

The Official Bulletin of the South Florida Golf Course Superintendents Association

EDITOR - Mike Barger

ASSOCIATE EDITOR - Tom Mascaro





CONTENTS

esident's Message 1
n Management
ecommended Reading 2
om the National 2
oming Events 4
raight Shots 5
er Profession Is Grass
orida Turfgrass Survey 9
p Dress Greens and See the Difference

ON OUR COVER

Looking across #9 & 18 Fairways at the beautiful Biltmore Golf Course SOUTH FLORIDA GOLF COURSE SUPERINTENDENTS ASSOCIATION

Board of Directors:		Committee Chairmen:		
Lou Oxnevad Riviera Country Cluo Coral Gables, Fla.	President	Henry McCartha Sentell Supply Co.	Reservations	
Mike Barger Supt. of Golf Courses City of Coral Gables, Fla.	Vice President	Walter Benton W. R. Grace Co.	Golf	
George W. Cavanaugh President Country Club	Sec'y/Treas.	Sunny Smith Superior Fertilizer Co.	Social	
West Palm Beach, Fla.		Larry Weber	Public Relations	
Carl McKinney P.G.A. Country Club	President Emeritus	Inverary Country Club		
Palm Beach Gardens, Fla.		Mack Parsons	Education	
Paul Turcotte LeJeune Golf Course	Director	Boca Raton Hotel		
Miami, Fla.		Bob Blancett De Bra Turf Equipment Co.	Helping Hand	
Henry St. John	Director			
Maintenance Supervisor - Golf Div. City of Miami Beach, Fla.		Otto Schmeisser Indian Creek C.C.	Scholarship & Research	
		Indian Creek C.C.	Resourch	
Billy Wright Villa Delray, Inc.	Director	Evert Misener Pembrook Pines I td	Membership	
Delray Beach, Fla.		Pembrook Pines, Ltd.	F	

ON MANAGEMENT

COMMUNICATING

How many times have you heard this expression: "The Superintendent? He's back in the Barn." "Back" means some remote, inaccessible area. "Barn" could bring to mind a pile of manure.

tion is a far cry from the original old "Bams". They have long since passed away like the old "Black Shed" of St. Andrews. When one realizes the magnitude of the total investment of equipnent tools and supplies to maintain a golf course, it seems imptobalic that this would all be stored in a "Barn".

The modern golf course should have a "Service Center" to house and stoke a considerable investment. In addition, the Service Center should have office facilities for the Superintendent and his staff. Briefly, an adequate Service Center will be a workshop for repairs and have space for all maintenance machinery storage, parts inventory storage (locked), chemical storage (locked), fartilizer storage, offices and a crews room with attoiren, paved areas are provided

RECOMMENDED READING

Water is a vital part of our lives in Florida. Write to the Supt, of Docu-



President's Message

Eye Appeal

The quality of man's life depends upon the quality of his surroundings and his environment. Our job as Golf Course Superintendents should be to improve the quality of the golfers' surroundings by creating a living environment with beautiful turf, lush vegetation and flowers so that a golfer can escape from the problems and pressures of his day for a few hours. We should continually improve the golf course not only for playing condition but for eye appeal. I wonder sometimes, if eye appeal is not the most important thing to most golfers. Neatly trimmed shrubbery, the traps edged and cart paths edged, freshly painted benches and trap rakes, the white cups, trees both trimmed and neatly mowed at the base, the lake banks mowed and the ponds clean and free of weeds. The ball washers clean and full, also neatly kept restrooms.

We can have bad greens or tees even weeds in the fairways and roughs, but I think if we would give a little special attention to eye appeal around the golf course these things would help us during he difficult time when our golf course was not in as good a condition as we would like it to be.

have been made will improve upon an already great event. On behalf of the Executive Committee, I woul like to invite your attendance an participation at this year's Co forence and Show and its mun related activities.

News on the Pension Plan..... With Congressional approval of the pension reform bill, GCSAA Pension Plan moved one step closer to reality and the flecessary steps are now bein talen to formulate an acceptable plan

Lan Openend

ON MANAGEMENT

COMMUNICATING

How many times have you heard this expression: "The Superintendent? He's back in the Barn." "Back" means some remote, inaccessible area. "Barn" could bring to mind a pile of manure.

Today's modern golf course operation is a far cry from the original old "Barns". They have long since passed away like the old "Black Shed" of St. Andrews. When one realizes the magnitude of the total investment of equipment tools and supplies to maintain a golf course, it seems improbable that this would all be stored in a "Barn".

