

# ISU Northeast R&D Farm, Nashua

August, 2003

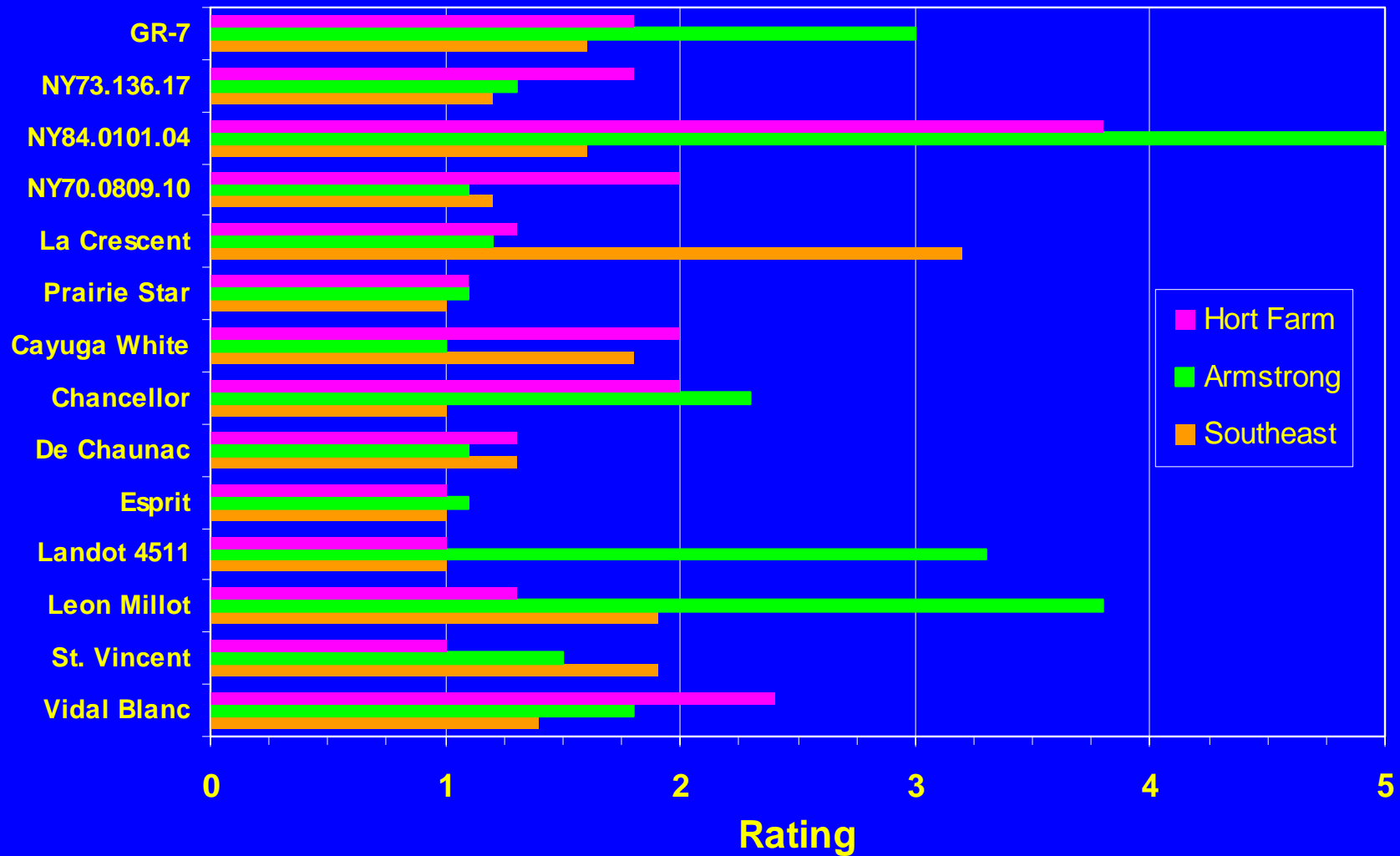


## Crinkly Leaf / Leafhopper Injury



Leaf crinkling that appeared to be associated with leafhopper feeding was observed at the Hort Farm, Armstrong and Southeast R&D Farms, and was rated for severity.

# Leaf Crinkle Rating



Scale: 1 = no apparent injury; 2 = slight; 3 = moderate; 4 = severe; 5 = very severe.

