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Pleasant Hills Country Club and Buzzard Gulch Golf Club are both 18 hole championship golf courses in a growing town. They are located on opposite sides of the same street and are each responsible for maintaining 120 acres of land.

Mr. Green, the golf course superintendent at Pleasant Hills, employs seven people and spent 330,000 dollars last year to maintain the golf course and surrounding grounds which was 20,000 dollars less than he had budgeted for.

Every other Monday, when the golf course is closed, Mr. Green and his crew play nine holes of golf in the afternoon, even though some of the personnel are not good golfers. (Mr. Green believes that his employees spot problem areas more easily while golfing than they do when they are working; besides, it’s fun).

The members at Pleasant Hills all agree that Mr. Green and his staff do an outstanding job of keeping the golf course immaculate. That is why they have each donated ten dollars into a fund which will provide Christmas bonuses for the employees.

Across the street at Buzzard Gulch, the members are thinking of hiring a new golf course superintendent. They feel that Buzzard Gulch has the potential to be a better golf club than Pleasant Hills, yet it is always in terrible condition.

Mr. Brown, the superintendent at Buzzard Gulch, spent 380,000 dollars last year for maintenance, 30,000 dollars more than he had budgeted for, and has 12 people on his crew.

Of the 12 employees, he can only count on eight to show up for work on any given day, and their performance seldom qualifies as mediocre. He always has help wanted ads in the newspaper because the employees at Buzzard Gulch don’t stay for any length of time.

Every other week when Mr. Brown sees the personnel at Pleasant Hills playing golf, he gets frustrated. He never has time to play golf because it takes him two days to accomplish what Mr. Green gets done in a few hours.

Mr. Brown knows he has a problem, but he has no idea that his difficulties are the result of poor employee motivation. And although Pleasant Hills and Buzzard Gulch don’t really exist, they are good examples of how the attitudes of golf course personnel can affect the condition and expense of a golf course.

Today, salary and fringe benefits such as hospitalization and life insurance are no longer stimulating enough to sustain high levels of performance. Employees must be emotionally satisfied or the quality and quantity of their productivity becomes poor.

It is therefore important that a golf course superintendent provide a variety of incentives for his crew members and that he structure work so that each individual can realize his full potential.

Cary Lewis, formerly of Windstar Country Club in Naples, now at the Vintage in Fort Myers, Wayne Lippold of the Forest Country Club in Fort Myers, and Buddy Carmouche of Fiddlesticks Country Club in Fort Myers contributed the following examples of how employee motivation works for them.

The first step to consider in employee motivation lies in hiring people who are suitable for the type of work required on a golf course. A person who dislikes working outdoors or doesn’t enjoy physical activities isn’t going to remain satisfied for any length of time on a golf course, regardless of the incentives a superintendent offers. And the individual who is dissatisfied with his work has a tendency to infect other crew members with his attitude.

Once the hiring is complete, job satisfaction becomes the next area of critical importance. If employees are to remain stimulated, the superintendent needs to be aware of what most advantageously affects their attitudes.

Cary Lewis gave a questionnaire to his staff to determine what had the most positive effect on their feelings of job satisfaction. Recognition of good performance came in first, followed by opportunity for advancement, with salary, or pay rate, placing third.

There are several different ways of letting an individual know that his work is appreciated, the most inexpensive of which is praise. Complimenting the person who, for
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example, does an outstanding job of mowing greens raises his self-esteem and instills pride in his achievements. It also allows the superintendent to positively reinforce his policies regarding the quality of work he expects from his personnel.

Rewards are another way of recognizing good performance. A day off with pay, an employee of the month award, comp time (the employee gets time off for the amount of overtime he puts in), a free lunch, or a field trip to a superintendents meeting are a few good examples.

Financial rewards such as sick leave or personal time also help stimulate motivation. For a predetermined amount of time that a person puts in, he gets a paid hour of sick leave or personal time which can be added to vacation time if desired. This type of reward prevents absenteeism and promotes dependability.

