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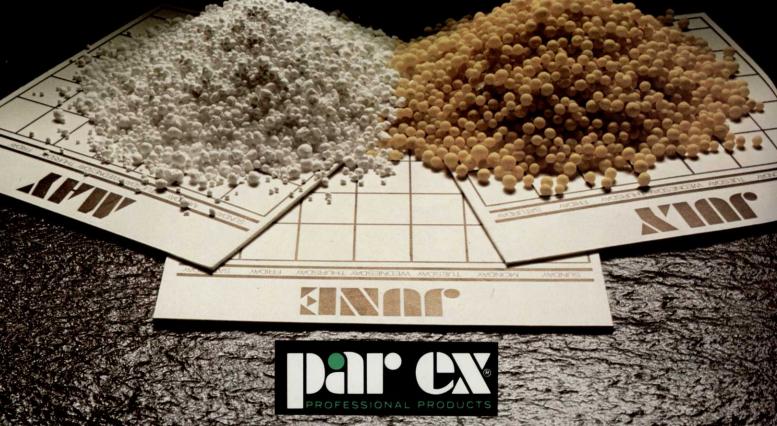
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President's Message

After my recent comments on becoming active in the organizations which contribute heavily to the life blood of our profession, the following remark may sound contradictory.

"I think there are too many meetings."

"Let's back up and start in the beginning so we can analyze the situation and perhaps realize why those words are not inconsistent with my thoughts on effectual participation—rather they are germane to the fact.

Everyone must, yes must—not should, belong to a local superintendent's association. If you have chosen this profession as your career, then how can you honestly expect to take advantage of all the benefits without offering any contribution in return. "It's not what my country will do for me but rather it's what I can do for my country" may sound square, but it does hold true in all levels of existence. Certainly you don't just take from your family life without offering anything in return. Hopefully, while receiving, you contribute to your community, your church, your work, and anything else of importance and value to you. But how much can anyone give of themselves? And I am talking about a combination of money and time—both essential to the culmination of any cause.



In my opinion, a superintendent must also belong to the State association, the FT/GA, and the GCSAA—all absolutely vital segments in the wheel of successful maintenance of a golf course. That superintendent must make every effort to attend the GCSAA Turf Conference. This association is the outer rim which holds the industry wheel together. It cannot be a successful binder without your money and talent when requested.

That same superintendent must make an even greater effort to attend the FT/GA Turf conference. This assocation is one of the essential spokes in that success wheel due to the close affiliation with IFAS, our local potential supply of expertise, and the ability to gather and disseminate information of value for us. Again this assocation needs your money and your time and; your talent to enable it to hold up its portion of the wheel.

The FGCSA and the local chapters are the other essentail spokes with the individual superintendent being the hub. The rim is a needless hoop without spokes or a hub. The spokes are useless pegs without an attachment at both ends. And, although nothing can start to roll without the hub, it in itself is confined to rotating in its own tiny circle and would be ineffectual without the spokes and rim. It takes all to be a successful wheel.

Participating in and/or partaking of the GCSAA conference requires at least five days; the FT/GA conference, Golf Tournament, and FGCSA annual meeting four days. These events amount to what should be classified as required meeting time. There are now two other well established and managed golf tournaments — Poa Annua and Crowfoot. These must be supported as they contribute to our social well being and business survival. More required time of the superintendent — time important to both the event and the participant.

I personally think the local chapter meetings should be reduced to four per year—fewer and, hopefully, better. Many monthly meetings have and continue to amount to a social outing, lunch and golf, a very inexpensive and enjoyable day away from the job.

Try on this schedule for a year:
Four good, one day, educational programs
Four informal golf outings (seperate from above)
Two golf tournaments
FT/GA conference and tournaments
GCSAA conference

Six educational opportunities—seven golf opportunities

An individual would be REQUIRED to attend three of the educational sessions to qualify him for participation in the golf events. Too drastic, too demanding, too restrictive—I don't think so.

The greatest reward for man's toil is not what he gets out of it, but rather what be becomes from it.

Maybe, just maybe, we all can become slightly better superintendents and better contributors to our society.

Bill Wigner

The Florida Green

The Official Bulletin of the Florida Golf Course Superintendents Association Florida Green Phone: Days - (305) 793-0069 or 793-2497

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TABLE OF CONTENTS

President's Message	7
Watching Your Tees & Q's 10	0
Goosegrass 1	2
The Gator Growls 1	4
Central Florida Crowfoots 1	6
West Coast Buccaneers 1	8
On The National Scene	
Palm Beach Chapter: Golf Course	
Superintendent's Association	0
Rhone Poulenc Names New	
Chipco Product Manager 2	1
Mole Crickets: Your Enemy Below 2	
POA Annua Classic 3	2
Compensation: A View	
From The Other Side 3	5
Wet Soil & Carts 3	6
Palm Beach Trade Winds 3	9
Treasure Coast "Tide"ings 4	0
North Florida Divots 4	
	5

ABOUT OUR COVER

Editorial

Hole No. 9 of the Gold Course at Wyndemere Country Club, Naples, Florida. Mark Hampton is the golf course superintendent. See page 37.

Dan Jones, C.G.C.S., Editor Banyan Golf Club

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Watching Your Tees & Q's

by Steve Batten and Bud White United States Golf Association—Green Section Southeastern Region



MONTY MONCRIEF RETIRES

As of June 30, 1982, James B. (Monty) Moncrief, Director of the USGA Green Section, Southeastern Region, will officially retire, For more than 25 years, Monty through the Green Section, has served over 100 golf courses in Florida. Monty always said he was in the "information sharing business" as he talked about growing turfgrass with his colleagues.

During this time, he was responsible for bringing the first Tifdwarf bermudagrass plug to Dr. Glen Burton in 1961 for field evaluation. Since then, he has continued bringing plugs of natural mutations from golf courses to Tifton, Georgia, hoping to help further improve the section of fine bladed bermudagrasses.

Monty is a member of the American Society of Agronomy and is a certified profession agronomist. He has always supported superintendents association efforts, which is reflected by his membership in 13 of these organizations. Monty has consulted in 19 states and 6 countries outside the U.S. He has just received the A.W. Crain Diamond Award, the highest turfgrass award given in Texas. Other honors include the indoctrination into the Oklahoma Turfgrass Research Foundation Hall of Fame Award in 1977.



Mr. & Mrs. Monty Moncrief

When asked what he will do after retirement, Monty said he's going to join the big league and play all those golf courses he visited. That should keep him busy for the next 25 years. If you see Monty playing golf, be sure to remind him of a few simple rules he often spoke of. That is, play the course as you find it, and the ball where it lies.

Monty will remain very active in the Green Section and the turf industry after his retirement. He is part of the new USGA Turfgrass Research Foundation Committee which will fund hundreds of thousands of dollars for turf research over the next years. He will also frequent superintendent association meetings and accept speaking engagements.

Monty Moncrief may get a chance to catch his breath, but he will never retire...we won't let him! ■

Charles "Bud" White, Southeastern Senior Agronomist, will become the Southeastern Regional Director for the USGA following Monty's (semi-) retirement. The office will still be housed on the University of Georgia campus in Athens, Georgia. Since last fall's football season, Bud is the only Clemson grad allowed near the University of Georgia campus.

NEW USGA OFFICE IN FLORIDA

The Southeastern Region of the Green Section now has a new sub-regional office in Florida. This office will be headed by Steve Batten and located in Lake Worth. Steve joined the USGA on February 16, 1982—25 years to the day after Monty began his USGA career. Steve is originally from Okalhoma City, Oklahoma and has a BS and MS in agronomy from Oklahoma State University. During the past four years he has been the research associate for Dr. James Beard at Texas A&M University.

The new office in Florida is the product of over ten years of promotion by Monty Moncrief. Florida has over 30% of the total USGA Green Section Membership in the Southeastern Region alone, and boasts of more than 700 golf courses. The new sub-regional office is unique in being one of only two sub-regional offices in the United States. This means that Florida golf course superintendents can take advantage of having local USGA benefits.

Both Bud and Steve are looking forward to sharing their information and talents with the Florida golf course superintendents.

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by Steve Batten U.S.G.A. Green Section

Goosegrass (Elusine indica) can be found throughout the United States with the exception of the mountainous regions and northern plains. Persisting on compacted soils, it is most often visible of areas on heavy traffic, such as along foot paths, and golf cart trails. Due to it's prostrate growth habit, goosegrass will tolerate closely mowed putting green heights, and can be most difficult of control under these low mowing conditions.

An annual grass reproduced by seeds, a single mature plant can product between 20,000 to 50,000 seeds on 3 to 7 fingerlike racemes per spike. Seeds germinate when daily average soil temperatures at or near the surface are 65 to 67 degrees F. This means that goosegrass can germinate throughout the summer growing season, and starts in February in Florida. In South Florida, goosegrass often acts like a perennial, and is present year round.

Long seasonal growth means that herbicide control of goosegrass needs critical timing, for best results. Preemergence herbicide controls used at present need either a long residual during a single application, or two safely applied applications between early and late spring. Some herbicides used at present for goosegrass control are benefin (Balan), oxidiazon (Ronstar), or a combination of oxidiazon plus bensulide (Betasan).

Post emergence control of goosegrass with MSMA plus metribuzin (Sencor) or Asulam (Asulox) is usually applied in late spring/early summer. Often mature plants are difficult to control and have to be spot treated by hand with a non-selective herbicide such as glyphosate (Roundup). Because goosegrass has a fibrous root system, one control often used is to cut out the crown of the plant with a sharp tool. New herbicides are being evaluated constantly for safer, more selective control.

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The Gator Growls

By DAN L. HALL JR. Imperial Golf Club



Over the years, much controversy has arisen over this topic and the controversies are varied:

To topdress or not-Mixed to straight materials-Purchase or blend in house-Light-Medium-Heavy rates-Sterilize or not; frequency-Add organics or notand on AD INFINITUM!

This one operation is probably the most effective tool, excepting the verticut and greens mower that will give the Superintendent and his members the most desired results for time and expense on the golf course. Golf courses with small budgets can see better results in many instances, from a well-done job of topdressing than from a fertilizer application.

In fact, in the early years, when budgets were low and the soil mixing was done in-house as a part of keeping the crew busy on rainy and/or cold days, topdressing was, on many Southern courses, the only plant food source ever applied on Bermuda.

Animal manures were plentiful and near-by and often had, just for hauling away. Native top-soil just had to be scraped up from the property next door and hauled to the mixing shed. Nearly every club had a lumber yard owner as a member and when plastering was the popular wall finish, you could get his contaminated or discolored white plaster sand, just for cleaning it up and hauling it to the course.

Grass clippings and the fall leaves were mixed with the top-soil and manures, then allowed to compost. The mix was blended with the sands to the desired results of the superintendent. Generally, it was screened through ½" and again through a ¼" mesh screen after being stored inside and allowed to dry; or at least under cover of either canvas or straw if a building with a roof and at least three sides was not available; as was more likely the case.

This topdressing was then applied, usually every 4 to 6 weeks by hand, for both fertilizing as well as smoothing and leveling the surface. As a youngster, and for many years as a superintendent, this was the only time that our Bermuda greens ever received any type of plant food. We

used a starter fertilizer of say, an 0-12-12 or 0-20-20 prior to sowing rye, a little Nitrate of Soda, Ferrous Sulfate, or Nitrate of Soda Potash dissolved in water to feed the rye early in the A.M. in the spring to burn out the rye. That was it as far as plant food goes, except the monthly top-dressings from April through September or October depending on how far South you were.

Golf greens, even thought not planted to the fine hybrid bermudas we have today, at clubs with conscientious superintendents, offered putting surfaces equal to and in many cases, better than those of today as far as lack of grain, quickness, and trueness of roll. This was primarily due to lack of water, little or practically no chemical nitrogen and FREQUENT TOPDRESSING, WELL WORKED into the surface.

One of the most difficult things I had to cope with when I came to Florida, was the membership complaining about topdressing. While in Savannah, the Carolinas, and Atlanta, the golfers really looked forward to topdressing and you just could not DO IT ENOUGH to suit them. The high rollers would load the course for about 2 to 3 weeks right after topping then wane off until the word was out; "the man just topdressed this week," and back they would come. In Jacksonville, it was just the opposite, not only at my club, but at the other clubs except Ponte Vedra; that club had a number of golfers from Alabama, Georgia, and the Carolinas, since there were not any seashore links except for Sea Island and Ponte Vedra. Put out topdressing in Jacksonville, and there would hardly be a golfer out for 2 to 3 weeks until that, "damned dirt would be worked down." To some extent, that feeling still persists today throughout Florida.

Primarily due to the fact that many of us look upon topdressing as a deadly duty and therefore, to cut down on complaints; do it quite INFREQUENTLY and QUITE HEAVILY. The coming of the aerifier and verticut brought the advent of, "there is now no need to topdress," from basically the non-golfing academia. Their stand was, the verticut could control grain and thatch, the aerifier controlled thatch and brought up soil, so therefore, there was little or no need of topdressing, plus the fact that Nitrogen fertilizers were quite plentiful and cheap compared to an in-house mix and storage of topping materials.