# Fall Frost

## Recorded Temperature (F)

Date	Hort Farm	Armstrong	South-east	North-east
Sep 29	32	36	30	32
Sep 30	32	37	33	29
Oct 1	31	33	26	27
Oct 2	26	30	21	21

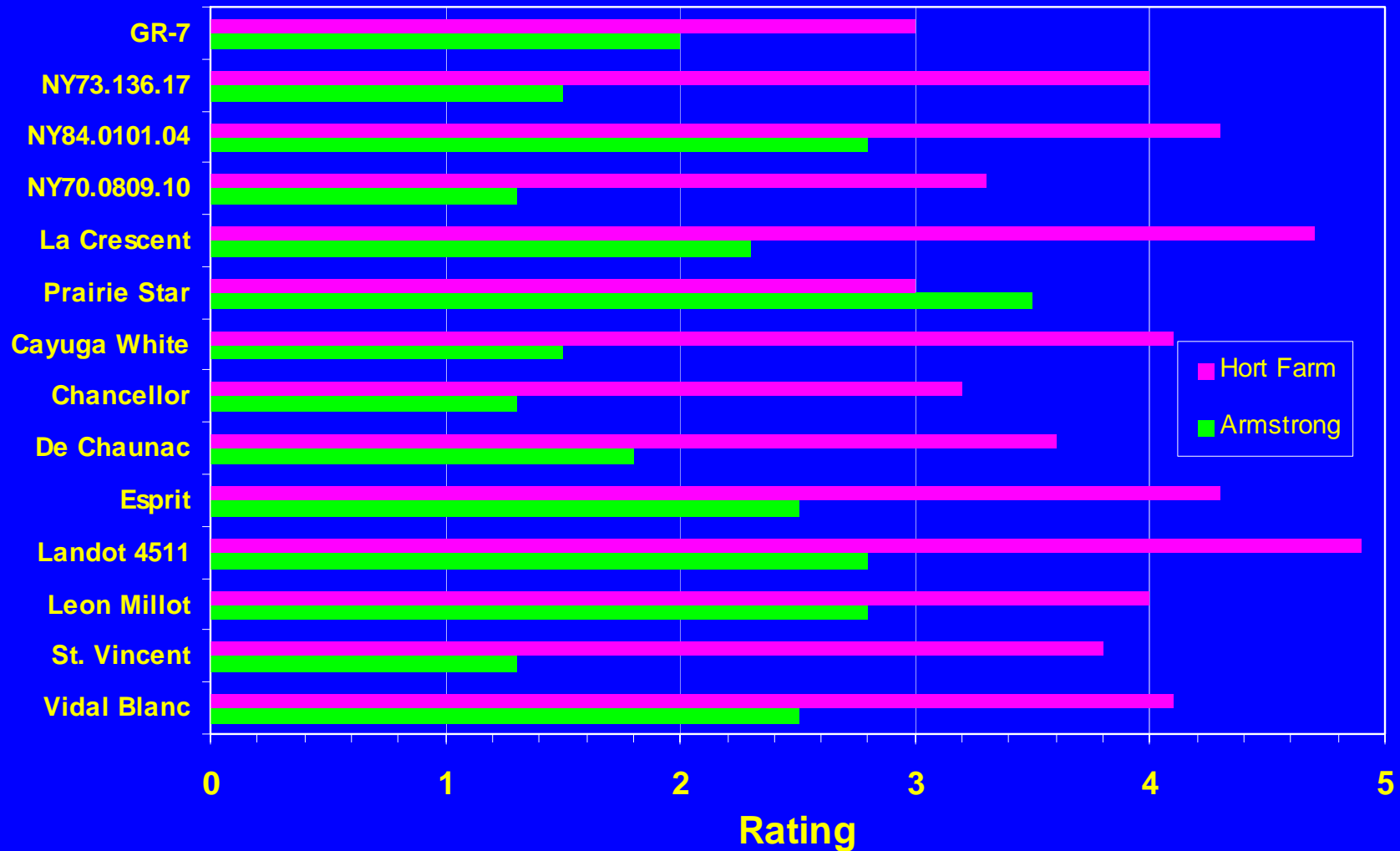
All four sites experienced an early fall frost. Frost injury ratings were taken at the Hort Farm and the morning of 2 October while the leaves were still frozen, and at the Armstrong Farm on 5 October.

