seedlings being too thick,

excessive soil moisture, and cool soil temperatures) that favor damping-off disease.

Once the seedlings have emerged, remove the covering and allow the growing medium to become slightly dry between waterings, but do not allow the seedlings to wilt. Watering is critical at this small seedling stage! Fertilize the young seedlings with a diluted formulation of starter fertilizer.

Transplant the seedlings to trays or individual containers at the two leaf stage, or in about 14 to 21 days. Use disease free containers and sterile growing medium. Carefully lift the young seedlings from the germinating medium using a knife or flat stick. Lift only a few at a time to prevent excessive root drying. When transplanting, hold the young leaves of the seedlings, not the stems. Maintain the plants at about 65°F, if possible. Fertilize every two weeks with one ounce of 20-20-20 fertilizer in three gallons of water. When well-rooted, these plants can be moved outdoors on warm days. Like purchased transplants, they should be acclimated slowly to the outdoors. Protect the seedlings to prevent sunscald, wind damage or wilting.

Transplanting into the Garden

Petunia plants, whether purchased or grown at home, should be carefully transplanted when set outdoors. Plant after all danger of frost is past and when the soil temperature has reached at least 60°F. Avoid excessive root and soil disruption around the transplant. Plant the young transplants at the same depth they were growing in the containers. Water thoroughly after transplanting to avoid excessive wilting. A soil ridge around the plant will help hold water in the vicinity of the plant. Young plants may need protection for a few days following transplanting during hot, windy weather. Plant on a cloudy day if possible. Plants can be spaced about 12 inches apart in the garden.

Care in the Garden

Petunias do best in full sun. However, they will tolerate several hours of light shade a day. Two pounds of 5-10-5 fertilizer or one pound of 10-10-10 dry fertilizer per 100 square feet can be incorporated into the soil at planting. A half rate application can be spread around the plants in July if needed. Too much fertilizer can cause excessive vegetative growth and sparse flowers. In high pH soils (alkaline soils) additional iron or iron sulfate may be beneficial to reduce chlorosis (yellowing) of the foliage.

Water to a depth of six to eight inches when the soil becomes dry. The frequency of watering will depend on the type of soil, weather conditions and the amount of mulch. A mulch will not only reduce soil water evaporation but will also reduce splashing of water onto the lower leaves, moderate soil temperatures and reduce weed competition. Do not allow the soil around the plants to remain excessively wet for several days because this can lead to stunted, chlorotic growth or disease. Remove weeds from the plantings that compete with the petunias for moisture, nutrients and light.

"Pinching" the plants can be used to increase the number of flowering stems and discourage excessive vegetative growth. Remove old flowers (dead heads) when they start to fade to encourage repeat blooming.

Diseases and Insects

Petunias are relatively free of disease and insect pests, but pest problems can occur. Damping-off can be a serious disease problem of young seedlings. It is a disease that rots the seeds during germination or kills the seedlings after emergence. Following good sanitation practices and maintaining proper moisture and temperature levels can minimize damping-off disease.

Petunias with virus diseases can have foliage that is stunted and deformed, with light-green streaks, and discolored and deformed flowers. The best control is to remove and destroy diseased plants and keep aphids and other insects which transmit the virus under control. Alternaria blight, crown rot, fusarium wilt, botrytis and fasciation are other diseases of petunias. Insects are generally not a problem on petunias. However, isolated cases with aphids and cutworms do occur. Diseases and insects should first be identified before any chemicals are applied to control these pests. Remember that healthy, vigorous plants are less susceptible to pest damage than unhealthy plants.

Yellow foliage on petunias may also be caused by nitrogen or iron deficiency within the plant. Both can be corrected with the proper supplemental fertilizers.

File G1127 under HORTICULTURE

A-21, Ornamentals

Paper version revised January 1993; 5,000 printed.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Elbert C. Dickey, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.

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