



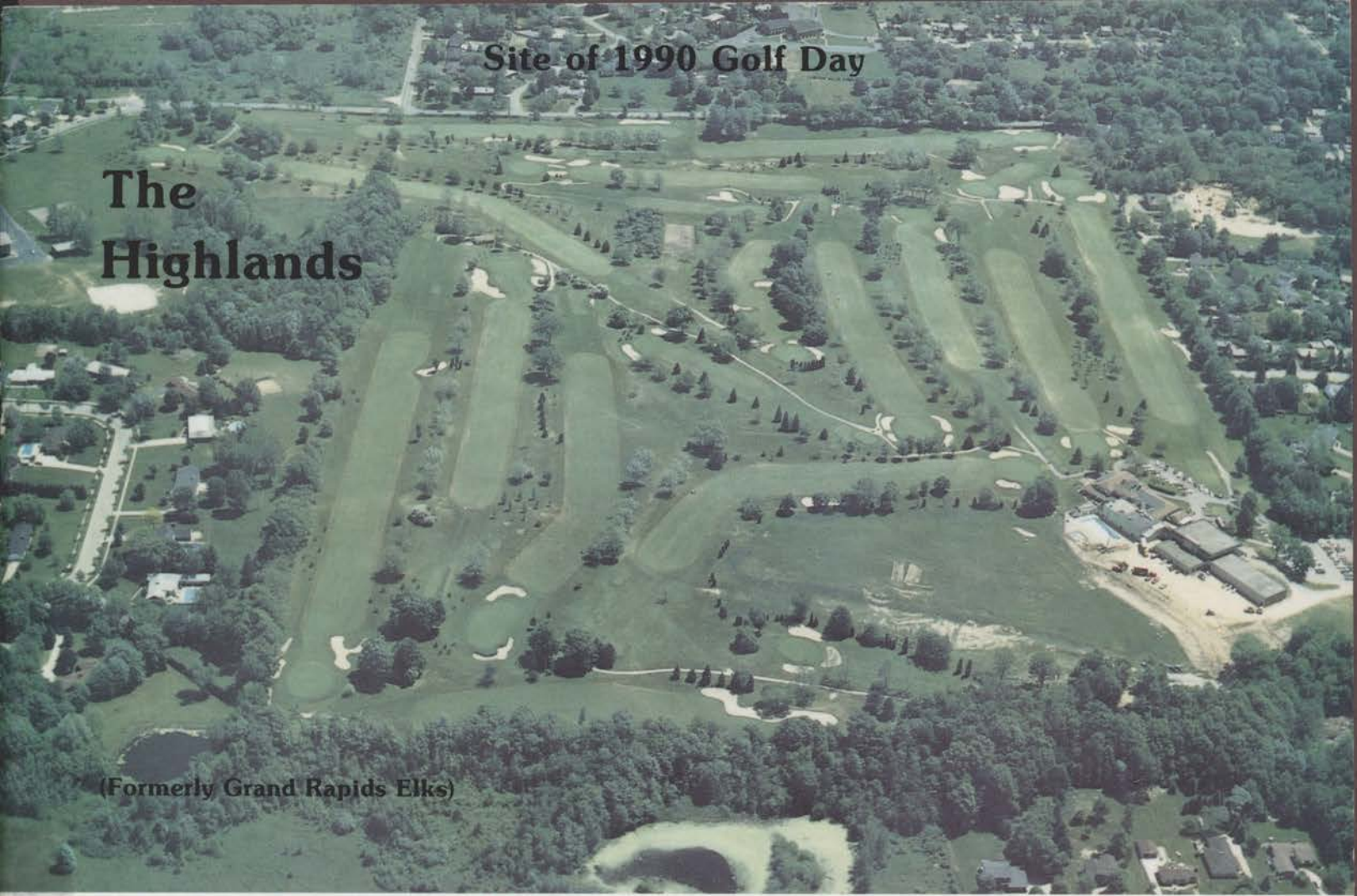
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Official Publication of the W.M.G.C.S.A.



July/August
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PRESIDENT'S MESSAGE

PROFESSIONALISM—this word seems to be coming up more and more in our business.

With all the new and changing rules and regulations coming down from the DNR, OSHA, EPA, etc. we as Turf Managers need to keep up on all the changes in our industry. It is our responsibility to know what they are and how we should comply to them.

Professionalism goes beyond keeping up on all of this. It also means improving our image over all.

It has come to the attention of the Board that we as Golf Course Superintendents are not always doing this. Calling in late for monthly meetings, not complying with requested dress codes, and leaving meetings before or during talks from our speakers is not being professional or projecting a professional image. It also puts added burdens on our host superintendents.

Let's try to improve our image. We are no longer people who just cut and water the grass, but Professional Turf Managers.

Fred Pastoor, CGCS



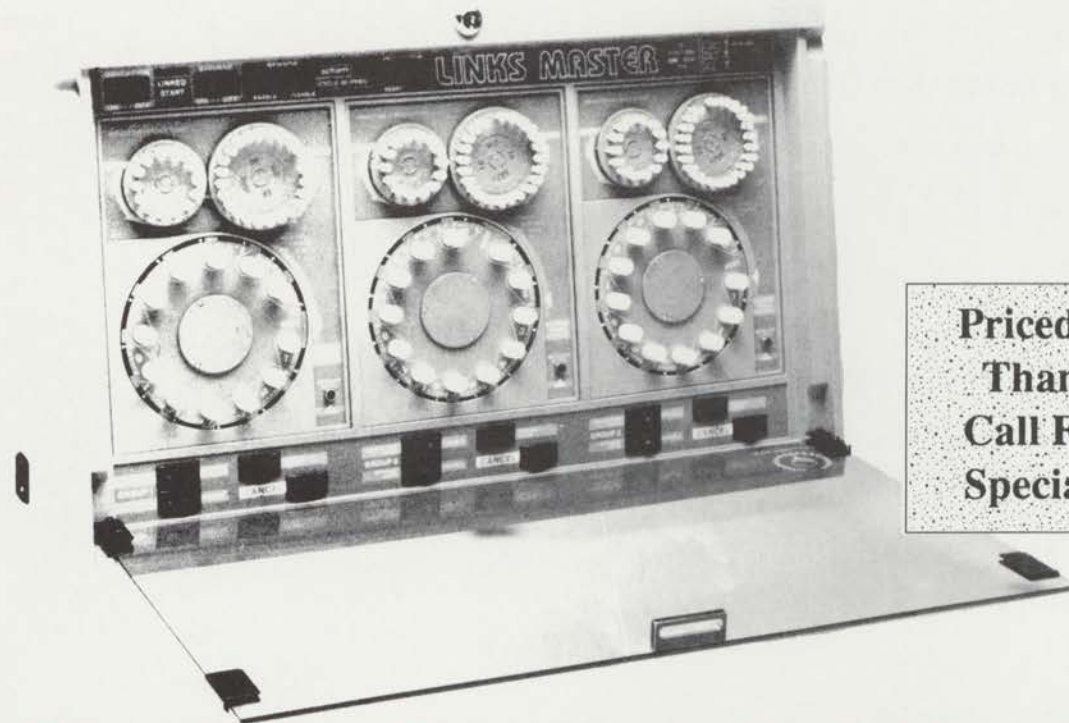
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Richter Ramblings

The Roster Book was late getting printed and mailed. Why? Because many of the dues payments were slow in being paid. Our goal was to have the Roster printed in April, but 25% of the members had yet to pay their dues at that time. Anyway, please be prompt with your payment.

