**Growing Temperature:**
50-55° F days
40-45° F nights

**Fertility:**
Feed during the cool growing season when plants are active. Helleborus are light to moderate feeders. Apply 50-75 ppm N at each watering. Monitor EC levels in soil to avoid root burning from elevated salts. Avoid feeding during the summer as plants are inactive.

**Potting and Timing:**
Helleborus prefers cool temperatures and shaded conditions.
They put on most of their growth in early spring and then again in fall. Summer potting is not recommended.

**Lighting:**
Provide 50% shade to avoid stress from the sunlight.

**Soil pH:**
5.5-5.8 (see below for more details)

**EC Level:**
1.5-2.0 pour through method

**Vernalization:**
Cold temperatures required for active growth.
Force at 45-55 degrees for best flower performance.

**Pests and Diseases:**
Scale can be a problem on helleborus and is easy to miss until there is a large population size. Scout the stems and undersides of leaves. Watch for crown and root rots as well as botrytis.

**Moisture:**
Keep plants moderately moist but not wet.

**Planting Level:**
At crown level.

**Other Comments:**
**Additional pH Notes:** While in the garden Hellebores might prefer an alkaline soil, we have found that juvenile plants in a production environment benefit from a lower pH. Our pH listing above is lower than one may think is appropriate, however we find most growers have high alkalinity water which tends to raise the pH to 5.8-6.4.
Grower Tips:

- Helleborus grow under cool conditions. Avoid overfeeding and overwatering in the summer months when plants are inactive. Helleborus must be mature to achieve consistent flowering. After the first season expect 10-15% to flower. After the second season more consistent flowering will appear.
  - Overwinter in a coldframe with white poly.
  - Be sure to vent as needed so as to avoid an early warming period.
  - Bait for rodents.
  - Avoid overly wet conditions from condensation.
  - As temperatures rise above 35° F begin to space the crop.
  - Push pots together tightly during the summer to keep roots cool.
  - Reflective aluminum shade cloth works well to keep the crop cool in the summer.