man for the nursery industry for more than 20 years. Wally SaBell was the 1980 President of the Associated Landscape Contractors of America. In addition, he is President of SaBell's, Inc., a large landscape contracting firm where he has worked for more than 30 years. Jot Carpenter was the 1979 President of the American Society for Landscape Architects. He is also Chairman of the Department of Landscape Architecture at The Ohio State University and also maintains private practice. George Moeller is the principal urban forestry scientist, Forest Environment Research Staff, Department of Agriculture Forest Service. Mr. Moeller has been involved with urban forestry since its conception.

The selected industry leaders were asked to address a number of questions and to assist us in finding areas where we might improve our performance. They were asked to define their area of interest and to identify areas where horticulture and their area of interest might interact in mutually beneficial ways. An assessment of current practices by departments of horticulture was requested if they felt that this was appropriate. Future needs of their industry were also suggested as possible subject matter. The leaders also were asked to separate their ideas into three areas where they believed it to be warranted: teaching, research, and extension.

I think it is incumbent on everyone in horticulture to consider these contributions and to determine for themselves if there are not ways in which horticulture can change to allow it to cope with changes which will occur during the 1980s. Indeed, it seems to me that if we approach the 1980s in the proper prospective, it will be possible for horticulture to look back on this decade as a period of growth and excitement and not as a period of retreatment.

LANDSCAPE MAINTENANCE INDUSTRY PLANS AND FUTURE NEEDS

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Webster’s dictionary defines maintenance as upkeep and/or keeping things in repair to provide efficiency. This definition holds true for landscape maintenance. Landscape maintenance has a very broad meaning, particularly in view of the many facets of the landscape industry.

Thirty years or more ago, only the very rich could afford grounds maintenance. At that time the demand for professional grounds maintenance personnel was limited. Therefore, there was no emphasis by educators on producing students for a career in maintenance.

Education and the landscape maintenance industry today

The landscape industry has problems today. The largest of these is personnel. Where do you find people who are willing to work for low wages by walking behind a lawn mower. Last year SaBell's, Inc. hired 829 people to maintain 250 people in the field. In the first six months of this year, they have hired more than 600 people to maintain a task force of 300 people in the field. As you can see, maintenance has tremendous turnover. The maintenance area, however, is no different than the nursery, which also shows tremendous turnover rates in entry level positions. I have been in the landscape industry for 32 years. As of 1980. I started at the ripe old age of 18, so I speak from a wealth of experience in all aspects of the industry. We must create better working conditions so our employees will try harder to gain a reputation as professionals. This will help reduce turnover and make available the opportunity for more permanent employment.

This year, as President of Associated Landscape Contractors of America (ALCA), I have had the opportunity to visit many of the 2-year and 4-year institutions of learning throughout the U.S. I find that there is a new trend toward development of professional grounds maintenance personnel at both types of institutions. I have been working hard to stimulate an interest on the part of the students in the landscape and maintenance segments of our industry. It is, however, difficult to accomplish because many or most of the students are well aware that they cannot command as high a salary in landscape maintenance as they might in other industries.

It would be helpful for academia to develop a gauge with which to measure the future interests and desires of a student as they enter an academic program. This may be extremely difficult to accomplish, but it is important to determine if a student has sufficient interest, that he is willing to work in an industry such as landscape maintenance. ALCA has developed seminars to educate industry leaders in their roles as employers to bid properly and include such things as prevailing wage rates. This is not a simple matter, as it requires the reeducation of the employer and a restructuring of thought processes all the way down the line to the original bid. For the wages to be paid, they must be included in the original bids. If the job is not a large project that specifies wage rates, the industry must learn to sell itself and its employees at a fair wage. As you can see, the very marketing process itself is a major key which determines to no small extent the amount of wages which can be paid.

