GrowerFacts

Helichrysum Petiolare

(*Helichrysum (Bracteantha) petiolare*)

Propagation

STAGE 1 - Harvesting of cuttings to sticking

- Harvest uniform diameter cuttings to ensure uniform rooting.
- Make multiple passes over the stock to collect uniform diameter cuttings.
- Harvest cuttings at the correct stage of maturity- be certain stem cuttings are not woody.
- Harvest cuttings in the early morning or late afternoon when ambient temperatures are below 90°F (32°C).
- Place cuttings in carriers either base up or base down.
- Avoid crushing the cuttings when harvesting to decrease botrytis problems
- Cover the carrier with a damp towel to prevent desiccation of the cuttings.
- Store the cuttings for at least 2 hours at 48°F (9°C) to reduce cutting temperature.
- Maintain 75-90% RH in the cooler to prevent desiccation of the cuttings.
- If planting is going to be delayed, store the cuttings at 50-60°F (10-16°C) for 24 hours maximum.

STAGE 2 - Callus formation (5-7 days)

- Callus formation occurs in 4 steps:
  1. Swelling of the tissue without any color change.
  2. Swollen area begins to turn white
  3. White areas begin to crack open (epidermis ruptures)
  4. Rough callus areas begin differentiating root initials.
- Soil temperature 68-72°F (20-22°C)
- Air temperature 68-70°F (20-21°C) nights, 75-80°F (24-26°C) days.
- To guarantee uniform rooting, the media should be sufficiently moist so that water is easily squeezed out of rooting media.
- Keep RH 75-90% at the base of the cutting.
- Use tempered water, 70°F (21°C), in the mist lines since cold water will lower the soil temperature during the day.
- Maintain high relative humidity in the air surrounding the cutting, 75-90%, to minimize evapotranspiration.
- Prevent leaf wilting by applying overhead mist or fog.
- The mist frequency should increase and decrease as the light and ambient temperatures change during the course of the day.
- During the first 3-5 days frequent night misting may be required.
- Each wilting episode during stage 2 adds at least one day to the rooting program.
- Light intensity should be 500-1000 foot-candles.
- Light intensity above 1000 will increase plant stress due to plant warming.
- Use retractable shade so that the light intensity can be increased as the cuttings mature.
- Begin foliar feeding with 50-75 ppm of 20-10-20 as soon as there is any loss in foliage color.
- Soil pH should be 5.5-6.5 with an EC < 0.5.
- Maintain pH of media leachate at 6.0-6.2.
- If growth regulators were used during stock plant growth, no growth regulators are used during stage 2.
- If growth regulators were not used during stock plant growth then start applying appropriate growth regulators as soon as cuttings are turgid.
- Once 50% of the cuttings begin differentiating root initials, the cuttings are ready to transfer to stage 3.

STAGE 3 - Root development (7-14 days)

- Soil temperature 68-72°F (20-22°C).
- Air temperature 68-70°F (20-21°C) nights, 75-80°F (24-26°C) days.
- Once the cuttings begin to form root initials, it is critical to begin drying out the soil.
- Avoid drying out the air since this will increase evapotranspiration which will reduce root zone temperature.
- To reduce soil moisture:
- Reduce the mist application during the dark period.
- Reduce the duration and frequency of the mist.
- Reduce the amount of water applied per day by delaying the start of the mist period until 9:30 to 11:00 AM and end the mist period earlier than 4:00-5:00 PM.
- Begin increasing light intensity to 1000-2000 ftc as the cuttings begin to root out.
- Apply growth regulators as needed.
- Foliar feed at 100 ppm nitrogen from 15-0-15 alternating with 20-10-20 then increase rapidly to 200 ppm. Increase the frequency and rate at each application to prevent salt problems.
- The majority of fertilizer should be in the nitrate form (15-0-15).
- The soil pH should be 5.5-6.2.
- Soil EC should be below 0.5
- Monitor the pH and EC of the leachate on a daily basis. The pH should be 6.0 and the EC should stay between 0.5-1.0.