The modern golf course should have a "Service Center" to house and store a considerable investment. In addition, the Service Center should have office facilities for the Superintendent and his staff. Briefly, an adequate Service Center will be a workshop for repairs and have space for all maintenance machinery storage, parts inventory storage (locked), chemical storage (locked), fertilizer storage, offices and a crews room with showers, lockers and a lunch area. In addition, paved areas are provided around the building for parking, washing and cleaning of equipment. Screen plantings to mask the entire Service Center complex completes the picture. An investment in a Service Center by any club is a money saving capital outlay. Equipment life and sheer efficiency of the whole maintenance operation pays handsome dividends against ever rising costs.

If you have a "barn", by all means keep calling it by that name. If you have a Service Center then insist on using that name for your center of operations. It becomes apparent to club officials that this is not only a better reference to your operation, but also a more meaningful description of the buildings that house his well invested money.



RECOMMENDED READING

Water is a vital part of our lives in Florida. Write to the Supt. of Documents, Washington, D.C. 20402 for Bulletin #30J titled: Our Land and Water Resources. It costs \$1.00 and deals with current and prospective supplies and uses. It includes a summary of national rural land and water uses, estimates of future land and water requirements to meet projected national agricultural production needs, and a discussion of environmental and institutional factors that affect the availability of land for agricultural and other uses. A thorough understanding of these situations will give you a better insight for water needs on your golf course.

If you have not ordered your book "Landscape for Living" (1972 Yearbook of Agriculture) from this same source (\$6.85) you should do so.

Bulletin 13J titled "Wheels and Wheeling" is an interesting presentation by the Smithsonian Institution. It traces the development of the cycle over the last two centuries. This is certainly recommended reading to anyone working with wheeled vehicles today. Without these phenomenons, we could not have had the sophisticated equipment for maintenance of golf courses that we have today.

Also available from the Supt. of Documents is a bulletin for .40¢ titled "1405 Patents and Inventions". It is an information aid for inventors. A step by step guide for the inventor who may wish to patent his invention. It also includes information showing him how to protect and promote his work. Many Superintendents are inventive. Here is a good guide if you have a worthwhile idea.



FROM THE NATIONAL

All Golf Course Superintendents and individuals having a vital interest in golf course maintenance are urged to attend the GCSAA 46TH INTER-NATIONAL TURFGRASS CON-FERENCE AND SHOW being held February 16-21, 1975 in New Orleans, La. Information preceding this Conference and Show indicate that this one may be the "best ever". For your review, we are printing below GCSAA President Charles G. Baskin's invitation: "Preparing For Change...Together," the theme of GCSAA'ss 46th Annual International Turfgrass Conference and Show was selected with great care, because it was felt that it epitomizes the nature of this year's events and of things to come.

As a result of numerous suggestions by the Membership, the Executive Committee and the Headquarters staff, a completely revised educational program has been planned for the week-long event. For the first time, topics of general and special interest will be offered concurrently, thus providing you a greater opportunity to choose those areas that interest you most and that will afford you additional education.

Additionally, Pre-Conference seminars and GCSAA Certification examinations will be offered. Pesticide Seminar 1, "Principles of Chemical Usage," and Management Seminar 1 "Financial Decision Making," will be held February 15 and 16, while the six-hour Certification examination will be given February 16 and again February 21.

As well as improving ourselves through education, we have an opportunity each year during the Annual Membership Meeting to set the course of the Association and to elect the coming year's Executive Committee. Although membership participation throughout the year is increasing, this once a year meeting of all GCSAA members provides us the opportunity to jointly discuss the Association's future and to prepare for those changes we would like to see ... together.

Looking over the information packet for the Conference and Show, it is hoped that you will discover that the changes which have been made will improve upon an already great event. On behalf of the Executive Committee, I would like to invite your attendance and participation at this year's Conference and Show and its many related activities.

News on the Pension Plan..... With Congressional approval of the pension reform bill, GCSAA Pension Plan moved one step closer to reality, and the necessary steps are now being taken to formulate an acceptable plan.



TRI-NITE REDUCES GOLF-COURSE MAINTENANCE COSTS!

In these days of rising costs, the efficiency of fertilizers becomes the watch word to reducing golf-course maintenance expenses. Turf-grass recovers more plant nutrients from TRI-NITE.

TRI-NITE — is a granular organic type nitrogen fertilizer containing MILORGANITE and fortified with minor elements (16-1-0).

TRI-NITE - is non-burning.

TRI-NITE — is long, long feeding (on improved Bermuda Grass, apply 10 to 15 lbs. every 60 to 90 days).

TRI-NITE - feeds efficiently, resists leaching, and reduces environmental pollution.





Mechanical turf damage to green in New Jersey.

Answer on page 5

FROM THE NATIONAL, cont'd.

