

# Meeting Review

## Flower Industry Expectations of Students

*E Jay Holcomb*

Three floriculture industry leaders were asked to address the question "What does industry expect of undergraduate university students that they would be hiring." Their responses suggest several important topics to be considered by university horticulture programs when revising their curricula or discussing the teaching of horticulture. Work experience or an internship are considered most critical. Next in importance are well-developed communication skills; all graduates must be able to speak and write well. Good basic skills in math and computer operation are also very important. Finally, well-developed business skills are important for all horticulture graduates. Today's horticulturist must be aware of how business is conducted as well as how plants grow.

In Nov. 1993, the ASHS Floriculture Working Group met to discuss floricultural research, extension, and teaching. The teaching portion of the meeting dealt with preparing undergraduates for work in the floricultural industry. Three leaders in commercial floriculture were invited to discuss industry's expectations of university bachelor's degree graduates in floriculture. Each speaker addressed

the group on the topic "What we want from the university."

Marvin N. Miller, market research manager for Gee. J. Ball, Inc., spoke first. Gee. J. Ball is involved extensively in plant breeding, seed production, and vegetative propagation, as well as supply, manufacture, and sale of floricultural products.

Publishing is a more recent, but well-developed, part of Gee. J. Ball floricultural enterprises.

The second speaker on industry expectations was Linda Stetson, personnel manager of the Yoder facility in Alva, Fla. Yoder is a propagation and sales company that specializes in the propagation of chrysanthemums and azaleas as well as research and development.

The third speaker on the program was David Hartley of the Paul Ecke Ranch, Encinitas, Calif., which is the largest breeder and propagator of poinsettias in the United States. It also propagates other crops, such as New Guinea impatiens and geraniums. Hartley has been at the ranch for 12 years. Before that, Hartley was extension floriculturist at the Univ. of Missouri for 10 years, then an associate professor of horticulture at Colorado State Univ. for 8 years. Hartley provided a unique outlook on student needs and skills from both industry and academic viewpoints.

Although the comments of these industry people were directed specifically to those who teach floriculture, the comments may be valid for all horticulture teaching faculty and students.

### Miller

Miller first said that the thoughts he presented included not only his, but those of Anna Ball, president, and

Anne LeventryJeffers, director of human resources. Gee. J. Ball.

In looking at what we want from universities, my comments fall into two categories, characteristics and skills.

In the characteristics category, I think we want to have people who can work with others in a team environment. This would include positive qualities such as tolerance and respect for people with a variety of skills and backgrounds. Unlike the past, we no longer have employment opportunities that allow people to work in isolation. Breeders and researchers are handling a lot of their work in a team environment.

We want people who have an international perspective. This does not necessarily mean that they have to be world travelers. Our employees must be sensitive to horticulture as part of a world economy, and must operate in that challenging international atmosphere.

Another characteristic we look for is the ability to embrace a rapidly moving and rapidly changing environment. We want people who like change. They have to be open to new ideas and be prepared to recognize that certain skills will be obsolete. They have to be flexible. They have to be willing to collect and use technical research results and information so that they can adapt to the changing environment.

We need people who are willing to live with ambiguity. Gee. J. Ball employees must still be able to make a wide variety of decisions, and they must be able to accept personal responsibility even when faced with ambiguity. Students must have initiative and follow through in spite of the tight financial environment.

"Finally, students who wish to become Gee. J. Ball employees must be willing to work harder and longer than average. I sometimes have a debate with our human resources people who suggest that employees need to work smarter rather than longer. In quoting the president of Gee. J. Ball, "People need to have a willingness to work smarter and harder and longer hours."

Now I would like to turn to the skills set.

First, we need people who can speak and write effectively. Business is an environment for communications,

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and people must be able to communicate.

Second, students need to have basic math skills. They need minimally to understand fractions, ratios, and the workings of a calculator. Unfortunately, not everyone coming out of college recognizes that two 1/8-ounce packages equals the same amount of seed as one 1/4-ounce package.