(Continued on Page 22)



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Central Florida

Crowfoots



By GARY MORGAN
Spruce Creek Golf and Racquet Club

TOPDRESSING

Topdressing is one renovation process that is sometimes overlooked or just plain taken for granted. There are so many different kinds of soil mixtures and other possibilities that you can do, depending on your particular conditions. For example: if you have an organic subsoil you may want to incorporate sand into your soil. If you have sandy greens you may want to keep them as is or add 10%-20% organic to them - maybe in the peat moss form. Whatever you choose depends on your own conditions your budget and your personal experience.

Topdressing is becoming very involved with the newer technology of todays times. You can find different particle size, variances in sand & organic mixes - (ex. 80% sand - 20% organic), you can have additives such as charcoal and vermiculite added if you desire these in your topsoil mix.

As you can tell by now, the more additions to your topdressing, the higher the cost will be. Another costly item these days is the freight charge. A supplier closer to you, will make all the difference as far as the total charge will be.

Here are some superintendents and what their conditions are and what they use.

- I. The Bayhill Lodge & Golf Club Jim Ellison - Superintendent
 - A. 1. Age of greens 20 years 18th green 4 years old.
 - 2. Age of tees 20 years.
 - B. Conditions of subsoil.
 - 1. Greens 90% sand, 10% organic.
 - 2. Tees 100% sand.
 - C. What topsoil used & why.
 - Greens when aerified uses 95% sand and 5% organic mix. Aerifies 2 times per year. Other months topdresses once per months with 100% sand mix. These topdressings are done along with verticle mowing.
 - 2. Tees aerified uses 100% sand mix for top-dressing. Aerify 2 times/year.

D. Comments:

- 1. Greens speed being accomplished range somewhere between 7-8. Very satisfied with results of topdressing. Only change that may be made is to go to a 100% topdressing of sand after aerify instead of 95%-5%.
- 2. Tee no change very satisfied.

II. Mt. Dora Golf Club

T.G. Boyd - Superintendent.

- A. 1. Age of greens: 9 holes 23 years old. 9 holes 21 years old.
 - 2. Age of tees: 9 holes 23 years old. 9 holes 21 years old.

B. Conditions of subsoil.

 Greens - from surface to 6" deep there is a layer of 100% organic dirt plus peat. From the 6" deeper is the regular Florida Sand. Tees - older tees - same subsoil as greens. Newer tees - 80% sand - 20% organic soil.

C. What topsoil used & why.

- 1. Greens most topsoiling done is along with aerifying. Uses a 60%-40% mix 2 times/year. a 3rd topsoil is applied of 100% coarse trap sand. Where thinning of turf may occur then spot treatments of topdressing are done.
- 2. Tees same program as greens.

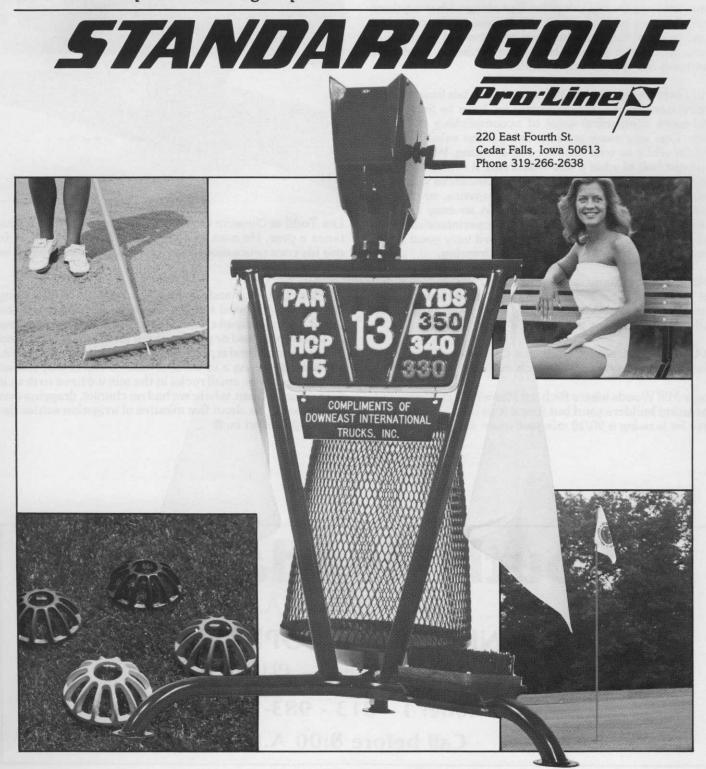
D. Comments:

- 1. Greens since there is such a high amount of organic in the soil, Boyd is trying a new approach to mixing the subsoil rather than to completely rebuild his greens. He is "Subsoiling" to the 6" depth to mix the Florida Sand with high organic subsoil. He has attached irrigation wire to a sod cutter (specific attachment) and injects the wire into the ground like you would a sod cutter. He then uses the wire underneath the soil as a mixer of soil. After this is done he topdresses with sand. He has done one green and is getting excellent results.
- 2. Tees not a problem.

(Continued on Page 31)

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West Coast Buccaneers

By REED LeFEBVRE Pines & Palms Management Corp.



When you speak of taking care of greens top dressing rates amoung the top priorities. But along with everything else, the cost of performing this necessary function has gone way up! Supers who have top dressed with a top-dress mix, on a regular basis, are having a hard time justifying the cost of this material.

Our costs for equipment, labor, and materials have far outpaced our income, consequently we have to find newer and more economical ways of accomplishing the same ends. One way many are now using is the substituting of regular white or trap sand for top-dressing. With its cost at about half of what a mix would run, it seems to be the logical answer. There are those circumstances when you have to use a mix, either for the organics, or to have amendments such as charcoal etc. in an easy to apply form. Conversations I have had with Superintendents who use one or both, found the majority felt very good about the results of straight sand as a top-dressing.

John Luper at Countryside Country Club prefers a mix but uses sand in his top-dressing every three weeks program. He used top-dressing along with light verticuting, and has been on this program for three years.

At Clearwater Country Club, Joe Clay uses an 80/20 mix when he top-dresses lightly each month.

Sugar Mill Woods where Richard Mann is Superintendent, was using builders sand but found it to be a little too fine. Now he is using a 90/10 mix just when aerifying.



Lee Todd at Dunedin Country Club uses a 90/10 mix four times a year. He uses the 90/10 very lightly. Lee likes to use his core processor for top-dressing material when he aerates.

At Plant City Golf and Country Club we have been using trap sand with good results. The only drawback are the occasional pea sized chunks in the sand. We are planning to screen our sand or perhaps look into D.O.T. spec sand which I understand is pretty well screened when you get it. We are now using a vicon spreader to top-dress, and as long as there are small rocks in the mix we have to drag it in to remove them, where we had no chunks, dragging was unnecessary, as about five minutes of irrigation settles the sand right down in.

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ON THE NATIONAL SCENE

by: John P. Hayden CGCS Director, GCSAA



Having just returned from my first board meeting in Lawrence, Kansas, I feel that GCSAA is on the verge of many new and exciting plans and programs for its members.

The staff in Lawrence has been organized in a very professional and productive manner. We, as members, will benefit by the many and varied programs that will be forthcoming from this very competent organization.

Already I think you see the improvement in our International Golf Course Management Magazine. Our Membership Department has set its goals for us to expand from the present 5,000 members to perhaps 10,000 with future goals ranging to possibly 15,000 in the next 10 to 15 years.

The Marketing Department will be shortly offering a number of items with the GCSAA logo so we all can show our pride in being members of the national organization.

The Education Department will be undertaking great strides in the advancement of our profession. One of the most interesting of these will be the telecasting of seminars, via satellite, to different locations in the United States. These seminars can be attended by up to 50 superintendents without the cost of travel, hotel rooms, etc. In

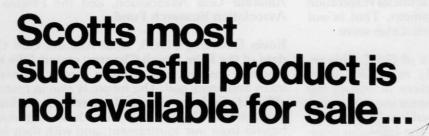
this way the association will offer you greater programs at a lesser cost to the individual. Look for this department to more than offset the cost of membership in GCSAA.

One other department that has been recently added is the Show & Conference Department. With this department the association will be able to provide us the best possible show sites and give us the best possible rooms at a price we can all afford.

I would be shirking my duty if I also didn't convey to you the possibility of the movement of National Headquarters to some other site. Current locations under consideration are Lawrence, Kansas; - Denver, Colorado; - Connecticut; -Atlanta, Georgia; -Philadelphia, Pennsylvania; -New Jersey and two Florida sites, Ft. Myers and Orlando.

Hopefully GCSAA will have all the information available this fall and will be able to present to the full membership a site that will fill our needs for the next two decades.

If you have any problems or ideas that I could help you with please feel free to give me a call... I am working with you.



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Dan McCoy Technical Representative

Jerry Mills Technical Representative

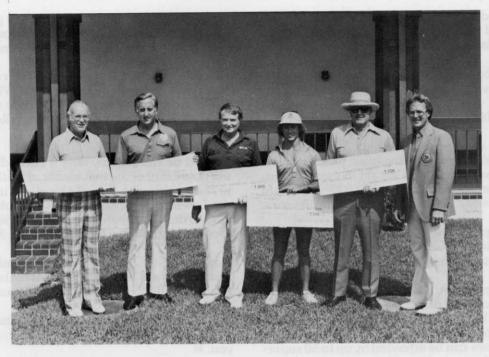
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Pro Turf Division

PALM BEACH CHAPTER Golf Course Superintendents Association



Kevin Downing, far right, awards five \$1,000 checks.

The adage of "golf is dying" appears too many times in golfing circles. The Palm Beach Chapter of the Florida GCSA has provided its own form of artificial respiration by conducting a benefit golf tournament. That is not unique, but the concept and the beneficiaries were.

The tournament title was the "Future of Golf". This relates to the continuing responsibility as golfers, pros, superintendents, architects, or suppliers to ensure the game has a bright future. The host chapter used the event proceeds to donate \$5,000. This helped local golf groups secure their future success. Each of the following organizations received \$1,000. They were the PGA Junior Golf

Program, Palm Beach County Youth Golf Program, Palm Beach Junior College golf team, Palm Beach County Amateur Golf Association, and the Florida Turfgrass Association Research Fund.

Kevin Downing, CGCS, from Atlantis Golf Club, President of the Palm Beach Chapter, stated: "We need to encourage, instruct and provide means for our youth to learn and enjoy golf. The future is also in research which aids us to find new ways and materials to perform our jobs more efficiently. We feel that those organizations will benefit from our tournament, and with their help we can ensure a bright future for golf.



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Nine Functions of a Consultant

Have you ever thought of becoming a consultant, for your present company or others, now or sometime in the future? It's a common daydream—one that comes true for a great many people.

Dr. Jeffrey Lant, a professional consultant and author, has looked at the consulting business and concluded that true consultants, as contrasted with those given that title by former employers who wanted to let them down gently, traditionally perform one or more of nine basic services for their clients:

They bring to an operation knowledge or skills not
held by the permanent staff.

- They supplement talents of the permanent staff for a special assignment or limited period.
- ☐ They indoctrinate or teach the staff a new skill.



- ☐ They supervise or oversee an operation, possibly without getting personally involved in carrying it out.
- ☐ They serve as a catalyst causing things to happen that would not

otherwise occur or would not come about so quickly.

- ☐ They bring to bear an objective, impersonal, thirdparty point of view, providing fresh insights into a situation.
- They serve as troubleshooters, putting a finger on a weakness or deficiency not otherwise fully perceived.
- ☐ They exercise political pull or bring other special influence to bear.
- ☐ They perform unpleasant chores, such as wiping out a department or firing a popular employee, which if performed by a permanent member of the staff might lessen the long-term effectiveness of that individual.

Rhone Poulenc Names New Chipco Product Manager

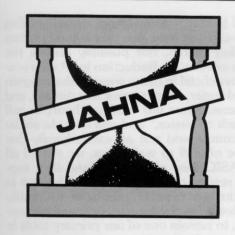
Rhone-Poulenc Inc., Agrochemical Division, announces the appointment of Jerry Garnett as the Product Manager for Chipco® 26019 fungicide and the Chipco range of phenoxy herbicides.

Jerry brings 14 years of turf and horticultural industry experience to his post at Rhone-Poulenc. He was perviously Market Development Manager for the May & Baker Garden Products and Environmental Products Department in Brentwood, England. (May & Baker, the United Kingdom's leading turf chemical manufacturer, is a wholly-owned subsidiary of Rhone-Poulenc.) Prior to joining May & Baker, Jerry was Technical Sales and Marketing Manager for a large United Kingdom distributor and specialist turf contractor, where he gained considerable experience designing and installing Toro irrigation systems in golf and landscaped areas. Before that he held the positions of Technical Salesman and National Accounts Manager with Fisons Corporation. Jerry earned a National Certificate in Turf Culture at the Teachers Training Colleges of Bristol, England, while serving as Superintendent of Grounds and Gardens at the institution.