Something every superintendent can do to help our profession, is to educate your State Legislator. Mail them a copy of the following articles that focus on pesticide and fertilizer's effect on groundwater. The articles by Dr. H. Niemezyk, February 1988; Dr. M. Petrovich, September 1989; and by Coaen, February 1990; all were published in *Golf Course Management*. These pieces of literature all discuss how much pesticide and fertilizer doesn't get into the groundwater. When the time arrives for the politicians to vote on legislation effecting our tools (pesticide and fertilizer), hopefully a knowledgeable decision can be made. If we don't inform them, who will?

Professionalism, Professionalism. And look who is in *Golf Course Management* without a coat and tie on. Sorry! I wore one the day before the picture was taken. No excuse.

Best wishes to Jeff Carson and we wish him a speedy recovery and quick return to work.

What happened to the greenhouse effect?

Welcome to new member Brian Larimer, now the superintendent at Pine View where our August meeting is to be held.

Any comments, questions, etc... please send them to:

Paul Richter
15784 Pruin St.
Spring Lake, MI 49456

Remember, Turf Field Day is August 30 at the Hancock Center. And get a foursome together for Golf Day on October 1 at The Highlands in Grand Rapids.

W.M.G.C.S.A. MEETING DATES

- | | |
|-------------|--|
| August 27 | Pine View G.C. Host - Brian Larimer |
| September ? | Scott Lake G.C. Host - Paul Hoag |
| October 1 | GOLF DAY - Highlands (G.R. Elks) Host - Harry Schuemann |
| November 3 | Fall Party - Egypt Valley Host - Chris Fochtman and Steve Pastoor |



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PESTICIDE FATE IN TURF

By Dr. Bruce E. Branham
Michigan State University
East Lansing, Michigan

A critical issue facing agriculture and the turfgrass industry is the fate of pesticides in our environment. In this context "fate" means the ultimate disposition of a pesticide after it has been applied. Why all of the concern about chemicals? First, use of pesticides has been increasing steadily since the 1960's.

Secondly, the ability of scientists to detect pesticides has increased at least 1000 fold in the last ten years (i.e. in the 1970's limits of detection were in the parts per million (PPM) range; currently levels of detection for organic pesticides are in the parts per billion (PPB) range). There have been many articles in the turf and agricultural literature talking about parts per billion with the general thrust of the articles being that a part per billion is such a tiny amount it can't hurt you.

As an example, the average extra strength aspirin tablet contains 500 mg of aspirin per tablet. Dissolving the entire tablet in 1 liter of water (16.8 ounces) would yield an aspirin concentration of 500PPM. To get an aspirin concentration of 1 PPB would require us to dissolve only 1/500,000 of the aspirin tablet in one liter of water. Thus, a 1 PPB concentration is a very small amount of a toxin, but that does not mean it is harmless.

The USEPA has recently adjusted the maximum allowable concentration of lead (Pb) in drinking water to 10 PPB. The maximum allowable concentration of atrazine (commonly used corn herbicide) in drinking water is 10 PPB. A third reason pesticides are more of a concern is that scientists have recently begun testing ground water and have been finding pesticides with considerable regularity. Because ground water accounts for almost 50 percent of the drinking water supplies in the United States, protection of this source of fresh water is essential.

These three points have focused attention on the use of pesticides. A fourth reason is an undeniable hysteria in the general public over the use of pesticides. The level of risk associated with the use of pesticides is not commensurate with the level of fear of pesticides amongst the general public. A recent article in *Newsweek* (Dangers in the Vegetable Patch, Jan. 30, 1989, p. 74-75) quoted Dr. Richard Jackson, Chairman of the American Academy of Pediatrics Environmental Hazards Committee, who estimated that for children between the ages 0-5, 25 percent of them will eventually contract cancer. That would equate to 4.5 million cases of cancer over the lifespan of these children.

Dr. Jackson then estimated that 5,000 of these cancers may be caused by pesticides. What is left unmentioned is that scientists (1) estimate that at least 75-80% of all cancers are caused by our environment. This would include such areas as diet, smoking, lack of exercise, exposure to carcinogens, etc. Using the 75% figure then, 3.4 million cases of cancer are caused by our "environment" and are thus preventable. While I am not trying to minimize the grief that 5,000 cases of cancer would cause, the preventable

cancers caused by pesticides as estimated by Dr. Jackson's figures are less than two tenths of a percent. Our national energies should be expended in those areas where the bulk of cancers occurs.

Regardless of the extent of the risk caused by using pesticides, it is incumbent upon all who use pesticides to understand the processes that control the fate of these compounds in the environment.

Pesticide Fate Processes

Pesticide fate generally is concerned with the disposition of pesticides after they reach the soil surface. Thus, spray drift is often omitted from discussions of pesticide fate because it is largely controlled by the type of sprayer used and is not dependent upon the physical and chemical properties of the individual pesticide molecule.

The processes affecting pesticide fate can generally be grouped into two categories—transformation and transportation. Transformation results in the alteration of the chemical structure of the pesticide. This is generally a desirable process since most organic pesticides used today are made less toxic or non-toxic by these processes.

Transportation processes are more of a concern because these fate processes often result in the movement of a pesticide away from the site of application. The transportation and transformation processes are displayed in Table 1. Each will be discussed individually.

The most important factor to consider in pesticide fate studies is leaching. Leaching is the downward movement of pesticides through soil. It is the process responsible for ground water contamination. A pesticide fate process that is strongly correlated, in fact one of the three primary determinates of leaching, is adsorption. Adsorption is the physical binding of a pesticide to soil organic matter or clay, which are the primary adsorptive sites in soil.

Some pesticides are strongly adsorbed to soil, and this reduces their availability for leaching. Adsorption, or more accurately, strength of adsorption, plays a critical role in determining whether a pesticide will leach. With some exceptions, most notably paraquat, which because it is a charged organic molecule, is essentially irreversible adsorbed, most pesticides will slowly leach over time. Thus, two other factors which are important in determining susceptibility to leaching are the half-life of a pesticide in soil and the water solubility of a pesticide.

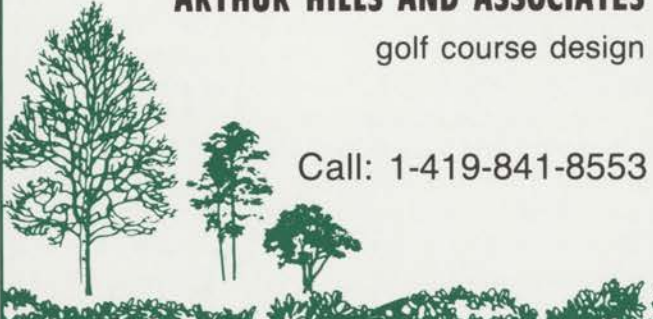
Table 1: Factors affecting pesticide fate.

| 1) Transportation | 2) Transformation |
|-------------------|---------------------------|
| A) Leaching | A) Chemical Decomposition |
| B) Volatilization | B) Chemical Degradation |
| C) Runoff | C) Plant Uptake |
| D) Spray Drift | D) Photodecomposition |

The half-life of a pesticide is the time needed for its concentration to reach one-half of its original value. If a pesticide has a half-life of 2 days, then at 2, 4 and 6 days after application, its concentration in soil will be 1/2, 1/4, and 1/8, respectively, of its initial concentration. A pesticide with a short half-life degrades rapidly and has little chance to leach.


"As a rule of thumb, a half-life of 30 days or less should mean that leaching will not be a significant problem."

The other factor to be considered is water solubility. Most pesticides are organic molecules with varying degrees of water solubility. For example, benefin (Balan) has a reported water solubility of 0.1 PPM, while paraquat has a water solubility of 62,600 PPM. If an herbicide is very slightly soluble in water, such as benefin, then its tendency to leach with downward moving water will be very much reduced. Generally, any compound with a water solubility of less than 30 PPM would not be expected to leach readily.



