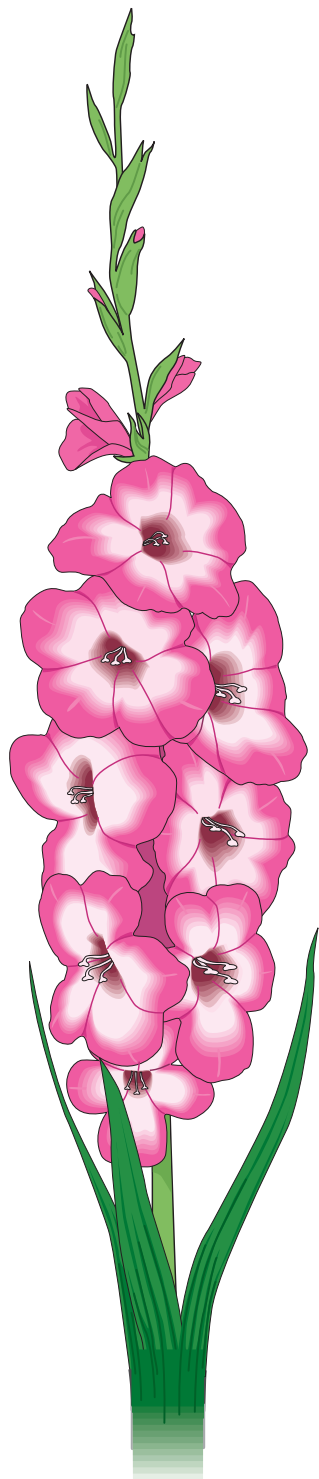


Giddy over Gladiolus

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Introduction

Few other annual flowers have as much to offer the casual, dedicated or commercial gardener as gladiolus: A wide range of colors from near black to white, with just about every conceivable shade in between; ease of growth attracts even the most amateur of gardeners to add color and variety to the landscape, and, as a cut, flower, glads are unequaled for keeping quality and showmanship.

Give them sun, lots of water and well-drained soil, and let nature take its course. Start out with a dozen or two, and in a few years the corms will have multiplied to the point where you can give some to neighbors, relatives and friends to grow on their own.

Many a farmer growing alternative crops for open-air farmer's markets has discovered the drawing power of glads in bloom on his stand. Not only is more produce sold, but the glads move quickly as well, many times forcing the vendor to "hold on" to the last dozen spikes for their attractive power until his stand closes.

Gladiolus range from 2 to 5 feet tall with graceful trumpet-shaped blossoms borne in a double row along the stem. Modern hybrids including many with ruffled, waved and frilled petals.

The blooming season for glads is generally July until frost. By planting different varieties and by spacing the planting dates of your glads you may have continuous color all summer long.

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Uses for Glads

Glads are a grand addition to any home garden. In the flower bed they may be planted in irregular groups among other flowers. They are attractive when grown among perennials such as peonies and daylilies.

However, glads are often more effective and easier to care for if they have their own exclusive area in the garden. The most popular use for glads is in flower arrangements. When grown for cutting, glads may be planted in rows in the vegetable garden or a corner of the flower border. Large quantities are easier to weed and care for in rows.

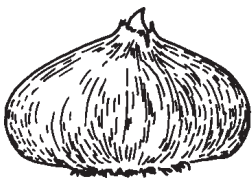
How a Glad Grows

Gladiolus grow from an enlarged bulb-like underground stem called a corm. Corms are planted each spring and dug in the fall. Each summer the old "mother corm" shrivels and dries up soon after the leaves emerge from the ground. One or more new corms are then produced during the growing season. These new corms are dug in the fall and stored over winter.

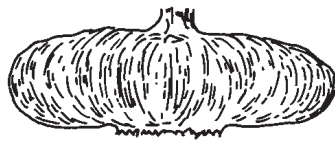
Obtaining Corms for Planting

The quality of gladiolus flowers depends on the quality of the corms. Buy corms from a reputable local source to obtain the highest quality. If the corms must be shipped to you, open the packages as soon as they arrive. Store the corms until planting time in a cool, dry, well-ventilated place safe from freezing.

When choosing corms, judge quality more by corm depth rather than width. Corms with high centers and plump shape are better than large, flat, thin ones. The thicker the corm, the higher quality bloom you can expect.



Good quality corm



Poor quality corm

Purchase plump, high-centered corms

Select corms on the basis of how you will use the flowers. For large show-sized blooms plant corms at least 1¼ inches in diameter. For standard cut flowers use medium sized corms of ¾ to 1¼ inches in diameter. Corms smaller than ¾ inch often do not flower the first season. Plant these smaller ones to develop into larger corms capable of blooming in future seasons.

Location and Soil Requirements

To produce glads with large spikes, plant the corms in a location that receives full sunlight. Brighter flower colors and sturdier stalks are produced in full sunlight. Select a location having protection from strong winds.