In addition, Jerry is editorial consultant to THE OFFI-CIAL JOURNAL OF BRITISH GOLF GREENS KEEP-ERS ASSOCIATION and its special correspondent to the new TURF MANAGEMENT journal.

Jerry is married and he and his wife, Christine, have two children. ■





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(Continued from Page 14)

I remember years ago when this controversy was at its height, Drs. O.J. Noer, Al Radko, and Fred Grau, all used to show slides of some of the old timers who had never gotten away from a frequent and light topdressing program and always used the slides as an example of a fine appearing as well as a true putting surface on minimum N2 feedings. The main secret was the same materials were always used frequently and there were never any layers in the soil profile.

Dr. Noer had slides of E.B. Steiniger's Pine Valley in New Jersey, showing the most beautiful soil profile you could every want. "Doc" used to say, "the USGA would never approve of this mix," but Eb's grass has liked it for 50 years, and the grass doesn't know the USGA, but it sure as hell knows the loving care Eb and his staff put in the aging, mixing, and applying the mix and has responded to this care all these years and after all, "the grass tells the story." Never could truer and more prophetic words have been spoken. The last time I saw the slide, the profile was over 2 feet thick with roots all through the profile.

Proof of topdressing's many benefits has now and again come to the fore-front. The stimpmeter has proven the results of the mechanics of properly applied dressing, and many fine courses have gone back to the old means how be it with modern ways. Had the equipment been available in past years that we have today, we would have probably topped the greens EVERY MONDAY or EVERY OTHER MONDAY at the LEAST.

So the basics of good dressing has not changed that much over the years:

- A. Use materials closest to that of your existing soils you can purchase or create.
- B. NEVER CHANGE THE MIX.
- C. Do it lightly.
- D. Do it frequently.
- E. Do it well so that the end results, even that day, are apparent to both the eye and the roll of the ball.
- F. NEVER CHANGE THE MIX.

The stimulation of bacterial action from dressing using the above formula can not only give you a good putting surface, by reducing thatch, but possibly reduce the amounts of N2 now advocated. Reduction in N2 will eventually prove most beneficial in many ways; reduced grain and thatch, reduced water, deeper roots, less disease, and fewer insect problems. Since our modern theory in golf maintenance is "back to basics," and golf as it should be played on a golf course and not an exceptionally fine manicured expanse of wall to wall grass, we should all reconsider this BASIC idea of frequent and light topdressing. The end results of its use and effectiveness in giving our golfers the best of putting surfaces, will justify any expenses involved. Topdressing is back, and personally I feel this time, to remain one of our primary tools in fine putting surface production.



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John Lapikas, Supt. Annandale Golf Club, Jackson, Ms. and LESCO salesman Roy Tarwater on an Oregreen Fairway.

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MOLE CRICKETS: YOUR ENEMY BELOW

How To Keep These Prolific Insects From Destroying Your Grass

During the next three months, many Florida golf course superintendents will find their grounds invaded by hordes of destructive visitors—insects barely more than an inch long with shovels for forelegs. Mole crickets are not strangers to Florida, but, more than ever, superintendents are becoming personally acquainted with these pests that chew and tunnel recreational turf to the tune of millions of dollars in damage annually. Golf courses, owing to grasses with shallower root systems, apparently rate highest on the crickets' menu.

Superintendents and entomologists alike agree that this prolific, mysterious pest has become the state's major insect threat to turf. Yearly, the mole crickets' sphere of destruction reaches further southward: they are common in Jacksonville, Orlando and Gainsville and well-established on many courses in the Fort Lauderdale and Miami areas.

"Next to water problems, insects are our biggest headache. And insects, to us, now mean mole crickets, above all," says Brad Kocker, superintendent at Inverrary Golf Club, Fort Lauderdale. Adds Al Jewett, Vice-President for landscaping and maintenance at Miami Lakes: "Mole crickets keep us alert, and they're our biggest insect problem. We've been fighting this battle from the time the course opened in 1962.



 MOLE CRICKET DAMAGE at Miami Lakes is pointed out by Al Jewett, Vice-President for Landscaping and Maintenance, left, and Richard Bilyard, technical representative, Woodbury Chemical Company. Jewett says mole crickets, a problem ever since the course opened in 1962, require prompt attention to control. He uses Sevin 20% Bait because "it is less erratic" and gives "better uniformity of control."

(Continued on Page 25)



APPLY INSECTICIDES NOW

University of Florida entomologist Dr. James Reinert points out that mole crickets complete their spring flights in April or May and have set up "housekeeping" in turf. Thus, he says, July is the best time for applying insecticides, because the newly-hatched nymphs are smaller and near the soil surface. While the immature crickets are not yet capable of doing extensive damage, if left unchecked the larger nymphs will soon begin chewing and tunneling, resulting in areas that can appear "roto-tilled."

Caught on the horns of this insect dilemma are the superintendents, who are charged with keeping grounds healthy and playable while, at the same time, battling the one pest that can undo their best work. Golfers, concerned only with avoiding bogeys, expect well-kept tees, fairways and greens and invigorating air not contaminated by insecticide odors.

Not every course has experienced mole crickets, says Dr. Reinert. But he adds that, with cricket populations on the rise, the likelihood of infestations developing on courses with no history of infestation is very probable. Inverrary's Kocker points out that, while "most superintendents are aware of the problem," once it strikes, no part of the course is immune. "We have had large turf areas that were just annihilated. When you see the start of some damage, a week later you find no turf remaining. It's incredible.'

Jewett finds the fairways at Miami Lakes hardest hit, with less activity on the dryer slopes. He keeps a close check on the crickets' progress by riding the course each morning, while Miami Lakes superintendent Sam Green goes on cricket patrol once a day. Jewett and Green are especially watchful on their shorter 18-hole par 3 course, because its lights serve as a nighttime lure.

RESEMBLES MOLE, GOPHER DAMAGE

The tunneling leaves mounds of soil resembling miniature ground mole or gopher damage, Reinert notes. He says the loosened soil uproots plants and promotes killing of exposed grass. Damaged turf appears to be cultivated, and crickets sometimes physically drag the uprooted grass into the ground and make a nest of it. The industrious insects can tunnel 10 to 20 feet in a single night.



2. FAIRWAY OR ROUGH? In a short time, mole crickets can transform a section of well-maintained fairway into a "rough," as shown by this damage at Miami Lakes. Al Jewett, Vice-President for Landscaping and Maintenance, says "mole crickets keep us alert."

(Continued on Page 26)

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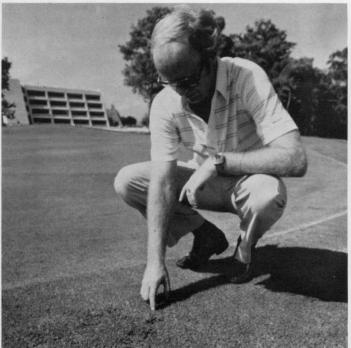
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(Continued from Page 25)



3. MOLE CRICKETS prefer the shallower root systems of golf course turf, as Superintendent Brad Kocher learns while examining the edge of a green at Inverrary Golf Club, Fort Lauderdale. Besides maintaining desired levels of control, non-odorous and safe pesticides should be used to prevent players' discontent, says Kocher. The Inverrary superintendent says Sevin 20% Bait can "pull mole crickets out of the ground in 30 minutes to one hour."



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Tampa Office 1-800-282-9115 Crickets also put additional strain on weed control programs and increase the need for herbicide investments, Kocher points out: "If you get crickets into an area and you start losing healthy grass, watch out. Before you know it, weeds will start creeping in."

Close-cropped Bermuda grass, with shallower root depths, are especially susceptible to feeding, says Reinert. Bahia grass also invites damage, owing to its open growth habit, he adds. St. Augustine grass can also be attacked. but doesn't show damage as readily because of its more canopy-type growth habit, says Reinert. Pastureland. football fields, baseball diamonds, home lawns and vegetable gardens and farms also can become targets of mole crickets, says Reinert.

SPOT TREATMENT BEST

The university of Florida researcher says insecticide treatments usually produce desired results, once superintendents have ascertained the extent of infestations.

"I discourage anything but spot treatment," says Reinert. "It makes no sense to treat wall-to-wall for mole crickets. Eighty to ninety percent of the population is confined to the area where you are seeing the damage."

One way to test for crickets' presence, he says, is to use a soap flush; mix one fluid ounce of liquid detergent in two gallons of water and apply over four square feet of turf. If the irritant drives more than two mole crickets to the surface within three minutes, then control probably is needed, he says. The entomologist stresses that this method is only an indicator. A more accurate method, but one not usually practiced on golf courses, he says, is to physically remove a soil ball, go through it and get an accurate count of crickets. A single cricket per square foot is indicative of a dangerous infestation, says Reinert.

The seriousness of the problem has wrought havoc with budgets. "I'm spending thousands of dollars trying to control crickets," says Kocker. "I can no longer say that I have so many dollars for a chemical budget. You have to spend what it takes to control the pest, even if it means cutting out something else."

Kocher and Jewett say they have obtained best control of mole crickets with Sevin carbaryl 20 Percent Bait at the maximum recommended label rate of 10 pounds per acre (four ounces of bait per 1,000 square feet . The label for Sevin 20 Percent Bait specifies treatment of two to four ounces of bait per 1,000 feet (five to 10 pounds per acre.)

Kocher suggests a thorough watering of the area 15 to 20 minutes before application. "Let it dry just a little before putting out the Sevin bait and hope it doesn't rain that night. Rain is our biggest problem during our control season, so it helps to keep an eye on the weather forecast."

Reinert points out that an insecticide bait applied when the soil is dry will not be consumed, because the crickets are deep in the soil and not feeding at the surface. "So. irrigate before the bait goes on to draw them to the top. However, a sudden heavy rain after treatment can leach the bait and render it ineffective," he warns.

(Continued on Page 27)



and present...



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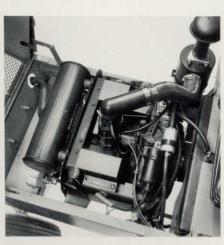
Toro engineering makes our Groundsmaster 52 and Groundsmaster 62 deliver superior performance. And Toro durability keeps them that way longer.

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a. Groundsmaster 52 has a 16 hp, 32.4 cu. in., cast-iron, air cooled Briggs & Stratton engine.



b. Groundsmaster 62 is powered by a 20 hp, 47.7 cu. in., twin cylinder, air cooled Onan engine for strong, quiet performance.



HEAVY DUTY DONALDSON AIR CLEANER is industrial type. Keeps

HEAVY DUTY DONALDSON AIR CLEANER is industrial type. Keeps your engine running longer by filtering out dirt and other contaminants before they can cause excessive wear. Allows dirt to be removed easily at the end of each day.



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RUGGED ROTARY BLADE SPINDLE to stand up to bombardment of rocks and other debris. Toro uses a cone rather than a cylinder housing, and splines rather than keys, to better absorb shock loads. Timken "SS" bearings also used. All for greater durability.

PERFORMANCE FEATURES:



P.T.O. DRIVE SHAFT with mechanical engagement for decks or accessories. Avoids belt misalignments and makes changing from one accessory to another a breeze.



OFFSET DECK OUT FRONT AND REAR WHEEL STEERING for

superior maneuverability. And the 52" and 62" decks are just right in size. Big enough to get the job done quickly and small enough to get into those tight spots. Both decks are offset 10¼ inches to give you one pass trimming around trees and obstacles. It's also ideal along curbs and beneath overhanging shrubs.



from 4 wide stance wheels plus low center of gravity. Front drive wheels and rear wheels are equipped with 4 ply rated tires. Both drive wheels have drum brakes controlled by individual pedals.



CUTTING HEIGHT ADJUSTS EASILY from 1 to 4 inches without tools. Simply pull four pins.

FLOATING DECK means more consistent cut, even over irregular terrain, because the cutting unit floats free of the prime mover. And, the entire deck raises hydraulically for fast, easy transport over obstructions like curbing.

OPERATOR STATION features adjustable, molded cushion seat, or deluxe suspension seat for a smooth ride all day long. 15 inch steering wheel, hour meter and ammeter, all located for maximum comfort, convenience and efficiency. Safety interlock stops engine when operator leaves seat with PTO or traction pedal engaged.

Team your Groundsmaster 52 or Groundsmaster 62 with any of these deck combinations.

GROUNDSMASTER 52 PRIME MOVER.

Shown with floating 52" deck. Driven by a 16 HP, 32.4 cu. in., cast iron, air cooled Briggs and Stratton engine. Designed for mowing up to 2.8 acres/hour. Ideal for mowing small areas, or as a trim mower when maneuverability is most important. Offers variable ground speed up to 8.5 m.p.h. Hydrostatic drive for single pedal operation of forward and reverse. Excellent stability from 4 wide stance wheels plus low center of gravity. Front drive wheels and rear wheels are equipped with 4 ply rated tires. Both drive wheels have drum brakes with individual pedals for greater trimability that reduces an uncut circle to 0". Operator station has adjustable, molded cushion seat or a deluxe suspension seat for smooth ride all day long. PTO drive shaft makes accessory changes a snap.