Students also need business skills, such as business and labor management and marketing. They also must have an appreciation for the bottom line—making a profit. We have had PhDs who have returned to college for an MBA so that they can cope in this business environment.

Students also need a work experience.

Finally, I should note that I have a big question. I did not address the skills set in horticulture. I certainly think it is important. I have had the same horticultural course background most of you have, but, in this day and age, horticulture alone is not enough. People have to have marketing and business background to survive in the workforce. If we can graduate horticulture majors with a good business background, they'll get hired. Unfortunately, I'm afraid that the horticulture background alone is no longer enough to guarantee a job.

## Stetson

Linda Stetson noted that the Yoder farm managers for Alva and Live Oak and the Yoder grower manager were interviewed and provided input to answer the question "What we want from the university."

First, there was general agreement among the Yoder managers that internships should be part of the horticulture curriculum. Students need to know what employers require; they need to get their hands dirty. Practical experience is important to the company and the individual. Students need to know if they've made the right career decision. They must possess the type of work ethic that allows them to make the right decision for the benefit of the crop, often at the expense of their personal time. (They should expect weekend work, long hours in peak season, and environmental conditions that include uncomfortably high temperature, humidity, wetness, etc.)

Second, the horticultural curriculum should emphasize insect and dis-

ease control, water and soil management, and a good understanding of plant science. The need for advanced courses in botany, entomology, plant nutrition, and especially plant physiology was stressed. Course work needs to be applied in a practical manner, because time and experience are the best teachers.

Third, selection of strong supporting courses as electives is a key to success. A course in statistics should be part of the study program, and basic computer knowledge is a current and future need. We at Yoders have a saying, "If you can't measure it, you can't move it and improve it." Floriculturists should have a bottom-line orientation. A course in cost or managerial accounting would prove helpful.

In Florida, we employ 300 people to whom Spanish is the native language. Steps we've taken to bridge the communication gap include conversational Spanish classes for supervisors as well as English as a second language course for employees. Knowledge of Spanish would be a valuable asset.

Strong interpersonal skills are the key to success in any industry. Basic management courses, which include such principles as planning, organizing, directing, motivating, and controlling, will prove useful. Case studies based on challenges confronting our industry would be beneficial.

## Hartley

Hartley began by suggesting that the university has two very important tasks. The first task is to stimulate students' interest in the field of horticulture. Many students enter the university unaware of the opportunities that lie in horticulture, specifically in floriculture. Horticulture faculty members need to promote awareness of opportunities and stimulate student interest in horticulture.

The second task for the horticulture faculty is to give students the cognitive skills to think. It is particularly important for the horticulture faculty to consider whether they see their graduates as managers or technologists, as growers or managers. The faculty's view of where the students will fit into the industry will affect the courses that they require the students to take.

Hartley divided the course work into basic skills for life, skills needed in

horticulture, and additional skills needed to work in horticulture. The first and key skill for life is communication. The student must be able to communicate both in writing and speaking. To achieve this end, Hartley suggested that the students be required to do more reading, write more reports, and take essay exams. Further, Hartley said that math skills and computer skills are basic skills for life, and these must be included in the courses students take.

The skills in horticulture begin with plant material identification. How can students call themselves horticulturists if they don't know plants? All graduates should know basic horticulture, not just floriculture. They should have a well-rounded understanding of horticulture in its broadest sense. All students in floriculture also must understand greenhouse management and flower crop production. If students are to work in the flower industry, they must study plant pathology, entomology, plant physiology, soils, nutrition, and chemistry. Hartley mentioned that all students should take advantage of internship opportunities. He concluded that the internships were very important, perhaps critical, for the future of the students.

There are additional skills that the student must master for success in the floriculture industry. First, and perhaps foremost, the student must be able to interact positively with people. If the student is a cooperative person and can fit into the organization, then that student probably will succeed. If the student cannot fit and work within the organization, that student may not be successful.

The last area with which students must be familiar is that of marketing and management. In the world of floriculture today, knowledge of marketing and management is critical for success.