# Hort Farm

After frosts on Sept. 29, 30, Oct. 1, 2



# Fall Frost Rating

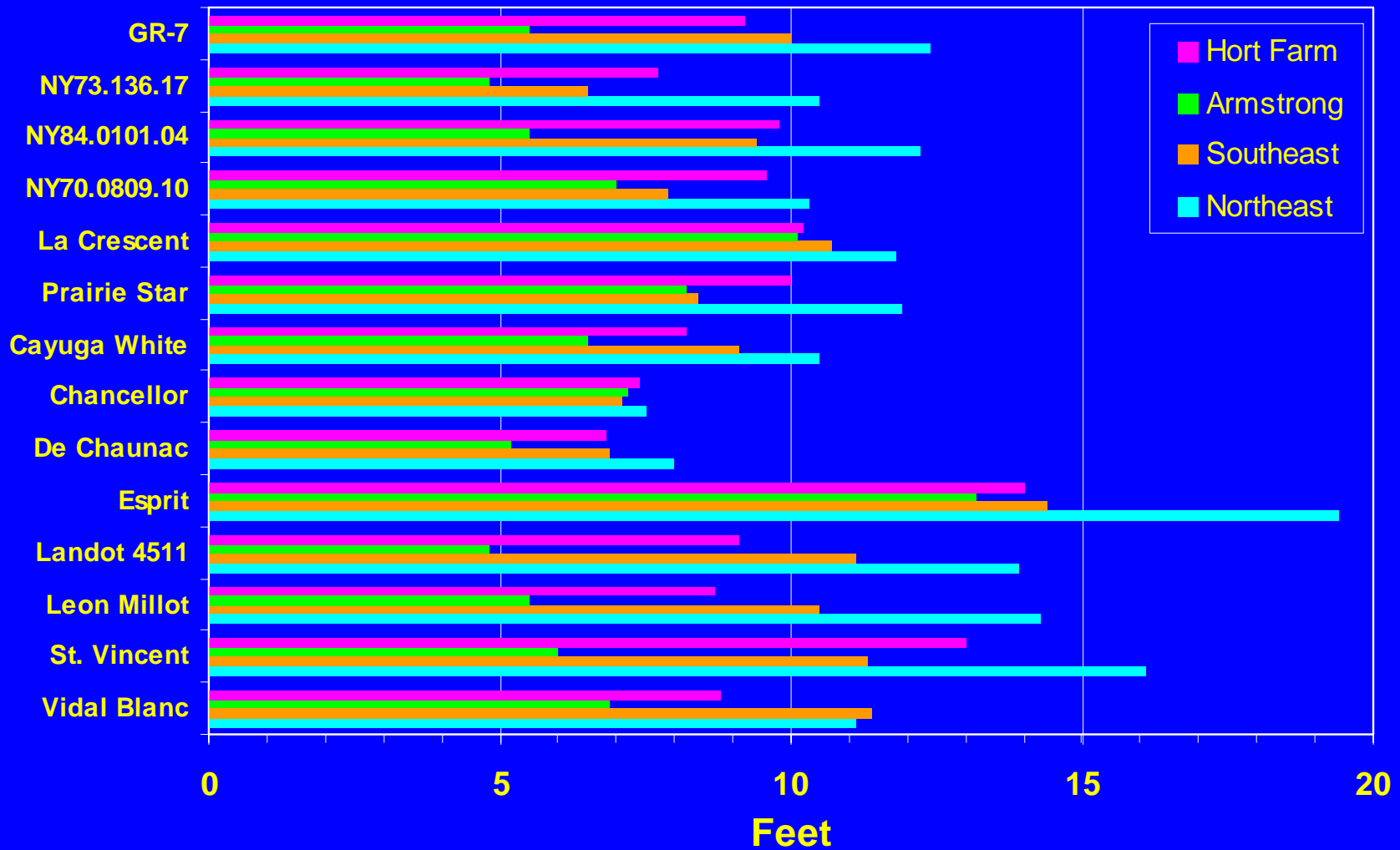


**Scale:** 1 = no apparent injury; 2 = injury confined to youngest leaves; 3 = moderate, some older leaves exhibiting injury; 4 = severe, over 50% of the leaves injured; 5 = very severe, over 90% of the leaves .