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STRESS

by Peter Ditzel
The Plain Truth

THE PAIN was nearly unbearable. I was hundreds of miles from home and my stomach felt as if it was being torn by a wild animal. Fortunately, a doctor was nearby.

After an examination, he diagnosed my ailment as a peptic ulcer. More extensive tests revealed a spastic duodenum.

The doctor didn't have to tell me that stress was a likely cause. I had long suspected that stresses were piling up too high. But what could I do about it?

Let's face it, you and I live in a stress-filled world. There is no way we can totally avoid the myriad pressures we confront daily. But we *can* do something about the source of our stress—*ourselves*.

That's right, we, or more precisely, the ways that we perceive ourselves and the world around us, are the causes of our own stress.

"Contrary to popular belief," explains Donald A. Tubesing in *Kicking Your Stress Habits*, "stress is not the pressure[s] from the outside.... Those are *stressors*. Your response to those situations constitutes *stress*."

I'm not saying that we should be able to take anything that comes our way and show no stress. The Creator did not make us with nerves of steel. Neither did he intend for us to live in a society that overtaxes our physical, rational and emotional resources.

Nevertheless—with doctors linking stress to ailments ranging from heart disease to allergies—most of us can greatly benefit by responding to stressors with as little stress as possible.

Stressors can range from infrequent major tragedies—the death of a loved one, divorce, the loss of employment—to the minor daily irritants that can slowly wear us down over time.

How we interpret stressors determines whether we find them distressful. And "we learn to interpret our experiences very early in life . . . from our parents, our teachers, our peers," says Dr. Tubesing. These perceptions become largely automatic, habitual.

If our stressful reaction to life is . . . a habit, what can we do about it?

Robert S. Eliot makes the answer clear in *Is It Worth Dying For?*: "Stress is only a burden when you respond to it with the feeling that you have lost control." The stress-prone see stressors as threats to their control over life.

Here are some of the more common reasons we become stressed and steps you can take to modify your stress-producing reactions:

• *Perfectionism*: The perfectionist sees happenstance as a threat to control and therefore pays overattention to details, making sure he or she has left nothing to chance. He or she will write a wellworded report, edit it several times, distribute it and read it through again for any minor punctuation error. The perfectionist expects nothing less than a 100 percent performance from everybody.

Researchers believe that perfectionism often starts in childhood when parents reward a child with love and approval only for outstanding achievements and either ignore the child or react with disappointment when the child's performance is less than perfect.

The child soon associates mistakes with a loss of love and acceptance and thinks his or her value lies in a job flawlessly done.

Perfectionists also overemphasize "shoulds" and "shouldn'ts." When they make errors, they torture themselves with "I *should* have done better," or "I *shouldn't* have made that mistake."

They overlook the value of the mistake as an aid to learning how to avoid repeating the error in the future. Instead, they become stifled by regrets of the past.

Perfectionists are just as hard on others: "He *should* have known better than to make a blunder like that."

To overcome perfectionism, observe that things are not always either black or white, perfect or totally unacceptable—few perfect reports have ever been written; few bathrooms have ever been cleaned to perfection. There is a flaw somewhere.

Expect weaknesses in yourself and others, breakdowns in equipment and delays in schedules. And *expect* these to surface at *unexpected* times!

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Next, start being less fussy. Choose some minor tasks and deliberately perform them quickly, without attention to detail. Also, make some snap decisions about minor matters.

Observe whether the results of these tasks and decisions are significantly worse than if you had spent more time on them. You probably will find they are not.

Keep working toward more spontaneity in your life without, of course, becoming negligent or careless. At the same time, develop tolerance for your mistakes and those of others.

• *Unrealistic self-image:* Do you find yourself taking on jobs that turn out to be nightmares? It could be that you have a distorted image of yourself as someone who can successfully tackle any task.

People who are experts in everything exist only in fantasies. You are asking for stress if you stake your livelihood or reputation on doing a job for which you don't have the skills.

Another fantasy many stressfilled people have is believing they can take on more work than they can realistically handle. Learn to say no.

• *Unwillingness to delegate:* If you subscribe to the old adage, "If you want something done right, do it yourself," you're setting yourself up for stress. When too much work piles up, do not react by feeling you must control it alone.

Give part of the work to others. They may not do the job exactly as you would, but their results will still likely be acceptable.

• *Excessive need for approval:* The thinking goes like this: Even if I do a great job, people will still be disappointed in me.

That's a heavy burden no one can carry without burning out. According to the Bible, the Israelites became disappointed in God even after he miraculously parted the Red Sea (Ex. 14, 15:24, 16:3-8). But God did not give up because they disappointed him. Neither did Jesus Christ, many centuries later, become depressed when his followers deserted him (John 6:66). Nor should you be overwhelmed when people are disappointed in you.

• *Disorganization:* If, after you have set realistic goals and delegated some duties, lack of time is still a stressor, you may be disorganized. "Personal management skills," further states Dr. Tubesing "can reduce your stress by helping you learn to spend your time and energy more efficiently."

Sort through your work and prioritize your tasks on a list in order of importance. Make sure the most important get done. Don't get distracted with nonessentials and trivia.

As you complete or eliminate each task, cross it off your list. This will help you see what you are accomplishing and prevent the stress that comes from feeling that your day is muddled and out of control.

• *Wanting to handle it alone:* You cannot handle it alone. "Increasing evidence supports the thesis that friends . . . play a vital role in keeping us healthy," say Patricia Wuertzer and Lucinda May in *Relax, Recover*.

Friends can help carry your burdens, make you

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forget your troubles with their good cheer and encourage you with their love. And friendships are two-way.

When friends unburden their troubles on you, they will take your mind off your own worries and help you develop compassion. You don't lose control of your burdens in this exchange between friends, you maintain it.

• *Pursuing happiness: "Happiness," write Robert L. Woolfolk and Frank C. Richardson in Stress, Sanity, & Survival, "cannot be achieved when pursued as a goal."*

When we look for happiness, we worry that we may not gain it, become stressed by our inability to control this part of our lives and consequently find happiness elusive.

And don't expect to attain happiness by amassing wealth or possessions. King Solomon of Israel was the wisest man in the ancient world. He tried a little experiment: "Whatever my eyes desired I did not keep from them . . . And indeed all was vanity and grasping for the wind" (Eccl. 2:10-11).

We are happy when we are absorbed in our activity and when we find something or someone other than ourselves to care about and believe in.

• *Worrying about the future:* It is wise to *plan* for the future, but a waste of nervous energy to *worry* about it. Jesus Christ taught:

"Which of you by worrying can add one cubit to his stature?... Therefore do not worry about tomorrow, for tomorrow will worry about its own things. Sufficient for the day is its own trouble" (Matt. 6:27, 34).

• *Believing only in oneself:* Stress-prone people would like to believe they alone should be able to control anything that can affect them. This is unrealistic. The truth is, we can control very little by ourselves alone.

We must learn to accept what we cannot control. The realization that there is a wise and loving, all-powerful God on whom we can rely in time of need is the greatest counter to stress-creating thoughts.

The apostle Paul wrote: "All things," even those our human eyes and minds perceive as being out of our control and about to lead to trouble, "work together for good to those who love God" (Rom. 8:28).

To those who rely on God, Jesus says:

"Peace I leave with you, My peace I give to you; not as the world gives do I give to you. Let not your heart be troubled, neither let it be afraid" (John 14:27)

Your Bible can tell you more about how you can stop being your own worst enemy and find peace.