TORO

The Groundsmaster 52 with standard deck is capable of mowing up to 2.8 acres an hour at 5.5 m.p.h. Unit has 51¾" width of cut with the three blade front mounted rotary deck. Deck offset 10¼" to the left. Can cut a 0" uncut circle with brake assist. Can be adjusted easily for a height of cut, from ¾" to 4" in ¼" increments, without tools. Has 5" deep, 12 gauge stamped steel Wind Tunnel® housing for easy cutting even on wet grass.

GROUNDSMASTER 52 FLOATING REAR DISCHARGE DECK.

Designed for controlled discharge of clippings to the rear center between wheels. Has full flotation design with front rollers to reduce scalping. Constructed from 12 gauge steel and is 3" deep. The 51¾" deck can mow up to 2.3 acres/hour at 4.5 m.p.h. Three bladed front mounted rotary is offset 10¼" to left for close trimming around obstacles and under overhangs. Adjusts from 1" to 4" in ½" increments without tools. Lifts hydraulically for





GROUNDSMASTER 52

This three bladed, front mounted rotary

unit offers full flotation in all directions.

uneven terrain. The Groundsmaster 52

with floating deck is capable of mowing

FLOATING DECK.

with rollers in front and back for

reduced scalping. Ideally suited to

cutting situations that involve hilly,

up to 2.8 acres an hour at 5.5 m.p.h.

Deck offset 101/4" to the left for greater

trimability. Capable of a 0" uncut circle with brake assist. Has a 5134" width of

cut. Can cut from a height of l" to 4" in

gauge stamped steel Wind Tunnel® housing for easier cutting and clippings

½" increments and has simple adjustment without tools. 5" deep 12



GROUNDSMASTER 52

52" floating cutting deck

52" standard cutting deck 52" floating rear discharge cutting deck

GROUNDSMASTER 62

62" floating cutting deck

52" floating cutting back

52" standard cutting deck

52" floating rear discharge cutting deck



GROUNDSMASTER 62 FLOATING 62" DECK.

Capable of mowing up to 3.4 acres an hour at 5.5 m.p.h. Front mounted, three bladed, rotary deck has 61%" width of cut. Deck is offset 101/4" to the left for greatly increased trimability. Capable of 0" uncut circle with brake assist. Deck easily adjusts without tools for a height of cut from 1" to 4" in 1/2" increments. Rugged 5" deep 12 gauge steel welded construction for greater durability even in tough mowing conditions.



GROUNDSMASTER GRASS COLLECTING SYSTEM.

Designed to fit the Groundsmaster 52 floating deck, the Grass Collecting System allows on-the-unit bagging of grass clippings. Utilizes a separate 16" diameter blower attached to the deck's discharge port that virtually eliminates clogging. A

durable one-piece, high-density polypropylene chute directs the grass clippings back through a hinged hood mounted to the bag support system. A rear-mounted polyester bag for clippings is positioned inside the path of the cutter deck for easy maneuverability. Hinged hood on top of bag support opens easily for quick removal of grass bag. The grass collecting system comes standard with a polyester bag capable of holding 7 bushels of grass clippings.

An optional dry condition polyester bag that will hold up to 10 bushels of clippings is also available.

These accessories make our Groundsmaster 52 and Groundsmaster 62 professionals for all seasons.



SNOWTHROWER. Big 48" two stage snowthrower with adjustable side skids and discharge chute. Electric chute rotator comes standard. Driftbreaker auger and oversized second stage clears snow in a hurry and prevents clogging.



LEAF MULCHER. Made of heavy gauge steel, the leaf mulcher mounts under side discharge decks allowing blades to vacuum and pulverize fallen leaves.



ROLL OVER PROTECTION SYSTEM. Certified roll over protection system (ROPS) for greater operator safety conforms to OSHA regulations, includes seat belt for greater safety.



CAB WITH ROPS. Completely enclosed vinyl cab turns your Groundsmaster into an all-weather vehicle. Includes ROPS. Heater and light kit available.



V-PLOW. Rugged, 48" V-plow for snow has front skid and reversible/ replaceable scraper blades for low cost snow removal. Requires special mounting kit which includes tire chains.



ROTARY BROOM. Tough 48 inch rotary broom sweeps parking areas, paths and walkways, saves hand labor.



SEAT OPTIONS. Choose from adjustable, molded foam seat or deluxe suspension seat for operator comfort on your unit.



WHEEL WEIGHTS/REAR WEIGHTS/TIRE CHAINS. Toro offers wheel weights and tire chains for better traction when using accessories. Rear weights will help counterbalance front mounted accessories for better operation.



SPARK ARRESTOR MUFFLER.
Minimizes spark emissions.



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GROUNDSMASTER® 52 PRIME MOVER (MODEL NO. 30775) Briggs & Stratton, 1 cylinder, 4 cycle, air-cooled 16 HP @ 3600 RPM, electric start. 32.4 cu. in. displacement. Splash oil system. 2 qt. oil capacity, I-beam alloy aluminum connecting rod, cast iron cylinder block, mechanical flyweight governor limits speed to 3200 RPM, vacuum fuel pump. Heavy duty remote mounted Donaldson Cyclopac air cleaner. Extra large ENGINE muffler for reduced noise level. Optional spark arrestor muffler available from Briggs & Stratton. 12 volt, 66 plate, 57 amp-hour capacity battery. Dash-mounted ignition switch. 3.2 amp., 12 volt dual circuit alternator with 60-100 watt A.C. lighting circuit. Seat switch. PTO and traction interlock switches. **ELECTRICAL FEATURES** WEIGHT CERTIFICATION $Certified \ to \ meet \ ANSI \ specifications \ B71.1b.-1977, and \ applicable \ Federal \ and \ State \ OSHA \ regulations \ based \ the reon.$ GROUNDSMASTER® 62 PRIME MOVER (MODEL NO. 30790) Onan twin opposed cylinder, 4 cycle, air cooled, 20 HP @ 3600 RPM, electric start. 47.7 cu. in displacement. Gear driven oil pump for full pressure lubrication, remote mounted replaceable oil filter, and remote mounted engine oil cooler. 2 gt. oil capacity. System also incorporates low oil pressure shut-off switch and high cylinder head temperature shut-off switch. Alloy aluminum connecting rods. Pearlitic iron cylinder liners cast into block. Mechanical flyball governor limits ENGINE speed to 3200 RPM. Vacuum fuel pump. Heavy duty, remote mounted Donaldson Cyclopac air cleaner. Extra large muffler for reduced noise level. Optional spark arrestor muffler Part No. 46-2390. 12 volt, 42 plate, cold cranking 300 amperes at 0°F, 50 minute reserve capacity at 80°F, maintenance free battery. 15 amp. alternator with regulator. Seat switch, PTO and traction interlock switches. **ELECTRICAL FEATURES** WEIGHT 810 lbs. prime mover with seat. Certified to meet ANSI specifications B71.4-1980 with 62" deck, ANSI B71.1b. - 1977 for all 52" decks, and applicable Federal CERTIFICATION and State OSHA regulations based thereon. SPECIFICATIONS COMMON TO GROUNDSMASTER 52 AND 62 **FUEL CAPACITY** 6.0 gallons gasoline. Variable hydrostatic transmission mounted on Dana GT20 axle - 20.9:1 ratio. Single foot pedal control of forward/ TRACTION DRIVE reverse ground speed. 25 micron replaceable filter. 5 qt. oil capacity. **GROUND SPEED/CLEARANCE** 0-8.5 MPH, infinitely variable. Ground clearance 6" Two rear steering tires $15 \times 6.00 - 6$, tubeless 4 ply rating. Two front traction drive tires $20 \times 8.00 - 10$, tubeless 4 ply rating. Demountable rims. Recommended tire pressure 10-15 P.S.I. depending on mowing conditions. TIRES/WHEELS/PRESSURES **MAIN FRAME** All welded formed steel reinforced with square tubing. Individual T x 13/4" drum type wheel brakes and parking brakes on front traction wheels. Dynamic braking through BRAKES traction drive STEERING Automotive steering gear assembly. 15" steering wheel. CONTROLS Hand operated throttle, choke, PTO, and hydraulic implement lift. GAUGES Hour meter and ammeter Optional: Molded foam seat with leaf-spring suspension, Model No. 30765. Deluxe suspension seat, Model No. 30766. SEAT Both adjustable 41/2" fore and aft

I" diameter splined PTO shaft clutched by two "HA" torque team section tight-slack V-belt.

TYPE	51%" width-of-cut, three blade, front mounted rotary.
MOWING RATE	Mows up to 2.8 acres/hour at 5.5 MPH depending on conditions.
TRIMMING ABILITY	Deck offset 10¼" to the left from center line; deck offset 10¾" to the left from outside of tire to trim side; 26" uncut circle left; 0" uncut circle with use of individual wheel brakes.
HEIGHT OF CUT	¾"-4", adjustable in ¼" increments in front and 1" increments in rear.
CONSTRUCTION	12 gauge stamped steel, 5" deep, Wind-Tunnel® housing.
CUTTER DRIVE	PTO driven spiral bevel gear box. "AA" section belt drive to all spindles. ¾" regreasable spindles with two ball bearings.
BLADES	Three 18" long, 3/16" thick, heat treated steel blades.
SUSPENSION	Two 8" front wheels. Suspended off the prime mover at rear.
LIFT	Two hydraulic cylinders.
WEIGHT	190 lbs.
CERTIFICATION	Certified to meet ANSI B71.1b — 1977, and applicable Federal and State OSHA regulations based thereon.

IMPLEMENT DRIVE

52" FLOAT	ING CUTTING UNIT (MODEL NO. 30555)
TYPE	51¾" width-of-cut, three blade, front mounted rotary.
MOWING RATE	Mows up to 2.8 acres/hour at 5.5 MPH depending on conditions.
TRIMMING ABILITY	Deck offset 10¼" to the left from center line; deck offset 10¾" to the left from outside of tire to trim side; 26" uncut circle left; 0" uncut circle with use of individual wheel brakes.
HEIGHT OF CUT	$l^{\prime\prime}\text{-}4^{\prime\prime}$ adjustable in $^{\prime}4^{\prime\prime}$ increments by relocating four pins at each corner of cutting unit.
CONSTRUCTION	12 gauge stamped steel, 5" deep Wind-Tunnel® housing.
CUTTER DRIVE	PTO driven spiral bevel gear box. "AA" section belt drive to all spindles. I" regreasable spindles with two tapered roller bearings.
BLADES	Three 18" long, 3/16" thick, 2.5" wide, heat treated steel blades.
CARRIER FRAME SUSPENSION	Two 8" phenolic resin front wheels with regreasable roller bearings. Suspended off the prime mover at rear. Front and rear deck rollers. Deck counterbalanced by spring between cutting unit and prime mover.
LIFT	Two hydraulic cylinders.
WEIGHT	220 lbs.
CERTIFICATION	Certified to meet ANSI B71.1b $-$ 1977, and applicable Federal and State OSHA regulations based thereon.

52" FLOAT	ring Rear Discharge Cutting Unit (MODEL NO. 30560)
TYPE	51%" width-of-cut, three blade, front mounted rotary.
MOWING RATE	Mows up to 2.3 acres/hour at 4.5 MPH depending on conditions.
TRIMMING ABILITY	Deck offset 10¼" to the left from center line; deck offset 10¾" to the left from outside of tire to trim side; trims on both sides; 26" uncut circle left. 0" uncut circle to left with use of individual wheel brakes.
HEIGHT OF CUT	$l^{\prime\prime}\text{-}4^{\prime\prime}$ adjustable in $\mathcal{V}_2^{\prime\prime}$ increments by relocating four pins, one at each corner of the cutting unit.
CONSTRUCTION	12 gauge welded construction, 3" deep.
CUTTER DRIVE	PTO driven spiral bevel gear box. "AA" section belt drive to all spindles. 1" regreasable spindles with two tapered roller bearings.
BLADES	Three 18" long, 3/16" thick, 2.5" wide, heat-treated steel blades.
CARRIER FRAME SUSPENSION	Two 8" phenolic resin front wheels with regreasable roller bearings. Suspended off prime mover at rear. Front deck rollers. Deck counter- balanced by spring between cutting unit and prime mover.
LIFT	Two hydraulic cylinders.
WEIGHT	230 lbs.
CERTIFICATION	Certified to meet ANSI B71.1b $-$ 1977 Safety Specifications, and applicable Federal and State OSHA regulations based thereon.

