The University of California has been evaluating potential new varieties by: 1) planting a few trees of a new selection on a growers property (ex. Sunland), or 2) evaluating the performance of a new variety in a growers planting (ex. Chandler and Howard). The first method does not generally provide enough trees to gather needed yield data, the second method is unreplicated and puts the grower at considerable risk. Neither method provides information which is useful state wide and rarely are these trials carried out long enough to provide totally reliable information, i.e. Serr and the PFA problem. Regional selection and variety trials, set up in a replicated manner, are needed to gather useful information on new and future walnut varieties.

Of three recent walnut varieties, (Chandler, Howard and Tulare), and one advanced selection (76-80), there are two that U. C. has only limited information on and are found in only limited plantings (Tulare and 76-80). Several year of data have been gathered on Chandler and Howard. Chandler is now widely planted and Howard is gaining in popularity. Tulare and 76-80 are the current candidates to be considered for a uniform, replicated variety trial. In addition to a variety trial Dr. McGranahan has new selections coming out of the breeding program that will need initial evaluation in selection blocks starting in 1997.

The groundwork for the beginnings of a walnut variety trial and selection block have been completed with a partnership between the University of California Pomology Department, U. C. Cooperative Extension, California State University, Chico School of Agriculture (CSUC) and local growers and businessmen.

The first trees in the variety trial will be planted in 1996 and will include Tulare, 76-80 and Chandler as a comparison standard in a replicated 4.5 acre trial. There will be 108 Chandlers, 57 Tulares, and 45 76-80s in four 11 tree replicates, with the remainder of the trees used to fill out the block. The trees, on paradox rootstock, have been donated by Stuke Nursery.

For this planting to be an economic unit, CSUC needed approximately a 10 acre block of walnuts.

The additional trees will be used for income, research and teaching. As of this writing some trees for the additional 5.5 acres (commercial block) have been donated by Green tree Nursery, Alex Suchan Nursery, Cal Western Nursery, and Stuke Nursery. These donated trees are either Chandler on paradox or Northern California Black Walnut rootstock, Scharch Franquette on paradox rootstock or Northern California Black Walnut rootstock seedlings.

To pay for the cost of establishment and cultural cost until the variety trial and commercial block come into economic production (approximately 6 years) a donors group of local growers and businessmen has been formed with 13 donors pledging approximately 26,000 dollars over a six year period (as of 12/11/95). In addition the Walnut Orchard Management Project supported by the California Walnut Marketing Board will provide up to 1,500 per year, on a re-charge basis, for maintenance of the variety trial for the first six years. Most of the irrigation system will be donated by suppliers of Durham Pump.
The variety trial will be planted with Chandler at 42’ x 42’ square with a test variety in the middle. The varieties are anticipated to be evaluated for approximately 12 years after which time they may be removed. Evaluations will include yield, nut quality, leafing, bloom and harvest date, PFA and other parameters. Sacramento Valley Farm Advisors have committed to be part of this project and help gather the needed information. CSUC has approximately an additional 10 acres of open ground that will be used for expansion of the variety trial as new varieties become available in 5 to 8 years. In addition 70 tree sites are set aside for a 1997 rootstock trial.

In addition CSUC is providing approximately two acres for one of three selection blocks (Davis, Parlier and Chico) where new selections can receive initial evaluation before being placed in the variety trial or discarded. Evaluations in the selection block will be early fruitfulness, nut quality, tree form, bloom characteristics, rootstock compatibility, and other parameters deemed important. Data will be gathered by interested farm advisors, specialist and plant breeders. There will be three standard varieties in the selection block: Payne, Hartley, and Chandler and up to four selections each year starting in 1997 provided by Dr. McGranahan’s breeding program. The initial trees for the selection block are being donated by Driver Nursery. Four of each selection will be tested; two on paradox and two on Northern California Black Walnut Rootstock. Selections will be evaluated for approximately eight years or less. Tree spacing in the selection block will be 20’ x20’ square. The irrigation system for the selection block is anticipated also to be donated by suppliers of Durham Pump and may be a micro sprinkler system. As the selection block grows additional support may be needed from the Walnut Orchard Management Project for maintenance of this block.