Prior to the House voting, President Baskin had discussed the matter with Rep. Donald Sarasin (CT), of the House Education and Labor Committee and with Rep. Wilbur Mills, chairman of the House Ways and Means Committee. In addition, Senator Carl Curtis (Neb.) was contacted on the subject during the Spring meeting of the National Club Association in which President Baskin participated.

The Association has directed its pension consultant to begin drafting a proposal which will meet the new requirements and to solicit necessary information from numerous insurance companies in order that a plan may be effected as quickly as possible.

HOOKS AND SLICES

Two stuttering blacksmiths had finished heating a piece of pig iron, and placed it upon the anvil with a pair of tongs.

"H-h-h-h-hit it," he stuttered to his helper.

"Wh-wh-wh-wh-where?" asked the helper.

"Aw, h-h-h-hell, we'll have to h-h-h-heat it again now."

Interested observer: "Well, I see you're putting up a new building."

Salty Old Superintendent: "Yeah, that's the only kind we ever put up."

On making love to a midget.....Yes, it's fun, but there is no one to talk to.

.....

COMING EVENTS

S.F.G.C.S.A. MEETINGS:

Tuesday, November 12, 1974 North Palm Beach Country Club North Palm Beach, Florida

Tuesday, December 10, 1974 Doral Country Club Miami, Florida

Tuesday, January 14, 1975 Agriculture Research Center Ft. Lauderdale, Florida

February 16-21, 1975 GCSAA 46th International Turfgrass Conference and Show New Orleans, Louisiana



Atlantic Fertilizer & Chemical Co. ATLANTIC **TELEPHONE 247-8800** WATS: 1-800-432-3413

STRAIGHT SHOTS

CAREFUL PLANNING CAN HELP YOU GET MORE OUT OF EDUCATIONAL MEETINGS

Conferences, conventions, field days, seminars, workshops, annual meetings – regardless of what they are called, periodic gatherings with an educational purpose can result in new or refined knowledge, providing the attendee goes in with a plan.

Each year there are ample opportunities to attend meetings and glean additional information, from the local level, through state and regional, all the way to national and international gatherings. In most instances, money for this type of gathering is limited, so care must be taken to see that the greatest value is received for the money expended. In order to achieve such a purpose, the following suggestions are made:

1. Familiarize Yourself With Schedules. Learn what is coming up, where it is going to be, who is going to be there and what they will be covering. Often times, magazines on the subject will include a listing of upcoming events and a review of these publications will give you a good start on the list of possibilities. Some meetings occur so regularly that personal knowledge can give you a general time frame for such meetings, or acquaintances may be able to recommend various meetings which they have found valuable.

2. Request Advance Materials. Most meetings are planned well in advance and as a result, considerable information is available to potential attendees. Receipt of this information will allow you a better opportunity to review the organization and contents of a future meeting.

3. Evaluate the Program. Once you have determined you will be attending a meeting and have the materials in hand, begin immediately to review and evaluate the program. Try to determine which of the offerings will be the greatest value to you personally. Doing this in advance of the meeting will permit you to better plan your time and as a result accomplish much, much more.

4. Register as Early as Possible. Advance registration will help you and the sponsoring organization. You will receive additional materials which can be extremely useful, and the organization can better determine the number of attendees and make necessary arrangements. In some cases, advance registrants can save money, but certainly they will be expected at the meeting, and materials will be prepared for them. In addition, there will be less of a delay upon your arrival at the meeting registration area.

If pre-meeting registration is not available, plan to arrive early and register on-site as soon as possible. Turn-away attendance is unusual, but important materials may not be available in sufficient quantities for late registrants.

5. Follow Your Meeting Plan. At the meeting, there may be last minute changes that will draw you away from some planned activity, but try to avoid missing those meetings which you pre-determined would be personally important. If you learn that some session is not going to be what you expected, change your plans accordingly, but don't lose time and information by procrastinating in the hallway.

6. Mingle and Meet Others. Answers to the questions you have may not be scheduled for the program, so the one method of acquiring answers is to meet fellow attendees. Meeting and talking with new people will heighten your opportunities to learn.

7. Ask Questions at Every Opportunity. There is no such thing as a "dumb question," and the only way you will receive specific information concerning your questions is to ask for it. Your problems may be so unique that your question has never arisen before, or it may be so common that everyone is suffering from it. In any event, seek answers to your questionsduring question and answer periods, or during casual meetings.

8. Seek Out the Experts. At every gathering you can safely assume that someone will be present to answer your questions or to provide you a source of information. If you are uncertain who you should go to, ask fellow attendees for suggestions.

