Planting Tiflawn 328 in green at Woodmont CC, Nashville. Pete Grandison first killed common Bermuda with methyl bromide.



T. M. Baumgardner and M. N. McKendree of Sea Island (Ga.) CC regard Tifton 328 highly and are converting all greens at the famed resort course to this fine textured Bermuda.



Closely cut U3 Bermuda has performed very well on a Par 3 hole in the Philadelphia Dist, where it was given thorough testing.

1957 Turf

Southern Courses Turn to Selected Bermuda

By O. J. NOER

MANY Southern courses are turning toward selected or hybrid strains of Bermudagrass for fairways as well as greens and tees. The strain chosen must be more vigorous than common Bermuda. Unless it holds common Bermuda in check the turf will revert back to that type before long. Clubs in Florida and South Texas have been among the first to use these grasses in a big way. It has been Ormond and Gene Tift strains mostly in Florida. Gene Tift and selections from Texas A. & M. have been planted in Texas.

The use of a selected strain is a simple problem on a new course. Planting stock is bought from a turf nursery or it is produced on the site. Five acres or less will provide enough stolons for greens, tees, and machine planted fairways. Houston CC used about half that much Gene Tift Bermuda to plant the greens, tees, and to row plant the fairways. A little more grass may be needed for broadcast planting of fairways.

In Florida shredded stolons are scattered rather thinly over the prepared fairway and cut into the surface with a modified farm disc. The saucer shaped discs are replaced with straight plow colters. After cross-cutting in two directions or more the planted fairway is rolled lightly. It is kept continuously damp until the grass gets off

to a good start.

Sodium Arsenite Burned In

The problem is different on established fairways of common Bermudagrass. One way is to cut close to skin the fairways without the roller on the back of the fairway mower if necessary. Then sodium arsenite is used at a heavy rate of 30 to (Continued on page 65)

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(Continued from page 40) 50 pounds per acre along with a wetting agent. The sodium arsenite is allowed to burn for two to three days. Then water is applied, if needed, to provide optimum soil moisture for growth. The surface is prepared for planting by using an Aerifier, discer, spike disc, or Renovataire enough times to loosen the soil. Bermudagrass stolons are scattered over the surface and cut into the soil with the modified farm disc. The surface is kept moist until the newly planted grass becomes well established. All eighteen fairways are seldom changed at one time. After the first ones are in turf the grass along the edge of one or two fairways is allowed to grow to provide stolons for successive plantings.

The strain used must produce a dense, tight turf. Otherwise it will not resist common Bermuda. It should not thatch badly and should exhibit no tendency to become puffy. Turf of that kind is unpopular with the golfer and is the reason most of them do not like to play fairways planted

with Tifton 57 strain. In every other respect this is one of the most vigorous growing and disease-resistant Bermudagrasses.

Large tees on new courses exemplify the problem confronting many supts. on old courses. The small, postage stamp size tees may have been large enough when play was light. Increased interest in golf by women as well as men has doubled, trebled, and quadrupled play on many courses. Nobody can keep good turf under these conditions on small sized tees. A program of modernization is the only answer.

There should be a long range program based upon a survey and study of every hole. The size and shape of the enlarged tee, or the new one in a different location, should be determined and approved by the green committee. Instead of building three or four small tees for each hole requiring much hand labor, the better way is to build one large tee, or two at the most, and design them for power maintenance. Abrupt sloping edges are a thing of the past. Long, gentle slopes which can be cut with a tractor and fairway mower simplify maintenance

and are more in keeping with a pleasing landscape than high, platform tees with steep sides. That is not nature's preferred way of doing things.

The program should start with the small sized tees on par 3 holes and progress to the next

bad ones until completed.

Heavily Played Courses

The choice of grasses is a perplexing one in the North. Common Kentucky bluegrass and fescues are not the best answers on heavily played courses. In the area north from New York to Chicago creeping bents seem better. There are some very good tees of Merion bluegrass in this region. A minimum of water and ample nitrogen fertilizer seem to be partly responsible. One supt. waters generously every 10 to 14 days, and uses 1 lb. of actual nitrogen per 1,000 sq. ft. each month. The turf is very good. Merion seems to withstand fairly heavy weekend play when weekday use is moderate to light. The East had a dry summer in 1957. What will happen to Merion after several successive wet summers is hard to say.

There are some satisfactory poa annua tees in the cooler parts of the North. Several Michigan supts, have learned how to live with it on large sized tees. They use sufficient water and apply nitrogenous fertilizer every two to three weeks. In hot weather daytime wilt is stopped by prompt syringing. The poa annua may take a beating after heavy rains in hot, humid weather, but recovers when the weather changes. After a bad winter, growth and recovery are slow when spring weather remains cool with very cold

nights.

Favor U-3

Clubs in the intermediate belt extending from Philadelphia and Washington to Kansas City are veering toward Bermuda for tees. U-3 seems to be their preference. It is among the best for winter hardiness and holds its color fall and spring better than common Bermudagrass. A heavy mower is needed to keep turf tight and satisfactory for play. Winter survival depends in part upon keeping the tees out of play after fall growth stops. Some clubs put markers up front and resod the worn strips in the spring. Others place the markers out front and a few clubs try to provide alternate tees for fall, winter, and spring use.

