the lecture type were evaluated voluntarily during the three semesters following removal of the mandate.

Frequency of evaluation has been delegated to both the individual and the department head to be used in the best interest of the faculty and program. It is anticipated that the evaluative system will be a tool that provides the desire to improve from "within" rather than incites opposition to administrative pressure.

References

1. Aleamoni, L.M., and J.C. Everly. 1971. Illinois Course Evaluation Questionnaire Useful in Collecting Student Opinion. **National Association of College Teachers in Agriculture,** Vol. 15, No. 4, pp. 99-100.

2. Aleamoni, L.M. 1976. Typical Faculty Concerns About Student Evaluation of Instruction. **National Association of College Teachers of Agriculture,** Vol. 20, No. 1, pp. 16-21.

3. Aleamoni, Lawrence M. 1978. Development and Factorial Validation of the Arizona Course/Instructor Evaluation Questionnaire. **Educational and Psychological Measurement,** 38:1063-1067.

4. Aleamoni, L.M. 1980. The Use of Student Evaluation in the Improvement of Instruction. **National Association of College Teachers of Agriculture,** Vol. 24, No. 3, pp. 18-21.

5. College of Agriculture, Annual Reports to President, University of Arizona, 1956-1981.

6. Everly, J.C., and L.M. Aleamoni. 1972. Rise and Fall of the Advisor — Students Attempt to Evaluate Their Instructors. **National Association of College Teachers of Agriculture,** Vol. 16, No. 2, pp. 43-45.

7. Ladd, E.C., Jr., and S.M. Lipset. 1975. How Professors Spend Their Time. **The Chronicle of Higher Education,** Vol. 11, No. 5, p. 2.

FOR AGRICULTURE

A Plea For A New Kind Of Post-Graduation Education

Joseph E. Howland

A great demand for a school that provides an overview of the thinking of leading owner/managers in an industrial setting was reported in the **Wall Street Journal** by Drucker.[1] He contrasted this interest with the failure of the expected demand for post-graduate "great books" classes that he and so many other educators had predicted. He reports an insatiable demand for professional education, especially for mature adults that demand teachers able to supply a humanistic perspective — a holistic appraisal in high-intensity courses that often cram a semester's work into two weeks!

This interest contrasts too with the fairly fast drop in interest for traditional education in traditional schools, as Dr. Drucker points out. Judd H. Alexander, Senior Vice President of American Can Company, went even further.[2] He stresses that nearly every major company can identify key executives with unexpected academic backgrounds, and warns that companies do themselves a disservice if they limit themselves to conventional forms of business education.

This new demand poses a vague but real threat to academia, as Dr. Drucker points out. He comments, "Students and parents must now be able to choose between alternative routes to learning, even though this is anathema to the public education establishment." He worries that we will respond "... with academia's standard response — produce new PhDs for a new department, roughly comparable to restyling the buggywhip for leadership in the new market for horseless carriages."

Howland is professor of Horticulture in the College of Agriculture, University of Nevada.

The College of Agriculture at the University of Nevada has had rewarding experiences in two attempts to supply a new type of post-graduate education in agriculture. We first conducted two-week Turfgrass Schools.[3] Next we tried two-week Seed Schools, first for commercial flower and vegetable seed production, later for new pollination techniques in breeding and producing flower and vegetable seeds.

Each of these schools was designed for graduates of a U.S. or foreign college of agriculture. The assumption was made that these students needed to acquire a current and holistic view of an agricultural industry in which they had already worked 3 to 5 years. Also, the assumption was made that they already recognized that their future management years would be in a world very different from what their fathers had experienced.

Specifically, the Turf Schools were designed to supply additional education for young professionals working at golf courses but unable to get away for additional education except by using their two-week vacation time. Most found themselves working under the old-time "greenskeeper" rather than a professionally educated business manager.

The Seed School students were breeders, producers, or marketing people. Most students were slated to manage the family seed business within relatively short times. And this is holding true for the next Seed School, slated to be held in Japan and Taiwan later in 1982.

