

# **ANNUAL REPORT TO NC – 140**

## **2003 DWARF APPLE ROOTSTOCK TRIAL – FINAL SUMMARY**

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The 2003 Dwarf Rootstock Trial was established in the spring of 2003 with 15 cooperators. During the past several years seven cooperators dropped out for various reasons. All eight remaining cooperators received trees on 11 core rootstocks; four of cooperators received an additional seven rootstocks; and two cooperators received 12 additional rootstocks. The scion cultivar is ‘Gibson Golden Delicious’. Each cooperator received 8 trees per rootstock for most rootstocks, but most got only 7 trees of 5 rootstocks and three got only 6 trees of one rootstock.

At each location the experimental design was a generalized randomized complete block design with 2 trees of each rootstock randomized within each of 4 blocks per location. Trees were trained to the Vertical Axis system.

**The 10-year summary was published in the April 2014 edition of the Journal of APS.**

### **General conclusions**

1. CG.3041 and CG.5935 are candidates to replace M.9 because it had better tree survival in locations where Malling rootstocks typically have high tree mortality and had YE higher than or equal to M.9. CG.3041 was slightly less vigorous than CG.5935 at most locations.
2. Based on results from only two locations, CG.5179 is in the M.9 size class, but did not perform better than M.9 NAKBT337 in terms of tree survival or YE.
3. B.62396 had good tree survival, and high YE and should be evaluated further as a potential replacement for M.9.
4. Based on tree survival and YE, J-TE-H should be evaluated further as a possible replacement for M.26.
5. CG.6210 is similar in vigor to M.26, with similar tree survival, but higher YE. CG.6210 may be a replacement for M.26, but CG.5935 seems even better.
6. CG.5179 was evaluated at only two locations, and performed similar to M.9 and should be evaluated further.

I hope to write 2 additional papers during the next 18 months. One will be a stability analysis of the rootstocks x location interaction and the other will be a paper on the length of time required to separate rootstocks statistically by TCA and YE.