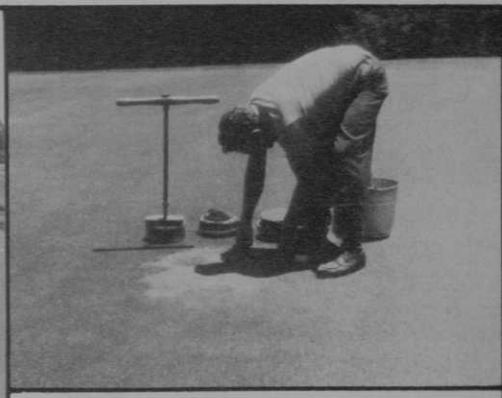

Vandals damaged Merion's 15th (above) four months before the '71 Open. New sod came from near-by clubs. Woodmont's bluegrass nursery sod (below) grown for collar of green under construction.

Nursery at Congressional (left) of bent and rye. Damaged green at Congressional (above) gets repair plug. Poorly-drained greens (below) frequently need major repair work, including nursery sod.

THE CLUB SOD NURSERY: A TESTING GROUND

In view of chemical bans, vandalism and disease, superintendents can be ready to meet each crisis economically with a nursery back-up, which can test new chemicals as well as supply instant sod

by WARREN BIDWELL

Manager, Golf Course and Grounds, Congressional CC, Washington, D.C.

For many years progressive superintendents have recognized the importance a golf course sod nursery plays in solving turfgrass management problems.

To the late Harry Mesloh, superintendent of Clovernook CC in Cincinnati, his Washington bent nursery became a source of funds during the Depression. By selling some of his excellent bent sod to less fortunate, neighboring clubs, he was able to purchase essential new equipment throughout that time of economic crisis.

Mesloh used his nursery in other ways, which expanded its importance to the course. It was an experimental laboratory, and Mesloh's understanding of the relationship of the nursery to the golf course was an education to younger superintendents. For example, there were no fertilizers especially mixed in formulations for golf courses, the only fertilizer available then was an agricultural one, 10-6-4. It was literally a "hot" item. Many superintendents couldn't even distribute it without burning their turf. Mesloh came up with the idea of splitting the application—one half the required amount was applied at right angles to the initial distribution pattern. His trial-and-error experiment on the nursery paid off. The resultant growth pattern was uniform and burn free, because no heavy amounts of fertilizer accumulated in a single area. This principle is still followed today.

Other lessons coming out of that era also helped to establish the proper relationship between the club's sod nursery and good turf management practices.

Before the development of the fungicide, Suspension Calo Clor and Thiram in its initial form in the late 1930s, the main source of hot weather disease control was Calomel and bi-chloride of mercury. This combination was more compatible when common salt was used to help dissolve the two chemicals before they were placed in solution in the spray tank. This was another "hot" item. The solution yellowed the bent greens considerably following application. Again, the nursery areas of Clovernook were used to advantage. It was found that by using slightly more than the usual amount of water in application and by using a larger spray nozzle disk, thereby avoiding the dew-type solution ap-

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plication, the burning problem was eliminated.

In 1941, at my own bent nursery adjacent to the eighth tee at Cincinnati CC, a large area of land was made available to the DuPont Chemical Company to experiment with a new fungicide formulation with a sulfur base.

This fungicide was destined to play an important role to all golf courses during World War II. DuPont was in the final stages of developing Thiosan, now known as Thiram. It subsequently became the only fungicide available to superintendents when the mercuries were placed on the priority list.

Now that the Environmental Protection Agency (EPA) has curtailed the use of many favorite turf protection chemicals, modern superintendents again have turned to their turf nurseries as the proper place to confirm the safety and effectiveness of new chemical substitutes. With the EPA and related state agencies banning such old timers as DDT, mercury, the arsenicals and the chlorinated hydrocarbons, many alternatives now are being offered, usually with less residual qualities and sometimes questionable effectiveness.

The sod nursery is the place to determine the effectiveness of some of these substitutions—not the playing 18 greens. The usual, advertisement slogans such as "just as good," or "totally safe," must not be taken for granted. Our reputations as professional turf managers are on the line and must be guarded.

Along with the new demands on the the golf course superintendent to find new and safe chemicals for the protection of the turf investment at his club, goes a certain responsibility to properly calibrate the application equipment to conform with the manufacturer's recommendations. If any mistakes are to be made, let them happen on the sod nursery.

There are other equally important reasons for establishing an adequate bent nursery. At the Philadelphia CC, the 20,000-foot nursery was begun prior to a major tee enlargement program. When the club was started in the 1920s, the teeing grounds served around 12,000 rounds of golf a year. In the 1960s, they were being mauled by nearly 30,000 golfers a year. The result? Bad tees. Don Pakkala, the superintendent, completed the project in the spring of 1972 (following my departure for Congressional CC). We had found that a properly managed bent nursery sown in April could be harvested in November, using the winter work force for whatever improvements were needed in the club's playing facilities.

Another contingency that justifies the existence of a bent nursery is the universal problem of vandalism, the victims of which almost always are the delicate greens. Very few clubs escape this social problem. Flagpoles, detergents and sometimes lighter fluids are used to destroy property. Motor bikes and four-wheeled vehicles rip open fairways and greens. Damage to the course requires instant sod to repair the scars and a green thumb to make the job professional.

There is a little "monster" about the land that is an insidious creature. His presence in the soil can only be properly determined by a scientist trained in identification through the examination of soil samples through a microscope. Long recognized as a detriment to Southern agriculture, his progression and adaption have made him famous as far north as Minnesota and Michigan. I refer, of course, to the nematode.