STRESS SYMPTOMS

Some researchers say the likelihood of developing stress-induced illness is best determined when trained interviewers personally evaluate **reactions** to questions. Nevertheless, if you commonly experience one or more of the following, you may be responding to life with too much stress:

- Neck or lower back pain
- Headaches
- Nervous tics

- Chronic pounding of the heart
- High blood pressure (this dangerous condition often has no symptoms, so have your blood pressure checked regularly)
- Cramps on one side of the abdomen, diarrhea or constipation (symptoms of irritable bowel syndrome)
- Stomach pain relieved by food or antacids (symptoms of peptic ulcer)
- Frequent contagious diseases such as colds
- Irritability, inability to concentrate, accident proneness and other symptoms of muddled thinking
- Insomnia
- Feeling that people keep letting you down
- Decrease in sex urge, or impotence
- Loss of interest in job, hobbies, life in general
- Increased use of alcohol, tranquilizers, amphetamines or tobacco

STRESS CAUSES

Below is a list of the top 30 stress-causing events from the Holmes-Rahe Social Readjustment Rating Scale. For a more complete list of the Holmes-Rahe scale, see the *Journal of Psychosomatic Research*, Vol. 11, 1967, pp. 213-218.

| EVENT | SCALE OF IMPACT |
|-----------------------------------|-----------------|
| Death of spouse | 100 |
| Divorce | 73 |
| Marital Separation | 65 |
| Jail term | 63 |
| Death of close family member | 63 |
| Personal injury or illness | 53 |
| Marriage | 50 |
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GCSAA WATER UTILIZATION

Fact Sheet

FINDING: Water is essential for the maintenance of all life. Thus, experts are increasingly worried about the continued supply of this resource in the future. Already periodic droughts and regional shortages cause planners to worry about supply issues. Many forecasters foresee more serious shortfalls in the future.

For the most part, golf courses are efficient users of water. The professionals who care for the nation's golf courses recognize the potential dangers of water shortages and have already started conservation efforts. Techniques have been adopted to decrease demand for freshwater, and the future promises to bring even more advances to save this resource.

NET WATER USE: Golf courses are important sources of recharge of rainfall and snowmelt to groundwater supplies. For example, open, grassy areas are approximately 90% pervious to rainwater, whereas residential areas are only 20% pervious.

Even assuming a 50% rate of evaporation, a typical golf course in Westchester County, New York, provides seven times as much groundwater recharge as it consumes for irrigation purposes. By providing an open "green belt," a golf course is actually a net water supplier to the community.

EFFLUENT WASTEWATER: An estimated 10 percent of the golf courses in the United States have already started using effluent wastewater for irrigation needs. Because recreational users are generally low-priority recipients of potable water, reclaimed water is a real panacea for golf courses. Use is especially high in hot and arid regions like Arizona, Florida and California. It is anticipated that nearly all desert courses will be irrigated with effluent by the year 2007.

Effluent water is high in nutrients like nitrogen and phosphorus, which means that professionals can use less chemical fertilizers. Moreover, reclaimed water cannot currently be returned to municipal water supplies, and federal regulations make it difficult to release it into streams, lakes or oceans. Thus, turfgrass use helps dispose of this water. Obviously, turfgrass use of wastewater is safer than use of effluent to irrigate food crops.

TECHNOLOGICAL PROGRESS: Many technological advances promise to reduce golf course demand for water. Indeed, some have already been adopted by superintendents. For instance, a new low pressure irrigation system, combined with computer controls, is being used on some golf courses, including one in the Southern California desert. That course achieved a 25 percent reduction in water use. Additionally, the new technology substantially reduced the need for fertilizers and other chemicals.

Still other courses are beginning to apply improved climatological information to irrigation problems. Using data about evaporation and transpiration—known as "evapotranspiration" or ET—turf specialists can achieve 20 to 40 percent reductions in water demand, depending on the season. More savings are achievable during warm seasons than in cool. The National Weather Service provides ET data.

Turfgrass research and development can also lead to reduced water needs. In particular, drought resistant strains can be developed that will require less water. A jointly operated research program by the GCSAA and U.S. Golf Association provides funds for scientists to develop new turfgrass strains. The ultimate goal of the program "is a 50 percent reduction in water use". Scientists also seek ways to decrease compaction of the soil, a condition that increases the need for irrigation.

EROSION CONTROL AND WATER SUPPLY: Soil erosion causes sedimentation of the nation's lakes, rivers and streams, thus effectively limiting supply of clean water. Since turfgrass prevents soil erosion, golf courses indirectly assure a continued supply of fresh water.

According to the scientific evidence, land planted in grass erodes at a rate far less than soil planted in agricultural crops. Indeed, corn erodes 668 times more topsoil, and wheat 84 times as much. Construction is even more devastating to soil, often causing the equivalent of a decade's erosion in a single year. Thus, alternative projects such as shopping malls or housing developments cause much more erosion than does a golf course.

Golf course ponds also combat the harms of erosion by serving "as a reservoir for storm water drainage." Pond water additionally creates a "supply of irrigation water that the superintendent can use at his discretion." Thus, ponds on golf courses can reduce the need to compete against other users of a community's water supply.

CONCLUSIONS: Golf course superintendents recognize the potential importance of water supply issues in the future. Many have already started to adopt means to conserve water today. Various techniques have been developed that can reduce demand for water by 25 percent or more. Other projects are in the research stage and could achieve even greater water savings.

WATER USAGE

The average American uses 1,800 gallons of water daily:

Direct person use—8% daily use

Per person:

Bath: 30-40 gallons

Shower: 5 gallons/minute

Cooking: 8 gallons

Toilet Flushing: 3 gallons

Lawn Sprinkling: 8 gallons/8,000 sq. ft.

(a median sized lawn = 7,000 sq. ft.)

Indirect Use—92% daily use

Per person:

