1993 California Avocado Research Symposium Page 1 California Avocado Society and University of California, Riverside

GERMPLASM ACQUISITION FOR THE PERSEA SPECIES COLLECTION

Rainer W. Scora

Department of Botany and Plant Sciences, University of California, Riverside, CA 92521-0124

The acquisition and establishment of *Persea* species of both subgenera *Persea* and *Eriodaphne* are proceeding. The most important species for future gene transfer are *P. borbonia* for salt tolerance, *P. caerulea* and *P. skutchii* for phytophthora resistance, and *P. lingue* for cold tolerance. We now have 20 small seedlings of *P. borbonia*, 18 of P. *skutchii*, and 6 of *P. caerulea*. We have none of *P. lingue*, but made contact with Chile, where this species is native. In addition, we have seedlings of the related genera *Nectandra* and *Beilschmiedia*, P. *pachypoda*, *longipes*, *cinerascens*, *donnell-smithii*, and various taxa from Central and South America identified by geographical location alone. The challenge lies in those taxa which either do not flower or fruit, are graft-incompatible, or whose cuttings we were not able to root. We have cut, girdled, and sprayed to induce flowering in these trees. Should we still be unsuccessful in producing seedlings or cuttings from these taxa, we will try tissue culture. I have made preparation with Dr. I. Ting's laboratory to have this done. We also have about 25 trees of 3-5 feet in height which belong to the subgenus *Persea* and are ready to be planted this spring 1993 at South Coast Field Station.