The Energy Crisis:

Golf Course Implications

by **J.R. WATSON,** Vice President, The Toro Company, Minneapolis, Minn.

Editor's Note: Although Dr. James R. Watson did not participate in the 1974 Green Section Educational Program in New York in January, his following paper is of such timeliness and importance to the subject, "Managing Turf In The 70s," we are compelled to include it with the proceedings of the day. Dr. Watson originally presented the paper at the Michigan Turfgrass Conference in January, 1974.

The most important bit of advice I can give about the energy crisis and its implications for golf courses, in my opinion, is "stay cool." I know you've been hearing the same from others, but when they say "stay cool" they are asking you to cut back on heating. What I'm suggesting is that you maintain your objectivity and not let the uncertainty and confusion that has built up these past six months stampede you into the abandonment of sound, normal management practices. And, don't be an alarmist and don't spread unfounded rumors! Check your facts and read with care.

There is no present source of information available to tell us how much oil there is in this country, what amount is coming in, and what our real shortage, if any, may be. The lack of qualified data has led to confusion and uncertainty, but there are some hard facts and opinions borne out by the experience of others. We may use this to arrive at sound judgments.

What we must do, I feel, is assess the short-term implications of the energy crisis and deal with them. We can and should prepare long-term contingency plans for future emergencies, but let us first turn our attention to measuring the problems we have here and now. This action will help to provide a base for the preparation and development of solutions for long range problems.

How important are fuel costs to golf course superintendents across the country? The Toro Market Planning Department conducted a survey of a number of superintendents whose courses range from Florida to Washington State.

The answers were most enlightening, and they confirmed a long held view of mine—that golf course superintendents, because of the very nature of their business, are excellent planners. They realize that one must utilize all of his managerial skills to anlayze each maintenance operation. Fuel costs, they informed us, make up only 2 to 3 per cent of the total golf course

budget, and even in those instances where the cutback in fuel supplies was as high as one-fourth of pre-crisis deliveries, the superintendents canvassed foresaw few major problems in continuing a high level of maintenance for their courses.

Unless the supply situation becomes so critical that the country must resort to rationing, these men see no reason for major modification or alteration of their normal operating procedures.

The one certainty we can look for from the energy crisis is an increase in play on our golf courses. Recreational travel—whether by car or by plane—has already been affected. That means the green areas close to home—the parks and the golf courses—will get the brunt of the recreational traffic. Heavier play will put greater stress on fairways and greens which can only be countered with good maintenance practices and careful planning of all operational activity. I'm sure you already see where I am leading you: the energy crisis, at least for now, presents **not a threat to the golf courses and other recreational facilities but a real opportunity to provide more service than ever before to the members and users of all turf facilities.**

Far too frequently we accept the first, pessimistic view of a problem. Too few of us try to look at the situation from more than one angle. We are familiar with the man who tells us his cup is half-empty. We must learn to remind ourselves that the cup is also half-full.

IT'S HOW YOU LOOK AT IT

A shift in your point of view can sometimes work wonders. My son Rick told me a story a few days ago that demonstrates that thesis beautifully. Ezra was a farmer, as his father had been, and his grandfather before that. One day Ezra did a most untraditional thing—he went to see his local banker about a loan. The banker asked if Ezra were in trouble? No—just wanted to borrow some money. The banker allowed that this was possible, but he couldn't understand why. They had never loaned money to Ezra's father or grandfather and he was surprised that Ezra needed money. He felt he should explain that when a bank loaned money it charged interest and required "collateral." Ezra said he understood, so the banker asked how much money he needed. "One hundred," said Ezra. Somewhat taken aback, the banker said, "Well, we take our interest out first and you'll get only $92, since the interest rate is 8 per cent. Did Ezra need $100?" No, the $92 was satisfactory, and he produced a certificate for 1,000 shares of General Motors stock as collateral.

The banker protested that this was much greater than was required. Ezra insisted that the certificate be accepted and held until he paid off the loan in a year's time. The loan was consummated.

The banker was highly amused at Ezra's naivetè and told the story around town. Soon it got back to Lucy, Ezra's wife, and she was furious. That night she told Ezra he was the laughing stock of the community. Whereupon Ezra said, "Now Lucy, you just let them laugh. Last year that banker charged me $25 to keep that certificate in the bank's vault!"

Ezra sets us a fine example of creative problem-solving. And there is a continuing need to exercise this type of ingenuity. But fuel costs and prices, at this juncture, do not appear to constitute a serious enough problem to call on the Ezras among us for ingenious solutions to the energy crisis. A straightforward, simple approach seems to be all that is called for.

SOME REPLIES

Let me quote some of the replies we received in our survey to the question: What effect has the energy crisis had on your course? A man in Pennsylvania said his fuel supplies had been cut back 25 per cent since last September. He had already revised his maintenance schedules, and he felt confident that his crew could accomplish everything that had to be done with 75 per cent of last year's fuel supplies that he had been promised.

A Florida superintendent operates close to 150 pieces of gas-powered equipment. He's getting 15 per cent less fuel, but he has had no problems thus far.

If supplies should be cut further, or rationing instituted, what would they do? Most of those responding said they would reduce the maintenance of the rough areas and work to continue the normal operations on tees, greens and fairways. Should the situation tighten even further, they would consider altering the mowing frequencies and fertilizer applications on fairways and roughs. They would also look for alternate power sources.

