

Gulf Stream Golf Club has a proud tradition of golf excellence. Late in 1923 a group of close friends organized the Gulf Stream Realty Company and acquired extensive acreage from the Atlantic Ocean to the Intercoastal Waterway. The location, fifteen miles south of Palm Beach, was selected because of its informality. The club derived its name because of the proximity to the ocean gulfstream just one mile offshore.

Two of the most famous architects of the era were secured to make Gulf Stream a landmark. The clubhouse, located just west of the ocean front sand dunes, is the creation of Addison Mizner. The golf course was developed by Donald Ross. Gulf Stream has met numerous challenges over the years. In the formative years of 1926 and 1928 storms did extensive damage. The Great Depression slowed progress of all clubs. World War II forced the closing of the club facilities. The course was maintained in a "protective state" of condition and the Armed Forces used the facilities. Due to the foresight of one of the members, it was possible to play during the war as a substantial supply of golf balls had been acquired and were closely controlled and rationed. The late fifties saw architect Dick Wilson along with well-known amateur Chick Evans recontour many greens and replant new grasses. The course was shortened to the members desires. Bobby Cruichshank was the golf profes-

sional for thirty-six years until his retirement in 1973. Legend tells of his 1923 U.S. Open Championship playoff defeat to Bobby Jones.

The history of Gulf Stream is now being directed by Edward Warren, club president. Howell Anderson is the greens committee chairman. The current staff consists of Stanley Carr, golf course superintendent. Bob Adams is the golf professional and Jim Briggs the club manager.

Stanley Carr has been at the club eleven years, the last six at his current position. Chris Sova is the assistant superintendent. Glen Sova is the equipment mechanic. Stanley Carr rates him "the best in South Florida". The turf at Gulf Stream is a very interesting story. The greens are Tifton 328 bermuda, not overseeded in the winter. The fairways are Ormond and some common bermuda on twelve holes. The lower six holes next to the Intercoastal Waterway have Paspalum in the fairways. The fairway water level is so low that Paspalum is better adapted than bermuda grass on wet sites. The salt content in the soil is 5,000 parts per million. These fairways were not irrigated until the mid 1970's. Thus nature created a high salt tolerant turf. These fairways are irrigated only in the spring to lower the salt build up. The Paspalum is difficult to work because of its limited herbicide selection. Ormond bermuda has been sodded into the fairways and always dies while the Paspalum thrives.

FLORIDA SEED LAW

By PAUL D. CRISP

Seed quality is of major importance to anyone who undergoes expense and labor of seed bed preparation, fertilization and planting in anticipation of certain results. The turf manager is likewise, concerned about the results he will obtain when establishing new turf or overseeding existing cover. The best preparation and cultural practices are to no avail when the seed which are purchased and planted do not produce strong and healthy plants.

Much can be learned about the potential of seed by reading and understanding the seed label or tag. Chapter 579, Florida Statutes, The Florida Seed Law, defines the term labeling to include all labels and other written, printed, or graphic representations, in any form whatsoever, accompanying and pertaining to any seed, whether in bulk or in containers, and includes invoices and other bills of shipment when sold in bulk.

The label or tag attached to the container or shipping document must show certain information in a format prescribed by Rule. "Tips on Interpreting a Ryegrass Seed Tag" by Dr. William Meyer, Turf Seed, Inc., *The South Florida Green*, Vol. 5, No. 4, October 1978, does an

excellent job of explaining what information is shown on a seed tag. The basic information required for agricultural seed, grass seed are classed as agricultural, includes:

1. Kind and variety
2. Lot number
3. Net weight
4. Origin, if known
5. Percentage by weight of all weed seed
6. Name and number per pound of each kind of restricted noxious weed seed.
7. Percentage by weight of other crop seed
8. Percentage by weight of inert matter
9. For each named agricultural seed:
 - a. percentage of germination, exclusive of hard seed
 - b. percentage of hard seed when present
 - c. the calendar month and year the test was completed to determine such percentages
10. Name and address of the person who labeled the seed or who sells the seed within the state

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 To the right of the central valve is a diagram of a Split Case Centrifugal Pump. Below the central valve is a diagram of a Vertical Turbine Pump, labeled "Water Lubricated, Oil Lubricated Vertical Turbine Pumps". To the far right is a diagram of a Deming pump, labeled "Gasoline, Fuel Oil and Industrial Solvent Pumps".