9. Make Notes and Gather Materials. Regardless of how good you feel your memory is, take notes and pick up every possible handout. What appears to be insignificant at the time may be specifically what you need later. That bit of information noted during the meeting may come in handy later. This will also facilitate easier follow-up if you need additional information in the future. While your memory may fail you, your notes and materials probably won't.

Attendance at meetings can be extremely valuable, or an extreme waste of time. Normally, the results will depend upon the "homework" completed prior to leaving home and the attitude of the attendee.



Answer (Can You Top This?)

Here is what turf will look like when you place a bucket of hot charcoal on it. Although it was not killed, the tops of the grass plants were scorched and unsightly. This is one of the many problems that occur around the clubhouse.





HER PROFESSION IS GRASS!

By Tom Mascaro

Would you believe that Debbie Winters helps grow grass-for a living? Not the kind of grass that seems so common to her generation, but the kind of grass that beautifies America and keeps people healthy. Your guess is right-Debbie works on a golf course.

Golf courses have traditionally employed men only in America. This is not true in other parts of the world, but for some reason golf courses in the United States have always had all male maintenance crews.

There have been a few exceptions, but these were rarities. For instance, Mildred Corrie became a tractor driver during the Second World War at the old Wilmington cc in Delaware. She moved with the club to its new location, outside of. Wilmington and became the right hand man-(oops Gal!) for Superintendent Gus DeFelice and then, with Harry McSloy, present golf course superintendent. Mildred is now retired. While on the job, she learned to do virtually everything. She not only drove tractors, she repaired and kept them mechanically perfect. Gradually, she took charge of the courses maintenance shop and issued work orders to the men. With her deep knowledge and love for growing good grass, Mildred unquestionably qualified to become superintendent of her own course. But she chose not to leave the club.

Zelda Baxter of Keokuk, Iowa, became the first women in the United States to reach full status as a golf course superintendent in 1954. Her husband was President of the Carthage Illinois Golf Course across the river from Keokuk. Zelda became familiar with club operations and then her interest turned to grass maintenance. She took over the job of supervising the links at Keokuk Country Club in 1959.

Chet Mendenhall, Superintendent of Mission Hills cc Kansas City, Mo. had a lady assistant named Mrs. Barker, and two girls on his work crew in 1959.

But, these were all unusual cases that were the main topic of conversation at many golf course superintendents meetings. Now this is no longer true. Girls-girls are everywhere! They are driving tractors, wheeling triplex greens mowers, raking traps, washing down equipment, digging ditches, planting trees, spraying-you name it and they can do it. South Florida apparently leads the nations golf courses with female maintenance crews. Larry Weber, Superintendent of Inverrary Country Club has had as high as 12, with about 5 or 6 still on the payroll. Tom Grondski, Superintendent of Ocean Reef courses has four girls on his crew. Arling Grant, Superintendent at Innisbrook cc Tarpon Springs, Florida, had at last count, 22 girls working on his course.

Some golf course superintendents, like Otto Schmeisser at Indian Creek have daughters that work on the golf course in the summertime. Woodlands CC Ft. Lauderdale, has had as high as 25 girls, but with college terms arriving, the crew will stabilize at 11 or 12.

Joe Yuzzi, Golf Course Superintendent at Woodlands, looks at it this way. "The mere presence of female help on the golf course changes the total environment. Everything is cleaner and neater. The language is civil and a happier atmosphere prevails. Girls are generally perfectionistscertainly more than men. They are neater and more careful in their work."

Although it may not appear so to the average golfer, maintenance of the grass on greens, tees, fairways, and even roughs, is an exacting profession. Extra care is needed to determine the grass's nutritional requirements, mowing schedules, irrigation and general overall maintenance. Millions of dollars are invested in our South Florida golf courses. Professional people are required to protect this investment, which not only provides wholesome



Joe Yuzzi and his crew?



... and he says they can do anything ! recreation for Florida residents, golf courses are virtually the backbone of the tourist industry.

Superintendent Joe Yuzzi goes on to say, "Girls seem to obey orders better than men. They listen carefully to detailed directions and then carry them out to the letter. A ten to twenty thousand dollar green leaves little room for mistakes or shoddy work."

Joe is so pleased with the work that the girls have done he decided to promote Debbie Winters to an assistant superintendent's position. As a result, Debbie is now a working assistant directly under Joe. She issues orders, makes decisions on her own in some areas of the operation, and shoots down problems before they start. Three male mechanics back her up with a superb preventive equipment maintenance program.

How did Debbie get into this line of work? "Just looking for something to do," she says, "I thought I wanted to be a Physical Education teacher. After completing Broward Junior College, I went to Florida Atlantic University. It looked like I was on my way to becoming a professional student. Then, I suddenly lost interest in Phys. Ed. I heard that Woodlands was hiring girls for golf course work, applied, and got a job on the crew." As Debbie puts it, "All of a sudden my whole outlook on life changed. I looked forward to each day. I suppose I was out to prove something in life and here was the opportunity of a lifetime. I wanted to do everything. I drove tractors, cut grass, sprayed for insects and diseasesyou name it on the golf course and I can do it."

