

EARNING WHILE LEARNING—AN EDUCATIONAL APPROACH

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Employers of today's Ornamental Horticulture graduates expect more of their new employees than just technical knowledge. They seek people who not only can pull their own weight, but who have leadership ability and experience in the industry. Most of the students in our horticulture program at Cal Poly have had some applicable experience. They have worked in nurseries, done landscaping, or been active in high school or community college horticulture programs. It is up to us to provide them with the technical knowledge and at the same time give them a greater depth of experience. This can be done in several ways—through part-time employment during the academic year, through industry-sponsored summer employment, through industry internship, or through production and sales experience.

Many years ago Cal Poly found its niche in agricultural education in California through educating young people for immediate employment in agricultural production and management. The "Learn by Doing" philosophy espoused by our long-time president, Julian A. McPhee, involved an upside down approach to teaching as compared to that of the traditional college or university. Our students began taking their major courses during their first quarter on campus rather than first taking two years of general education. The reason for this approach was two-fold:

(1) Since many students do not complete four years of college, they are learning practical applications from the very beginning. They are developing marketable skills that should make them more employable if they drop out after one or two years.

(2) By an early exposure to the practical aspects of agriculture students will see more need for the theoretical and scientific work as it comes along.

Last year, in Rockhampton, Queensland, I spoke to the IPPS Australian Region about Cal Poly's Agricultural Internship Program as a means of providing experience (1). Today, I would like to describe our Agricultural Enterprise Program—a program in which the Cal Poly Foundation finances our qualified agriculture students in setting up their own business enterprises. With faculty guidance the student selects, researches, produces, and markets an agricultural commodity, sharing in the profits from his labor.

Of the ten departments in our School of Agriculture, six are involved in Agricultural Enterprise operations. This program

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requires planning, space, and facilities, but the most important ingredient in its success is a dedicated faculty. This means someone who is willing to be there on Saturdays and holidays, who is firm and fair, and who will guide but not dominate the students.

Examples of typical Agriculture Enterprise projects might include:

POULTRY DEPARTMENT:

Laying project
Meat bird project

CROP SCIENCE DEPARTMENT:

Certified oat seed
Fresh market corn

FOOD SCIENCE:

Chocolate covered bananas
Blackberry jam

DAIRY SCIENCE:

Milk production
Ice cream manufacturing

ANIMAL SCIENCE:

Thoroughbred training
Cow-calf operation

ORNAMENTAL

HORTICULTURE:

Bedding plants
4-inch color plants

Each year, approximately 25% of our 3800 agriculture students are involved in this production and marketing experience. Because of limited space and faculty for supervision, we consider involvement in an Enterprise Project a student privilege, not a right. To be eligible, a student must have completed two academic quarters with satisfactory grades and be able to convince his advisor that he has the dedication and tenacity to follow through.

As a 40-year faculty member and administrator at Cal Poly, I am convinced that the Agricultural Enterprise Program is one of our most effective teaching tools. This has been borne out time and again by testimony from our graduates.

Some advantages to the student include:

1. An opportunity to apply knowledge gained in class to a real life situation.
2. An opportunity to earn money.
3. An opportunity to experience the work ethic: to demonstrate dependability, persistence, and the budgeting of time.
4. An opportunity to have a real look at human relations: Your best friend may not be the best business partner; a verbal contract doesn't always assure a market.
5. An opportunity to learn merchandising and sales.
6. An opportunity to deal with minor or novelty crops in greater depth than can be done in formal classes.
7. Learning to time a crop for a specific market.

Need for the proper environment. Typical problems could include:

Light pollution of a poinsettia crop?
What happens when the heat goes off?

How to compensate for a month of rain?

Deer control?

What happens when spring holiday comes during Easter week?

8. Gaining valuable experience toward career employment.

Some advantages to the department include:

1. A much wider range of crops than could be justified by state funding alone.
2. Greater cooperation of the horticulture industry in furnishing plants, materials and markets.
3. Successful projects often lead to minor research grants.
4. Information gained leads to Senior Thesis and Special Problems studies.
5. Projects provide good publicity and public relations.
6. Project involvement generates faculty positions.

Up to this point all of my comments on the Agricultural Enterprise Program have been positive. However, there are also some potential problems, including:

1. Public relations.
Perceived competition with local businesses.
2. Accountability.
Need for accurate records and handling of money.
3. Supervision time for faculty and staff.
4. Competition for space and facilities.
What priority does this program rate?

SUMMARY

While the Agricultural Enterprise Program has worked well for Cal Poly, it may not necessarily be applicable on other campuses. It demands strong backing of the faculty and staff as well as the university administration.

It is one of the teaching tools that is effective as part of a vocationally oriented teaching program. The experience ties in well with classroom teaching, industry internships, field trips, and close communication with the horticulture industry. It provides the student with real life experience in production and sales, enabling him to begin his full-time job with a running start.

LITERATURE CITED

1. Brown, H. C. 1985. Training plant propagators and nursery workers. *Proc. Inter. Plant Prop. Soc.* 35:141-144.

BRUCE BRIGGS: How can we work with other countries so that as the IPPS grows larger we can continue as a united organization and not just a bunch of independent groups?

PHIL PARVIN: The basic philosophy of IPPS is "to seek and to share" and, as other countries consider joining us, they must adhere to this precept and we must help them learn the philosophy that has worked so well so far. It seems that English must continue to be the language used in our publications.

RICHARD CRILEY: I would like Phil Parvin, as IPPS President, to comment on the relationship of the IPPS and the Ornamentals Sections of the International Society for Horticultural Science (ISHS).

PHIL PARVIN: IPPS gives strong moral support to any of the Regions who wish to co-sponsor a symposium jointly with ISHS. This was done so well in the case of the Australian Region which did co-sponsor such a meeting. However, the International Board of IPPS does not have a fund to financially support such cooperation. We would welcome any suggestions as to how we should support such joint meetings.

HOWARD BROWN: I would like to ask Dr. Tukey to comment on the methods they use at the Center for Urban Horticulture at the University of Washington, Seattle, for raising funds to keep their new program going and expanding.

HAROLD TUKEY: Our financial support comes mainly from individuals rather than corporations, but it takes a lot of hard work also. Nurseries in Washington have also given us strong support, both financially and morally.

DENNIS CONNER: Dr. Tukey, could you elaborate, too, on the role of the ISHS in relation to the IPPS?

HAROLD TUKEY: The International Society for Horticultural Science sponsors every 4 years an International Horticultural Congress. The last one was in Hamburg. Next week at Davis, California, such a Congress will convene with about 4000 participants attending from all over the world. This is the largest attendance ever, and only the second time the Congress has been held in the U.S. ISHS has commissions and sections but do not have large funds to promote meetings. It just aids in facilitating sectional meetings all over the world, but particularly in Europe. The ISHS and the IPPS are planning to jointly sponsor a symposium on the propagation of woody plants to be held in Pisa, Italy in September, 1987.