In the far South Bermuda continues to hold first place for tees located out in the open. Common Bermudagrass is used most, but selected strains are gaining favor. Ormond, Gene Tift, Everglades 1, and Tifton 328 are popular choices in the Southeast. Local selections are being tried in other parts of the South.

Kentucky bluegrass is the most popular grass for roughs in the Mid-West and parts of the East. On acid soils of the Northeast, fescue and the colonial bent grasses predominate. Some clubs express a desire for sheep fescue, but have not been able to buy the seed. Possibly they could substitute hard fescue. Seed of it is being produced in western Washington, but only in a limited way.

There is a trend toward cutting the roughs at two different heights. Closer cut rough adjacent to fairways is often cut with reel-type mowers. The strip is the width of two gang mowers. On watered fairways this part of the rough becomes invaded with clover and bent grass. Rotary mowers are frequently used to cut the higher part of the rough. The turf is generally a pure stand of bluegrass or fescue.

Courses in the South continue their search

Courses in the South continue their search for a better grass than Bermuda for the roughs. Players are penalized unduly when there is a heavy growth of Bermuda. Tall fescues offer some promise, particularly in shady spots where Bermudagrass will not grow. Bahia is being tried in Florida. The final answer may be different than anything tried so far. Clubs should alert southern turf investigators and urge them to search for a satisfactory grass.

Penncross Has Promise

Penncross looks like the most promising new development in the field of cool season putting green grasses. So far it has given a good account of itself. Turf on the putting greens at the Fairless home, Pine Valley, is exceptional and has behaved well over a three- to four-year period in a spot where summers are apt to be hot and humid. Good stands have been obtained with a seeding rate of 1 lb. per 1,000 sq. ft. One way to get uniform distribution is to bulk the seed with dry topdressing and go over the area four to six times. The price of Pennlu seed dropped appreciably this fall—to about 50 per cent less than before.

Pennlu was always a top ranking grass on plots at State College, Pennsylvania. In spite of this, it is losing favor with golfers because of its tendency to produce a fluffy turf. In every other respect Pennlu has lived up to expectations except that some supts. in the Louisville-St. Louis belt think it more susceptible to pythium. This may be coupled with some ad-

verse maintenance practice.

Old favorites, such as Arlington, Congressional, a mixture of the two, Cohansey, and even Toronto, Washington and Old Orchard are favorites with some.

The behavior of the bentgrass greens at Richland in Nashville, Tenn., has created an interest at other clubs there. Belle Meade is building three bent greens under the direction of Charles Danner. Arlington bent is to be used. The topsoil is a light, sandy loam placed on a gravel blanket over the subgrade. Surfaces are contoured to provide quick run-off of surplus

water in several directions.

There is a marked trend toward the finer textured Bermudagrasses in the deep South, especially in the parts where there is little likelihood of success with any of the bents. No one grass is the choice, but Tifton 328 seems to be gaining ground in the Southeast. Sea Island started with this grass on several greens. Baumgardner thinks highly of it and has started to change all greens to it. Tifton 328 seems to be less badly affected during the spring transition period than common Bermuda.

Woodmont in Nashville changed its first green



to Tifton 328 in the spring of 1957. Pete Grandison first killed the common Bermudagrass with methyl bromide. Incidentally, when methyl bromide was used on the stadium at the University of Illinois, the station staff nematologist reported that they had eliminated the predatory nematodes in the soil. He did not know whether they were present in sufficient numbers before to harm the turf. Several days after methyl bromide was used the Woodmont green was cross-aerified several times. Sprigs of Tifton 328 Bermuda were inserted in the holes which were pressed shut. The green was rolled, topdressed lightly and kept damp to hasten growth of the springs. By midsummer there was a good cover of grass.

Sprigs Recommended

Use of sprigs appears better than the use of plugs for planting. Grass above each plug produces a mound. This retards development of a uniform surface. Growth from sprigs is uniform and creates a uniform surface from the start.

The problem of overseeding on fine textured

Bermuda greens is being raised because some think domestic rye is not the best answer. Some propose trying bluegrass, and others plan to experiment with red top alone or mix it with Seaside bent. Seaside, when used alone, germinates quickly, but does not stool out rapidly so greens are not good until late winter or early spring. Then they are perfect for the balance of the season. Red top produces cover quickly. Two mixtures will be tried by one supt.; one part red top and two parts Seaside, with the other one consisting of equal parts of red top and Seaside. The seeding rate will be 3 lbs. per 1000 sq ft. in both cases.

Seaside has done well when used correctly. The seed is exceedingly small and should be planted after the Bermuda green has been topdressed rather than before, which is customary with rye grass. Rye seed is large and grows best when covered with 1/4 to 1/2 in. of soil. The comparatively large amount of topdressing needed to bury common Bermuda stems often smothers the bent seed when it is planted