Viola Rebelina

Cultural Information for: Viola Rebelina Annual
Common Name: Viola
Botanical Name: Viola cornuta
Seed Count: 28,000-34,000/oz. 1,000-1,200/gram
Optimum Germination Temperature: 64-68°F / 18-20°C
Optimum Growing Temperature: 55-65°F / 13-18°C
Optimum pH: 5.5 – 6.0
EC – Plug: 0.26 – 0.75 mmhos/cm (1:2) / 0.76 – 2.0 (SME)
EC – Finishing: 0.76 – 1.25 mmhos/cm (1:2) / 2.1 – 3.5 (SME)

Plug Culture – 4 weeks (288 / 12 x 24 tray)

Stage One (days 1-7) Sow viola seed in a well-aerated plug mix with a pH between 5.5 and 6.0 and cover lightly with a medium or coarse vermiculite. After sowing, water the plug flats well and maintain a soil temperature between 64-68°F/18-20°C. The use of primed seed and a germination chamber with a fine mist system to maintain moisture levels is ideal.

Stage Two (days 8-15) If using a germination chamber, be sure to remove viola plug flats when the seed coat is cracked. When green begins to appear in the flat, lightly fertilize with 75 ppm of Nitrogen from a well-balanced fertilizer. Applying 0.25 ppm of boron, if needed, using Solubor or Borax, is recommended to avoid boron deficiency. Maintain temperatures as cool as possible and maintain good air-flow. Light levels should be maintained as high as possible, without causing heat or water stress. After the initial feed, begin fertilizing with 200 ppm of Nitrogen from a well-balance fertilizer containing trace elements. A Calcium Nitrate-based fertilizer works well to build strong compact plants.

Stage Three (days 16-24) Plug trays are beginning to fill in, reduce fertilizer applications. When applying fresh water, (no fertilizer), still apply trace elements; especially boron, and keep water alkalinity at 60-80 HCO3 to maintain soil pH between 5.5 and 6.0. Fertilizer concentrations can be reduced to 150 ppm but maintain trace elements at full strength; especially boron at 0.25 ppm. Ideally, viola plug flats should be given higher light levels to control stretch. Moving plants outdoors under a saran house will reduce temperatures and provide optimal air movement. Viola Rebelina is day length neutral and sets buds early; especially under the long days and warm conditions of early fall. It is best to transplant earlier rather than apply growth regulators.

Stage Four (days 25-28) Plug flats are approaching market size, feed every 2nd or 3rd watering, alternating with acid, if needed, and trace elements to maintain soil pH and trace element supply; especially boron. During periods of hot and humid weather, or before shipping plugs in a box or truck, apply either Manzate® or Zyban® to control anthracnose.

Never delay transplanting into pot as root bound plugs bud prematurely with poor plant canopy; especially under long day and warm temperature conditions.

Transplanting: 5-6 weeks (Blue & Yellow 7-8 weeks)

Media: Transplant plugs into a well aerated soil mix a low nutrient charge. Avoid planting the plugs too deep to prevent stem rot.

Temperature: Optimum day temperature is 62-68°F/ 17-20°C with nights at 50-55°F/10-13°C.

Fertilizer: Fertilize with 200 ppm of Nitrogen from a well-balanced fertilizer to ensure a healthy start. Violas are sensitive to boron deficiency characterized by deep green foliage, crinkled foliage and tip abortion. Supply 0.25 of boron at each watering. Be sure to check the boron level in your water supply to avoid oversupplying this microelement. Pansy special fertilizers are formulated with higher microelements at lower Nitrogen rates and highly recommended.

Growth regulator: In the early fall season under warm temperature conditions Viola Rebelina series set buds early and should not be checked in the plug tray or finished container. Providing optimum temperatures, high light, good ventilation and low ammonium promotes compact plants. If needed, B-Nine® (daminozide), Cycocel® (chlormequat), and A-Rest® (ancymidol) are effective.

Pests: Violas are not usually affected by major pests but occasionally aphids and whiteflies may infest plants.

Diseases: Thielaviopsis root rot can be a problem early in the season when temperatures are high. Research has shown that the disease can not survive at a pH of 5.5 or lower. Also, high ammonium levels and the use of the chemical Subdue will encourage the development of this disease. Anthracnose or leaf spot can be a problem during periods of high heat and humidity. Foliar applications of Zyban and Manzate will help control this disease. A Cleary's drench will also supply systemic control.

Crop Timing:

Container	Plants / pot	Total crop time
6 inch / 15 cm.	3	9-10*
10 inch / 25 cm.	5	10-11*

****add two weeks for Blue & Yellow***

Reduce crop time by 1-2 weeks in late summer as plants develop quicker under long days and warm temperatures.

"All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North America conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions."

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