Debbie hails from Charlotte, North Carolina. She has found her place in the sun, here in Florida. Like many of the other girls I have talked to that have chosen this line of work, Debbie loves the challenge of a male-dominated profession. She enjoys the outdoor work, in any kind of weather. Her work day starts at 6:00 A.M. and ends at 3:30 P.M. In the cool of the morning, before the golfers ... art banging away, the big grooming jobs are completed without interference. She likes the fact that there is no pressure when you work with nature.

Debbie wants to pursue this line of work until she learns it well enough to become a full fledged Golf Course Superintendent.

There are, of course, many reasons why girls have chosen this field. Perhaps the biggest reason is that in the last 10 years, golf course maintenance has largely become mechanized. Slow, tedious, back-breaking hand work and walking sbehind machines have given way to sophisticated riding equipment. Dragging and lifting heavy hoses to irrigate the grass has been replaced with automatic watering systems. There are few laborers needed on the golf courses. Trained technicians that can operate modern equipment are needed now. Brains, rather than brawn are more in demand, hence this evolution to girl operators.

There are other reasons too. "Office jobs cost money," as one girl put it, "Almost everything I made went back into clothes for the job." Most girls wear shorts, a shirt and shoes. Another gal, who wanted to remain anonymous stated, "I was all trussed up in office clothes. Here, I don't even wear a bra." The biggest attraction is the money. As Debbie puts it, "I'm already making twice as much as my former teacher."Golf courses pay well, generally speaking. Opportunities are also good for summertime work, which gives some girls needed extra income to complete their college education.

All the girls at Woodlands are single, with the exception of Gladys Saski. Her job is to groom the play equipment, (ball washers, tee towels, etc:), before play starts. Their ages average in the mid-twenties.

The Woodlands Green Committee is also unusual in that it has two women helping make club decisions. As a result, according to Superintendent Yuzzi, Debbie and her girls are well represented in policy matters.

When I asked Debbie if she had any hobbies, she smiled sheepishly and said, "I paint." "Are your preferences



Old Joe Yuzzi and his beautiful young Assistant Superintendent

portrait, landscape or other areas?" I asked. She looked straight into my eyes and with a broad smile that is much a part of her personality, responded, "I didn't mean to imply that I was an artist, I paint houses!"

With this Superintendent Joe Yuzzi laughed and said, "They are all originals too-she never gets invited back." This is the kind of rapore that Yuzzi has developed with his girls and men.

My own observations are that it takes a special type of personality to relate to girls in this type of work. Some superintendents have tried female help and it has not worked out-for the girls or the club.

It also takes a special kind of girl to become successful in this line of work. Speaking to the gals who might read this article, "Debbie Winters has it-do vou?"



A FULL-LINE FAMILY OF FERTILIZER **MATERIALS AND PRODUCTS**

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

P.O. BOX 467 • MULBERRY, FLORIDA 33860 TELEPHONE: AREA CODE 813 • 425-1121

CHUCK COLLINS Specialty Sales Representative RAINBOW DIVISION P.O. Box 12663, Lake Park, Fla. 33403 844-7824 - W. Palm Beach





Helping the superintendent through turf research...

■ Controlled Release Fertilizers Fertilizer/Pesticide Combinations Soil Testing-Weed & Disease Identification Mike Ko

SCOTTS • LELY • GANDY SPREADERS

Finest quality turfgrass seed-Fairways • Greens • Tees • Roughs Scotts Windsor and Victa blends

Phillip Holcombe Technical Representative

Cranbrook Club Apts - Apt 228 1980 N.W. 46th Avenue Lauderhill, Fla. 33313 Telephone: 305/484-9338

Technical Representative 414 Homewood Blvd. Delray Beach, Fla. 33444 Telephone: 305/276-9834

FLORIDA CROP AND LIVESTOCK REPORTING SERVICE 1222 Woodward Street, Orlando, Florida 32803

U. S. Department of Agriculture Statistical Reporting Service Florida Department of Agriculture Division of Marketing

University of Florida Agricultural Experiment Stations

FLORIDA TURFGRASS SURVEY

The Florida Turfgrass Survey, which is now under way will provide data for all maintained turf areas except grasslands used <u>only</u> for pasture. Sampling procedures provide for the use of selected lists and an area sampling frame.