The nursery industry has done a better job in marketing than the landscape contractors and maintenance industries have. The landscape contractor is invariably working on large projects and must be competitive as far as price is concerned. Many people in the landscape maintenance industry are beginning to realize that being low bidder is not a guarantee of a quality product or a profit. Many low bidders are forced, because they have bid the job unrealistically low to cut corners. Some will even cheat their clients either knowingly or unknowingly. In Colorado, perhaps 90% of the maintenance contractors do not even know how to properly prune a tree or shrub. I often go past my competitors' jobs and even a few of my own and find that the jobs have been neglected in this manner. One of the things were are lacking in the maintenance industry is qualified technicians. The schools themselves are not producing the technical people who can function on the job upon graduation.

I hire many students through our internship and co-op program. During 1979 I hired 22 students. In 1980 SaBell's had 17 students on the payroll. This method of exposing students to the industry is excellent. After a year or two of getting out and getting his or her hands dirty, the student will know how to do the job and will build up the self-confidence necessary to function in a supervisory capacity. What I am saying in essence, then, is that the educators must find the students who are truly interested in the industry, provide them with academic training and assist them in finding an internship or co-op partner who will provide practical experience.

It is discouraging to have a young person in your firm for 2 to 3 years only to find that the student did not have a clear idea of what he wanted to do when he came to work in the industry. When I talk with youths in my trips around the country, I try to encourage them to find out who they are, what they want, and where they are going. The next thing, of course, is to get involved with the industry they have selected for a career. A tremendous amount of money is wasted in training students who are not truly interested.

When we hire a student I normally start them out with a speech which begins: “As far as I am concerned you know nothing. We will put you in the field and find out what you do know. We will train you in the way SaBell's operates. Your college training has provided you with the basis on which to build a career.” In many instances, students move from one part of the country to another. For example, we have hired a number of students from Mississippi. These students are not familiar with the plants that are used in Colorado. Watering requirements are also different in Colorado, as are disease problems. Quite literally, these students will almost have to start anew. While the students must learn all over again, we do realize that the student has a good basic knowledge.

Let me elaborate again on the need of the maintenance industry for personnel. My firm would hire 15 to 20 qualified people today if they were available. They could start working tomorrow morning. This means any student who has a good technical horticulture background

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and who is willing to come to Colorado could find employment. The student, of course, must realize that he must adapt his basic training to fit the Colorado environment. This same kind of adaptation would be required for a student in Colorado who wishes to move to Florida or to California. While some basic horticultural training is extremely important, actual work experience in the area where the student wishes to work is much more important.

We also have a problem with students not using their talents properly when they do graduate from college. Many students lack good common sense. For example, you cannot be successful by always watering a plant with X number of gallons per day. The amount of water required each day is based on the need of the plant on that particular day. Fortunately, this becomes a matter of knowing the plant intimately. It is very important that a person on a maintenance site who will be on this job once a week instinctively know whether the plants are being stressed by too much or too little water. Perhaps the need of the plant is not even related to water requirements at all. The plant may be suffering from some other factor, and simply adding additional water will have no effect or perhaps even be detrimental. A student with a good technical background is better able to answer these kinds of questions and to cope with the myriad of situations which he or she will encounter on a daily basis.

How can common sense be taught in the current academic program? In my judgement this type of information cannot be covered in a 4-year program. It must be taught by experience on the job. In many cases, the academic program is so busy that a student will work until 2 or 3 o’clock in the morning to meet project demands. This is being done not because a student has been “goofing off”, but because the academic programs are rigorous and require this kind of time. The students are working diligently. In many cases these same students simply do not have time to walk into a field and begin to look at and learn some of the symptoms which are expressed by the plants under various stress conditions. Surely the student is unable to work with a plant on a daily basis that a proper diagnosis of problems can be made.

In the nursery industry it is sometimes easier to put a finger on the problem. Failure to correctly diagnose a disorder shows up directly on the profit and loss statement since dead plants are not saleable. The horticulturist, on the other hand, does not see the clear distinction and may frequently say, I think the problem is this or I think the problem is that. Private enterprise frequently does not allow time to fully evaluate the situation.