62" FLOATING CUTTING UNIT (MODEL NO. 30562)

TYPE	61%" width-of-cut, three blade, front mounted rotary.
MOWING RATE	Mows up to 3.4 acres/hour at 5.5 MPH depending on conditions.
TRIMMING ABILITY	Deck offset 10¼" to the left from center line; deck offset 16" from outside of tire to trim side; 18" uncut circle left; 0" uncut circle with use of individual wheel brakes.
HEIGHT OF CUT	l"-4" adjustable front and rear in ¼" increments by relocating four pins at each corner of cutting unit.
CONSTRUCTION	12 gauge steel, 5" deep Wind-Tunnel® housing, welded construction.
CUTTER DRIVE	PTO driven spiral bevel gear box. "AA" section belt drive to all spindles. I" regreasable spindles with two tapered roller bearings.
BLADES	Three 21.5" long, 2.5" wide, 3/16" thick, heat-treated steel blades.
CARRIER FRAME SUSPENSION	Two 8" phenolic resin front wheels with regreasable roller bearings. Suspended off prime mover at rear. Front and rear deck rollers. Deck counterbalanced by spring between cutting unit and prime mover. Deck includes one 35 lb. rear weight.
LIFT	Two hydraulic cylinders.
WEIGHT	335 lbs.
CERTIFICATION	Certified to meet ANSI B71.4 — 1980, and applicable Federal and State OSHA regulations based thereon.

IMPLEMENT AND ACCESSORY COMBINATIONS												
	30545 CUTTER	30555 CUTTER	30560 CUTTER	30562 CUTTER	30570 SNOWTHROWER	30750 V-PLOW	ROTARY BROOM	CAB W/ROPS	ROPS	30765 STANDARD SEAT	30766 DELUXE SEAT	SPARK ARRESTOR MUFFLER
PRIME MOVER MODEL NO. 30775	Opt.	Opt.	Opt.	-	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt,	Opt.
PRIME MOVER MODEL NO. 30790	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.
GRASS COLLECTING SYSTEM MODEL NO. 30557	-	Opt.	-	-	-	-	-	-		- 1	-	-
LEAF MULCHER MODEL NO. 30700	Opt.	Opt.	-	-	-	-	-	-	-		-	-
LEAF MULCHER MODEL NO. 30792	-	-	-	Opt.		-	-	-	_	-	-	
V-PLOW MOUNTING KIT MODEL NO. 30755	-	-	-	-		Req.	=	-	-		-	
SNOWTHROWER ADAPTER KIT MODEL NO. 30572	-	-	-	-	Req.	-	-		=		=	-
TIRE CHAINS PART NO. 28-5470	-	-	-	-	Opt.	Incl.	Opt.	-	-	-	-	-
WHEEL WEIGHTS PART NO. 28-1270	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	_	-		-	-
REAR WEIGHT KIT PART NO. 24-5780	Opt.	Opt.	Opt.	Opt.	Req.	Opt.	Opt.	-	_		_	_
HIGH LIFT BLADE PART NO. 44-5480	-	Opt.	-	-	-	-		-	-			

LEAF MULCHER

Optional attachment of 12 gauge steel with $\frac{1}{2}$ diameter staggered holes. Mounts under side discharge deck. Model No. 30700 fits cutting units #30545, 30555; Model No. 30792 fits cutting unit #30562.

GRASS COLLECTING SYSTEM (MODEL NO. 30557) FOR 52" FLOATING CUTTING UNIT

CONSTRUCTION

Blower assembly housing is 16" diameter; three piece welded construction. The blower assembly attaches to the discharge port of Model #30555 cutting unit. Impeller speed is 1650 RPM max. @ 3200 RPM engine speed.

Chute is one piece, made of black, high density polypropylene material used to direct debris into bag.

Hinged hood, Mounted to bag support assembly, is made of black high density polypropylene. Air exhausted through riveted metal screen in hood.

Rectangular bag support is welded to frame of steel tubing. Bottom pan is black high density polypropylene riveted to a welded tubular steel frame. The bag support assembly mounts to the right side of traction unit and supports a polyester grass bag.

Bumper of steel tubing is bolted to deck suspension frame to protect blower housing.

Includes deck baffling a	nd mounting bracket.
CAPACITY	Polyester bag 20" dia. x 46" high — approximately 7 bushels. Optional dry condition polyester bag 24" dia. x 46" high — approximately 10 bushels. Part No. 43-0980.
OPTIONAL ACCESSORIES	18" high lift blades for improved wet grass bagging, Part No. 44-5480. Elastic retaining cord allows use of 30+ gallon plastic trash bags, Part No. 36-7770.
DIMENSIONS	57' high, 120" long, 68" wide, installed.
WEIGHT	123 lbs. — grass collecting system only.
CERTIFICATION	Certified to meet ANSI B71.1b. — 1977 and applicable Federal and State OSHA Regulations based thereon.
	V PLOW (MODEL NO. 30750)
CONSTRUCTION	$48^{\prime\prime}$ heavy gauge steel construction with front skid and reversible/replaceable scraper blades.
WEIGHT	210 lbs.
V PLOW	MOUNTING KIT (MODEL NO. 30755)
CONSTRUCTION	Consists of push arm attaching brackets. Required for mounting V Plow.
WEIGHT	50 lbs.
ACCESSORIES	Tire chains included (Part No. 28-5470).
SNOWTHROW	R (MODEL NO. 30570; 30572 ADAPTER KIT)
TYPE	48" two stage with adjustable side skids and discharge chute.
WEIGHT	340 lbs.
ACCESSORIES	Two optional rear weight kits required (Part No. 24-5780).
	ROTARY BROOM
TYPE	48" wide. Consult with your Toro distributor for manufacturer's specifications.
	CAB WITH ROPS
CONSTRUCTION	4 post ROPS all steel tubular frame construction with contrasting steel canopy. Includes seat belt, seat retention kit and perforated foam headliner.
	OPTIONAL Vinyl enclosure kit consists of reinforced heavy duty vinyl fabric with left side heavy gauge wire frame door. Enclosure kit includes tinted safety glass windshield, velcroe fastening kit, latching door handle, and floor mat.

latching door handle, and floor mat.

Certified to meet OSHA standard 1928.51(b)(1).

OPTIONAL Light kit includes front headlight rear work light,

and roof-mounted flashing amber beacon. **OPTIONAL** Single speed windshield wiper and defroster fan for cab installation.

4-Post ROPS with canopy-110 lbs.; enclosure kit - 60 lbs.

	LENGTH	WIDTH	HEIGHT	WEIGHT
TRACTION UNIT #30775	74"	42"	48"	770 lbs.
W/30545 CUTTING UNIT	95"	65"	48"	960 lbs.
W/30555 CUTTING UNIT	97.5"	65"	48"	990 lbs.
CUTTING UNIT	97.5"	53.5"	48"	1,000 lbs.
W/GRASS COLLECTING SYSTEM	97.5"	68"	57'	
W/SNOWTHROWER	102"	51"	48"	
W/V-PLOW	99"	48"	48"	
W/BROOM	119.5"	53"	48"	
W/ROPS	N/A	42"	74.5"	
W/CAB	N/A	42"	74.5"	
TRACTION UNIT #30790	78"	42"	48"	810 lbs.
CUTTING UNIT	106"	74"	48"	1,145 lbs.
W/30545 CUTTING UNIT	99"	65"	48"	1,000 lbs.
W/30555 CUTTING UNIT	101.5"	65"	48"	1,030 lbs.
CUTTING UNIT	101.5"	53.5"	48"	1,040 lbs.
W/GRASS COLLECTING SYSTEM	101.5"	68"	57"	
W/SNOWTHROWER	106"	51"	48"	
W/V-PLOW	103"	48"	48"	
W/BROOM	123.5	53"	48"	
W/ROPS	N/A	42"	74.5"	
W/CAB	N/A	42"	74.5"	

ACCESSORIES						
DESCRIPTION	MODEL/ PART NO.	DESCRIPTION	MODEL/ PART NO.			
TIRE CHAINS - 20 LBS.	28-5470	STANDARD SEAT	30765			
WHEEL WEIGHTS - 100 LBS.	28-1270	DELUXE SUSPENSION SEAT	30766			
REAR WEIGHT KIT - 70 LBS.	24-5780	SPARK ARRESTOR MUFFLER — MODEL NO. 30775	See Briggs			
HIGH LIFT BLADE (ONE BLADE)	44-5480	MODEL NO. 30790	& Stratton 46-2390			

*Specifications and design subject to change without notice.

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CERTIFICATION

ELECTRICAL FEATURES

WEIGHT

(Continued from Page 26)

Jewett stresses that prompt attention is necessary: "You can't say, I'll get this area on the way back'—you have to get it in now. Something may happen that keeps you from returning." The Miami Lakes superintendent says he likes Sevin 20 Percent Bait's control because "it is less erratic. You get better uniformity of control."

GOLFERS DISLIKE ODORS

Kocker says respect for the playing members cannot be overemphasized: "We have a lot of traffic at Inverrary and that always creates problems in pest control. You try to use treatments during times that won't interfere with golfing. I don't want players smelling pesticides or tracking through any of it, safe as it may be. Some insecticides labeled for crickets pose an odor problem. Sevin has no odor. What's more, with Sevin, it takes 15 times less material (at the 10 pound rate) to cover the same space as Dursban. In a heavily infested area, I've seen Sevin pull mole crickets out of the ground in 30 minutes to one hour. You see dead ones all over the place, but, more importantly, you know there are many more dead ones underground that won't come up."

"The baits all do a good job in certain situations," says Reinert. "There will always be failures, no matter what. Sometimes you get a good treatment, at other times not so good. It just happens. Spray applications using high-pressure injections have been used successfully by several people, but we have no research experience to support this method of application."

While cricket populations are typically higher in late summer, a lesser peak of egg-hatching occurs in late January to mid-February, says Reinert. This is the result of a second flight, usually in September to November, he adds. Thus, golf course superintendents who may enjoy a late fall respite may experience a return of their problem in springtime. But in many cases, says Reinert, the cycle appears unbroken: Nymphs of crickets can be found yearround.

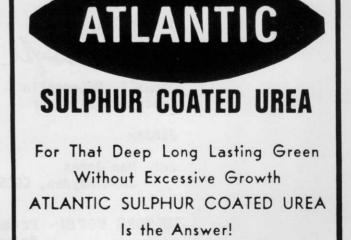
MOLE CRICKETS: YOUR ENEMY BELOW (cont)

Fortunately, all hatchlings do not survive, Reinert says: The insects are cannibalistic and often are preyed upon by fire ants, ground beetles, earwigs, spiders, birds and small animals. A parasitic wasp, credited with reducing mole cricket populations in Puerto Rico, has been introduced to Central and Southern Florida, bur several years of testing remain before its controlling effect will be known.

The bad news is, Florida probably has not seen the worst of its mole cricket problem, says Reinert. He points out that, as an "imported" insect, no natural predator sufficient for ideal levels of control exists in this country. Also, pastures, gardens, lawns and local ball fields may continue to "warehouse" future generations owing to lack of adequate control information or resources.

But the good news is, Florida's golf course superintendents, by addressing the seriousness of the problem, can continue to keep their grounds in enviable shape—with help from insecticides, their weatherman and the club treasurer.





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June 7, 1982

William G. Wagner 22 Pinetree Circle Tequesta, FL 33458

Dear Bill:

Just a brief note on behalf of the Golf Course Superintendents Association of America to thank the Florida GCSA for donating bound copies of its magazine, THE SOUTH FLORIDA GREEN, to the GCSAA library. We are honored and pleased to accept these books with the expectation that they will contribute handsomely to an expanding Association library concept.

Should it be possible, we would appreciate receiving future bound copies of THE FLORIDA GREEN. As always, your members and key Chapter Chairmen continue to represent the game and the profession so well. Best wishes for continued success and a good summer.

Sincerely,

James E. McLoughlin Executive Director

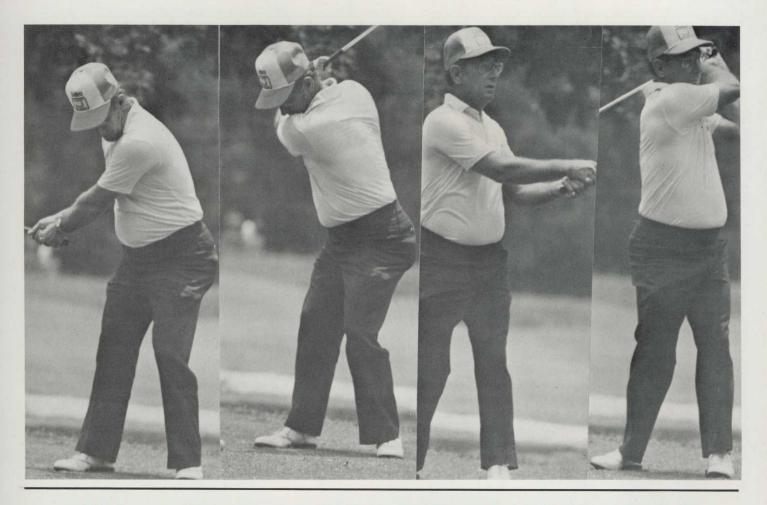
JEM/mr

cc: Dan Jones

John Hayden, CGCS

EDITORS NOTE:

President Bill Wagner reports that all future issues of "The Florida Green" will be bound and made a permanent addition to The GCSAA Library.