STAGE 4 - Plants ready for transplanting or shipping (5-7 days)

- Air temperatures 62-68°F (16-20°C) nights, 70-75° F (21-24°C) days.
- Move the liners from the mist area into an area of lower RH, lower temperatures, and higher light intensity.
- A zero DIF is desired.
- Use growth regulators if DIF is positive.
- Increase the light intensity to 2000-4000 ftc.
- Provide shade during the mid point of the day to reduce temperature stress.
- Maintain soil pH 5.5-6.5 and EC less than 0.5 mmhos/cm.
- Fertilize at 150-200 ppm nitrogen from 15-0-15 alternating with 20-10-20 once per week.

Growing On to Finish

This species is the vegetative filler. Please see H. bracteatum in the annual seed directory for flowering Helichrysum.

TEMPERATURE

Night: 62-65°F (16-18°C)

Day: 68-78°F (20-24°C)

- 65°F promotes the most rapid growth.
- Will tolerate temperatures from 40-90°F.

LIGHT

- Keep light intensities at 5000-9000 while maintaining moderate temperatures.
- Low light levels promote stem stretch.

WATER

- Avoid wet foliage to prevent Botrytis and Powdery Mildew.
- Helichrysum is very susceptible to over watering, keep them on the dry side -but avoid wilting.

MEDIA

- Use a well-drained, disease-free soil-less medium with a high initial nutrient charge and a pH 5.5-6.5.
- Combinations of peat, bark, or perlite are best.

FERTILIZATION

- Helichrysum has a heavy fertilizer requirement.
- Constant fertilization 15-0-15 alternating with 20-10-20 is best.
- As the plants mature the rate can be increased to 200-300 ppm.
- Apply additional iron if leaf chlorosis occurs.
- Plants require regular magnesium application to prevent lower leaf chlorosis.
- Water with clear water every third watering if high soluble salts problems occur.
- Maintain medium electrical conductivity around 1.0 mmhos/cm.

PINCHING

- Once liners are established, pinch plants back, and again 6-8 weeks after planting to improve basal branching.
- Severe pruning improves final plant form.

CONTROLLING HEIGHT

- Height can be controlled by withholding fertilizer, especially phosphorous and ammonium-form nitrogen.
- Helichrysum responds well to Florel, but avoid application 8 weeks prior to sale.
- A one time Bonzi drench is also effective.

POST PRODUCTION CARE

TEMPERATURE

Night: 60-65°F (15-18°C)

Day: 65-72°F (18-22°C)

LIGHT

- Helichrysum does best in full sun.
- Optimum light levels are 5000-9000 ftc.

WATER

- Avoid wet foliage to prevent Botrytis and Powdery Mildew.
- Helichrysum is very susceptible to over watering, keep them on the dry side -but avoid wilting.

COMMON PROBLEMS:

Insects: Caterpillars, Thrips, Whitefly, Leaf miners, Fungus gnats

Diseases: Botrytis, Rhizoctonia, Pythium, Alternaria

Problem: Plants collapse

Cause: Wet media for an extended period

Problem: Excessive vegetative growth

Cause: High ammonia concentration in the soil; Over fertilization under low light; Low light and over watering, wet media; Excess or late Florel application

Ball Horticultural Company
622 Town Road, West Chicago, Illinois, USA, 60185-2698
630 879-BALL www.ballseed.com

™ denotes a trademark of and ® denotes a registered trademark of Ball Horticultural Company in the US. It may also be registered in other countries.
©2024 Ball Horticultural Company

Problem: Poor branching

Cause: Low fertilization, lack of nitrogen

Problem: Chlorosis-Yellow-red older foliage, bleached younger foliage

Cause: Phosphorous toxicity- use 15-0-15 fertilizer

Problem: Stretched Plants

Cause: Low light conditions

Ball Horticultural Company
622 Town Road, West Chicago, Illinois, USA, 60185-2698
630 879-BALL www.ballseed.com

™ denotes a trademark of and ® denotes a registered trademark of Ball Horticultural Company in the US. It may also be registered in other countries.
©2024 Ball Horticultural Company