At the top right, there is a map of Florida with the text "LICENSED 24 HOUR EMERGENCY SERVICE" written around its outline.

Below the central valve, the text reads: "The Clayton 100 BASIC VALVE" with an arrow pointing to the valve.

The field personnel of the Department of Agriculture and Consumer Services, Bureau of Feed, Seed, Fertilizer and Pesticide Inspection are available on request to sample seed and review labeling for you. Our inspectors live in the area where they work and make frequent calls on golf courses to check products such as fertilizer, pesticide and seed which are purchased for used. If you have not met him, be on the look out for him in the next few weeks as he will be calling on you again. In the event you have an urgent request, you may call the Tallahassee office at (904) 488-6686, Monday thru Friday from 7:45 a.m. to 4:30 p.m.

Official samples of seed purchased for planting purposes may be collected and submitted by our inspectors to the State Seed Laboratory, located in Tallahassee. Purity and Germination tests are conducted and results are reported on official State Chemists Laboratory Reports. This generally takes three to four weeks, but may take somewhat longer if retests are necessary or the percentage of hard or firm seed is guaranteed on the label.

Purchasers who have experienced problems with seed quality should make available to the inspector records relating to the purchase and planting of the seed. An investigation report by an inspector should show the kind and variety of seed purchased, lot number, distributor's name and address, date of purchase, date of planting, method of planting, weather conditions at time of planting and similar pertinent information. Generally, purity and germination tests will reveal most problems related to seed quality.

The Golf Course Superintendent certainly must be assured that he is planting the proper kind and variety of weed free seed which has a minimum germination which meets or exceeds the standard of 60% for agricultural seed, and that the germination test date is within seven (7) months of the date of purchase and delivery. The rate of seeding may be adjusted according to the germination percentage, therefore, the higher the germination, the lower the seeding rate may be on a per acre or area basis.

Undesirable plants, weeds, may be introduced during overseeding which will result in unfavorable conditions of fairways and greens for years to come. Bunch grasses or some tall growing type grasses are undesirable. Annual Bluegrass (*Poa annua*) is such a grass. It is classed as a restricted noxious weed with a limit of 5,000 seed per pound. It has been proposed that this number be reduced to 1,000 per pound. This will be done through the administrative hearing process at sometime in the future.

Treatment of seed against soil borne disease is a help to agriculturals in obtaining better stands. Grass seed may be treated with any one of several products. Caution must be exercised here to make sure that birds in the area of seeding do not have the opportunity to pick up treated seed.

Seed treated with mercurial or similarly toxic substance, if any amount remains with the seed, shall be labeled to show a statement such as "Poison", "Poison Treated", "Treated with Poison." The word "Poison" must be printed in Red letters on contrasting background. *continued on page 27*



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SEED TAG UPDATE

By SALLY McGOVERN
O.M. Scott & Sons

A country/western song popular not too long ago vocalized the advice, "Let's get back to the basics of life." It's a good bit of advice.

In the turf business, as in the business of life, the basics are important. The basic ingredient necessary for fine turf is quality seed. Attempting to save a few dollars by purchasing something less than the best will most likely provide unsatisfactory results that mean extra work and added expense once the turf is established.

In other words, starting out with the best makes the job of turf maintenance much easier in the long run.

Buying quality grass seed sounds like a simple enough proposition. But it's not always as easy as it seems.

The problem is with the seed label. The terms, numbers and percentages printed there can be confusing and misleading. And without adequate knowledge of seed label terminology, it's easy to purchase inferior seed. To obtain quality grass seed, a turf manager needs a thorough knowledge of how to read and interpret the label information.

According to the Federal Seed Act, the following information must be printed on the label:

1. The name of the seller.
2. The lot number of the seed.
3. The date the seed was tested.
4. The seed variety.
5. The percent of seed purity.
6. The percent of germination for each variety.
7. The percent of crop seed present.
8. The percent of inert matter.
9. The percent of weed seed present.
10. The noxious weeds by name and number per pound.

Terms such as purity, germination, crop, weeds, noxious weeds and inert matter are very important facts of the seed label. They can reveal and conceal many important facts. Unfortunately, these are the same terms that are most often misunderstood.

Purity. Purity is the percent by weight of pure seed, crop, weeds and inert matter in the package. It should total 100% and, therefore, account for everything in the package.