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(Continued from Page 16)

III. Spruce Creek Golf Club.

Gary Morgan - Superintendent.

A. 1. Age of greens - 7 years.

- 2. Age of tees 7 years (10 new Pro tees have been built in last year).
- B. Conditions of subsoil.
 - Greens all but 5 greens are 80% sand 20% organic. 5 problem greens are 50% 50%.
 - 2. Tees older tees range from 60% 40% to 80% 20%. New tees are 95% sand 5% organic.
- C. What topsoil used & why.
 - 1. Greens use 80% sand 20% peat with charcoal added (@ ½" thick equivalent to 3 lb/-1000 charcoal). Topsoil is applied when aerifying and various times of growing season when needed. Charcoal is used to cleanse the soil and to make it warmer for faster head time. Same topdressing was used at overseeding time to help deactivate the kerb, instead of spraying charcoal through sprayer. Results were satisfactory the 1st time tried.
 - 2. Tees 80 20 mix used where and when needed.
- D. Comments:
 - Greens happy with results. The greens where subsoil is 50-50 are to be rebuilt soon.
 - 2. Tees satisfied with results.

IV. Suntree Country Club

Ron Andrews - Superintendent.

- A. 1. Age of greens on new nine holes planted Nov. 1, 1981.
 - Age of tees on new nine holes planted 2nd week of Nov., 1981.
- B. Conditions of subsoil.
 - 1. Greens 85% sand 15% peat (Mixed off site).
 - 2. Tees 80% sand 20% peat (Mixed off site).
- C. What topsoil used & why.
 - Greens straight sand is being used. This is the same sand that was used in the building of the greens.
 - 2. Tees 90% sand 10% peat mix.
- D. Comments:
 - Greens topdress 1st 3 times starting 2nd week of January, 1982 with straight sand then aerified with ¼" times 3 times and each time topdressed with sand and rolled to get smoothness of a level surface. Happy with results.
 - Tees since 2nd week of January, 1982 they have been aerified and topdressed with 90% sand 10% peat 2 times. Satisfied with results.

As you can tell we have quite a few different ideas on what is done on each superintendent's course. It all depends on what's best for you, your course and your budget.

I would personally like to thank, on behalf of the Central Florida Chapter, the superintendents and their professionals who attended the 2nd Pro-Superintendents Meeting and Golf held at East Lake Woodlands Golf Club, Tarpon Springs on May 17. I think we showed each other that we are both professionals in our own right and that we are willing to communicate so that our clubs will be successfull. Remember superintendents — The Professional is a close friend to us, lets make him feel the way that we want to feel. See you at the next Pro-Superintendents sometime in the Fall 1982.



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The Everglades Chapter of the Florida Golf Course Superintendent's Association





COMPENSATION

A View From The Other Side

by: Melvin Weinstein

The issue of compensation for superintendents has surfaced big over the last 10 years. We see coming on the scene, a highly skilled individual with schooling, and solid golf course apprenticeship. These facts have made the superintendent's position one that is highly skilled and knowledgeable. Is management paying for this expertise?

We have superintendents caring for properties that would cost millions to replace. Their annual salary cost is minimal considering the cost of fatal mistakes and mismanagement of these properties.

Like everyone else, the superintendent must prove his worth. He must be able to give the club the finest course available for whatever budget management approves, then he must remain within this budget. This is critical, since poor financial management will sour the whole picture. Management must also be aware of what kind of course the budget will allow and not make "pie in the sky" promises. The superintendent must follow through on any committment he makes. Don't tell management something is going to be done and then forget about it for several weeks. Results not promises gets the job done. Management must be made aware of why goals can not be met. Honesty is the best policy.

With budgets escalating, clubs expect more and more for their dollars. If the superintendent is producing, management will be happy. Whether they translate this happiness into salary is the issue. The superintendent however can not sit back and wait. He must make management aware of his desires so management will know where they both stand. Overpushiness or threats will get him nowhere. Controlled discussion and communication at the right time will produce results. If promises are broken or rewards not forth-coming, then it is time to look for greener pastures.

Superintendents are no different that other managers, with one big exception—that is, he performs his work for the most part under no direct supervision from his management. He might receive some general objectives from his owner or chairman, but the performance is totally his own. He must discipline himself to stay within his own goals, and he must see that these goals ultimately aline with the goals of management. I've seen superintendents hanging around their offices day in and day out, having only a vague idea of what is going on out in the field. Self discipline is a very important factor in this profession, and most importantly, pay your dues as an apprentice.

Summary: Get the training. Don't take a job that you're not qualified to do. Do the job right. Tell management how you and they stand, then stand up for your right. Come in on budget at all costs. If management doesn't recognize your worth, then you both have a problem.



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WET SOIL AND CARTS

With all of the wet weather this winter, someone called to discuss effects of cart traffic on fairways. The superintendent had made a decision to close the course to all cart traffic. Rain twice a week for several weeks and the night before had saturated the soil. The members called two area clubs and found their carts running, then confronted the superintendent with this information. The superintendent realized the two area clubs had paved cart paths from tee to green. This club did not. Next question: It isn't raining now. Why can't we take the carts now? Answer: Water-saturated soil is much more easy to compact than damp or dry soil. The water acts as a lubricant between soil particles. Weight from above, forces soil particles into empty spaces. The soil particles move easily, forcing out free water and any air in the spaces. Granular structure of a good soil is ruined. Pore space for air and water is taken by soil particles, making the soil more compact and dense. Reduced pore space means less room for roots to enter the soil. Result: poor grass growth. A day of running carts on saturated soil could require several years of cultural practices, such as slicing, core aerification and tilling, to correct the soil for good grass growth.

Landon's Turf Tips



GOLF COURSE GREENERY

by Vince Smith

It's one of those bright and brilliant days you go out to play your favorite golf course.

The tee-box grass is unscarred and trimmed to perfection. The fairways are lush and verdant where the ball sits up stoutly. The greens are soft and smooth and velvety: they're putting like a dream.

And all's right with the world. These are ideal conditions most golfers not only expect at their favorite golf course. they generally take them for granted.

But all this immaculate greensward did not just come about by accident. The ultra-fine shape your layout has been honed into has been brought about by a dedicated, highly trained technician who is probably the most invisible, most unrecognizable member of your club staff—the golf course superintendent.

In the old days these knowledgeable turf management specialists were known as "greenskeepers." Today, as more educational skills have furnished a higher level of turf management technicians, the golf course superintendent has become one of the most vital cogs in the present-day golf club operation machinery.

Today's superintendent's in many instances, are collegetrained turf experts who have engaged in considerable "on-the-job-training" before reaching the prestigious level which now marks their profession.

Mark Hampton, golf superintendent at Wundmere Country Club in Naples, is an excellent example of the breed of turf technicians who have supplanted the old greenskeepers of years gone by.

Wyndmere is a comparatively new 27-hole private complex, designed by Golf Architect Arthur Hills, which is part of a large residential development owned by Canadian industrialist and sportsman Gerry Livingston.

From Jacksonville he moved on to LaGorce Country Club at Miami Beach as a maintenance worker then procured the job as assistant superintendent at Valley Country Club in Denver, Colorado. After a year in the cool Colorado mountain air, Hampton decided to go back to school.

"At the time I was going to the University of South Florida in Tampa and received an AA Degree in speech pathology," he said. But while he had been in Colorado, Hampton became interested in pursuing his schooling in turf management and ended up at Lake City (Florida) Community College, one of the finest turf specialty schools in the nation.

The Lake City turf management course at that time was two years...it has now been expanded to three years. Hampton finished his schooling, which included an onthe-job training program at Countryside Golf Club in Clearwater.

Hampton then decided he wanted to come to Southwest Florida and so he took the position of golf superintendent at Cypress Lake Country Club in south Fort Myers. He stayed there a year and a half.

"Cypress Lake was the most enjoyable for me, getting to know Herb Graffis and doing a couple of things for Patty Berg, whether it was her Christmas show or whatever," Hampton said. "So the time there was very enjoyable because of those two people, along with the members that were there also."

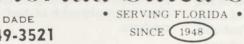
(Herb Graffis is a World Hall of Fame member form Fort Myers Beach who is HOME & CONDO'S award-winning columnist. Patty Berg is a women's golf immortal who is a member of Cypress Lake.)

The young superintendent was given the post of golf (Continued on Page 38)



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(Continued from Page 37)

course superintendent at Wyndemere where he started work February 1, 1980. "When I started here they had not even knocked a tree down," he recalls. "Evidently, Mr. Livingston likes to have his people in on the ground floor because I know it is kind of unusual to have a superintendent in on the job that early in the game. But to me, a lot of money was probably saved by having an expert on the job. And I would like to hope that will follow suit in a lot of other operations."

Livingston receives high marks from Hampton. "He knew the quality of operation he wanted to run," the superintendent says. "And, believe me, the freedom and the confidence that he's given us in our area has been tremendous."

Of his pre-development start at Wyndemere, Hampton says, "I think we're starting to see more of that now in many of them, (new development golf courses) because there's no question that the people that are there as far as the development part, they do not understand the golf course. And with the investment that you have on a golf course...to be run by layman, it does not hold true anymore.

"The architect in the past, I think, had been responsible for it (the golf course). But to come in on an every-two-week basis or a monthly basis to check progress is just not adequate enough. Somebody had to be the watchdog, or the eyes, for the owner and preferrable, trained eyes."

Hampton agrees that his profession has come a long, long way since the bygone era of the greenskeepers. "Probably the biggest advances we've made is just in the equipment we use. And we are starting to use now the modern technology that is finally entering our business," he said. "When I first started on the golf course it was nothing more than a shovel and a handle.

"If you went out and were able to mow three greens and three tees in a day's time, and rake the traps, that was a day's work," he noted. "And we've progressed to doing that now just in a matter of a couple of hours."

The maintenance equipment inventory alone at Wyndemere today stands in excess of \$400,000, Hampton says. "And the knowledge you need to have on that —and that's not just doing the mechanics' work, that's just really understanding what a lot of the principles are in that area."

Personnel-management, too, is an integral portion of the superintendent's position. Hampton has a force of more than 20 maintenance workers at Wyndemere. "Probably in the older times, if you had three or four people, or up to six, you were very fortunate," he says. "Also, the type of people we have working on the golf course are different. We have retired people here now who are an excellent source of personnel. And, also we're getting more college type people. I have two men working for me now who will be off to Lake City in the fall.

"So, the more trained employee is what we're starting to get now. My assistant, Greg Dent, is also a graduate of Lake City.

Going back to the applying of pesticides, Hampton ob-

serves, "In the past the superintendent was probably the one that had all the knowledge as far as pesticides went. And in an operation of this size, for me personally, or for my assistant, this is just not possible. We do schedule what needs to be applied but we have five people on our staff that do have their commercial pesticide licenses."

Hampton has broken down the different areas of maintenance. "Whether it's the shop, with the mechanic and his assistant, our spray technicians, landscape technician or whatever it might be, they all have their own particular area of responsibility. And the ones that are in those areas are very well trained," he says.

Southwest Florida's maintenance overseers have blended their talents into one cohesive organization, The Everglades Golf Course Superintendents Association, one of nine groups within the Florida Golf Course Superintendent's Assocation.

Regular monthly meetings of the local chapter are held at various golf clubs throughout the area where a wide variety of issues are discussed in detail and a large amount of input is thrust into each gathering. The Everglades Chapter is made up of about 125 members.

Reviews of current problems facing all superintendents are delved into in great detail by the Chapter at these monthly meetings. One vital issue facing the maintenance technicians would appear to be the ever-increasing water shortages in Southwest Florida.

"We've gone through different periods—it's just part of our business," Hampton explains. "I think a lot of us have thick skins because of the problems we encounter; whether it's been environmental problems where we've been trying to convince the EPA (Environmental Protection Agency) that what we're doing is positive and that we are watching what we're doing, whether it's the chemicals we're using that they are constantly taking off the market, and of course right now, the water situation is just another one that's on the horizon.

"We've known about the water situation for about five years but it's just now coming to the attention of the public," Hampton said. "Superintendents have been aware of this problem for quite some time."

Golf course superintendents are constantly faced with perplexities involving everything from weather conditions to outbreaks of turf disease and control of mole crickets.

"We were told at school, believe it or not, that the easiest thing we would have to do is grow grass. That sounds unbelievable because that's supposed to be our business. But there are so many things that enter into it," he said. "Whether it's the environmental people or whether it's the water management or the personnel problems, they all add up."