Education and the landscape management industry tomorrow

In the future I see a definite increase in demand for people with maintenance training, because larger areas will be under the care of landscape maintenance personnel. The maintenance industry has been one of the fastest growing segments of the so-called “green industry.” Townhouses and condominiums have created a need for professional services and grounds maintenance on a contractual basis. The industry, too, is recognizing this trend. In the last 5 years, there has been a 30% increase in the number of landscape contractors in ALCA which have become involved in the landscape maintenance area. There are 2 primary reasons for this: first, landscape contractor installing a project prefer to see it maintained properly so that it will reflect positively on the contractor’s reputation. The second reason that contractors have begun to become involved in maintenance in monetary. There is a good profit to be made in the maintenance area. In order to make money, however, in the maintenance area, a contractor must have highly qualified personnel.

Maintenance starts, believe it or not, on the drawing table. Poorly designed projects quickly become severe maintenance headaches. No project is designed to be totally maintenance free. I can never look at a client straight in the eye and tell him that we are designing him a maintenance free project. In truth, we probably would not wish to do so, even if it were possible, which it is not.

One of the tasks facing the maintenance industry today is the necessity to convince clients that it is in their best interest to spend a great deal of money maintaining their capital investment — the landscape. There are some landscape developments in Colorado which I have been watching for over 30 years. Indeed, there are projects in Colorado which we have been maintaining for more than 30 years. These are some of the nicest landscape developments in the state. The clients are normally happy because they have not had to totally redo the landscape, but rather simply change small things as time progresses.

A well maintained landscape grows in value. There are not many investments which a client can make which will grow in value over the years. Antique automobiles and antiques in general are examples of items which do appreciate, but the number is relatively small. Landscape maintenance is not a discard business. I have watched Euonymous alatus in Colorado reach heights of 6 feet with a 10 foot spread. This may not be large by Eastern standards, but it is unusually large for Colorado. Why did the plant reach such size? Because it was properly maintained. Weeds had to be removed, the dead wood removed and the plant must be pruned to maintain a uniform crown. Wet snows had to be removed to prevent the plant from being crushed or broken. Proper maintenance will pay dividends.

Research needs of the landscape maintenance industry

We need more controllable plants. People involved in selecting plant materials have a great challenge because the new landscape will feature higher population densities and smaller spaces. Smaller scale plants will be required in such situations. There is no reason that in the future plants should require extensive pruning to maintain proper scale in a landscape design. All too frequently today we see plants sheared into gumballs and other bizarre shapes in an attempt to restrain the plant. While this may be appropriate in certain instances, lifestyles today are, generally speaking, informal and this type of pruning is not appropriate. In Colorado we frequently sell our clients an overabundance of rocks, gravel and ground cover in the landscape designs. It is frequently sold to the client as low maintenance, however, you know as well as I do that the net result of this type of situation is an abundance of bindweed, thistle and quack grass. More work on use of herbicides in landscape maintenance is needed. A marvelous new material called Round-up is today rounding up everything or being used as a cure-all. I hope we do not run into severe problems in the near future from use of chemicals that at first answer our problems but later create larger ones. Many of the miracle herbicides in the past have been misused by man only to create severe problems in the landscape maintenance area. Proper use of herbicide must be defined and the personnel using the chemicals must be educated in their proper use.

Additional information and data on insect and weed control are also needed. Both chemical and other means of insect control must be employed by these landscape maintenance personnel in order to provide the client with attractive and functional landscapes.

Summary

Educators involved in horticulture should get their students into internships programs to become involved in the landscape industry. Let the students get some first-hand experience and information. It will help both during the student’s academic career and in his professional career with the “green industry”. If there are changes to be made, let them find out which area they wish to pursue as they learn through summer work experience. Research personnel should work with industry and share their knowledge freely. It should be the researcher’s goal to make sure that the people involved in grounds maintenance do a better job and develop into professionals.