Pay raises and bonuses provide excellent incentives for personnel. Wayne Lippold evaluates his staff each year before Christmas and, because the individuals who have worked the longest in his service deserve special recognition, he gives bonuses for longevity as well as performance.

Allowing crew members the opportunity for advancement as higher level positions become available is an additional means of rewarding those who excel at their work. Promotions are great goal builders and employees without goals are seldom high achievers.

To assure personnel that they are being treated fairly, establish a written policy and don’t deviate from it. Included in the policy should be proper attire, care of equipment, break and lunch times, safety rules, and reasons for dismissal.

Keeping files on individual crew members and recording their attendance along with specific information with regard to job performance also assures employees of fair treatment. If, for example, an individual is passed over for promotion because of poor attendance, the superintendent won’t have to guess how often the person was absent, he’ll know. The files can also help the superintendent justify his reasons for firing an employee or giving large pay raises to some and small raises to others. Personnel should be permitted access to their respective files so they’ll know where they stand and there won’t be any disputes over the superintendent’s remarks or comments.

When negative feedback becomes necessary, calm, rational reprimands made in private get best results. Yelling at a person who has made a mistake while other crew members are present can generate negative feelings that are irreversible. And delegating the task of reproval to an assistant or foreman helps to maintain comfortable communication between staff and the superintendent.

Communication is essential to any productive work force and staff meetings can provide an opportunity for the superintendent to clear up any misunderstandings or problems before they create negative attitudes. Staff meetings also give personnel a chance to make suggestions, which gives them a feeling of contribution while increasing their job involvement.

Buddy Carmouche believes that the key to employee involvement lies in delegating authority and giving more responsibility to crew members. With that in mind, he permanently assigns two employees to nine holes of the golf course who are then responsible for everything from repairing divots to mowing greens.

Not only does this program help prevent the boredom caused by repetitious work, it creates competition between crew members for the best nine holes out of 36. The work is more interesting for the employees and they are permitted to make some decisions regarding their particular nine holes.

As a final suggestion, golf course superintendents should assign the most demanding tasks in the morning when employees are fresh and motivation is highest. Pushing crew members after lunch can be frustrating and the beginning of poor work habits.

Good employees are hard to find and the golf course superintendent should make every effort possible to keep them. As was illustrated by Mr. Green and Mr. Brown, motivation plays an essential role in the productivity of personnel. It is an internal need of every individual and the superintendent who can create a positive work environment for his staff will have a better golf course, with fewer problems, at a lower cost.
Water Quality On The Golf Course

By Lynn Griffith

Golf Course Superintendents apply many things to their grass in order to establish and maintain a quality playing surface. Fertilizers, wetting agents, pesticides, fungicides, herbicides, and nematocides are all applied regularly to turf in order to accomplish these goals. If you think about it, however, a golf course superintendent applies far more water to his course than anything else. Water quality is often overlooked and only occasionally thought of by most turf professionals, but all things considered, it can lead to a significant difference in turf quality between your course and the one down the street.

Water quality affects performance in various and subtle ways. It can affect soil pH, moisture stress, pesticide activity, buffer capacity, disease pressure, nutrient requirements, and a number of other surprising, seemingly unrelated parameters. How water chemistry interacts with turf performance is the subject we will cover here.

Probably the most important thing to consider is the pH of the irrigation water. Soil pH is significantly affected by the pH of the water applied. In fact, at lower fertility rates, soil pH often takes on the irrigation water pH, especially in sandy or poorly buffered soils. Golf courses in central and southern Florida often irrigate with water of pH 7.2-7.6, even approaching 8.0 in some areas. Inland areas in central and northern Florida have water which runs 6.6-7.2, although there are many exceptions to these averages. When alkaline water is a problem, trace element availability in the soil can be a problem. Chelates may be necessary in these cases where high pH tie-up hinders uptake of non-chelated metals.