Sunday paper: 280 gallons

One pound aluminum: 1,000 gallons

One automobile: 100,000 gallons

1 egg: 40 gallons

1 ear corn: 80 gallons

1 loaf bread: 150 gallons

1 gallon whiskey: 230 gallons

1 pound beef: 2,500 gallons

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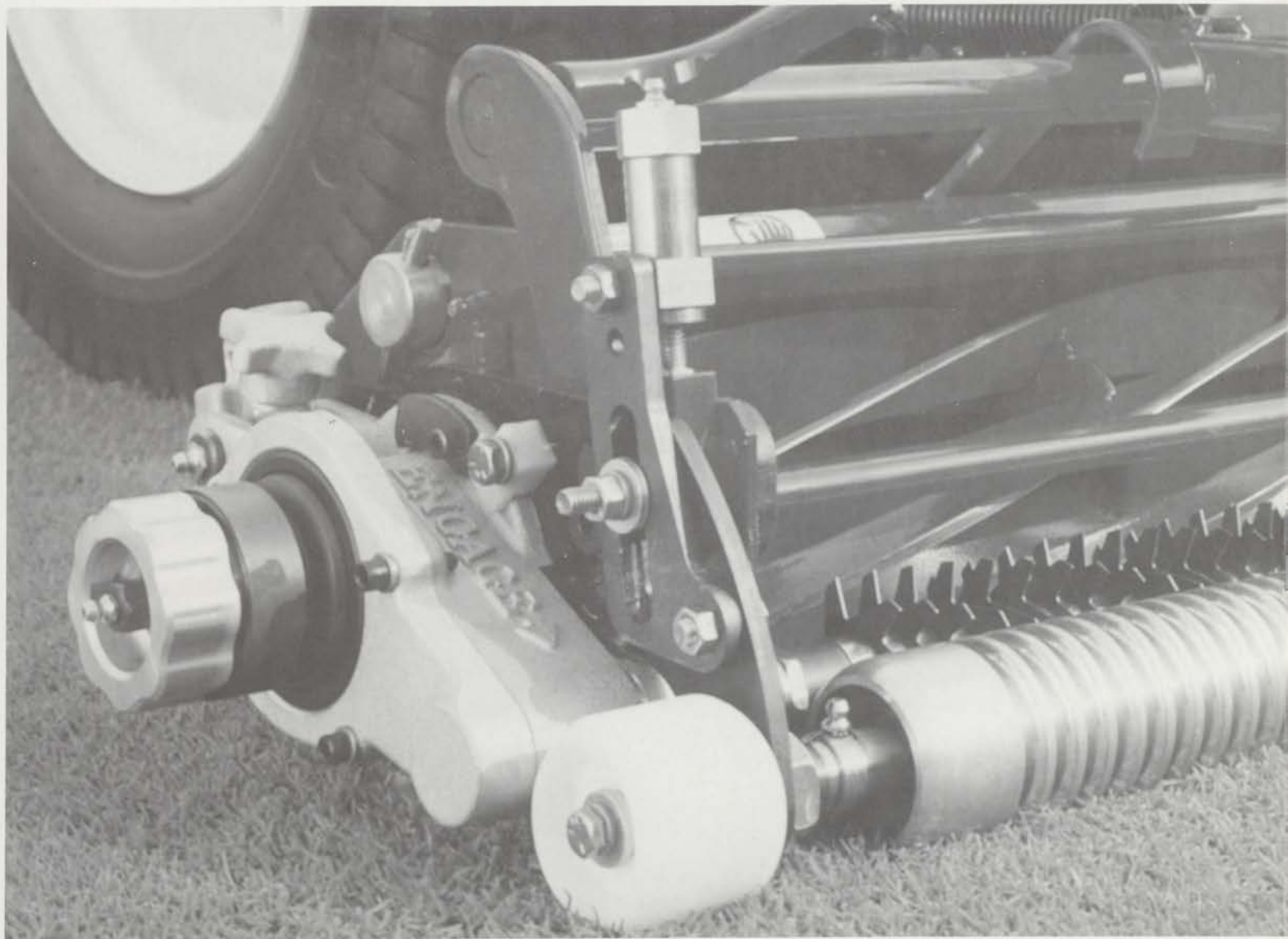
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WORKING WITH DIFFICULT PEOPLE

The Pryor Report

It can be a real zoo out there—

Working with people is often more demanding than lion taming. Perhaps that's because there's an animal inside many of us, suggest Frances Norwood and Annette Nunez, professors at the University of Southwestern Louisiana.

They use animals to describe traits of difficult people and then suggest ways to "tame" them.

BULLS. They come out charging, attacking the other person, usually because they feel frustrated. Because they feel their victims are inferior, they believe they have tremendous power and often act abusive, abrupt and intimidating.

To manage Bulls:

1. Let them speak for a while to let off steam.
2. Sit or stand deliberately and dramatically to get their attention.
3. Call them by name and maintain eye contact.
4. Ask them to have a seat.
5. Present your ideas forcefully.
6. Refuse to argue.
7. Be as friendly as possible.

SNAKES. They enjoy blending in with the surroundings and striking suddenly when their victims least expect it.

To manage Snakes:

1. Bring problems out into the open.
2. Involve the group.
3. Smoke out hidden problems through surveys, suggestion boxes, etc.

CHEETAHS. They burst forth in sudden temper displays (a tactic learned early in life to cope with fear and helplessness), as an automatic response to threat.

To manage Cheetahs:

1. Sincerely try to alleviate their fears.
2. Help them regain confidence and control.
3. Talk with them privately.

"MACAW" PARROTS. They talk and chatter sometimes sense, sometimes nonsense. They feel powerless and think others should behave in certain ways, and they complain when they don't.

To manage "Macaws":

1. Give them your full attention and maintain eye contact—so they'll feel important.
2. If they have a complaint, don't jump to conclusions before you hear the matter out.
3. Ask for facts, and get the complaint in writing.

OSTRICHES. They stick their heads in the sand, handling painful situations in noncommittal ways. They tend to avoid other people and themselves.

To manage Ostriches:

1. Use questions to get them to talk. Don't fill in the silences.

2. Summarize what they say, ending the summary with an open ended sentence.
3. Listen attentively when they talk. End the discussion if they clam up, but set up another appointment.

CUBS. They are humorous, friendly and cooperative. They agree, whether or not that's what they truly think. Needing to be liked leads them to make unrealistic commitments.

To manage Cubs:

1. Let them know they can be honest.
2. Compliment them.
3. When you suspect their commitments, say, "I don't think I could do that in the time you've allotted. When I did that it took me more time."
4. Look for true feelings in their humor.

HYENAS. They "chill out" people's positive feelings. They lack faith on other people and wilt them with sarcasm and doubts.

To manage Hyenas:

1. When they predict failure, ask: "What's the worst thing that can happen?"
2. Make positive statements about past successes.
3. Show your determination to take action and succeed.

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RHINOCEROSSES. They are strong, knowledgeable people whose "know-it-all" attitude is overbearing. Their ideas are best; yours unimportant, except to point out shortcomings.

To manage Rhinoceroses:

1. Be certain your facts are correct when you present ideas to them.
2. Repeat what they say to avoid their overexplanation.
3. Use questions when you express disagreement.

PEACOCKS. They pretend to be experts, but aren't, so often give wrong or partially correct advice.

To manage Peacocks:

1. Let them maintain their dignity, but don't rely on their information.
2. Remind them of facts diplomatically.

TURKEYS. They can't make a decision. They're usually nice, but hope most situations will resolve themselves or be forgotten before they must decide.

To manage Turkeys:

1. Talk through the decision-making process step-by-step.
2. Listen carefully to identify their fears.
3. Show why ideas or proposals are worthwhile.
4. Emphasize the need to be decisive.

BEAVERS. They are hardworking and proficient but they arouse other employees' jealousy and suspicion.

They often are underpaid because they don't demand more, or are bypassed for promotion to keep them doing their present jobs.

To manage Beavers:

1. Don't exploit them, and don't make them favorites.
2. Advise them to channel some energy into developing better relationships with fellow employees.

SUGGESTION: Recognize your co-workers' animal types-and your own. Of course, no one is an animal all the time-it's stressful situations that bring out the beast in us.

GOLF COURSES SHOW STRONG COMPLIANCE WITH PESTICIDE REGULATIONS

Of the 1,157 superintendents who responded to the GCSAA survey, 1,061, or about 92 percent, hold valid pesticide applicator licenses for the state where they work. Another five percent who are not licensed themselves have someone on their staff who is licensed.

Certification for pesticide application is done in compliance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Section 3 of FIFRA states that any pesticide classified by the Environmental Protection Agency (EPA) "for restricted use only" must be applied by or under the direct supervision of a certified applicator. It is up to each state to implement its own certification guideline and programs as long as they comply with FIFRA.

"The importance of training and certification to individual communities really ties in to the concept of 'Think globally — act locally?'," said Akins. "The survey showed that individual superintendents take seriously their commitment to the environment and are working hard in communities throughout the U.S. to make sure that their operations are as safe as possible."

About 97 percent of U.S. golf courses that employ members of the Golf Course Superintendents Association of America (GCSM) have at least one licensed pesticide applicator on staff, according to the findings of a recent survey.

To address concerns about pesticide use, GCSM recently conducted the survey to gauge the degree of compliance with federal and state pesticide applicator regulations among professional golf course superintendents.