Turf managers have viewed his presence in their turf as a new, uncontrollable turf disease. Perhaps, they reason, their best fungicide isn't what it used to be or, as I raised the question to Dr. Herb Cole of Penn State in July of 1969, "If I don't have a turf disease, what do I have on the fifth green?" Having exhausted his bag of tricks, Dr. Cole turned the soil sample over to a nematologist. It showed that our soil was loaded with them. Having sodded the "problem green" three times in four years from my nursery, I was desperate for a new approach and a solution to the problem. Proper treatment was begun immediately, and I was grateful for having had a nursery.

Aside from the need, convenience and practical application of operating a bent sod nursery, many superintendents are facing up to an-

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other, ever-increasing annual problem—that of repairing damage from golf cars in the concentrated use areas. Identical to the program here at Congressional, many superintendents are establishing nurseries of either common Kentucky bluegrass or the more wear-resistant Kentucky 31 tall fescue or bermudagrass. Many superintendents devote considerable time to transferring the sod from the nursery to the objectionable worn spots on the course each winter.

Former Golf Course Superintendents Assn. of America President, Bob Shields of nearby Woodmon CC believes and practices the multi-use principle, as did Mesloh, in the management of the four distinct areas of sod nursery at Woodmont, all closely related to his 36-hole operation.

Shield's bent nursery is always ready to back up his continuing drive for perfection on his two courses. He grows some of the latest introductions of bluegrasses, ryegrasses and bents to determine their tolerance to the Washington D. C. climate. Because he maintains two distinct types of fairway grasses—cool season, Kentucky bluegrass on the North Course and warm season, bermudagrass on the South Course—he has a wide margin from which to choose to make decisions affecting the course. Over the years he has moved sod to all of the collars, replacing an inferior bent-*Poa* sod with bluegrass from the nursery. On the South Course, he continues each year to move nursery-grown P-16 bermudagrass to those fairways using the slit sprigging method.

At present, Shields is relocating a green on the North Course and will use nursery-grown Kentucky bluegrass on the collars. Instant turf is possible when one maintains an adequate club sod nursery.

Most clubs have room somewhere on the grounds for a nursery area. I have never talked with a progressive superintendent who did not want a nursery. Commercial turf nurseries seldom grow putting height bent sod. Usually, a golf course nursery equal to the size of the average green is considered sufficient back-up to an 18-hole oper-

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ation. Other types of grasses grown for other purposes on the property generally are twice the size of the bent area.

Basic clay or loam soil needs some modification with peat moss and sand to bring it closer to the soil type prevalent on the playing 18 greens. This procedure of incorporating the materials into the basic soil is well within the scope of the turf manager, his crew and existing equipment. Water is necessary and usually available from the irrigation system close to the selected nursery site.

In the cool season grass-growing regions of the country, August to late September is considered the best time to establish either bent or bluegrass nurseries.

With all the changes in the grounds operation of a golf course, with vandalism on the upswing and with the normal uncertainties of managing a golf course, instant turf is necessary for repair work. And the practicality of having a private multi-purpose sod nursery is good business. □

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produced information on worker alienation, which is useful for any employer of a labor type force (large or small). The results showed that assembly line monotony, a condition prevalent where one person executes one type of assembly repeatedly each day with no change in work type or schedule for the conduct of that specific work. was conducive to low efficiency, heavy absenteeism, many labor-management disputes (flooding the established grievance procedure), which were only symptoms of the real problem—monotony and generally repressed hostility on the part of workers with accompanying interpersonal friction and low morale.

The company claims to have affected some relief from many of these problems by training each assemblyman to do not one, but all steps on his assembly unit. Under this plan, the worker also has a say in when he can change from one assembly job to another. The company says this method has created little confusion and that the initial low efficiency caused by the necessity for the worker to reorient himself when periodically tackling a new step, is compensated in surprisingly short order, making over-all efficiency greater than when mono-job assembly training was used.

The general result of this new plan (instituted only in certain plants; in others they feel the nature of the assembly precludes multi-job training where each assembly step is very complicated), has been to heighten the worker's self esteem and thereby to increase his motivation.

A leading golf equipment manufacturer has attempted a plan that is revolutionary in the field of mass production organizational development. The company has instituted periodic employee assembly, almost taking the form of a seminar at which workers are asked to help solve certain management and production problems (employees are at liberty to present to management at these gatherings their suggestions for solving other problems the existence of which management may not be aware).

This program acts as a balm for labor-management strains and frictions, which grow as a result of worker alienation and job monotony It hypes employee motivation and morale because the worker sees that although his job function may be insignificant when compared to the over-all operation, he does have a voice in changing aspects of the system he dislikes. These meetings have been particularly effective because they lessen the necessity for the worker to use the costly (in downtime) and complicated grievance procedure that oftentimes carries a stigma for the worker who may feel he is regarded as a complainer who shuts down at his job to file a grievance. Thus, under this kind of a system both worker and management benefit.

Worker alienation, job monotony and the insuing low morale and lessening of motivation are not inique to large industry. Golf club administrators could undoubtedly benefit from applying some of the above techniques to their labor management relations problems. Training each grounds maintenance worker to use the variety of available course equipment and giving him the opportunity to function in all or many of the turf maintenance procedures, from labor to administration, would surely increase job interest and effectiveness and could help make his work attitude approach the ideal—a labor of love.

This would apply equally to the dining room and pro shop personnel. Training people to double as bartenders, waiters, second cooks and so forth also gives the club manager a more versatile staff. Gathering them for periodic interchanges of ideas on how the dining room could operate more efficiently and attract more business could not help but be fruitful.

The lesson learned by industry (that nobody knows more about a specific job than the man who does it day in and day out), is also applicable to golf club employees. Don't short suit your grasp of club management by failing to get the views of the person closest to each job—he does it every day. □