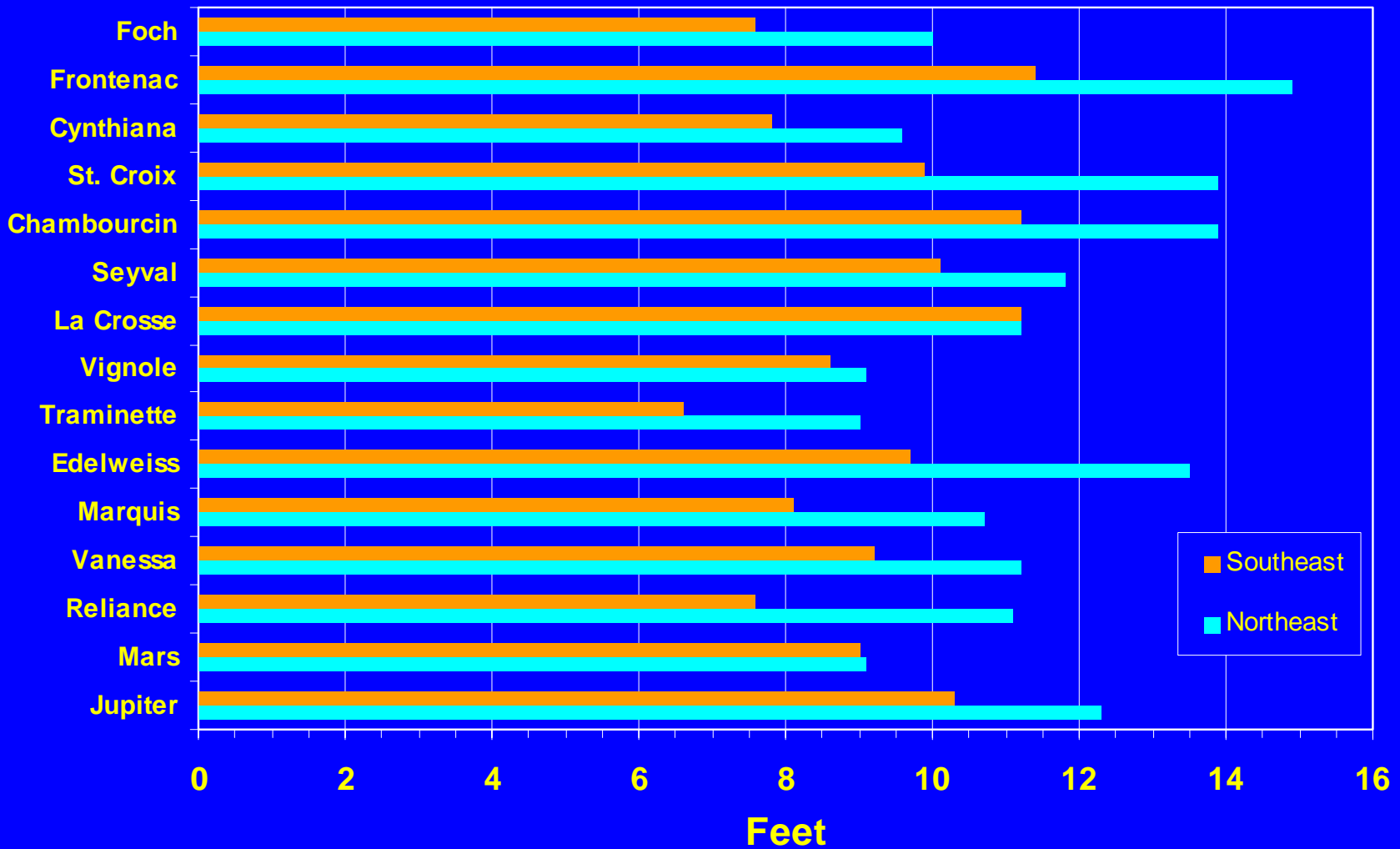
To determine how well the vines grew, the length of the 3 longest canes originating from the base were measured.