"These results provide strong evidence of our members' committed to safety and sound ecological practices," said Tom Akins, GCSAA Government Relations Manager. "GCSAA strongly supports the position that only properly trained and educated personnel should be allowed to purchase and apply restricted-use chemicals. Even though most golf courses don't apply any restricted use materials, we are pleased that the survey shows that an overwhelming majority of our membership has taken this extra step. This supports our long-held belief that golf course superintendents are among the best educated and most thoughtful users of agricultural chemicals in the country."



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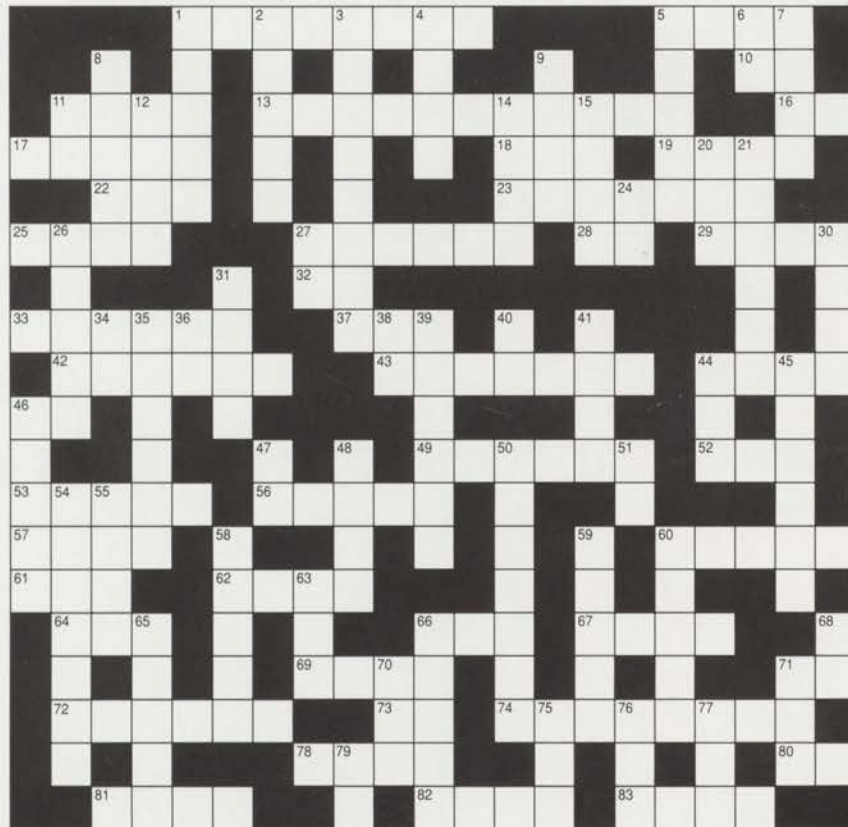
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Supers Crossword

by Mike Schindbeck, Asst. Supt. Spring Lake C.C.



Across

1. Rusty golfers need this
5. Black golfer Jim _____
10. Lanny's Init.
11. Mr. Player
13. Push cutting unit
16. Mr. Bean's init.
17. Legend Ben
18. Rage
19. Mr. North
22. Position of the ball
23. Fuzzy _____
25. Mr. Couples
27. One under the hole's par
28. Mr. Hammond's init.
29. Grass becomes limp
32. Mr. Strange's init.
33. _____Maxfli
37. Mr.Kite
42. Mr. Archer
43. Between tee and green
44. Arnie's _____
46. Mr. Hogan's init.
49. _____Open, Potomac, MD
52. Lee Super _____Trevino
53. Minus score, _____par
56. Ladies' tour host Dinah
57. Shift to high
60. Lady golfer Little
61. Golf apparel (head)
62. Reserve a tee-off
64. Ladies' tee mark color
66. Lady golfer Ertll
67. Hold firmly
69. Shaft
71. Mr. Watson's init.
72. What each swing counts
73. Mr. Irwin's init.
74. Bunker
78. Whirl
80. Mr. Beck's init.
81. Men's tour governing body
82. Mr. Ballesteros
83. Turn

Down

1. Mr. Stewart
2. Approach
3. Golf brand _____D.T.
4. Golf vehivle
5. _____Open, Miami
6. Lady golfer Lopez init.
7. Golfer Bob _____
8. Two underhole's par
9. Mower brand
11. E-Z _____cart's
12. Golfer Mike
14. Gofler Larry
15. Unwanted plant
20. Recent
21. Opening shot maker
24. Mr. Hinkle's init.
26. Outside fairway
27. Mr. Charles' init.
30. Mr. Jacklin
31. Ladies' Tour, init.
34. Compass point, init.
36. Official ruling, init.
38. Legend's _____golf
39. Coin used on green
41. Golfer Jerry _____
44. To point or direct
45. Dunlop _____
46. Lady golfer Laura _____

47. Lady golfer Sheehan's init.
48. Golf's "Beware"
50. Tourney at Augusta
51. Mr. Floyd's init.
54. Putts last
55. Social engagement
58. Branch
59. Walter _____
60. Golf apparel
63. 8-_____Scramble
65. Tim Conway & Friends on golf
66. Actual low score each indiv. hole
68. Mr. Woosnan's init.
70. _____Chi Rodriguez
71. Player's tournament init.
75. Hole-in-one
76. Mis-hit
77. Rolled past the hole
79. Mr. Jacobsen's init.

init. = initials
 _____ = fill in theblank

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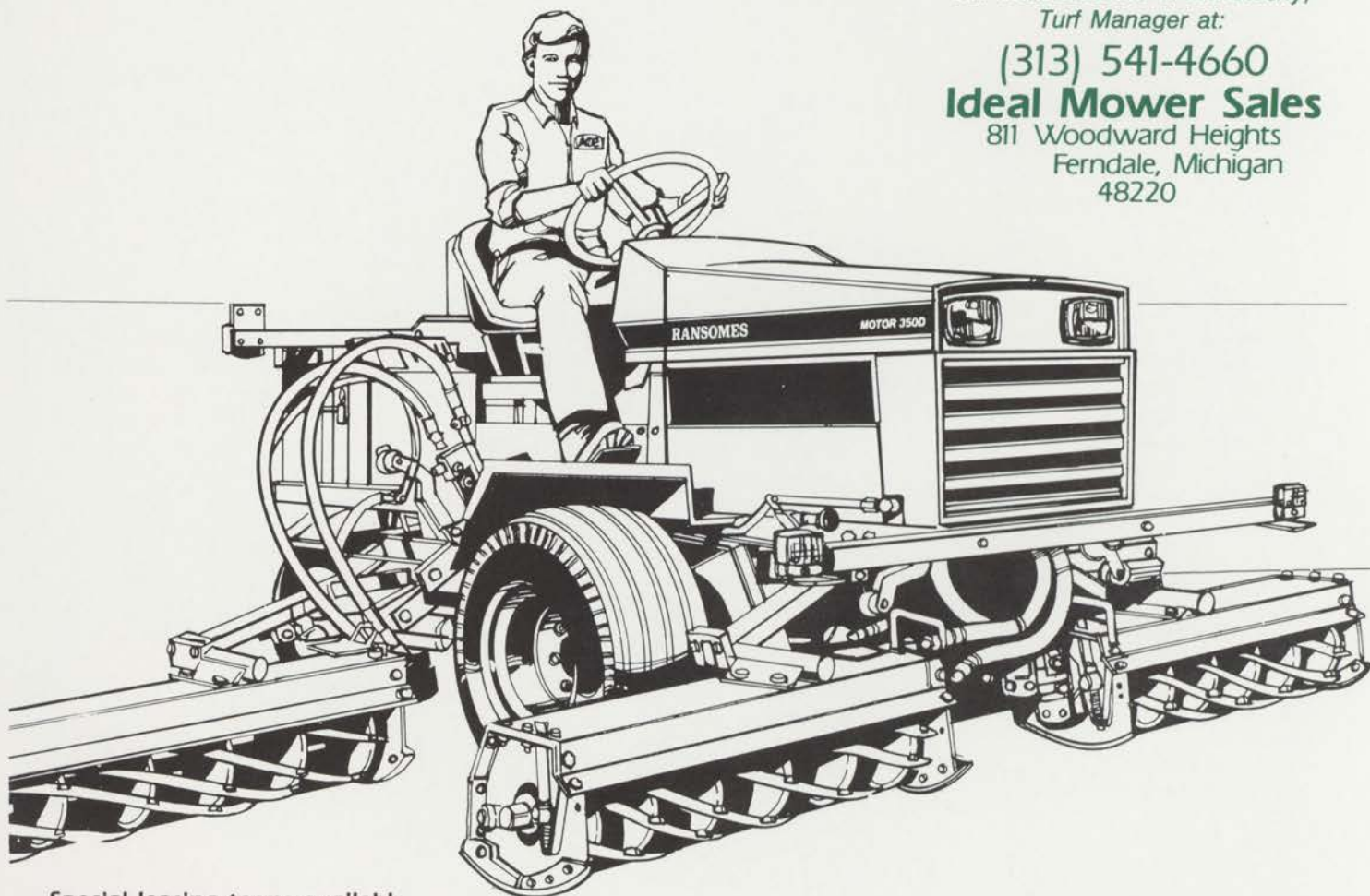
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SHELLCRACKERS KEEP THE GEESE AWAY

