

Pansy Halloween Improved F₁

(*Viola x wittrockiana*)

Annuals Culture (revised 02/20/18)

Plug crop time: 5 weeks

Transplant to finish: Autumn 2 to 3 weeks

- Replaces Halloween II with less stretch under Autumn growing conditions and a larger flower size.
- Blooms are a unique, uniform pure black colour, on strong, short peduncles.
- Early, well-branched and floriferous plants are great for Autumn pots and packs, and overwinter with ease when planted in-ground.

NOTE: In black pansies, a small percentage of white/yellow bicolor off-types is common. Halloween Improved has about 3% of these plants in the population.

General Information

Exposure	Bloom Season	Height	Spread	Spacing
Partial Sun, Sun	Early Spring, Spring, Autumn	6-8 in. (15-20 cm)	8-10 in. (20-25 cm)	8-12 in. (20-30 cm)

Germination

Seed Form	Recommended Plug Size	Seeds/Cell	Plug Crop Weeks	Days to Germinate	Initial Media pH/EC	Cover Seed
PRM, RAW	288	1	5	3-4	5.5-5.8 pH 0.75 mmhos/cm	Yes

Plug Production

	Stage 1	Stage 2	Stage 3	Stage 4
Moisture	Level 4	Level 3-4	Level 3-4	Level 2-4
Temperature	65-70°F (18-21°C)	60-65°F (16-18°C)	60-65°F (16-18°C)	55-60°F (13-16°C)
Light		2,500 f.c. (26,900 Lux)	2,500 f.c. (26,900 Lux)	5,000 f.c. (53,800 Lux)
Fertilizer		Less than 100 ppm N - Less than 0.7 EC	100 to 175 ppm N - 0.7 to 1.2 EC	100 to 175 ppm N - 0.7 to 1.2 EC
PGR			ancymidol/5-10 ppm/Spray daminozide/1,500-2,500 ppm/Spray	ancymidol/5-10 ppm/Spray daminozide/1,500-2,500 ppm/Spray

Fertilizer Notation

It is best to use a nitrate-based fertilizer with low phosphorus to reduce stretch. Maintain a media pH of 5.5 to 5.8 and EC at 0.7 to 1.0 mS/cm (1:2 extraction). A higher pH (greater than 6.2) can induce Boron deficiency and also encourages fungal black root rot caused by *Thielaviopsis* sp.

Propagation Key Tips

Adjust PGR rates and frequency of application depending on local conditions in Stages 3 and 4. Northwestern Europe: Can use 1 to 2 applications of B-Nine/Alar (daminozide) at 1,280 ppm (1.5 g/l of 85% formulation or 2 g/l of 64% formulation).

Growing on to Finish

Growing on Temperature	Target Media pH/EC	Fertilizer	Daylength
(day) 60-70°F (16-21°C) (night) 50-55°F (10-13°C)	5.5-5.8 pH 1.5-2.0 mmhos/cm	175 to 225 ppm N - 1.2 to 1.5 EC	Facultative Long Day

Crop Scheduling

Container Size	Plugs/Pot	Crop Time	Season	PGR
Cell Pack	1 (ppp)	4-5 (weeks)	Autumn	daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray
Cell Pack	1 (ppp)	4-5 (weeks)	Autumn	paclobutrazol 0.125 ppm Drench
4"/4.5"/Quart	1 (ppp)	5-6 (weeks)	Autumn	daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray
4"/4.5"/Quart	1 (ppp)	5-6 (weeks)	Autumn	paclobutrazol 0.125 ppm Drench
10" Pot or HB/3 Gallon	7-9 (ppp)	4-5 (weeks)	Autumn	daminozide/chlormequat chloride tank mix 2,500/250-5,000/500 ppm Spray

Common Problems

Insects: Fungus Gnats and Shore Flies in plug stage and Aphids in early stages after transplant. Disease: Damping off, Black Root Rot, Foliar Leaf Spots, Botrytis

Finishing Key Tips

Adjust PGR rates and frequency of application depending on local conditions.

NOTE: Growers should use the information presented here as guidelines only. PanAmerican Seed recommends that growers conduct a trial of products under their own conditions. Crop times will vary depending on the climate, location, time of year, and greenhouse environmental conditions. It is the responsibility of the grower to read and follow all the current label directions relating to the products. Nothing herein shall be deemed a warranty or guaranty by PanAmerican Seed of any products listed herein. PanAmerican Seed's terms and conditions of sale shall apply to all products listed herein.

Variety Pictures



Halloween
Improved

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