The common thread that runs through all the reports was that labor costs far outweigh fuel costs. Over the past several years, the most rapidly rising cost factor on the golf course has been labor. Don Ward, Superintendent of the Pine Tree Golf Course at Boynton Beach, Fla., offers a dramatic case history. A few years ago he had a 12-man crew which he has been able to cut back to nine men with the use of sophisticated equipment. Don pointed out that a 10 cent hourly raise for his crew adds $3,000 a year to his budget. Excess fuel costs amounted to one-third this sum. Labor savings,

Dr. James R. Watson (right) and James Moncrief (left), Southern Director, USGA Green Section, discuss the energy crisis during the recent GCSAA International Turfgrass Conference, Anaheim, Calif.

Don concludes, are more important than rising fuel costs.

TO CONSERVE FUEL

Nevertheless, there are a number of things golf course superintendents can do to conserve fuel. The first of these is to select the most efficient piece of equipment for each job. Generally, reel mowers and sickle bar mowers are more efficient than rotary or flail mowers. The scissors action of the reel not only cuts better but requires less power. Data developed by our engineering division show several significant points with regard to equipment selection and fuel consumption. For example, a 70-inch reel mower is capable of cutting a 70-inch swath of grass with a 6.25 horsepower engine, while a rotary mower uses a 14 horsepower engine for a 60-inch width of cut. With the same mowing speed, reel mowers will use up to 50 per cent less fuel per acre of cut grass than rotary mowers. The number of blades in a reel not only affects the quality of cut, but also the fuel consumption. A 5-bladed reel will use 8 to 12 per cent less power and fuel than a 6-bladed reel. However, determining the quality of cut for a given area is something only the superintendent can do, so it is up to him to decide if he can take advantage of this fuel-saving opportunity by using fewer blades on the reels.

Let me say again that it is more efficient to use one large piece of equipment than to use two or more smaller mowers. The riding greensmower can cover a given area in the same time that it takes three to four walk greensmowers. While a 9-gang fairway mower—although it uses 5 to 10 per cent more fuel than a 7-unit machine—will increase mowing capacity by 20 per cent. I hardly need to remind you that clean, properly adjusted equipment, and sharp blades, require less power and therefore less fuel. But perhaps you have not thought of some of these mowing practices that could also save fuel:

Plan mowing patterns that require the least amount of transport between locations.

Use the least amount of overlap consistent with the skills of your operators.

By selecting the height of cut best suited for each area, you may be able to increase heights, particularly in the roughs, and thereby add one or two days to your mowing cycle.

We are truly fortunate to have in this country more than 11,000 golf courses. That network is, in my opinion, a national treasure, one that will increase in importance to the people of this country as we move further into a new age. The energy crisis provides turfgrass managers with their greatest challenge and their greatest opportunity in years. The production and maintenance of good turfgrass facilities can only grow in importance, for those facilities are a vital and necessary part of our way of life.

SUMMARY

In summary, the energy situation does not appear to have reached crisis levels in so far as golf course operations are concerned at this time. Superintendents must "keep cool,"

remain objective, and not become alarmists. The following statements summarize the energy crisis implications for golf courses:

Increasing costs—materials, supplies, labor.
Delays in delivery of products, parts, whole goods and supplies.
Few actual shortages.
Exceptions: Some petro-chemical products.
Operating costs increasing.
Labor highest cost item in budget and offers major opportunity for relief of budgetary pressures resulting from increased costs.
Labor-saving equipment a critical consideration and need.
Fuel costs: 2 to 3 per cent of total maintenance budget.
Fuel Cutback: 10-25 per cent.
Some course layouts being changed to accommodate high capacity equipment.
Changes in working hours to fit car pools and other transportation schedules.
Increased play and more intensive use of *all* turfgrass facilities.
Management. Critical need for improvement of all managerial talents.
Necessary to recognize that turf facilities are economic entities and their investments and operating decisions must be predicated on sound business judgment.
Opportunity: Increased challenges and increased opportunity for all involved with turfgrass.

The Superintendent In The 70s

by **CLIFFORD A. WAGONER,** President GCSAA

Since my subject refers to all the 1970s, this discussion will review where we are now, our future, and what kind of programs the Golf Course Superintendents Association of America has and will have to help the superintendent in the years ahead.

It is my opinion, after serving six years on the GCSAA Executive Committee and visiting golf course superintendents in all sections of the country, almost all superintendents are seeking ways to improve their knowledge. The large turnout at local, regional and national seminars and conferences is an example of the quest for information. Many turn to the USGA agronomist, to agronomists in the universities, as well as to fellow superintendents.

The period of the early 70s has seen a number of superintendents enter the field who have graduated from turf management schools. The evolution from greenkeeper to golf course superintendent has been slow but steady. The 70s will see this accomplished. The new pressures that have been heaped on the superintendent by federal and state regulations will probably start those in the profession searching for a new title, one that better describes his position. This might already be in the making, because one of the GCSAA surveys taken during the development of the Certification Program indicated that there were 99 titles used by superintendents of clubs (property manager, golf supervisor, outdoor operations man). A high percentage of these titles in use indicates a definite trend toward the suggestion of management.

Today's golf course superintendent's responsibilities can be divided into three categories which are scientific, managerial and technical. This will not apply to all situations because of the variations of the organization at each club. Some golf facilities have sufficient activities to employ a managing superintendent (companies owning more than one golf facility), but the average club seeks a superintendent with the ability to manage and yet possess the scientific and technical skills necessary to produce a good, playable golf course. Contract maintenance may become more prevalent in the late 70s.

In February, 1972, GCSAA recognized 47 golf course superintendents who had completed all the requirements of the newly adopted Certification Program. This program was developed to give the golf course superintendent who chose to become involved the opportunity to gain additional recognition. The program requires a superintendent to be a Class A member of GCSAA for three years and successfully complete a six-part examination. The six sections include questions on the