Glads do well in a variety of soils, but they prefer a sandy loam. Heavy clay soil may be improved by adding organic matter such as compost, peatmoss or well-rotted manure. The chief soil requirement is good drainage. Poorly drained soil restricts growth and encourages disease. The better you prepare the soil before planting, the better your glads will respond. Till the soil deeply, digging to a depth of about 12 inches.

Fertilizing Glads

Glads reward the gardener with increased vigor, stronger bloom and larger corms if additional fertilizer is added. The amount to use depends on the soil's present condition. Choose a well-balanced fertilizer like 8-8-8 and follow label directions. In general, either of the following methods give satisfactory results:

1. Apply 2 pounds of an 8-8-8 or similar well-balanced fertilizer per 100 square feet as you prepare the bed.
2. Apply 1 pound of 8-8-8 per 100 feet of row at 2 inches below the corms when you plant, then side-dress ½ pound per 100 feet of row at mid-season and ¼ pound when the spikes form. Be careful that the fertilizer does not come in contact with the corms or roots.

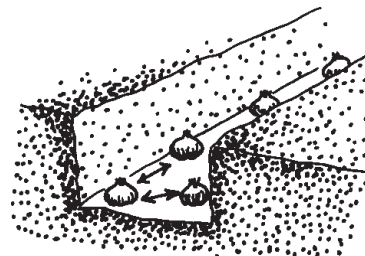
One pound of fertilizer equals about 2 cups.

Planting

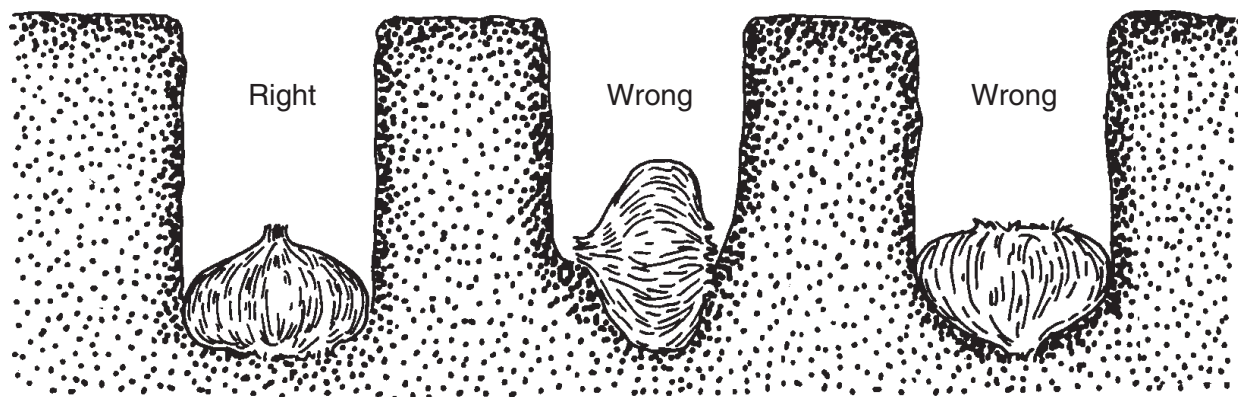
Glads may be planted anytime from early May until mid-June. Spacing planting one to two weeks apart will provide continuous bloom, or choose early, mid-season, and late varieties. The days from planting to bloom may vary from 60 to 120 depending on variety. Garden catalogs usually give the number of days to bloom. For earliest bloom, plant early flowering varieties and begin in early May.

Glads may be planted either in rows or in informal groupings in the perennial flower bed. Space corms 3 to 6 inches apart within the row or within the grouping. A "staggered row" system may also be used (*see illustration*).

The distance between rows can vary to fit the tools available for cultivation. If you are putting in a large planting for cut flowers, rows may be 2 to 3 feet apart. For smaller



Corms may be planted in a double, staggered row



Plant corms with pointed side upright

home plantings, an 18-inch spacing between rows is sufficient.

Spacing and depth of planting depend on both the soil type and size of corms. In general, plant deeper in sandy soils and shallower in heavy soils.

When corms are:	Plant them:
Large	6" deep; 6" apart
Medium	4-5" deep; 3-4" apart
Small	3" deep; 2" apart
Cormels	1½-2" deep; 1-2" apart

Deep planting anchors the stem and helps resist wind damage.

To plant the corms, dig a furrow at the depth recommended for the size corm and soil texture you have. Set the corms the proper distance apart in the furrow with the pointed side up and scar side down. Be sure the corms are upright.

Labeling

Varieties should be labeled as you plant. Even if you don't know the particular name of the variety, the color should be labeled. This will help you to keep them separated at digging time. It is important to keep colors separated because they multiply at different rates. Colors such as white, yellow, and pink are usually quite vigorous and may multiply faster than the dark colors like purple, rose, or smoky. If corms are mixed together, the lighter, more productive colors will eventually outnumber the darker colored varieties. This may give the impression that the glads have "changed colors" to primarily light shades.

