

## Summer Red Raspberries - Spring 2003 Evaluation

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Eight varieties of summer-bearing red raspberries [Lauren, Emily (formerly JAM-2), PCA-B4, PCS-1, PCS-2, MDJ-W4, NAN-5, OAM-W2] were planted on 2 foot spacing in May 2000 at the Van Meter farm (39°02'N, 83°02'W) in the Scioto River Valley. Plots were replicated four times (Figure 1 ) except Lauren. Soils at the site are predominantly Huntington silt loam. Average temperatures range between 32 to 75°F and relative humidity ranges between 79 to 93%. The mean annual rainfall is approximately 36 inches±8 inches, with about 40% of the precipitation falling between May and September. Drip irrigation was installed and is used to maintain adequate soil moisture. Recommended pest control measures were followed to control weeds, insects, and disease.

**Figure 1. Plot map of summer red raspberry planting.**

<b>NORTH</b>				
<b>WEST</b>		<b>EAST</b>		
PCS - 1	OAM -W2	PCS-1	X	PCS-1
X	NAN-5	X	PCA-B4	PCS-2
MDJ-W4	Emily	MDJ-W4	NAN-5	OAM-W2
PCA-B4	PCS-2	PCA-B4	MDJW-4	X
Lauren	OAM -W2	PCS-1	OAM-W2	PCA-B4
PCS-2	NAN-5	PCS-2	Emily	MDJ-W4
Emily	Lauren	Lauren	Emily	NAN-5

X=Empty plot

*Varietal descriptions are based upon the breeders' comments and are not necessarily indicative of what we observe at this site.*

- Lauren (USPP#10610) [USDA, Maryland 1997 (Reveille x Titan)] was selected at the Wye Institute as a very large, very early, vigorous and productive spring bearing red raspberry. It is short chilling and performs well in -20F weather in Minnesota, producing fruit the size of 'Titan', but with more uniform stands in wetter soils. Its flavor was much superior to 'Titan', but like 'Titan', it suffered when experiencing warm spells followed by cold in March or April. Typically, Lauren survives January and February cold very well and can produce if kept cool.
- Emily (USPP#12173) was selected at the Wye Institute as having the firmest, most conic fruit. It is only mildly flavored. It has a longer chilling requirement than 'Lauren', it readily winterkills and is susceptible to Phytophthora and overuse of typical residual herbicides.

- PCA-b4 is a species hybrid (*R.stellarcricus*, *R. corchorifolius*, *R. pileatus*, *R. occidentalis* and *R. strigosis*= *R. x prittsii*) selected for clean foliage, resistance to root rot, and large size. Fruit is flavorful and acceptably firm (arising from soft parents).
- PCS-1 is a very vigorous and productive early fruiter. It has good flavored moderate sized fruit.
- PCS-2 is a very vigorous and very productive late fruiter. It has large and flavorful fruit. PCS-2 canes are clean of fungi especially in their protracted ripening period.
- MDJ-W4 – a cold hardy red raspberry selection that has AmosH, NY 817, Skeena and Titan in its background. It is productive with has medium sized round fruit that is somewhat soft.
- NAN-5 5 is a small fruited hybrid with high sugar and high acid. It is productive, purple, cold hardy and has good flavor.
- OAM-W2 has conic, large, flavorful species hybrid fruit. OAM-w2 fruit may be somewhat soft, but the plant has survived -20F and lower temperatures.

This year plants were pruned the week of April 14, 2003. Rows were narrowed to approximately 22 inches (slightly wider than the recommended width of 18 inches), spent floricanes were removed, dead tips on the current year floricanes were removed, and weak canes were also removed. Nine feet of row in each plot were randomly selected and the number of canes was counted and average height determined. Average cane counts are shown in Figure 2.

**Figure 2. Average cane count/yard.** A cane count of 16.5 – 18.3/yard is roughly equivalent to a count of 3-5 per linear foot of row in a narrow (12-18 inch) row.

NORTH				
WEST		EAST		
19.33	18.33	17.66	X	16.33
X	15.33	X	12.66	11
8.66	0.33	1	22.66	15
10.33	3.33	8.33	6.33	X
1.667	8.66	15	15.66	14.33
9.667	3.33	4	0.33	3.33
0	2	1	0.667	17.33

X=Empty plot

0-16 = unacceptable

16-18.333 = target range

>18.3 = high

Based upon these cane counts the we can say:

- PCS-1 has at least an acceptable average cane count in three of the four plots, and one of those is slightly high.
- NAN-5 has the highest stand count in one plot and acceptable levels in a second plot.
- OAM-W2 has acceptable cane survival in one of the four plots.

The average height of canes is somewhat dependent on location in the field, but when averaged across the field they are ranked from tallest =1 to shortest =8

1. PCS-1
3. (tie) OAM-W2, PCA-B4
4. NAN-5
5. PCS-2
6. Lauren
7. MDJ-W4
8. Emily - floricanes did not survive the winter although there are new primocanes developing.

Our winter low temperature was measured on January 27 and was approximately – 4 F.