Frost tolerances - Spring 2011

Frost tolerance checks began on April 11-12, 2011. Buds were examined from the following cultivars: Early Black (EB), Howes (H), Ben Lear (BL), Stevens (ST), Crimson Queen, Mullica Queen, Demoranville, and Grygleski#1 (GH1). At that time, all cultivars were at the tight-bud or spring dormant stage. All of the new hybrids, the Ben Lear, and the Early Black buds were green inside, when cut and examined under a scope. Some Stevens and most of the Howes still showed some dormant red color within the buds. Based on this information, the CCCGA began their frost warning service messages on April 14.

At the tight-bud stage tolerance for EB and H is 18°F; tolerance for BL and ST is 20°F. Based on appearance, new hybrids should be assumed to have the same tolerance as BL.

On April 15, additional buds were examined. Appearance and tolerance remained the same as earlier in the week, although EB were showing signs of moving towards the white-bud stage or 20°F tolerance. ALWAYS CHECK THE TOLERANCE ON YOUR BOGS.

EB tight-bud, 18°F
H tight-bud, 18°F

BL tight-bud, 20°F
ST tight-bud, 20°F

EB - losing dormant color, approaching white-bud, 20°F
On April 19, buds were examined from the following cultivars: Early Black (EB), Howes (H), Ben Lear (BL), and Stevens (ST). These buds were collected at Makepeace Rosebrook Bogs in Wareham. All cultivars had buds that had reached the 'white bud' stage. EB had virtually all buds at that stage. ST and H from Starr Bog in East Wareham were not quite as advanced.

At the white-bud stage tolerance for EB and H is 20°F; tolerance for BL and ST is 22°F. Based on appearance, new hybrids should be assumed to have the same tolerance as BL.

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H white-bud, 20°F

BL white-bud, 22°F
ST white-bud, 22°F
On April 29, buds were examined from the following cultivars: Early Black (EB), Howes (H), Ben Lear (BL), and Stevens (ST). These buds were collected at Makepeace Rosebrook Bogs in Wareham and Makepeace Starr Bog in East Wareham (H and ST only). All cultivars had buds that had reached the 'cabbage head' or bud-break stage. The buds had expanded to 2 mm diameter or greater.

At the cabbage head stage tolerance for EB and H is 25°F; tolerance for BL and ST is 27°F. Based on appearance, new hybrids should be assumed to have the same tolerance as BL.

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H cabbage-head, 25°F, Rosebrook 4/29

H cabbage-head, 25°F, Starr Bog 4/29
BL cabbage-head, 27°F, Rosebrook 4/29
ST cabbage-head, 27°F, Rosebrook 4/29

ST cabbage-head, 27°F, Starr Bog 4/29