

Alyssum Snow Crystals

(*Lobularia maritima*)

Germination

- Soil temperature 65 to 70°F (18 to 21°C).
- Keep media very moist, near saturation.
- A light cover will help uniform germination and dissolve pellet.
- Light at 100 to 400 f.c. (1,000 to 4,000 Lux) may be beneficial for germination.
- Soil pH 5.5 to 5.8 and soluble salts (EC) less than 0.75 mmhos/cm (2:1 extraction).

Plug Production

Stage 1 – Time of radicle emergence (2 to 3 days)

- Soil temperature 65 to 70°F (18 to 21°C).
- Keep media very moist, near saturation.
- A light cover will help uniform germination and dissolve pellet.
- Light at 100 to 400 f.c. (1,000 to 4,000 Lux) may be beneficial for germination.
- Soil pH 5.5 to 5.8 and soluble salts (EC) less than 0.75 mmhos/cm (2:1 extraction).
- Alyssum is very sensitive to high salts, particularly high ammonium, during germination.

Stage 2 – Stem and cotyledon emergence (5 to 7 days)

- Soil temperature 65 to 70°F (18 to 21°C).
- Reduce moisture levels once radicle emergence occurs. Allow the soil to dry out slightly before watering for best germination and rooting.
- Keep soil pH 5.5 to 5.8 and EC less than 0.75 mmhos/cm.
- Keep ammonium levels less than 10 ppm.
- Begin fertilizing with 50 to 75 ppm N from 14-0-14 or a calcium/potassium nitrate feed once cotyledons are fully expanded.
- Alternate feed with clear water.
- Apply protective fungicides for damping off organisms once full stand is achieved.
- Irrigate early in the day so foliage dries by nightfall to prevent diseases.

Stage 3 – Growth and development of true leaves (14 to 21 days)

- Soil temperature 60 to 65°F (15 to 18°C).
- Allow the soil to dry thoroughly between irrigations, but avoid permanent wilting to promote root growth and control shoot growth.
- Maintain soil pH 5.5 to 5.8 and EC less than 1.0 mmhos/cm.

- Increase feed to 100 to 150 ppm N from 20-10-20, alternating with 14-0-14 or other calcium/potassium nitrate fertilizer.
- Fertilize every 2 to 3 irrigations. Clear irrigations between feeding will help control growth.
- If using 15-0-15, supplement with magnesium 1 to 2 times during this stage, using magnesium sulfate (16 oz./100 gal.) or magnesium nitrate. Do not mix magnesium sulfate with calcium nitrate as precipitation will form.
- Use temperature differential (DIF) whenever possible, especially the first 2 hours after sunrise, to control plant height.
- Minimize water and fertilizer stress in Stage 3 to prevent early bud set.

Stage 4 – Plants ready for transplanting or shipping (7 days)

- Soil temperature 55 to 65°F (13 to 17°C).
- Allow soil to dry thoroughly between irrigations.
- Maintain soil pH 5.5 to 5.8 and EC less than 0.75 mmhos/cm.
- Fertilize with 14-0-14 or calcium/potassium nitrate feed at 100 to 150 ppm N as needed. Avoid ammonium fertilizer.

Growing On to Finish

Temperature

Night: 50 to 55°F (10 to 14°C)

Day: 55 to 70°F (14 to 21°C)

Light

Maintain light intensity between 4,000 and 6,000 f.c. (40,000 to 60,000 Lux).

Media

Use a well-drained, disease-free soil-less medium with a medium initial nutrient charge and a pH of 5.5 to 6.2.

Fertilization

Fertilize every other irrigation with 15-0-15, alternating with 20-10-20 at 150 ppm nitrogen.

Maintain medium electrical conductivity around 1.0 mmhos/cm (using 1:2 extraction).

Excessive fertilizer stress will cause very small leaves,

hard plants and yellow lower leaves. Keep the nutrient level low, but not exhausted.

Excessive fertilizer levels will result in large, lush leaves and smaller flower count. Low to moderate feed levels are best.

Controlling Height

Once plants are rooted to the sides of the containers, they can be allowed to wilt prior to irrigation to provide some height control. Do not allow severe wilting.

Height can also be controlled by withholding fertilizer, especially phosphorus and ammonium-free nitrogen.

Alyssum are responsive to day/night temperature DIF and are shorter with a negative DIF.

Post Production Care

Temperature

Night: 50 to 55°F (10 to 14°C)

Day: 55 to 65°F (14 to 18°C) or lower

Optimal conditions may be difficult to maintain, especially if plants are displayed outside.

Using a negative DIF will help keep the plants short and of high quality.

Light

Alyssum requires full sun; however, partial shade may be beneficial for retail shelf life.

Common Problems

Insects: White flies

Diseases: Powdery mildew, downey mildew

NOTE: Avoid using copper-based fungicides on alyssum.

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