The key areas of student concern in all these schools has management education overtones, as you might guess: 1) What special opportunities exist for greatly expanding the size of the market; 2) How can I increase my share of an expanding market; 3) How can I best use marketing research; 4) How can I achieve better money management; 5) What extra education do I need to be able to create new products; 6) What understanding of supervision do I need to acquire to be able to increase people satisfactions among those working with me;

7) How do I learn to cope with the size limitations I must accept in business; 8) What attitudes do I need to be successful in importing and exporting products and people; 9) How do I prepare myself to cope with the legal restraints likely "tomorrow"; and 10) What can I do to teach myself about ways to resolve the inheritance problems inherent in a family business?

None of the potential students were willing to take a year off for a traditional MBA degree program. Nor were they willing to take time for one of the new entrepreneurial programs. And none had any interest in the traditional post-graduate education offered by a college of agriculture — the MS and PhD programs — as they were not interested in becoming researchers. They wanted to further their education as agriculturalists. aware that they soon would be faced with running a family business as a business. They recognized a need for education, not just skills acquisition, a service already supplied in the seed industry, for example, by Mississippi State's seed processing training school for blue-collar workmen; or by Oregon State's seed technology program; or Colorado State's seed storage program.

We decided that educating seedsmen about operating a seed business as a business could best be done on-site, hence our "classroom on wheels" concept, bringing the class to one company after another for in-depth, on-site study. Travel time too was used for classroom time, with the two instructors teaching alternate hours in a 10-hour teaching day. This intensive schedule posed no problems as the students were demanding intensive use of their time and their investment in a school that necessarily has to be expensive.

The upcoming school in Japan/Taiwan, for example, will cost the students about $4,000 for the 14 days. Their expectations obviously are high, which makes for a good educational situation. Our first Turfgrass Schools were held as part of the University's regular summer session, charging simply the standard summer session fees. This seriously handicapped the program because so few on-site classes could be arranged. Chartering a bus proved prohibitively costly, and having one instructor drive a university bus while the other instructor taught in a "classroom on wheels" situation soon had both instructors so worn down that they were less effective as teachers. That alternate hour of complete rest has proven to be essential to the success of the school.

The Seed Schools used chartered bus service, costing $5,000 for a 14-day, 3,500 mile bus tour. But we were able to work every hour of that travel, in air-conditioned comfort despite the 110-115°F heat outside, and with a good public address system always available. Our mistake was in charging only $875 tuition fee (included travel and hotel rooms but not meals). We were not able to provide for the salaries of the two instructors and the one laison staff person.

The second Seed School did become completely self-supporting because of its $1,875 tuition fee. Meals were included this time, a mistake our experience showed. Even young people rebel against some traditional foods of the foreign lands being visited, so now we leave food buying to each student.

We have not had resistance to the admittedly high tuition fees we must charge. The fee is an ordinary business expense for the family firm. We had announced that the Seed Schools would be limited to 10 students. Enrollment has closed each time within weeks of the announcement that it would be held.

Our experience indicates that groups organizing similar schools should set tuition high enough to cover transportation, housing, books, and supplies as well as two instructors (6 weeks salary each for a two-week school) plus a staff laison person to travel with the school. Require at least 50 percent of the fee to reserve a place in the school, and 100 percent one month before the school starts. Plan to work the students hard, full 10-hour teaching days, seven days a week. Hold working lunches and dinners. Students want all the educational time possible in the limited time. They are not, however, interested in any academic credits so testing times are not needed.

Thus, while admitting that traditional, year-long MBA level[3] programs, also technical school level[4] have demonstrated an ability to turn out entrepreneurs, my plea is for offering the alternative of ultra-intensive two-week "classroom on wheels" programs for on-site study of unusually successful operations.

References

1) Drucker, Peter F. March 3, 1981. The coming changes in our school systems. **Wall Street Journal.**
2) Alexander, Judd H. February 2, 1981. Education for business: a reassessment. **Wall Street Journal.**
3) Anonymous. June 18, 1979. How the classroom turns out entrepreneurs. **Business Week.**
4) Howland, Joseph E. June 28, 1973. Must Horticulture always be done in the same humdrum style of the past? Graduation Address of the Headmaster, DuPage Horticulture School, West Chicago, Illinois.

NACTA

NATIONAL ASSOCIATION OF COLLEGES AND TEACHERS OF AGRICULTURE