Care During the Season

Most glads will be vulnerable to North Dakota winds, being subject to being blown over the taller they get. To protect them from wind and storm damage, or just from their own weight as they mature, stake them individually if you are growing only a few. If you are growing clumps of glads, provide a corset of stakes and twine running in

all directions between them. Another alternative would be to plant them in rows with two parallel strings on either side that are tied firmly to strong stakes. Keep weeds to a minimum by hand removal or with shallow cultivation.

Lack of moisture often causes shorter spikes, smaller florets and smaller corms for next season. Adequate moisture is especially important when flower spikes are beginning to form. Apply 1 inch of water per week if rainfall is insufficient. Mulching of the soil around plants and between rows will reduce weed competition and conserve moisture. Suitable mulches include straw, dried grass clippings and compost.

Insect and Disease Control

Thrips are the major insect problem of gladiolus. They are tiny insects that are difficult to see with the naked eye. They are slender black insects about 1/25 inch long. Thrips cause white streaks on the leaves. Flowers often are misshapen, streaked, discolored and occasionally will fail to open. To protect gladiolus spray or dust plants with malathion or carbaryl (Sevin) when plants reach 6 inches in height. Continue treatment every seven to 10 days. Thrips can overwinter on stored corms. After harvesting and curing, shake gladiolus corms in a sack with a small amount of carbaryl (Sevin) dust. Use 1 to 2 teaspoons for each 100 corms.

A non-chemical method of controlling thrip build-up is to soak the corms in very hot water (not boiling – about 160° F) for about 2 minutes. Try to plant them in a different location each season to help control thrip populations, but also to control Fusarium wilt and other viruses. Immediately lift and destroy any plant that turns yellowish and looks stunted.

Cutting Gladiolus Blooms

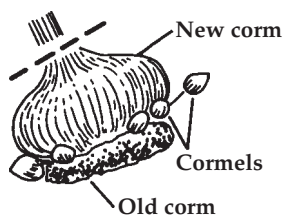
Cut the glad spike when one to three florets are open. The rest will open in turn. Cut during early morning or evening for maximum freshness. Allow at least four leaves to remain on the plant to feed and mature the developing

underground corm. Remove spikes with a diagonal cut and immediately place the stems in a deep container of warm water. Leave the flowers in a cool, dark place for several hours before arranging.

As lower florets wilt, they should be removed to improve the appearance of the stalk. Blossoms will continue to open. Change water daily and cut off 1 to 2 inches from the bottom stem so the stalk can absorb more water.

Digging, Curing and Storing Corms

Gladiolus corms should be dug at the time of the first frost in the fall. Dig carefully to retain all cormels surrounding the corm. Shake off excess soil and sort according to variety. Cut the stems just above the corm.



Glad corms
at
harvest time

Cure the corms by drying them in shallow containers in a well-ventilated, warm, frost-free area for about three weeks. You will discover that your large corms are not the ones you planted, but new ones that have developed on the top of the old ones, which are now withered and shrunken. After the corms are thoroughly dried, remove the old shriveled mother corm from below the fresh new corm. It usually snaps off easily by hand. Remove only loose husks. Leave wrapper husks intact. Also remove and label the small cormels and place in a paper bag for storage for future planting.

Before placing glad corms in storage, dust with carbaryl (Sevin) to reduce chances of thrip injury as described in the insect section.

Store corms in a dark, cool, dry, well-ventilated location at 40 to 45° F. Store in flat boxes, slatted trays, old mesh onion bags or nylon stockings.



Stored in labeled trays at 40° F

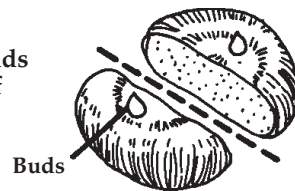
Propagation of Glads

After a gladiolus corm has been planted, a new corm begins to grow from the top of the old one. A corm lasts only one year. In addition to the new corm, smaller corms or "cormels" usually develop at the new corm base. These cormels can be removed and stored for planting the next spring. They will be identical to the mother corm in color and flower type.

Although all cormels can be saved, those the size of a dime or larger give best results. Cormels of this size can bloom two or three years after replanting. Store cormels in an open bag or jar at 40 to 45° F in a well-ventilated area. Before planting in the spring, soak cormels in water for one day. Plant 1 to 2 inches deep. Keep soil moist until plants emerge.

Glads may also be propagated by division of the older corms. If large corms have two buds, the corm can be cut in two so that each section has a bud. Allow the cut pieces to dry and "heal" for several days before planting.

Corms with two buds
can be cut in half



Exhibiting Glad Flowers

Cut the spikes the night before exhibiting so the flower can absorb water and recover its vitality. Place in a deep container of water and leave overnight in a cool location. Be sure they are kept in a vertical position.

A gladiolus spike for exhibition should be just approaching its peak of perfection with the bottom floret at its best with no signs of aging. About one-third of the number of florets should be in full bloom. One-third showing color, and the top florets in bud. The spike should be straight and have an even development of florets with all of them facing the front. The spike should be cut so that the flowering portion of the spike is about twice the length of the bottom portion. An exhibition spike should have no side spikes. For greater perfection at exhibition time, the grower must remove any side spikes as soon as they are formed.

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