

## GROWING PIXIOLA GLADIOLUS IN THE GREENHOUSE

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Today growers are experiencing all kinds of stress, such as increased cost of labor and energy and additional competition from foreign markets. A few growers are trying new crops that lend some diversity to the marketplace as well as potentially becoming profitable.

Such crops as these may include alstroemerias, freesias, gerbera and snapdragons. Another crop that may have a big future according to Seward Besemer is the 'Pixiola' gladiolus. They have customer appeal and are productive bloomers.

### CULTURE

Pixiola gladiolus require a well-drained root medium. Many problems can be avoided by proper pH and fertilizer balance. Based on a soil test, add dolomitic limestone to adjust the pH to 6.0 to 6.5. The dolomitic limestone will provide Mg as well as Ca. A low pH may result in toxic levels of manganese, aluminum, molybdenom, boron or lithium. A pH of 7.5 or higher may result in phosphorous or iron insufficiency. Problems such as Fusarium corm rot are not as severe when the pH is maintained in the 6.0-6.5 range.

Nitrate forms of nitrogen applied during cool temperatures or wet seasons reduce the severity of Fusarium corm rot since they do not acidify or lower the soil pH as do ammoniacal forms. Sources of nitrate nitrogen include potassium nitrate, calcium nitrate and sodium nitrate. Ammoniacal forms of nitrogen are found in ammonium sulfate, ammonium nitrate, urea, and di- & mono-ammonium phosphates.

Various nutrient deficiencies may be observed in growing gladiolus. Below is a summary of the deficiency symptoms of nutrients:

NITROGEN--lower floret and spike count, and pale green foliage.

PHOSPHORUS--dark green foliage, purple coloration of lower leaves.

POTASSIUM--shortening of spike stem length, general yellowing of older leaves and a yellowing between veins of leaves. In severe cases older leaves exhibit marginal leaf burn, reduced number of florets and delayed flowering.

CALCIUM--breaking over of spikes as they open, a disorder called "topple." Bud rot may occur (florets do not open normally, petals tend to cup inward and there may be a breaking down of petal tissue to produce a water-soaking effect). Leaves may exhibit some horizontal cracking.

MAGNESIUM--yellowing between veins on older leaves, some delay in flowering.

BORON--horizontal leaf cracking extending inward from the margin toward the midrib, some varieties exhibit translucent areas between veins; in some cases veins grow together; flower production impaired.

COPPER--wilting of leaves and softness of spikes.

IRON--yellowing between veins of new foliage, spike yellow or pale green.

MANGANESE--yellowing between veins of the newer leaves.

To grow *pixiola gladiolus* in the greenhouse, corms are planted 2 inches deep and as close as 2 inches apart in 4" rows (18/sq. ft.). Autumn planting is inadvisable, since corms require a rest period before they may be forced. Plantings may be made as early as late December or January. If forced at 50°F, a 75 to 80 day cultivar will bloom in May if planted in January. At 55-60°F, or if bottom heat is utilized, flowering will occur in April. To conserve on space, *gladiolus* corms may be interplanted between other bench crops such as carnations, or snapdragons.