by Kevin Czerkies, Supt.
Sportsman's Country Club

Once again the topic of geese came up at the March MAGCS meeting. Like many courses, I had my fair share of them. My biggest problem with the geese was the droppings they left behind.

I had heard that Dave Beno at Bonnie Brook and Paul Bastron at Glen Flora were successfully scaring their geese away with the help of shellcrackers. I decided to give it a try.

Shellcrackers are a class "C" explosive that sounds like a gunshot when they explode. They are considered somewhat like fireworks; therefore, I needed written permission from the village of Northbrook and the police department before I could legally purchase them.

I ordered 600 shellcrackers and purchased a 12 gauge flare gun. The flare gun needed to be reamed out slightly to hold the shellcrackers.

Before I could begin firing shellcrackers, the Northbrook police asked that I notify all neighbors that bordered Sportsman's. I drafted a letter explaining our intentions, and had two of my employees distribute copies to each house.


Finally, it was time to begin. We began firing shellcrackers last October. At that time we had over 500 geese.

The first week my staff and I fired nearly 500 shellcrackers. Within one week period we had completely rid Sportsman's of geese.

Now, whenever any geese land on the golf course, a single shot clears the course again. The geese are so spooked that, quite often, they fly away before I can get a shot off.

It took a lot of time and effort to get this program implemented, but it's a solution that works.

Feel free to contact me if you have any questions.



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IT'S THE LITTLE THINGS THAT COUNT

by Dennis Lyon, CGCS
Immediate Past President, GCSAA

The Maintenance and management of that tract of land known as a golf course requires an intriguing blend of art and science. The scientific aspects of the profession are obvious. Golf course superintendents, by necessity, must have an aptitude for science. We are concerned with such things as pH, evapotranspiration, cation exchange capacity, percolation, allelopathy, volatilization, synergism, etc. However, the scientific aspect of the business is not the subject here. Rather, we are concerned with the "art" of professional golf course maintenance and management.

Besides growing good turfgrass, what is involved in the art of golf course maintenance? It is my opinion that good turf, good golf, and a good time on the links involve more than a superintendent's scientific expertise. The scenario also requires the superintendent's artistic understanding of the dynamic blend between the game, its beloved playing field, and the golfer.

There are many ways to approach the art of golf course management, and I shall touch on only a small part of the artisan approach to golf course maintenance, call it the "little things." In reality, it truly is the little things that count. It is all the pieces which mesh together in near perfect harmony to produce a great golf experience.

During my 18 years in this business, there is one observation I have seen repeated many times: Golfers are simultaneously understanding, yet cynical and forgiving, yet critical beyond description.

I have, for example, during the process of construction and renovation, relegated a golf course to a near unplayable status without complaint. At Aurora Hills (Colo.) Golf Course, in 1985, I had a contractor install eight miles of drainage to a depth of between four and eight feet throughout the course. The course was never closed. I have converted manual irrigation systems to automatic, with pipe and trenches everywhere, and only received comments of encouragement from the golfers. I've built greens, dug ponds, buried equipment, turned fairways into mud, and every other disruptive activity imaginable with hardly a whimper of dissatisfaction from the golfers. As long as they understood in advance why we were doing the work and what they could expect on the course when they played, the golfers understood.

However, let the tissue run out in the ladies' restroom, or provide ball washers with no water, or leave litter in the parking lot, or forget to mow a green, or place the pin in a seven-putt location, and the phone rings off the wall. Why? If the golfer feels or perceives the superintendent is working to improve the course, there's no problem. If, however, the golfer perceives that the superintendent is not paying attention to details and taking care of the little things, he becomes irate. To ignore the little things, even while concentrating on the "Big picture" agronomic aspects of turf management, is to communicate to the golfers that the Superintendent is not a good manager or else he/she simply does not care about the golfer.

What are these little things that mean so much? The following is a short list of items which come to mind:

1. A clean golf car.
2. A properly marked golf course.
3. Putting cups at the proper depth without a mound one inch all around.
4. No bird baths in the bunkers.
5. Bunker rakes which aren't broken and have painted handles.
6. Clean tee towels.
7. A friendly wave from a maintenance employee.
8. Soap and water in the ball washers.
9. Green flags that are not at half mast.
10. Maintenance employees who are clean and neat.
11. A clean maintenance area, rather than some place that looks like a cross between a junk yard and a landfill.
12. Clippings removed from tees.
13. Clean restrooms.
14. No cigarette butts around tee boxes.
15. Properly adjusted mowers.
16. Drinking water on the course.
17. Ground-under-repair areas marked accordingly.
18. Advance notice of maintenance activities.
19. Maintenance employees who know when to mow and when to move out of the way.
20. Edges of bunkers clearly defined.

This list of 20 is just a start. Every golfer can come up with a different list. The message is, Don't get caught not being able to "see the golf course for the grass." Great golf turf only gets you in the race; it's the little things in addition to great turf that guarantee the prize.

In keeping with the rule of semantics, that everything can never be said about anything, I would like to stress one final point about the little things. This point is about the little things in life. I shall refer to these little things as the building blocks of a lifetime. The day will come for each of us to reflect on our life's accomplishments. There is no question that we all desire to look back and feel we did a good job,

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that we made a contribution to the game and to our profession. Thousands of golfers will have traversed our turf and gone home satisfied, anxiously planning to return another day. But what about the superintendent as greenkeeper, equipment manager, agronomist, administrator, supervisor, et al? We are not one dimensional. What about the superintendent as husband, father, boy scout leader, coach, PTA member, and so on?

To me, it seems we sometimes expect so much of ourselves in our jobs that we can lose sight of what life is all about. Sometimes club members expect to see the superintendent every Saturday and every Sunday morning. Sometimes superintendents can never leave the golf course in the summer; not for a week, a weekend, or even a full day. Are we truly so important that we can't train an assistant or crew member to identify pythium, or that we can't tell the green chairman we are taking the kids to the mountains or beach for a week?

