

# 1996 McIntosh Rootstock Trial: A Look at the Vineland Rootstocks

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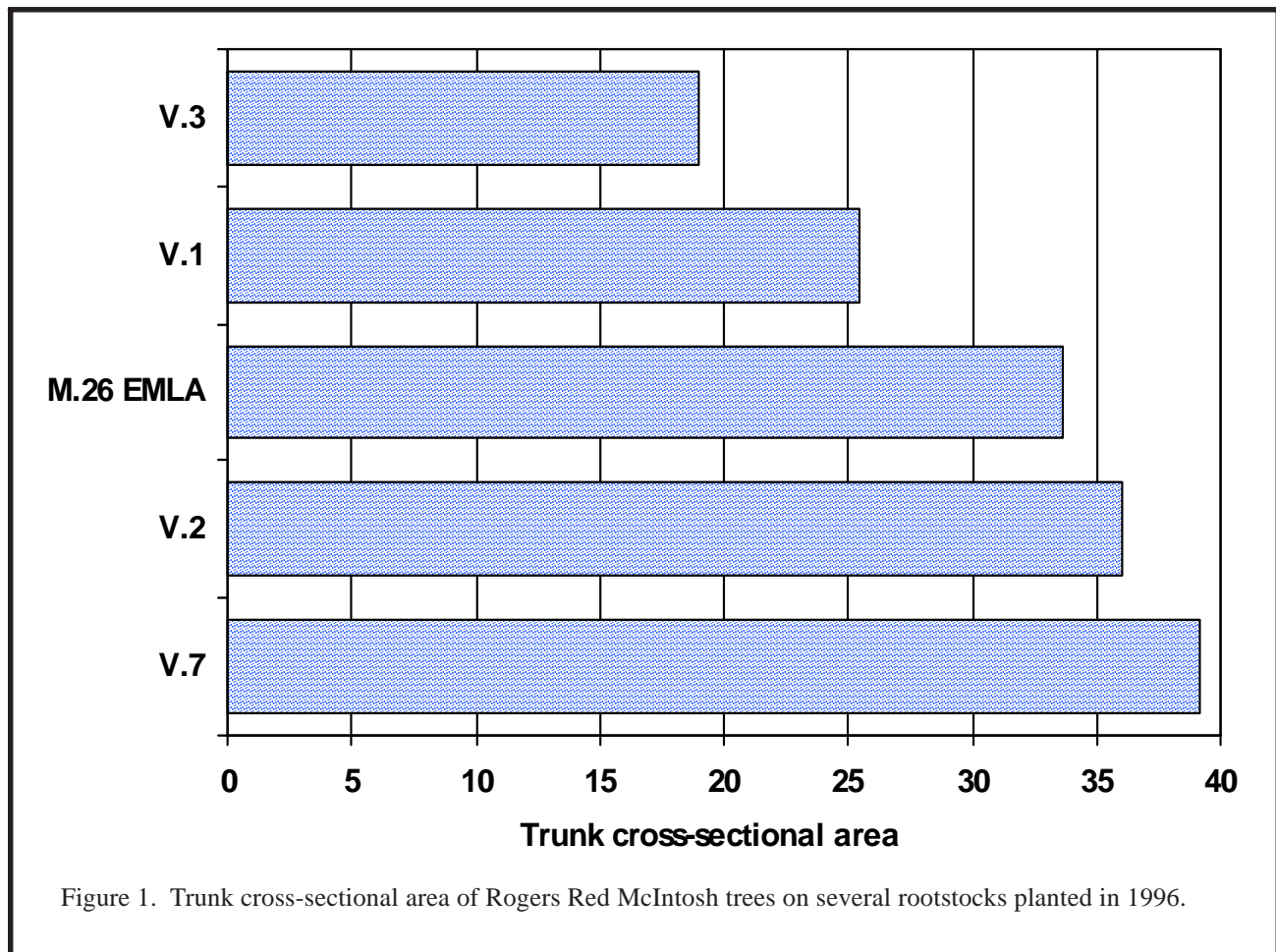
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In 1996, a trial was established at the University of Massachusetts Cold Spring Orchard Research & Education Center including Rogers Red McIntosh on V.1, V.2, V.3, V.7, and M.26 EMLA. The experiment was a randomized-complete-block design with seven replications. Means from 2004 (9<sup>th</sup> growing season) and cumulative means are included in Table 1 and Figure 1. Please note that V.4 was eliminated from this trial due to excessive vigor.

At the end of 2004, the largest trees were on V.7

and V.2, and the smallest were on V.3 (Figure 1, Table 1). Trees of M.26 EMLA and V.1 were statistically similar and intermediate between the groups. It is interesting to note that trees on V.1 were not as vigorous in this trial as they appear to have been in the 1995 trial reported in the previous article.

Yield per tree in 2004 was greatest from trees on M.26 EMLA and least from trees on V.3. V.1, V.2, and V.7 resulted in intermediate yields. Cumulatively (1998-2004), differences among rootstocks with re-



spects to yield per tree were nonsignificant.

Yield efficiency in 2004 was not affected by rootstock, but cumulatively (1998-2004), V.3 resulted in the greatest efficiency, and V.2 the lowest. Other rootstocks resulted in intermediate efficiency.

Rootstock did not affect fruit weight in 2004 or on average (1998-2004).

The Vineland series of rootstock are from Vineland, Ontario and are reported to be winter hardy. This trial does not point to any outstanding rootstocks from this portion of the Vineland series. V.3, possibly, could be considered for further trial, since in both this trial and the one reported in the previous article, it produces a moderately dwarfed, reasonably yield efficient tree.

Table 1. Trunk cross-sectional area, yield, yield efficiency, and fruit weight in 2004 of Rogers Red McIntosh trees on several rootstocks planted in 1996.<sup>z</sup>

Rootstock	Trunk cross-sectional area (cm <sup>2</sup> )	Yield per tree (kg)		Yield efficiency (kg/cm <sup>2</sup> TCA)		Fruit weight (g)	
		2004	Cumulative (1998-2004)	2004	Cumulative (1998-2004)	2004	Average (1998-2004)
V.1	25.4 bc	12.7 ab	75 a	0.52 a	2.96 ab	179 a	132 a
V.2	36.0 a	13.1 ab	91 a	0.38 a	2.43 b	177 a	142 a
V.3	19.0 c	8.8 b	63 a	0.46 a	3.50 a	163 a	128 a
V.7	39.2 a	18.3 ab	97 a	0.47 a	2.55 ab	185 a	142 a
M.26 EMLA	33.6 ab	21.9 a	100 a	0.67 a	3.00 ab	182 a	142 a

<sup>z</sup> Means within not followed by the same letter are different at odds of 19 to 1.