High pH water have been shown to adversely affect pesticide performance in a number of instances. The organophosphates can be especially sensitive to high pH hydrolysis. With the cost of chemicals today, it makes sense to consider acidification of the spray tank water. The amount of acid needed to place alkaline water into a good pH range (say about 6.0) varies with water pH and the buffer capacity of the water. As a general guide, however, a shot glass of 75% food grade phosphoric acid (available at most chemical supply houses listed in the yellow pages) will put 200 gallons of spray tank water into and acceptable pH range.

Another major water quality criterion is the amount of dissolved salts in the water, as measured by electrical conductivity. The higher the level of dissolved salts in the water, the more electricity it will conduct. In fact, total dissolved solids is a direct calculation from the electrical conductivity. For over eleven years we have been at the leading edge of nutritional technology and TOTAL CONCEPT SERVICE, providing:

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iron hydroxide. The sunlight oxidizes this to iron oxide, or rust. If rusty water is a problem from wells, it is best prevented by the use of filters or injection of chelating agents. Lake water with rust can be improved by aerating the water, which will precipitate some of the iron in the lake itself.

Salt intrusion can be a serious obstacle to turf maintenance. Areas around Melbourne and the Bradenton Sarasota area are especially affected. The high sodium in the water tends to "crowd" the potassium out of the soil colloids. The grass plant tends to run deficient in potassium, causing abnormal water stress and sensitivity to wear. The golf ball may not stand up well in the grass. Salt intrusion can also add excess levels of boron to irrigation water.

Most Florida ground water contains only minimal amounts of the major plant nutrients - nitrogen, phosphorus, and potassium. Those who inject soluble fertilizers into lines where drinking water is taken from the same well should be sure that fertilizer does not enter the drinking water. Levels above 45 ppm nitrate can affect the health of infants under six month of age.

Most coastal and southern Florida irrigation water contain high levels of calcium. High calcium can affect water pH. At the same time, magnesium availability in turf soils can be a problem when high calcium waters is used. Staining of fixture can also be troublesome.

Carbonate and bicarbonate ion content is also very important. In addition to contributing to the staining problem, large amount of these ions will, upon drying in the soil, precipitate calcium and remove it from the soil. This can result in a net deficit of soil calcium over time, leading to pH or nutritional problems. Carbonate ion will not be present unless the water pH is above 8.0. Bicarbonate levels can be a problem above 120 ppm, and are especially troublesome in southeast Florida.

Iron staining can be a serious problem for some golf courses. When water contains high levels of calcium and bicarbonate, and has more than 0.1 ppm iron, staining often results. The iron dries on plant and soil surfaces as

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(continued from page 15)

trical conductivity reading. When using water containing high soluble salts, risk of burn from pesticides and soluble fertilizers is substantially increased. Conductivity ideally should be less than .75 millimhos (about 500 ppm) for golf course irrigation. If it is much higher, the grass will be more sensitive to water stress, especially in areas subject to winds or elevated berms and tee slopes.

Varying the depth of a well can significantly affect water quality. These wells can be high in iron and sulfates. Deep wells may yield very good or very bad water. Tendencies vary from region to region. One way to combat salty well water is to dilute it by pumping into a lake to mix with rain water.

During drought periods, water quality deteriorates noticeably. There is less water to dissolve everything in, and the water travels farther to get to the well point. Thus, any existing water problems become magnified in a drought. Rain water is far more pure than ground water, and quality is improved when rain replenish the ground water. The purity of rain water and the oxygen dissolved in it often "linen up" turf more than an equal amount of irrigation. This response to rain is a classic example of the benefits of good water quality.

Pesticide and herbicide residues are not frequent problems with well waters, but may be significant in lake and canal waters. Detection is difficult, and chemicals must usually be analyzed individually or by the class of compound. Superintendents sometimes ask to have the water tested for "chemicals", but this can only be done if a specific type of chemical is suspected.

Plant disease causing organisms may sometimes be present in irrigation water. Water from ponds, lakes, or canals are more likely to contain pathogens. Bacterial pathogens and the water mold Pythium are the most likely to occur. This is not a common problem, but if pathogens are suspected, water samples can be baited for disease causing organisms.

