The future of the business of turfgrass business

The back office

by Christopher Sann

There will be considerable changes in the future, in both the levels and kinds of turfgrass research conducted and the ways in which the field work of turfgrass managers is accomplished.

But by far the greatest changes in the turfgrass industry will occur in the organizational and business practices of any organization whose operation has the potential of causing substantial environmental damage.

The changes that will occur in research and practice will be measured in percentages, but the changes that will effect the back offices of turfgrass management organizations will be measured in quantum leaps.

Concern for the environment will dominate

Concern for the environment, which manifests itself in increasing doubts of the current political system's ability to recognize the situation, will lead pressed bureaucracies to develop broad new paperwork and data storage regulations. The turfgrass management industry, horticulture and landscape management and other business types that have the potential to cause environmental harm will all be forced to march to the same drummer.

Protests by businesses over the correctness, severity and the appropriateness of these new regulations will prove futile. Finger-pointing by one affected group at another affected group will be commonplace. If we in the green industries with our meager resources try to slug it out with the big boys of agribusiness and petro-chemical manufacturers and the heavy hitters of energy, paper and plastics in the arena of the insiders, we will surely lose.

If the turfgrass management industry can keep its wits about it while everyone else is consumed by the chaos, then we stand an excellent chance of not only surviving the next 10 to 20 years intact but of actually raising the current negative image of turf to one of a respected partner. But in order for that to occur, the turfgrass management industry must prepare for the heavy demands that will surely come.

Automation is the key

The turfgrass management industry must completely computerize its office functions — from application record keeping to application scheduling, from records of site weather conditions to site diagnosis, from probabilities to precise pesticide inventory records. It must also automate application justification thresholds, have controlled paper trails on disposal of toxic wastes, and keep records on current and ongoing training qualifications of all handling and application personnel.

The turfgrass industry will have to change the way it does business if it is to survive the onslaught of environmental paranoia that will surely follow the loosening of the information noose that will be the natural outgrowth of the end of the Cold War. We must allow the computer, both at the office and in the field, to become the new backbone of how we operate.

Computers are everywhere

It was recently reported that 30% of all blue collar workers use computers daily and that 60% of all white collar workers use computers daily. It is estimated that 25 million homes in the US have computers. This increase of the use of computers in the home and workplace has occurred within the last decade.

During this most recent recession, businesses all across the US have grown leaner: hundreds of thousands of people have been let go, offered early retirement or laid off. The majority of these jobs have disappeared. These jobs will not be filled when the economy turns around and things get better. The work that the now unemployed workers did still needs to be done, it is not going to be done by people, it is being done by computers. Hundreds of thousands of repetitive, tedious jobs have vaporized never to return.

One industry has risen to the challenge

Perhaps an examination of the recent history of the petroleum refining industry and how far it has computerized to meet the ever increasing regulatory cost and liability pressures of the last 10 years, would prove to be very illustrative.

At many modern petroleum refineries, the computer has gone from being the glorified adding machine days of a mainframe computer operated by clean office personnel, used to invoice billing, run payroll and track inventory, to being the garage mechanic's partner on his work bench.

Instead of a shelf full of manuals designed to cover the maintenance and repair of up to 300 different pieces of rolling stock that the mechanic must know how to work on, he now has a computer terminal with a CD-ROM library of all the manuals and direct modem connections to all the manufacturers of the equipment. If he has a problem that the CD-ROM libraries cannot answer, then he has the parts that he needs to repair the equipment delivered to his bench by a local off-site parts supplier who is connected to his

bench on-line by computer and delivers just the parts needed for that job within one hour.

The maintenance man or pipefitter at the refinery who works on the plant fixtures downloads all the information that he will need into his laptop computer before he leaves the garage to replace a valve or put in a replacement gizmo. That computer tells him where that old part is, what tools he will need to remove it, how to take it out, and whether he will need a helper. It will let him know whether the fire and safety personnel should be at the site, and when he should expect to return from the job.

The modern tanker truck that is used to deliver product from the refineries will not even start if the computer in the cab of the truck does not have the correct information from the 30 to 40 sensors placed on the rig to check the braking system, the tires, and the axles. In addition, the driver will have to have the right product code to be able to start the engine.

A new diesel engine designed for these big rigs has just been introduced that actuates the valves on the engines by computer. It completely eliminates the valve train system that has been standard on internal combustion engines for the last 90 years.

A bumpy road to full computerization

The petroleum refinery industry has responded to the pressures of federal, state and local regulators, the dramatic increases in liability costs and the cost pressures of the market place. It has looked at every operation within their complex business structure and asked the question: how could a computer help us here?

The turfgrass industry must take the same approach. It must examine every dusty corner, every half used bottle of pesticide or bag of fertilizer, and every lost employee hour. Hours waiting for a piece of equipment to be repaired, dollars lost in scheduling problems or lost inventory and say: can a computer help me solve these problems?

Computerizing will not come easily. There's a revolution, not an evolution in small, hand-held computers and the coming wireless communications network that could link field computers to the computers in the office. Much of the customized software that the industry will need to solve its various problems does not exist yet.

The computer hardware business is different from any business we have been used to. It is not like the present equipment supplier, the present mower manufacturer, or bag goods supplier. Thecomputer hardware suppliers will not come to you and offer you turn key solutions to your problems. You must go to them. You must let them know what your problems are and together develop the software and hardware configurations that will answer your questions. Computers are dumb tools and turf manager will have to invest considerable time and energy to make those dumb tools turf smart.

Change, our constant companion

The world of computers is constantly changing, with innovations often coming so fast that it is easy to become overwhelmed. But the computer is the only way we have to deal with the tremendous pressures to come. The information requirements and the data storage requirements of the near future will make the last 10 years look like a walk in the park.

Feeling overwhelmed is not a new feeling for turfgrass managers. We operate in an ever-evolving business climate. When we make our living in what is considered to be the most complicated of the plant sciences, often requiring intimate knowledge of as many as ten scientific disciplines, change is our constant companion. If we can see the problems that are coming in the near future, anticipate the solutions, and have confidence in our abilities to adapt to change, we will survive.

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ing requirements and keep databases of collected site-specific information. This will lead to predictive modeling software that anticipates problems before they develop. These same databases could be used to develop "what if" scenarios, such as exist with today's spreadsheet programs.

Services

The number and types of services offered to the turfgrass manager will increase dramatically. As the amount of new knowledge and the increase in the learning curve continues, managers already strapped for time will increasingly hire consultants to help them manage their facilities.

Services like soil testers and fertility specialists, application specialists, computer programmers and advisors, I.P.M. scouts, risk assessment analysts, specialized outside mechanical consultants, water and drainage experts, and a host of others offering specialized services, will become more frequent visitors to larger facilities. Already, soil testing and fertility specialists and application specialists are increasingly being called upon for advice or work by facilities managers.

Field Management Techniques

Actual field management techniques will be substantially affected by all of the above changes as well as by new, more accurate, scientific information, as more money is spent on basic turfgrass research. These forces will all combine to change the number, frequency and spectrum of activities on turf sites and probably reduce the number of persons directly employed by these facilities.