

2003 NC-140 Apple Rootstock Physiology Trial: Do Different Rootstocks Respond Differently to Crop Load

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Table 6. Trunk cross-sectional area and root suckering in 2004 of Gibson Golden Delicious trees on three rootstocks in the Massachusetts planting of the 2003 NC-140 Apple Rootstock Physiology Trial.^z

Rootstock	Trunk cross-sectional area (cm ²)	Root suckers (no./tree)
G.16	2.4 a	0.0 a
M.26 EMLA	2.7 a	0.0 a
M.9 NAKBT337	2.0 a	0.0 a

^z Means within columns not followed by the same letter are different at odds of 19 to 1.

As part of the 2003 NC-140 Apple Rootstock Physiology Trial, a planting of Gibson Golden Delicious on three rootstocks was established at the University of Massachusetts Cold Spring Orchard Research & Education Center in 2003. The planting included ten trees of each rootstock in a completely random design. This trial was planted in several locations throughout the United States and Canada, but only Massachusetts data are reported here. Means from 2004 (2nd growing season) are included in Table 1.

This trial is not intended to compare rootstock performance directly (to date rootstock has not affected trunk cross-sectional area or root suckering). Instead, it was established to study the varying effects of crop load on different rootstocks. Beginning in either 2005 or 2006 and continuing for three years, crop load will be adjusted to varying levels. Effects on yield per tree and fruit size will be studied. It is supposed that rootstocks respond to crop load in different ways. These data are presented only to introduce this trial. Future years will begin to present the relative crop load effects.