Data to be gathered will include the total area of turf by kinds, the area of newly established grass by kinds and varieties of grasses, and propagation practices utilized in establishing grass for landscaping purposes. The survey will also provide records of detailed expenditures associated with the commercial production of sod, as well as costs of establishing and maintaining turf by all other elements of the turfgrass universe.

Complete lists of selected groups, such as sod producers, golf courses, large cemeteries, airports, schools, colleges, parks, hotels, motels, apartments and condominiums are being assembled. Questionnaires will be mailed to all golf courses, sod producers, and perhaps others. Lists not chosen for complete mailings will be sampled. Personal enumeration of a sample of non-respondents will be undertaken when all possibility of further response by mail has been exhausted.

Administrative records of the Department of Transportation are believed capable of yielding satisfactory data for State highways.

Elements of the turfgrass universe not otherwise accounted for (homes, business and industrial facilities, etc.), are being surveyed by personal enumeration in land segments randomly chosen from an area frame stratified to provide heavier rates of sampling in the more densely populated communities. Each segment of land chosen for enumeration is precisely delineated on either aerial photos or geological survey maps. Knowing the exact fraction of land area, which each sample segment represents, provides the means for computing a multiplier for expansion of sample data to State totals for the categories sampled by this method.

Burton Miller has been designated to supervise the survey.

Robert A. McGregor Statistician in Charge



830 gives you what you want most in a tractor — great performance, low cost

Compare the 35-horsepower John Deere 830 Diesel Tractor with any other tractor in its class—and even with some larger tractors and you'll agree: none offers you so many outstanding features at such an economical price.

The heart of the 830 is its rugged 35-hp diesel engine. Built-in strength is everywhere in this engine. An extra-heavy cylinder block permits the crankshaft to be mounted high in the block for extra strength and rigidity. Keystone piston rings provide excellent ringto-cylinder wall contact for better oil control. Replaceable, wet-type cylinder sleeves promote uniform heat dissipation. The 830 engine has plenty of torque reserve and that gives you more lugging power when the going gets tough. And very important, we're so confident of these engines that we back them with the longest-term warranty in the industry, covering all internal working parts for 1,500 hours or 24 months, whichever comes first. How can you go wrong with backup like that?

830 Tractor Quality Features



DEBRA

A modern John Deere Diesel Engine is the heart of the 830 Tractor-and it's built for strength and reliability. The cylinder block is a heavy-duty, one-piece, highquality, gray-iron casting that is cast in a John Deere foundry that utilizes the most modern computerized core-making methods. The block is heavy-ribbed and deep skirted. The forged-steel crankshaft is dynamically and statically balanced. For added strength, the connectingrod journals overlap main bearings by 25 percent.

The Turf & Industrial Equipment People

John Deere

830 Tractor Quality Features

The 830 has a heavy-duty, 8-speed, collar-shift, constant-mesh transmission, with helical-cut gears for strength and quiet operation. Ground speeds range from less than one mile per hour to more than 16 miles per hour. The transmission provides eight well-spaced forward speeds and four reverse, plus a safety park position. Simple 2-lever control allows you to select the desired range with your lefthand lever, and the working gear with the right hand. The transmission serves as a hydraulic reservoir to provide an ample supply of oil to serve all hydraulic functions as well as lubricate the transmission.

The 830 features planetary final drives. They divide the final-drive gear-reduction loads over three points to ensure smoother power delivery and prolong bearing and gear life. Planetaries provide three times more surface contact than conventional bull gears, so when power is transmitted to the rear wheels, much of the stress is taken off any given area.

The John Deere 830 has plenty of hydraulic power to easily handle any of the attachments, such as loaders or backhoes, that are described on the following pages. The hydraulic controls are simple to operate and conveniently located.

Additional features that help make the 830 an outstanding value include 12-volt electrical system; oil-bath air cleaner; swinging drawbar; a 540-rpm "live" PTO; and many operator convenience features that are described on the following pages.

145 Loader size and capacity are tailored to the weight, horsepower, and maneuverability of the 830 Tractor. Lift capacity is 1,950 pounds to a maximum height of 9 feet 3 inches. Breakout capacity is 3,150 pounds. Loader has doubleaction cylinders. Fast cycle time plus close coupling of the tractor and loader put the operator in command of a compatible, agile team that works swiftly in close quarters. Attaching plates permit easy attaching to and detaching from the tractor. The mounting frame is out of the way and can stay on the tractor after the loader is removed.

The 165 Backhoe offers many outstanding operational features. The backhoe can be attached in about a minute and removed in even less time. The John Deere system has 2-lever control for operation of the boom, dipper swing, and bucket-which greatly speeds up digging. There are no hydraulic "voids" on the 165, so the job goes faster and smoother. Four buckets, from 12 to 36 inches wide-are available. Maximum digging depth is 8 feet 101/2 inches.