To compound the vexation, Hampton says, "When you're dealing with a variable like Mother Nature, she is constantly throwing you curves." But, he adds, this is a vari-

(Continued on Page 42)



Palm Beach Trade Winds



By MICHAEL BAILEY Boca Greens Country Club

With the subject of topsoil and topdressing you immediately think of the old jokes in school about soil and just dirt. I distinctly remember my first day in the class of soil principles. The entire class session was spent drilling into our minds the difference between soil and dirt! For two words to be so synonymous, they are absolute antonyms to the agronomist.

First of all, we as professionals must call the media always soil and not just dirt. I think of soil by definition as being the aggregates of the earths crust, possessing mineralogical values in a relationship to microboilogical activity and available air and water pore space to support a biological function for the plant growth. Wow, I guess that's what I mean. However, I think of dirt as simply being a useless accumulation of the earths crust with virtually no nutritional values, poor structure and density that otherwise can not support plant life. Commonly being the dirt one vacuums from the carpet.

There are times when we easily become discouraged with the soil media that we are often forced to grow turf upon. Perhaps there are even times when we feel the soils makeup of our greens is . . . just dirt. Our seemingly number one major problem of Florida appears to be the morphology of our soils. Professors show us the typical charts of the sand/silt/clay triangle, however, the superintendents are the ones who must work with the lower left hand corner which reveals "mostly sand or pure sand". Research and actual use of sandy soil greens prove that if given enough available moisture and budget to support high fertility levels, one can maintain excellent greens on sandy soils.

Superintendents often produce superlative turf on sandy soils, however, we try to come in and modify the soil with what we feel is a better soil media. This quite often is not the case, for we will pay the bill later through accumulated thatch buildup and the inability of the soil to percolate.

Since our basic media is sand, how can we go about helping ourselves from the very beginning. Fortunately for myself, I was hired at Boca Greens during early rough grade construction. This allowed me to work with golf course architect Joseph Lee, as he employed the ideal choice of construction. Native topsoil was of excellent cultivated farmland. A more expensive and tedious procedure of stripping the farm land, stockpiling, then digging and hauling from tentative lake beds, resulted in the best needs of the contours. Then the native soil was top-dressed at layers of at least 12 inches for the final coating of most all land elevations. It was at these stages of construction that Joe Lee and myself examined the native soils

and tested for the best soil media for the greens. Even though we complain about the sand, yes, we can achieve excellent drainage. This should be one of our primary goals during greens construction. U.S.G.A. specifications of tile and drain pipe along with gravel, seldom are needed in Florida, however testing should be performed of the soil. I had an infiltration test performed, that revealed percolation in excess of eight inches per hour. Yes, this seems ideal, however improper topdressing can destroy such data in a matter of a few years, if soil particle sizes are not matched to the native soil.

One does not necessarily have to be a soil science major in order to achieve proper drainage. There are several laboratories in our industry that are readily available to assist us. Laboratory and field technician, Lynn Griffith, of A & L Laboratories explains an infiltration test. "Taking a part of your existing field and placing it under laboratory conditions to simmulate rainfall, thereby measuring the amount of infiltration over a given period of time." The procedure can best be described as taking probes of the upper 4 inches of the soil. Then mix with sodium aexametaphosphate to keep the soil particles from adhering to each other. The soil is then placed within a cylinder of 2 inches in diameter by 12 inches of length. The soil is gently settled to near field conditions. Distilled water is then allowed to infiltrate through this column of soil for ½ hour, to form a homogeneous mixture of soil without air pore space. After this period of time, the testing actually begins. This contraption of hoses, tubes, buckets and graduated cylinders looks much like a downhome distillery, however the device technically allows water to percolate over a prescribed amount of time to quite graphically reveal the amount of water infiltration per hour. It is with this test, I can set the standard for which the greens should percolate. Your topdressing MUST be purchased with this in mind.



(Continued on Page 43)

By JAMES P. CALLAGHAN Riomar Country Club

Topdressing greens along the Treasure Coast has become the most important aspect of golf management that insures a true smooth putting surface and suitable soil characteristics. With the exception of more emphasis on using the correct material for a specific circumstance, the art and science of topdressing hasn't changed drastically over the years.

Many area superintendents have initiated a sand only topdressing program to balance the high percentage of organic material found in their greens. Chuck Calhoun of John's Island, Clarence Fleming of Dodgertown, Bill Mangold of Crane Creek, and Dave Bertholf of Miles Grant have all reported of using sand only for topdressing greens coupled with frequent aeration to alleviate drainage problems in the greens found at their courses. Bill Mangold commented that the greens at Crane Creek were built with 100% muck and grew more algae than grass during periods of wet weather. After three years of topdressing with sand, Bill has noticed great improvement in the overall condition of his greens.

For the supers who have adequate perculation (3"-6"/hr.), a prepared topdressing with a high percentage (70%-90%) of sand is used. The balance of the blend is of organic material, usually peat or muck. Most superintendents agree that a small amount of organic material is essential for water rentention. After last year's drought, only problem greens along the Treasure Coast are receiving 100% sand as a topdressing medium.

One of the easiest ways of topdressing greens seems to have been almost abandoned in our area. The practice of verticutting cores and then dragging the soil back over

Getting an early morning start on topdressing greens at Riomar Country Club, Vero Beach.

the putting surface is believed by some to have an adverse effect when working with hybrid bermudagrass. Although this practice as adventageous as far as using similar soil material for topdressing, it is in fact transplanting any mutation or contaminant grasses that may be present in the green. Under the high intensity of maintenance, chances are that a mutant sprig from a shredded core replanted in another aerifier hole WILL SURVIVE. The time saved in topdressing is not worth the future headaches when one continues to move undesireable grasses around on his greens.

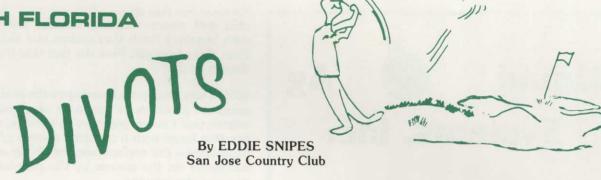
A trend towards frequent topdressing during the year has become evident in the three county area. Adam Yurigan, Jr. of the John's Island Club in Vero Beach stated that he rarely goes more than eight weeks without topdressing. And during the winter months, overseeded greens are topdressed every four weeks. Ross Saylor, Golf Course Superintendent of Stuart Yacht and Country Club, reported that his greens are topdressed EVERY WEEK. Ross stated that this practice ensures quality putting conditions and eliminates undesirable thatch build-up.

Topdressing has proven to be a useful tool in correcting undesirable soil characteristics, reducing thatch build-up, rejuvinating sparse turf, and providing a billiard table surface on putting greens. Treasure Coast supers have carefully selected the topdressing program suited to their individual circumstance and plan to stick with it. For they realize that changing materials creates layers that impede air, water and roots. Layers may cost one his turf and also his job. ■



Modern equipment has greatly reduced time required to topdress greens.

NORTH FLORIDA



Top Dressing, "She ain't what she used to be."

The Golf Course at San Jose Country Club located in Jacksonville, Florida has a very long and rich history. The present 18 hole course was completed in 1927 by golf course architect Donald B. Ross. The semi-private course was used by guests that stayed at the San Jose Hotel. The hotel was situated one-half mile away from the clubhouse and set on a bluff overlooking the St. Johns River. The hotel now houses Bolles High School The club was officially chartered in 1947 and went to private membership status.

What in the blue blazes does this have to do with top dressing greens one may ask? The 55 year growth of San Jose Country Club and the practice of top dressing run the same continuum. Top dressing did not begin to blossom as a potential maintenance practice until the 40's.



During this time at San Jose, top dressing was carried out with shovels and several men to distribute the top dressing material. This mode of operation was costly and time consuming. Top dressing procedures and San Jose Country Club at this time were in their infancy. One might speculate that in the 40's superintendents did not realize the full benefits of top dressing.

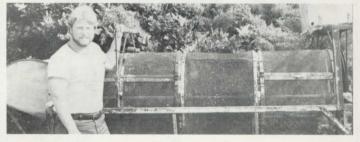
Today Dr. James Beard tells us that top dressing is utilized for (a) thatch control, (b) smoothing or leveling a turfgrass surface, (c) modification of the surface soil, (d) covering stolons or springs of vegetative plantings, (e) winter protection of turfs (Beard 73).





With the advent of a walking mechanized top dresser, the frequency and cost of top dressing became less and its benefits more obvious at San Jose. The greens are historical reminders of different superintendents philosophies on top dressing. Each layer of different soil in green plugs samples is evidence of their tenure at San Jose.

Today it is recommended that top dressing material be of the same consistency as the greens. This will help to prevent layering in the soil which allows for poor water and air distribution in the soil.



Top dressing used to be "homemade" at San Jose in a giant mixer. This mixer is now an artifact of days gone by. Today we buy treated (disease and weed free) material for our top dressing. The cost is far less to San Jose this way, in quality of material and in the man power it would take doing the operation ourselves.



(Continued on Page 44)

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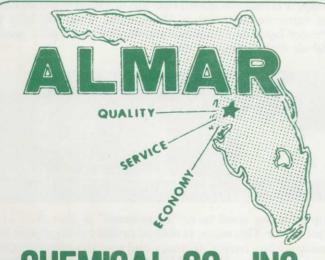
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(Continued from Page 38)

able golf course superintendents are forced to work with. "Again, I think that makes our skin a little thicker than alot of people. Plus the fact that it's going on seven days a week."

With water shortages looming on the horizon and with the immense increase in the price of chemicals needed to enable golf course greenery to survive, superintendents are also faced with a constant source of irritation at the local level—the replacement of divots and the repair of ballmarks on the greens by the players who enjoy the game at the courses.

"These are two headaches," Hampton admits. "To me, the way we handle divots here—this is our personal preference—we do ask the members to replace their divots. The chance of it probably ever growing back may be nil but it's a lot easier to hit off an old divot than out of a new one.

"Ballmarks, everywhere I've been have always been a problem. We do hope our players will repair ballmarks. But we go out and part of our early morning chores is repairing ballmarks. It's done on a daily basis.

"That is probably the biggest pet peeve that we do have. And during the months when the grass is not growing as fast as it is in the summer, they do not heal back as quickly and they're lot more noticeable."

Golf course operations are supervised, as a rule, by what Hampton refers to as "The Triangle"—the superintendent, the club manager and the club professional.

"As far as the wage scale and the different responsibilities we all have, probably the superintendent is the least visible one amoung all of them," he says. "But I think now, back in the development-type operation, the developers or the owners themselves are starting to understand the large responsibility of their investment and I think the 'Triangle' is becoming more equal than it ever has been in the past."

Which leads to the inevitable conclusion that Southwest Florida's golf course superintendents have come a long, long way since those days when they bore the nondescript title, "Greenskeepers."

Reprinted from Home & Condo Magazine, May/June 1982.

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(Continued from Page 39)

When it finally comes time to plant the turfgrass and eventually begin a topdressing program, the controversy really begins. Idealistically, I would choose to topdress with the surrounding native topsoil, so that I might match the exact particle sizes. Obvious problems of weed seed contamination, not to mention other problems, immediately elliminate such thoughts. Because of many outside vendors, who commercially offer a more suitable soil, your homework begins. First you must analize your comparison of particle sizes. Brookside Farms Laboratories Ass'n., Inc. has analized our sieve size in a ratio to allow me to understand the ratio of particle sizes, ranging from the smallest to the largest ones. I can then even test various topsiol medias on the market and feel free to choose that which best harmoniously blends to our existing soil. Tests reveal 75% of Boca Greens soil media falls between the sieve sizes of 10 and 60, (medium through large particle sizes) while only 25% of the material falls into sieve sizes of 80 to 100 (small sizes). The coarser particle sizes will aid in hendering compaction, while allowing proper infiltration of available moisture, nutrients, proper pore spaces and ultimately support deeper roots correlating to a healthier stand of turfgrass.

Once you have finally found the media which is best suitable, you then must decide upon the blend. A test of the percentage of sand/silt/clay should be performed on the native soil. A percentage of approximately 5% clay, 0% silt, approximately 90% sand and up to 5% organic matter will produce an ideal media. To achieve these ratios within a blend will cost a few dollars of laboratory testing. The time and money will prove beneficial with years of dividends.

Our ultimate goal in a topdressing program is to not produce an excessive thatch buildup at an alarming rate. Afterall, thatch by definition is an excessive accumulation of growth buildup. Since we are producing a putting surface at mowing heights below \(^1/4\) of an inch year round, we find ourselves beating our putters against a wall. In order to produce the product, thatch will always be a byproduct, so therefore topdress with a soil media that theoretically will meet your best overall demands—but never use just dirt!

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(Continued from Page 41)



Progress in the practice of top dressing at San Jose has now reached the state of the art. A maintenance practice that once took several men two to three days to accomplish can now be achieved in three hours by one man. The motorized riding top dresser with a 1,000 pound spreader attachment has brought greater speed, quality and efficiency to our top dressing program that will now increase in occurence.