## In summary

By examining what the speakers said, it is possible to distill a few themes that should be components of all floriculture programs and, with slight modification, all horticulture programs. One recurring theme is work experience. All students should be encouraged to participate in at least one internship program. The internship should be more than manual

labor, exposing the student to the entire range of activities possible in the participating firm, including the business aspect. An alternative to an internship for students is work experience, preferably in the type of business where the student plans to work upon graduation. The message is that upon graduation the student must demonstrate an understanding of an employer's needs and expectations. The question with which a horticulture faculty member must struggle is whether work experience should be a requirement for graduation. Another question to answer is how the internship experience is to be evaluated both for the student and employer.

The next theme is student training in interpersonal skills, the most important of which is communication skills. The graduate must be able to communicate effectively orally and in writing. Most universities require an English course and probably a speech course, but many students do not develop adequate communication skills in two or three courses. These communication skills should be developed further through the teaching of our horticulture courses. The students should write across the curriculum, with papers and oral presentations in horticulture, applying the skills learned in English or speech courses. The more often students practice communication skills the better they will become.

Another aspect of communication skills is to know a second language. In the horticulture industry, many workers do not speak English as their primary language, and some do not speak English at all. For our students to communicate effectively with these workers, a second language would be a definite asset. Perhaps horticulture curricula should have a second language requirement for graduation. Certainly Spanish would be a good candidate as a second language. Because of the international scope of floriculture, Dutch, Danish,

German, French, and Japanese also might be other very useful languages.

An additional skill that is a general concern is simple mathematics. Students are required to take math courses, but they should practice their math skills in horticulture courses. The math skills that the students should practice are those that will develop broad problem-solving ability.

The last aspect of these skills is being able to get along with other people. It is difficult for a person to work alone in any business today. They must interact with others—customers, suppliers, employees, and competitors. If a student is required only to do lab reports, papers, and the like as an individual, that student is not being prepared for work in the industry. Horticulture courses should include more cooperative projects, reports, etc., to provide experience working with others. There is an increasing recognition of the general importance of cooperative learning and teaching, and horticulture can benefit greatly from this.

The third area of concern identified is business skills. Today's commercial horticulturist is as concerned about the business and bottom line as with how to grow a quality crop. Horticulture students should take business courses to prepare themselves to understand and compete in the business world. Most universities offer a series of business courses that are available to nonmajors. Business courses should be required for graduation. If a university offers a business minor, students should consider this option.

If a horticultural curriculum already has the elements discussed, the faculty should be pleased that their curriculum is aligned with industry's needs. For others, this report may be disquieting. How can we do more in the same amount of time, and perhaps with fewer faculty members? I have few, if any, definitive answers, but

there are a few small changes that will help align teaching programs to industry needs. Essay rather than multiple-choice tests would help the students learn to write better. Keeping a journal forces students to observe and write. This type of writing does not have to be graded, just completed. Faculty members can require students to do more calculations in horticulture courses, including the use of computer spreadsheets. Many students have trouble with fertilizer problems; a homework assignment or two graded on completion could help develop student competence and confidence. Even a few small changes such as the preceding could have an impact.

There are other useful steps that are more difficult to implement. There are many experiential learning projects that can be performed in horticulture. These can cover the range from putting in or maintaining a garden on campus, to analyzing a greenhouse or nursery business. If the students work in groups or teams, they learn how to work together as an added benefit. Perhaps students can be required to take a more intensive communication course rather than more communication courses *per se*.

In conclusion, floriculture programs are providing students entry to a dynamic floral industry; thus, the curricula must be dynamic and change as industry changes. As new information and ideas develop, those must be examined by each horticulture faculty to determine relevance to that program. Current industry concerns are communications, math, interpersonal, and business skills and work experience. Horticulture faculties must be creative to prepare students to meet industry needs as well as give students a strong background in science and horticulture. Horticulture faculty members need to get students to be active participants in their education so that they will contribute to industry in the future.