

TRAINING HORTICULTURISTS

HOWARD C. BROWN

*California Polytechnic State University
San Luis Obispo, California 93407*

Our emphasis at Cal Poly, San Luis Obispo, and I believe the other state colleges and universities, is to provide the students with certain horticultural skills and knowledge that will prepare them for employment in commercial horticulture.

I believe that it is important for the students to start their major courses within the first year. Otherwise, many of them lose interest and drop by the wayside.

We have three courses that give the student practical experience in the propagation and production of woody ornamental plants. The first of these is Nursery and Garden Practice, which is usually taken during the fall quarter of their first year. This deals with soil preparation and treatment, potting, canning and the production of plants from seed to saleable size.

Their second course in this series, Plant Propagation, is taken in the spring of the sophomore year and deals with layering, cutting propagation, and budding as well as field-growing operation.

The third course which we call Advanced Plant Propagation is offered during the winter quarter of the third year. It emphasizes grafting, production of rootstocks, hardwood cuttings and various treatments of seed.

By the end of the third year, the students have had experience in the nursery during three seasons of the year and have helped to carry the plants for a 3-year period. They take great pride in the plants that they have budded or grafted.

Two years ago, at Portland, I discussed Cal Poly's Agricultural Enterprise Program, in which our students operate a commercial nursery and flower shop on the campus, sharing in the profits from the crops which they grow. This is still one of the keystones of our educational program.

I should mention today, two other techniques that have helped our graduates to face the cold, cruel world. One of these is the intern program, in which a student can enroll for 12 units of course work and spend the quarter in a carefully selected commercial establishment. As an intern, he must have completed all the courses in his first two years. The employer must give him enough responsibility to make management decisions. His grades are based upon evaluation by the employer and a member of our faculty, including periodic reports that he submits. Interning permits a student to explore a business in which he is interested as well as permitting an employer to size him up as a future emp-

loyee. In many cases, the student is offered a permanent position by the organization in which he interned.

We are one of the few universities that requires a thesis or "senior project" as a prerequisite to the Bachelor of Science degree. While our current students frequently look at this requirement with mixed emotions, or utter fear, our graduates — almost 100 percent — state that it was a valuable experience. Employers continually stress their belief in the value of an employee who can carry on a project with a minimum of supervision and write it up so that others can understand it easily.

Senior projects range from experiments in propagation, to testing new materials, or designing innovative propagating structures, or library research on a problem. One of our most widely publicized projects was done a number of years ago by Martin Koobation. He surveyed the literature and compiled into one paper recommendations for the treatment of seeds to improve germination. This was later published in booklet form by *Pacific Coast Nurseryman* and sold several thousand copies.

In summary, there are many techniques that can be used in training horticulturalists. The key to success is to stimulate interest, get the student involved in a practical way as early as possible, give him guidance, and let him go. There is no question in my mind that the jobs will be there if the horticulturist is well prepared.

MODERATOR BROWN: Our next speaker today, going up the line, starting from high school, community college, state college, and universities, represents horticultural teaching at the University of California. He needs no introduction to you. Dale Kester received his B.S. at Iowa State, and his M.S. and Ph.D. from the University of California. He is co-author, with Hudson Hartmann, of a very popular book on plant propagation. He is a charter member of the Western Region, International Plant Propagators' Society, and was our first Secretary-Treasurer. It is my pleasure to introduce Dr. Dale Kester.