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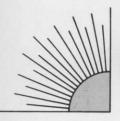
Top dressing practices at San Jose Country Club over the last 55 years have gone through different phases of development along with overall club development. It is progress made in our profession as in the practice of top dressing that helps us to do a better job for the members we work for and to enhance our professional capabilities.



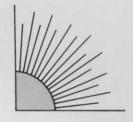
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South Florida Sunshine



By BRAD G. KOCHER Inverrary Country Club

THE ART OF TOPDRESSING

Topdressing serves a great variety of useful purposes. It stimulates growth in turf areas that are weak and need increased turf coverage. It smooths rough and similarily "thin" areas on putting greens and tees. As a soil amendment, a special mix can help to improve poor soil drainage. It can be said - if you are having trouble growing grass in any particular area - topdress it.

There are as many types of mixes available as only your imagination will let you conceive. Sterilized, unsterilized, 50/50, 70/30, 70/30 Medium, coarse, fine, 90/10 - the list goes on forever. One thing that is generally accepted is that the first number in the slash series is the sand and the remainder is Florida muck. However, there are some inconsistencies that exist even using these standards.

One supplier may call his 70/30 mix what another calls straight "muck". Briefly explained, all muck contains a certain percentage of sand. It is usually very fine sand or what we call sugar sand. If muck is placed in a jar of water and allowed to settle, it is readily seen that usually 50-70% of the composition is this fine sand. Conversely, another supplier of topdressing will use muck in its regular form as the other ingredient to be combined with sand. Simply put, if I would order a 70/30 mix, the supplier would take 7 parts sand (fine, medium or course) and mix it with 3 parts muck. This second option, as you can see, does not consider the very fine particles of sand that exist in his muck. Most mixes used by South Florida superintendents use this latter method of measuring sand to muck ratios, but it would seem there is a definite need for some form of standardization within the industry.

Differing types of sand also play a big part in topdressing mixes. Trap sand and D.O.T. sand are considered some of the coarse grades of sand and mason sand is probably the finest grade. A combination of the two sands should give you a medium grade mix. This mix, from personal experience, seems to work into the soil extremely well and can be applied at very light rates. Additionally, because the mix works into the existing turf, it is somewhat less abrasive to mowers making for a more contented mechanic.

The infiltration rate of different mixes also greatly varies. A mix using strictly fine sand may have a very poor water infiltration rate, whereas a straight trap sand mix may have excessive infiltration and little nutrient holding capacity. In either case, there are different purposes for different mixes. The coarser mix could be used to improve poorly drained soild especially during aerification, and the medium grade for general topdressing on well constructed greens having a similar soil profile. The fine mix, although one may question its percolation characteristics, can be used to "polish off" putting surfaces or to use

after establishment of overseeding. The finer mix is generally less abrasive and would be less harmful to sensitive overseeding leaf sufaces. It should be noted that any combination of the different sands is feasible and most topdressing suppliers are most receptive to custom mixing to your specific needs.

Probably the greatest benefit derived from topdressing is the results achieved to improve a putting surface. Light frequent topdressings are that extra plus that separates an average putting surface from a superior one. It would not be excessive to consider light (3/4 to 1 cu. yd. per 5,000 sq. ft.) topdressing every 3 to 4 weeks. the topdressing smooths the roll of ball as well as increases putting green speed. One of the prime tools a superintendent has to improve quality, in addition to low mowing height and minimum fertility levels, is topdressing.

Topdressing decreases the severity of low mowing heights. This is especially true when a decision has been made to lower mowing height. Probably the best time to lower mowing height is the day after a light topdressing. It decreases the shock to the plant. I have seen what happens when a green is mowed at 7/32'' and the decision to gradually lower to 5/32'' is made. It puts undo stress on leaf blades and will often result in browning or yellowing of the turf. However, if over a 2-3 week period the height is lowered in 1/64'' increments just following a light topdressing, little discoloration, if any, will result.

One of the ways so many of the courses who consistently maintain Bentgrass or Tifdwarf at 1/8", or 328 at 5/32" is through the use of topdressing. A northern course I am familiar with has the reputation of applying a very light layer of topdressing once a week. We all hear of how so many of the "tournament" courses mow at 5/64" or 3/32" for sustained periods during major tournaments. It is entirely feasible and with light topdressings it can be done with little loss of that desirable green color. I think most superintendents desire a "pool table" putting effect. I am sure at least the smoothness is desired, maybe not always the speed. Topdressing is the answer!

Topdressing is also a small price to pay to improve the most important area on the golf course. Twenty yards of topdressing at \$20-\$25 per yard plus 30-40 hours labor to topdress, drag and mow is a small monthly investment to give golfers a smooth, consistent surface. It does not seem like much when compared to \$300-\$350 thousand to maintain an 18-hole golf course.

I believe most superintendents would, if they had their choice, topdress more frequently. It really seems to solve a great many problems. It is the great cure-all. ■

Editorial

Over the past ten years Golf Course Superintendents have evolved from grass growers to professional turf managers. They are asked to grow grass under the worst possible conditions, and are required to maintain it at tournament condition on a daily basis. Golf Course Superintendents are managers entrusted with dispensing over a third of a million dollars annually.

Let's look at the facts. A golf course generates a lot of revenue. Often a course is the selling fact for housing units, it provides jobs for restaurant workers, pro shop employees, office workers, club managers and any number of grounds and golf course maintenance employees. The golf course is the necessary factor in this chain. Without "the great green golf course" this whole cycle of enterprise would not exist...this very fact makes the professional Golf Course Superintendent's position one that earns a high degree of financial compensation. Unfortunately some clubs still look at their superintendents as only grass growers and not as total managers.

People management requires superintendents to motivate employees to perform any number of labor positions in a day when generally people are no longer willing to do these type of jobs. They must help to instill a sense of pride in the way their employees view the course. We can not simply hand out tools and demand that workers rake traps, edge cart paths, trim trees, etc.... without appreciating them and educating them in such a way that they develop a sense of pride in the "over all success of the total operation."

Golf Course Superintendents are true professionals dedicated to the betterment of golf. Salaries of \$45,000. to \$55,000. are becoming common in Florida. Benefits for good superintendents include \$2,000. a year for IRA, one months vacation, a car for business and personal use, meals at the club, golf privileges for peers and so on.

Golf is a game which should be enjoyed. So... when was the last time you hugged you Golf Course Superintendent?



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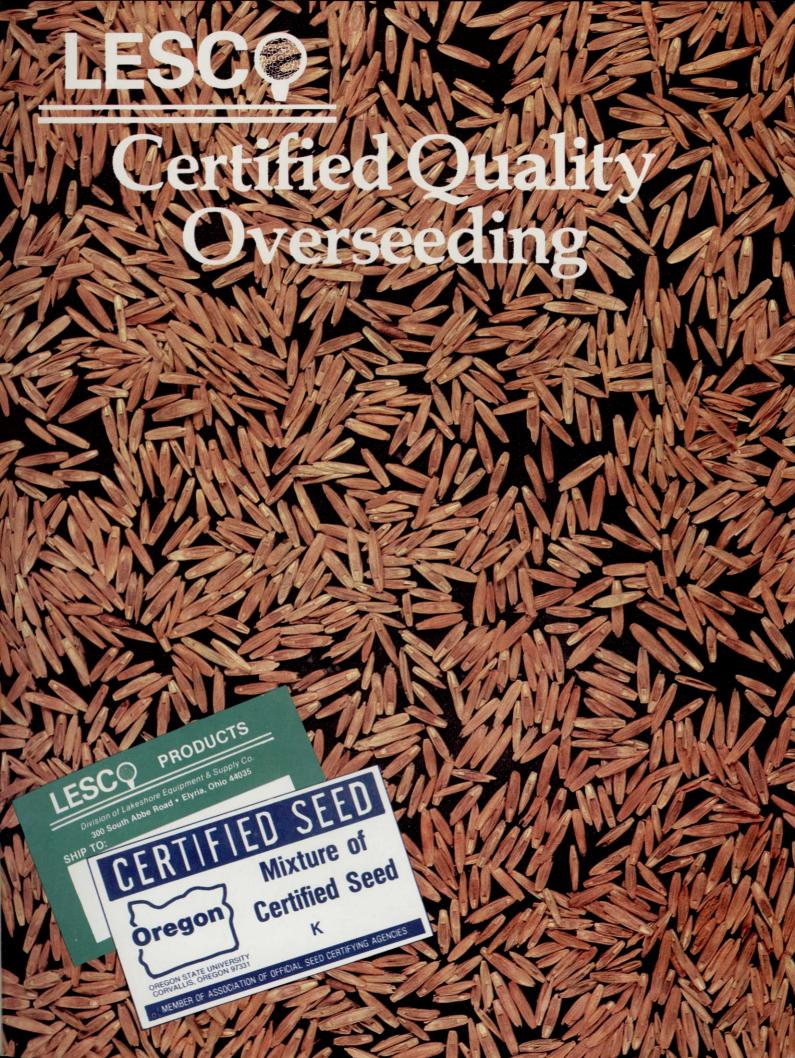
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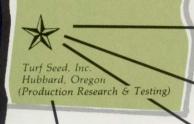
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LESCO'S CBS Blend is backed by 29 years of seed knowledge and research of Bill Rose (left) and Dr. Bill Meyer (right) of Turf Seed.



Two Turf-Seed contract seed growers roguing a Citation perennial ryegrass field for undesirable plants by spot spraying with Roundup.



Seed analyst conducting seed tests by carefully inspecting each seed with the help of magnification. Meeting seed test standards is an important step in the certification process.



Oregon officials placing certification seals and tags on CBS Brand Overseeding Mixture bags, which completes the certification process.



LESC

the benefits of a wide, diverse gene base for more consistent quality turf with a dark color, heat tolerance and excellent mowing qualities vital for overseeding. The certified blends are your assurance of purity and quality. LESCO Product salesmen bring you turf products like their certified quality overseeding blends because they know your concerns are quality and value.

PRODUCTS

Division of Lakeshore Equipment & Supply Co. 300 South Abbe Road, Elyria, Ohio 44036 (216) 323-7544

(800) 321-5325 Nationwide (800) 362-7413 In Ohio







Certified Overseeding Blends

Recommendations For Overseeding Bermudagrass

FORMULAS	USE AREA	MINIMUM SEEDING RATES
LESCO CBS Perennial Ryegrass Blend	Putting Greens	24 - 40 lbs/1000 sq. ft.
(Citation, Birdie, Omega (Syn B))	Tees & Collars	20 - 25 lbs/1000 sq. ft.
LESCO CBS + Oregreen ²	Putting Greens	25 - 40 lbs/1000 sq. ft.
(60% CBS, 40% Oregreen)	Tees & Collars	20 - 25 lbs/1000 sq. ft.
LESCO CBS + Pennfine Perennial Ryegrass Blend	Putting Greens	25 - 40 lbs/1000 sq. ft.
(60% CBS, 40% Pennfine)	Tees & Collars	20 - 25 lbs/1000 sq. ft.
LESCO CBS + Shadow ¹ Mixture	Putting Greens in northern	
(70% CBS, 30% Shadow Chewings Fescue)	Bermuda regions	25 - 30 lbs/1000 sq. ft.
	Tees & Collars	20 - 25 lbs/1000 sq. ft.
LESCO CBS + Sabre	Putting Greens in northern	
(85% CBS, 15% Sabre [poa trivialis])	Bermuda regions	20 - 25 lbs/1000 sq. ft.
	Tees & Collars	10 - 15 lbs/1000 sq. ft.
LESCO Oregreen Intermediate Ryegrass	Tees & Collars	20 - 25 lbs/1000 sq. ft.
	Fairways	250 - 300 lbs/acre

Fungicide seed treatment is available on all of the above certified ryegrass mixtures.

The genetic integrity of all the above products is double checked. The consumer is assured that the quality of the seed is the same as that desired by the breeder when he developed the variety because seed components are grown under the Oregon State University Certification Program. The mixtures are also checked and certified as BLUE TAG mixtures under the Oregon State University Certification Program when mixtures are shipped. These blends and mixtures are designed to produce top quality over seeded turf with improved disease resistance and wearability.

- 1 Shadow Chewings fescue is a new, moderately dark green variety with improved disease resistance, heat and shade tolerance. Shadow has very good resistance to powdery mildew.
- ² Oregreen Intermediate Ryegrass is a new variety derived from a cross between Manhattan perennial ryegrass and a low growing annual ryegrass. It has a turf-type growth habit and better disease resistance and cold tolerance than common annual ryegrass. All Lesco Oregreen is certified quality seed.

Call LAKESHORE EQUIPMENT & SUPPLY CO. and ask for BARB.

She'll take your order or have one of our LESCO Salesmen call on you to tell you about the family of LESCO Overseeding Blends.

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A Family of Fine Products

Lescosan 12.5G — Lescorene — Lesco 4 — Lescobor — Lescopar — Lescopex — Lesco Non-Selective Herbicide Lesco MSMA — Lesco Thiram 75W — Lescozyme — Lakeshore Chinch bug & Sod Webworm Control.