Because purity is an indication of quantity, not quality, a bit of simple arithmetic is necessary to determine how much of the pure seed in the mix will actually germinate. This is accomplished by multiplying the percent purity by the percent germination.

Using the Scotts Proturf Winter Turf I label (printed Fig. 1) as an example, this would mean:

$$\begin{array}{r} 38.90\% \times 90\% = 35.01\% \\ 29.05\% \times 90\% = 26.15\% \\ 19.20\% \times 90\% = 17.28\% \\ 9.85\% \times 87\% = 8.57\% \\ \hline 87.01\% \end{array}$$

Adding these figures shows that 87.01% of the ProTurf Winter Turf I is pure live seed.

Germination. Germination is the percent of pure seed that will grow in an ideal laboratory environment in a prescribed time. A standard laboratory germination test consists of 400 seeds (four replications of 100 seeds each) subjected to alternating temperatures of 60 to 80°F for 28 days at 95% humidity. The seeds are kept moist and illuminated under cool white fluorescent lights for eight hours each day.

Crop. Crop is the percent by weight of seeds grown as an agricultural crop. These seeds must be specified by name if they comprise more than 5% of the weight of the package. Examples of grasses grown as cash crops, but undesirable in a ryegrass/bluegrass overseeding mix such as ProTurf Winter Turf I are bentgrass, tall fescue, timothy, redtop and orchardgrass.

Inert Matter. Inert matter is the percent by weight of material in the package that will not grow. The more inert matter a package of seed contains, the less turf you are getting for your money. ProTurf Winter Turf I contains only 1.41% inert matter in a 50-pound bag.

PROTURF WINTER TURF I GRASS SEED MIXTURE

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38.90% Manhattan Perennial Ryegrass	90%	ORE
9.85% Victa Kentucky Bluegrass	87%	ORE

COARSE KINDS	GERM	ORIGIN
29.05% Loretta Perennial Ryegrass	90%	ORE
19.20% Pennfine Perennial Ryegrass	90%	ORE

OTHER INGREDIENTS

1.50% Crop	
1.41% Inert Matter	
0.09% Weeds	No Noxious Weeds

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For example, consider a hypothetical seed mixture containing 65% Kentucky bluegrass, 22% fine fescue and 10% bentgrass. Calculating actual seed count, a pound of this mixture would contain 1,423,976 bluegrass seeds, 952,560 bentgrass seeds and 116,707 fine fescue seeds. In other words, although bentgrass appears insignificant on the label, it actually makes up well over one-third of the mixture!

Keeping all of these things in mind the next time you purchase grass seed should help make the purchase a wise one.

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Seed Law (continued)

Another point which I would like to make concerns the "Disclaimer clause" or "nonwarrant clause" frequently printed on seed labeling. The Florida Seed Law states that the use of such a clause does not relieve or exempt any person from any provisions of the Law.

Department inspectors are available to assist you by sampling seed, fertilizer and pesticides when you wish. Call on us to come by to make an inspection, collect samples or interpret labels.

Editors Note: Paul Crisp is assistant chief, Feed, Seed, Fertilizer and Pesticide Bureau, Division of Inspection, Florida Department of Agriculture and Consumer Services.

