April 5, 2017

- ALWAYS check the tolerance at your bog [tolerance photos for all stages are shown at the end of this file]

- All cultivars at Rosebrook appeared to still be dormant

- Buds were tight and red or tinged with red

- Spring dormant tolerances are 18°F or lower for Early Black and Howes; 20°F or lower for Stevens, Ben Lear and new hybrids

- Buds observed at State Bog on the 7th were similar to those observed at Rosebrook on the 5th

- Next check scheduled for April 12th
Frost check at Rosebrook on April 5, 2017

Ben Lear

Early Black

Stevens

Howes
Frost tolerance check protocol 2017

• Tolerance check team:
  Glenn Reid, Carolyn DeMoranville [CCCGA frost committee]
  Anne Cote, Patti Silvia [CCCGA frost program]
  Erika Saalau Rojas, Peter Jeranyama [UMass Cranberry Station]
  Other growers attend from time to time

• Visit Rosebrook Bog in Wareham:
  Observe buds of Early Black, Howes, Ben Lear, Stevens
  Take in-field photographs, collect buds to bring to the lab
  Agree on current frost tolerance

• In the lab at the Station:
  Take close up photos of buds
  Cut buds and photograph
  Post photos and tolerance report to the UMass Cranberry Station web site

UMass Cranberry Station 4.5.17
Spring Frost Tolerances - Early Black and Howes

- Early Black
  - Spring Dormant: 18°F
- Early Black
  - White Bud Stage: 20°F
- Early Black
  - Bud Swell Stage: 22°F

- Early Black
  - Cabbage Head Stage: 25°F
- Early Black
  - Bud Elongation: 27°F
- Roughneck Stage: 29.5°F
- Hook Stage (L), Bloom (R): 29.5°F
Spring Frost Tolerances - Ben Lear and Stevens

Tolerances for large-budded hybrids are assumed to be similar to these. Crimson Queen, Mullica Queen, and Demoranville have been observed to develop in a similar timeline as Ben Lear.

- **Crimson Queen**, **Mullica Queen**, and **Demoranville** have been observed to develop in a similar timeline as Ben Lear.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Temperature</th>
<th>Plant</th>
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<tbody>
<tr>
<td>Spring Dormant</td>
<td>20°F</td>
<td>Ben Lear</td>
</tr>
<tr>
<td>White Bud Stage</td>
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Cranberry Station April 2015