The stark reality of life's priorities became apparent to me three years ago, when the car in which my son, a high school junior, had always gone to lunch in, was involved in an accident. He was not in that car on this particular day, but the two girls who were had to be freed from the wreckage by the Jaws of Life and transported to a hospital by helicopter.

Yes, it really is the little things that count. Mine came in packages of 9 pounds 1 ounce, 6 pounds 13 ounces, 7 pounds 15 ounces, and 8 pounds 3 ounces.

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Plant The Flowers
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Mother Earth

Make The Fairways Attractive
As If An Artist Drew
A Lovely, Lovely Picture
When Golfers Come In View

Scenery Is Important
As The Golfer Starts To Play
Lovely Surroundings
Will Brighten Up The Day

The Men Work Hard
They Keep On Their Toes
Trying To Make A Living
Though The Wages Are Low

When The Work's Done
Deep Satisfaction
Greens Look Great
It Took Action

It's A Land Of Beauty
Where The Grass Is Green
Salute Those Men
And Their Machines

Poem By: Nettie B. Workman
April 12, 1990

The wife of Berry Hill C.C. Green Staff
Member, Ronnie Workman



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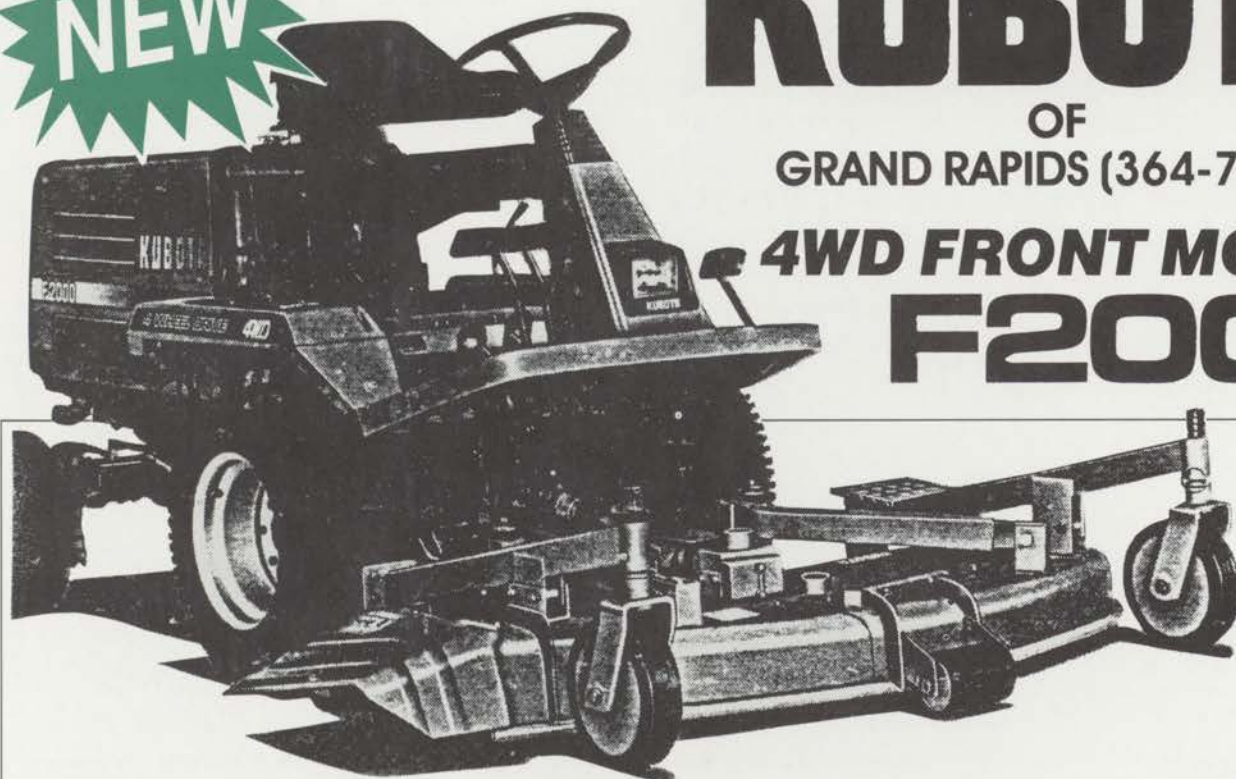
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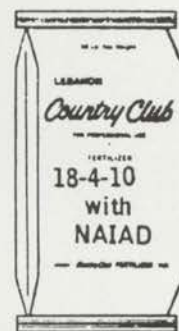
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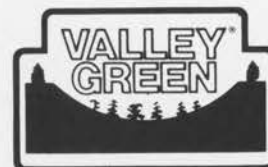
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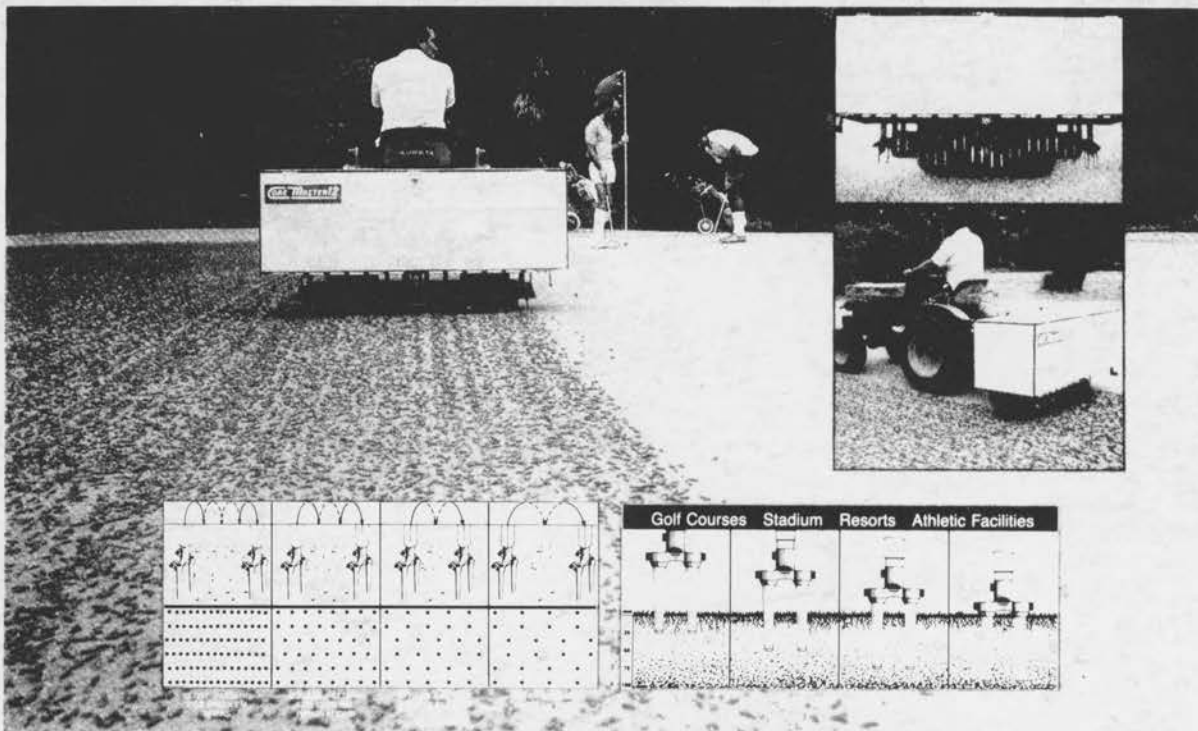
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