830 Tractor Attachments

830 Tractor





The physical mixing of these components is less tedious than it once was. Large quantities can be fairly rapidly mixed with today's front-end toaders, power shredders, screens, and other modern equipment. Time and labor costs have been

the additional steps are needed before this "soll becomes eligible for "top-dressing" statute starilizaomposting. A weed-free mixture coernitzation methods. Methyl bara to since bar



The Turf & Industrial Equipment People

TOP-DRESS GREENS AND SEE THE DIFFERENCE William H. Bengeyfield Western Director USGA Green Section (From USGA Green Section Record, January 1969)

In this age of science and technology, where man's knowledge is increasing at a great rate, it is still difficult to improve upon some things. Top-dressing greens is one of them.

Last October, at the Northwest Turfgrass Conference, Dr. John Escritt, Director of the Sports Turf Research Institute, Yorkshire, England, was telling his audience of his observations of turf management practices in the United States:

"Americans," he mused, "seem to want to overdo everything. For example, I feel you are overdoing putting green fertilization. You are constantly spraying fungicides and insecticides. You seem forever to be veri-cutting and aerifying greens. But there is one important practice you should be doing and are not doing at all: top-dressing greens!"

Many agronomists in this country will heartily agree. His point is valid. Top-dressing is not easy. It may seem expensive, but properly done it is worth every effort and the money if your goal is championship putting turf. It is one management tool your golf course should use even though your neighbors have been overlooking it for the past three decades.

In the early days of greenkeeping, the ritual of top-dressing was carried out every few weeks. The old-timers may not have known all the reasons why, but they knew it worked. World War II put an end to that. Shortages of labor, equipment, and material practically eliminated the practice, and it has never regained popularity. The advent of the mechanical aerifier in the late 1940s further discouraged a return to top-dressing. The soil cores, it was believed, would do the job for us. Only in recent years have the better managed golf clubs returned to sound top-dressing practices.

Why is top-dressing important? How does it work? What are proper top-dressing procedures? Are there really major advantages for today's golfer and course superintendent in a top-dressing program? There is much to be said on the subject.

Why Top-Dress At All?

Golf has expanded so rapidly in the past 20 years that the technical advantages of top-dressing have perhaps been forgotten by the old, and never fully appreciated by the new. Ask ten turf managers, "why top-dress?" today and at least nine will reply, "to smooth the surface." But the story has far greater dimensions than this.

"The principles behind top-dressing originate deep in the basic tenets of agriculture, and anyone who manages fine turfgrass would do well to learn the real reasons for the practice," says turfgrass agronomist Bob Wiley.

More than merely "to smooth the surface," the following amazing advantages also await the top-dressed green: **Tighter**, **Finer-Textured Turf:** By following proper top-dressing techniques, the fresh soil material encourages new growth of grass shoots and stems. A dense, fine-bladed turf results.

Grain is Checked: Whether your greens are bentgrass, bermudagrass, or Poa annua, certain strains of any grass type are going to be more vigorous, more included to lay down than others. Top-dressing encourages upright growth and checks grain development in any type of turf.

Thatch Control: With heavy fertilization, high or infrequent mowing, etc., aggressive grasses soon form a spongy layer known as thatch accumulation by intermixing soil materials with plant materials. It encourages new microbiological activity, which in turn breaks down thatch and converts it into valuable soil humus.

Less Disease: Thatch is an ideal medium for disease organisms and insect activity. With thatch under control, this problem is reduced.

Better Water and Fertilizer Infiltration: Because top-dressing checks heavy thatch accumulation by actually separating the plant residues, tight turf matting is prevented. The passages for air, water, fertilizers, etc., are preserved in the turf profile. Localized dry spot problems are reduced, and better overall irrigation infiltration is achieved.

Alleviates Compaction: Top-dressed greens have better "holding qualities" for the golfer. The material physically supports the grass plant and thereby helps it absorb compacting forces. It develops resiliency. On heavily played greens, this point is of particular importance.

Protects Against Winter Kill: Years of experience and research have shown that greens top-dressed just prior to the winter have fewer problems from desiccation and winter injury. The crown of the plant is protected from the winter's drying winds and wide temperature swings.

There's a Technique to Top-Dressing: The success of any top-dressing program depends on how well it is carried out. Poor top-dressing procedures are worse than no top-dressing at all.

At the very beginning, the soil material to be applied must be "standardized," that is, made of uniform quality from one year to the next. Turfgrass agronomist Charles G. Wilson put it best when he said, "Each club should require an act of Congress before anyone is permitted to tamper with or alter the soil mixture decided upon, no matter how well-meaning he may be."