# Cumulative Cane Growth



# Cumulative Cane Growth Leopold Cultivars



# Armstrong Farm

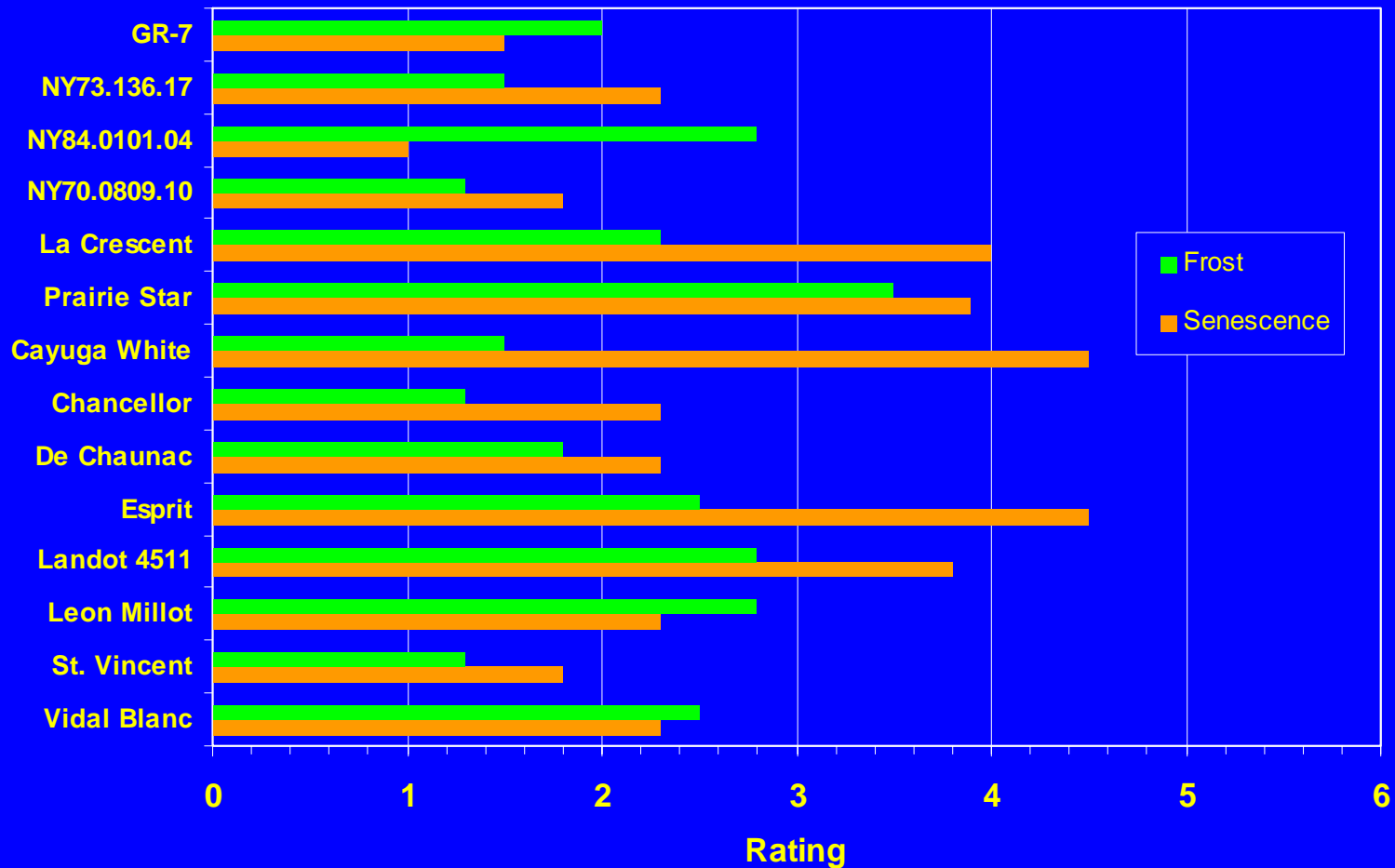
November 6, 2003



Following the frost on 2 October, the Armstrong Farm was frost-free until 26 October. On 25 October, the vines were rated for leaf senescence.

# Fall Senescence

Recorded October 25, 2003



**Scale:** 1 = completely green; 2 = beginning to show a color change but mostly green; 3 = half or more of the leaves have turned color; 4 = leaves turned color and beginning to drop; 5 = over half of the leaves have dropped; 6 = all the leaves have dropped.