

# Pansy Production Program

## Media

Different soilless mixes may be used for pansy production, including mixtures of peat, perlite, rice hulls and composted pine bark. The media should provide good air space and be well drained. The starting pH should be adjusted between 5.7-6.2 for soilless mixes. Iron and boron are two micro elements in high demand for optimal pansy growth. These two micronutrients decrease in availability when the pH rises above 5.8. pH during pansy production should be maintained between 5.4-5.7 for soilless media and 5.6-6.0 for soil-based substrate.

EC levels should be maintained between 0.75-1.5 mS to promote good growth. Pansies are light feeders with a constant feed of 100 ppm N being sufficient. In addition to their high demand for iron and boron, pansies also require 12.5-50 ppm of magnesium, depending on their stage of growth.

## Fertilization

### Plugs

Starting from seed, pansies should be fed with **Plantex® Solutions 15-2-20 Pansy Special**. This product has a slight basic soil reaction but has a 3:1.5 Ca:Mg ratio and higher levels of boron, molybdenum, iron and magnesium.

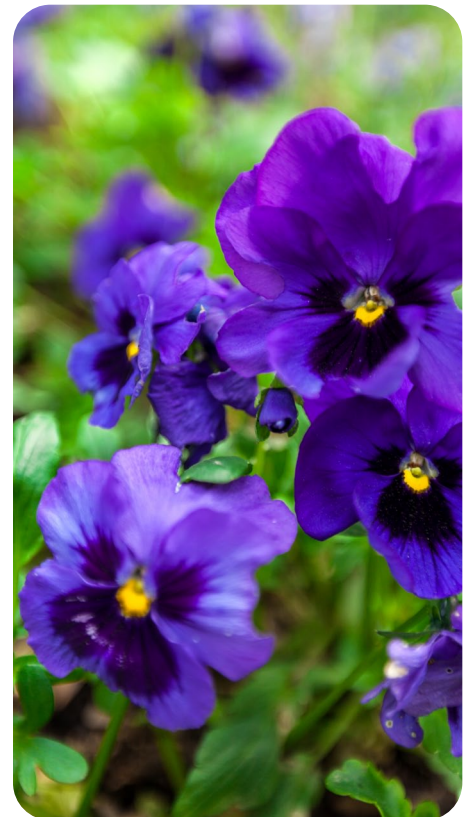
### Growing

Pansy fertilizer, as with all crops, is dependent upon the quality of the irrigation water being used. Options are available for various alkalinity levels. Acid injection (usually sulfuric acid) is used when the alkalinity level is above 250 ppm  $\text{CaCO}_3$  for growers who want a constant feeding program. Plant-Prod can provide water tests to determine your alkalinity level and general water nutrient levels. Based on your water analysis, we can determine which fertilizer schedule would work for you.

For all water types, if extra boron is required, as indicated from a soil test, drench the soil with 0.25 oz. per 100 gallons of solubor. Boron deficiency shows up as mottled younger growth and distorted leaves in severe situations. If acid is not an alternative, rotation between acidic blends and a Cal Mag is suggested. The fertilizer analysis suggested would be determined by the water sample results but in general the following guidelines apply:

#### **Water alkalinity between 75-100 ppm $\text{CaCO}_3$ with low Ca/Mg levels:**

Use **Plantex Solutions 17-5-17 Complete** at 100 ppm N, alternated with **Plantex® 17-4-19 Pansy** at 100 ppm N. Keep soil pH between 5.4-5.7.



### Water alkalinity between 150-200 ppm CaCO<sub>3</sub> with low Ca/Mg levels:

**Option 1** - Use **Plantex Solutions 19-8-13 Complete Plus** at 100 ppm N, alternated every other feeding with **Plantex 17-4-19** at 100 ppm N.

**Option 2** - Use **Plantex 20-10-20 All Purpose High N** or **Plantex Solutions 19-2-19 Fertility Plus** to provide extra iron, manganese, and magnesium. Fertility Plus has a lower amount of phosphorus which also helps to keep pansies compact. Alternate every third watering with **Plantex 17-4-19** to provide enough boron, iron and magnesium.

### Water alkalinity greater than 250 ppm CaCO<sub>3</sub>:

**Option 1** - Use acid as mentioned above. Use **Plantex Solutions 17-5-17** at 100 ppm N, alternated with **Plantex 17-4-19** at 100 ppm N. Check pH of soil to keep pH between 5.4-5.7.

**Option 2** - Use **Plantex Solutions 18-9-18 pH Reducer** and alternate every 2nd or 3rd watering with **Plantex 17-4-19**. Make sure you check your pH to keep it between 5.4-6.0. pH Reducer will decrease the pH in the soil and will also provide extra iron, manganese, zinc and boron.

## Finishing

Fertilizer should be reduced in the 2-3 weeks prior to shipping and **Plantex Solutions 15-0-20 No-Stretch®** should be used to maintain compact but sturdy growth.

### Plantex® Solutions 17-5-17 Complete

Contains 3% calcium and 1% magnesium and is an all-in-one formula. Over 70% of N is in nitrate form. Contains a full micronutrient package.

### Plantex® 17-4-19 Pansy

Designed for pansy growers wanting an acidic soil reaction. Contains increased iron, magnesium and boron levels.

### Plantex® Solutions 19-8-13 Complete Plus

Contains 2.5% calcium and 1% magnesium. This modification of 17-5-17 provides a greater acidic potential. Contains a complete and enhanced micronutrient package with 3 chelating agents.

### Plantex® 20-10-20 All Purpose High N

An all season fertilizer with a high potential acidity and complete micronutrient package.

### Plantex® Solutions 19-2-19 Fertility Plus

A balanced growth formulation that's urea free, high in nitrate and contains an enhanced micronutrient package with 3 chelating agents.

### Plantex® Solutions 15-0-20 No Stretch®

Works to harden plant structure and prevents leggy growth. Contains a complete and enhanced micronutrient package with 3 chelating agents to improve the availability of Iron and other micronutrients.



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