As you can see, water quality has many facets, and any of them can affect turf production in unexpected ways. If you are having problems that other fellow superintendents are not having, even though their cultural practices are similar, water quality might be the hidden cause. Bad water problems must first be identified, and then appropriate measures taken. Sometimes a superintendent just has to live with bad water quality, but if he knows what the specific problem is, he can compensate for it more intelligently.

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On January 8, 1985, the South Florida Golf Course Superintendent's Association honored one of its long time ACTIVE members, Paul Turcotte. The meeting was held at Miami Springs Golf Course, one of two city of Miami golf courses that Paul supervises. This was also the last time Paul will host a meeting since he will be retiring from the city of Miami after 31 years of service on January 25, 1985. The South Florida Golf Course Superintendent's Association presented Paul with a plaque to commemorate his 24 years of active participation in the association.

Paul Turcotte with his wife showing matching gold watches that they received from the City of Miami. Al Howard is in the background making the presentation.

Paul, the second youngest of six children, grew up on a farm outside of Lewiston, Maine. Public schooling in rural communities such as Lewiston was different than today. The school which Paul attended consisted of a one room school house in which from first to sixth grade Paul was the only one in his class. In sixth grade Paul's family moved to the city. Since there were no more chores to do, Paul immediately got himself a job after school at Dube's Nursery. Six years later, after graduating from high school, Paul became general manager of the nursery at the age of 18. Five years later, Paul was hospitalized for three weeks when an over accumulation of the insecticide, Pyrethins, left him paralyzed. After his recovery, Paul decided it was time for a change. In November of 1952, Paul, his wife and three month old son, headed for Miami. Paul worked approximately nine months with Exotic Gardens before accepting the horticulturist position with the city of Miami. In 1959, Paul took a cut in pay to work on the Melreese Golf Course (formerly LeJeune Golf Course). It was his first exposure to golf course maintenance. In June of 1960, when the golf course opened for play, Paul was superintendent. In 1968, with the retirement of Woody Laughinghouse, Paul took over the maintenance of both city golf courses. As
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Paul's knowledge grew in turf, so did his responsibilities. In 1973, he was promoted to assistant director of parks, and took on the maintenance responsibilities of the city's 92 parks. During this era, Paul became involved in a number of different projects. The first documentation of Lethal Yellow Diseases in Miami occurred ten blocks from the Melreese Golf Course. Paul worked extensively with the University of Florida to try to find a cure to the dreaded disease which eventually took the life of 1,500 palm trees on his golf courses. Paul also was involved in the installation of the Prescription Athletic Turf System in the Orangebowl.

It is hard to believe that Paul would have time for other outside activities when one considers the amount of time he puts into his job and professional trade associations. For 12 years Paul worked with the Boy Scouts — ten of those years as a scoutmaster. He eventually became the overall chairman of the scouting program in this area. In 1966, Paul approached the leaders of his church about setting up a support group for the prisoners of Dade County. Through his efforts, five programs have been established in Dade County. For 18 years, Paul has spent two days per week, one evening, and one Saturday morning trying to help prisoners find a purpose in their lives. He is very active in his church serving as president of the Saint Vincent DePaul society.

What effect has all this volunteer work had on Paul's home life? What sort of wife would tolerate a husband who spends all his time helping others? Well, fortunately, Paul has a wife who is equally as generous who he met 40 years ago as a teenager in Lewiston, Maine. They have two lovely children who are now grown and seem to have been influenced by their father's example of helping others. His daughter is a registered nurse, and his son who has a Ph.D. in psychology heads a program for the rehabilitation of people with drug, alcohol, and emotional problems.

So it is only fitting that in a time when many associations are experiencing apathy from their membership, that the South Florida Golf Course Superintendents' Association honors one of its members for being ACTIVE for 24 years. Paul has set an example which if many of us would follow, would not only make our association stronger, but also enhance our personal lives.