If the present soil in greens has a history of success (good drainage, deep rooting, minimum compaction, etc.), the top-dressing material should be of the same general nature, if available. On the other hand, if it is not available, or if greens do not have a good soil, than an additional effort is needed. In this situation, a physical soil analysis (see "USGA Green Section Specifications for a Method of Putting Green Construction") should be made of these materials that are and will be available at a cost within budget means. The physical analysis will determine what mixture of soil, sand, and organic matter is best for your program. This mixture then becomes THE permanent mixture for all future top-dressings and construction.

The physical mixing of these components is less tedious than it once was. Large quantities can be fairly rapidly mixed with today's front-end loaders, power shredders, screens, and other modern equipment. Time and labor costs have been enormously reduced.

Now two additional steps are needed before this "soil mixture" becomes eligible for "top-dressing" status: sterilization and composting. A weed-free mixture can be obtained by several sterilization methods. Methyl bromide, calcium cyanamid, Vapam, steam, and other techniques have been used. Finally, there is but one factor that can change a soil mixture into a top-dressing soil: TIME. It is too often overlooked.

Composting was known even to gardeners in the early 100s. It remains of extreme value today. Top-dressing material should be mixed or composted for at least eight or ten months before it is used on a green. The top-dressing soil should be properly stored (soil sheds are best) and kept dry enough to insure free flow at application time.

Light and Easy Does It

The question of "how much top-dressing and how often" is always good for spirited debate. But with the advent of today's power top-dressing machines, a program of light but frequent applications is recommended, and is important. For example, four dressings at ³/₄ cubic yard each are far more effective than two dressings at 1¹/₂ cubic yards each. Certainly, a top-dressing should never be so heavy as to bury the grass plant.

Depending upon the size of the green and normal circumstances, an optimum schedule might be one of applying $\frac{1}{2}$ to $\frac{3}{4}$ cubic yards per 5,000 square feet of green on four occasions spaced throughout each growing season. The 'light but frequently' approach allows each dressing to silt into the turf, mingle with the grass, and carry out its many important functions.

Because of the frequency required and the great need for uniformity of application, a power top-dressing machine is an absolute necessity. It will more than pay for itself in any serious top-dressing effort. Hand spreading is of a bygone era.

The use of flat boards, or the back of rokes are needed for the "boarding" operation. They move the top-dressing more uniformly over the surface. The boarding or matting operation must be done very slowly, carefully and in several directions. If it is done rapidly, it does not move the new material uniformly over the turf. Uneven coverage produces irregular surfaces, rather than smooth surfaces.

Aerification and Vertical Mowing?

Aerification and vertical mowing are now considered practically synonomous with top-dressing, but this need not necessarily be the case. Certain aerification will continue to be important for most good putting green turf, but it need not accompany every top-dressing. In fact, two aerifications annually are generally accepted as standard practice today, unless a special problem exists.

Light or moderate vertical mowing prior to top-dress (as well as regular mowing) is desirable. However, it is not mandatory. The absence of any of these practices should not be used as an excuse for not top-dressing.

Is It Worth \$500?

Is top-dressing worth the expense? Many of this nation's better golf course superintendents and agronomists firmly believe it is. In fact, there is substantial evidence for believing that a good top-dressing program can reduce other costly maintenance practices. At the same time, it will produce better turf on better greens.

Although costs vary, recent figures in California place the total expenditure of top-dressing 18 greens at \$500 per application. This is an average cost of \$4.50 per 1,000 square feet. Labor as well as material costs are included in the figure.



<text><text><text><text><section-header><image>



SAFE-T-LAWN Offers You:

- ONLY SAFE-T-LAWN sprinkler heads allow you to "TUNE-IN" your water requirements.
- The ONLY sprinkler heads with a simple ball drive-no complex drive mechanisms.
- The ONLY sprinkler head with an Infinite Trajectory Adjustment.
- The ONLY Patented "K" nozzle for Uniform droplet distribution.

- STI
- The ONLY sprinkler heads where many parts are interchangeable.
- The ONLY heads in the world available with a strong ground support flange.
- All of these exclusive features plus a full range of nozzle sizes, infinite rotational speeds, and many other characteristics that will excite you!

SAFE-T-LAWN, inc.

Home Office • 7800 N.W. 32nd STREET • MIAMI, FLORIDA 33122

• AREA CODE (305) 592-0801 • BROWARD (305) 981-8884

Warehouse • 525 TERRACE WAY, SAN DIMUS, CALIF. 91773 Warehouse • 10875 SHADY TRAIL, SUITE 108, BUILDING 3-J • DALLAS, TEXAS 75220 • AREA CODE (214) 350-2458