

ROOTSTOCKS

Phenolic Compounds of Juglandaceae -- Chemotaxonomy & Rootstock Physiology -- P. B. Catlin, G. C. Martin

Preliminary examination of several species of walnut, interspecific hybrids and near relatives indicates a high potential for utilizing extracted phenolic compounds to objectively identify them. This may be useful in rootstock identification per se and could permit identification of types within a species, or hybrids, which possess tolerance to blackline, root lesion nematode and other disorders. For example, phenolic compounds may be involved in secondary reactions leading to hypersensitivity of some roots to soils saturated with water. Similar phenomena may accentuate lesion formation due to P. vulnus.

Rootstocks from J. regia - G. C. Martin

Eureka seed was obtained from several farm advisors, stratified for 2 months and planted in the nursery. Seed sources both from solid blocks and interplants of Eureka resulted in virtually no albino plants. Some differences in growth were noted by the fall following the original planting. These differences more than likely resulted from individual tree differences rather than any variation from county to county. This spring, the Stukey Nursery will graft over the rootstocks and we will subsequently evaluate the propagation aspects of Eureka.

Rootstocks - W. Schreader, G. Martin

Manregian Seedlings. Ten pounds of Manregian seeds were secured from the Webster Nursery in Oregon. The seeds were propagated by Stuarts' Nursery in French Camp. This year's growth was comparable to that expected from Eureka seedlings, according to the manager. He will grow them one more year, then give them to us for trial plantings statewide if desired.

Paradox Cuttings. No effort to propagate Paradox cuttings was made by Stuarts' Nursery in 1972, but plans for 1973 call for further experiments including peat pots for undisturbed transplanting and mycorrhizal inoculations of the rooting media.

Rooting of Cuttings - H. T. Hartmann, G. C. Martin

Hudson Hartmann has agreed to lead this project; George Martin will be assisting him. This past fall some adventitious buds were forced from the stocks of several Paradox. Cuttings were made from the shoots which resulted, however, the rooting effect was as poor as any other approach used in the past. Detailed work will be done this year on softwood cuttings.