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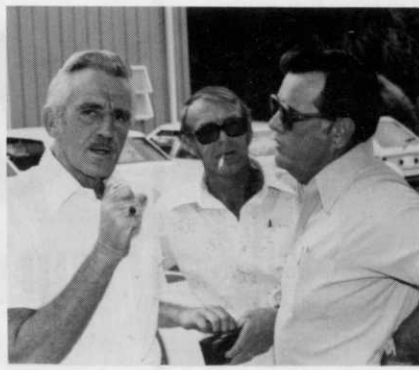
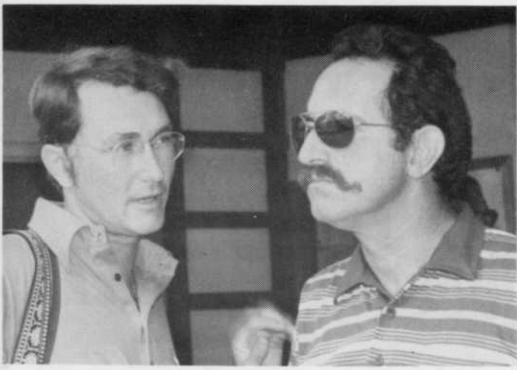
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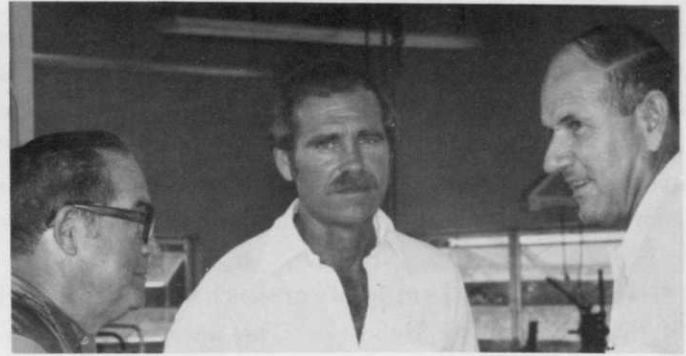
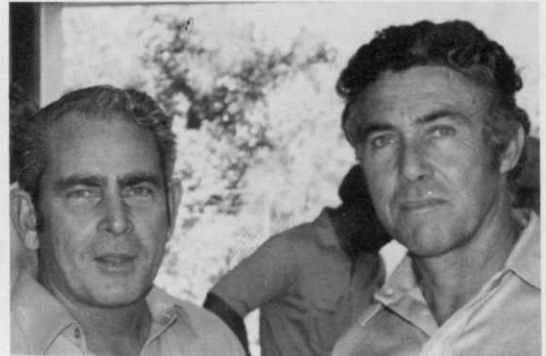
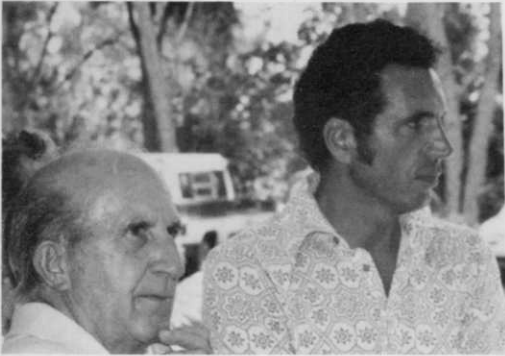
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Fred V. Grau

Guest Editorial

By FRED V. GRAU
President
Musser International Turfgrass Foundation

The time-honored adage "in union there is strength" never has been more applicable than now when the Florida Golf Course Superintendents Association is working toward unification and greater strength. Those who are devoting time and energy to the full development of the FGCSA deserve high praise and warm thanks for the effort. The Open Letter by Tim Hier in the *The South Florida Green* for April 1979 tells the story well. The FGCSA deserves the full support of every golf course superintendent in the entire state. A unified VOICE is vastly superior to uncoordinated individual efforts which tend to be fragmented, weak and inconclusive.

Helping to organize turfgrass groups has been an absorbing passion of mine ever since my introduction to turf in 1927 at the University of Nebraska. The fates were kind in steering me to Maryland for my degrees and thence to Pennsylvania in February 1935. Then only two county agents took an active interest in turf — some sixty others couldn't have cared less. There were but two golf course superintendents (greenkeepers then) associations in the state. My extension travels permitted me to attend every meeting of the two organizations and obligated me to visit many golf courses in other sections of the state where organization was lacking. By 1945 when the USGA brought me to Beltsville as Director of the Green Section, there were six strong regional superintendents organizations in Pennsylvania and virtually every county agent was involved in turf. There was talk of a state association but Professor Musser (he of the Musser Foundation) and the leaders in the state developed the Pennsylvania Turfgrass Council in 1955. As PTC grew, each turfgrass organization in the state developed strength and stature. My role as executive director began when Professor Musser retired. He died in 1968. Changes were made in memberships and PTC thrived as did the members. The several regional golf course superintendent groups look to PTC as their statewide organization which is strengthened by the inclusion of *all* turfgrass interests. There was no lost identity in any group. On the contrary, each group definitely was strengthened by the association. Nearly all superintendent's groups have directors sitting on the Board and, in fact, the president of PTC, Jim MacLaren, is a golf course superintendent.

This example of coordinated turfgrass effort in Pennsylvania is not intended to discourage efforts to have a statewide GCSA in Florida. It simply illustrates what can be done when people with common interests unselfishly work together for the good of *all* turf. Also it further points out that any state-wide organization will have fewer problems and will be infinitely stronger if its component parts already will have developed strength and leadership on their own.