

# Course Maintenance Becomes A Big Business Task

By JOE VALENTINE

Twenty-five years of real progress has been achieved in golf—a substantial part contributed by GOLFDOM. Congratulations on your great share in real accomplishment. The superintendent of the golf club (formerly greenkeeper) was considered by many people to be the forgotten man. In point of fact, he was never even



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known to anybody so how could he be forgotten? That the superintendents of country clubs have become known to the golfers, club officials and committee members is in no small part due to constant plugging for recognition by GOLFDOM. GOLFDOM credited the "forgotten man" with being a most responsible man at the golf club—gave recognition to the tremendous task of creating the best quality turf and best possible playing conditions for the members in order that they can enjoy the game.

The golf course superintendent must be an artist—a man of imagination—maintaining the course in such a manner that he almost plays the game for the members, keeping in mind the needs of the poor players as well as the experts. But the course superintendent also must be a practical man with enough horse sense to do a competent job of managing a half-million dollars worth of club investment in a golf course. A lot of know-how goes into good golf course management. Mighty few people knew about it until GOLFDOM brought the "greenkeeper" into the limelight.

I can remember back in the early days; many times I watched one of the chronic kickers making a putt and I prayed he would sink it so I would not hear him squawking about the putting surface. It has changed now. We do get praise much of the time. Playing conditions are better—and golfers are better acquainted with the difficult problems encountered in turf maintenance.

## Research Brings Improvement

The improved conditions on the golf course have been brought about through the research organizations of the different

colleges, sectional and national associations of superintendents, the USGA Green Section and others. There is, too, our own practical research on the golf course, trials of different chemicals, fertilizers, new seed, different organic materials, calcium and many other things are used experimentally. New materials and methods are then used on the course, provided they give satisfactory results and at the same time are economical.

Economy will have to be considered very seriously; this word economy is applicable to any business. Scarcities in labor, materials and equipment affect golf course management just as they affect every other business enterprise. We must make the most of what we have. We must get full value for each dollar spent. At Merion we have some machines that are 25 years old and still in good condition. Routine care and making needed repairs make it possible to prolong the life of equipment. Much of the research by the Green Section and other organizations is keyed toward making maintenance more economical as well as improving the turf quality.

Our progress during the past 25 years has been the production of better turf, more economically maintained. What are the specific innovations that have made this possible? 2,4-D is one example. For selective elimination of broad-leaf plants—dandelion, plantains, buckhorn—2,4-D is a highly useful tool on the golf course. 2% 2,4-D in dust form at 35 pounds to the acre has eliminated practically all the broadleaf weeds on our course.

We have other weed killing chemicals too. Potassium cyanate is a new one which shows promise. Latest information on PMAS is that one ounce in five gallons of water applied to 1,000 square feet will control crabgrass and disease on

Joe Valentine began his business career in banking and left it to engage in work that he loved and which he has advanced by his outstanding qualities as a practical agronomist, a scholar, a businessman and a willing, helpful team mate in his profession. — Editor

greens. Applied every ten days it controls large and small brownpatch as well as destroying crabgrass. It will not control silver crab.

### Learning New Methods

Progress is made not only in producing new chemicals, but also in learning methods for using them. We have had sodium arsenite for control of crabgrass, chickweed and clover. A new method for using it is proving quite successful. Only small quantities (as little as one pound to the acre) of the chemical are applied to minimize the crabgrass and clover. Treatment may be repeated two or three times depending upon the amount of infestation. When sodium arsenite is used, it is essential that soil be a little moist and atmospheric temperature should be under 90° F. If these precautions are not heeded, serious discoloration will occur.

Chemicals to kill insects and grubs have advanced considerably during recent years. Arsenate of lead was the only one we had for quite a while, and it still is a good control for many grubs and insects. World War II brought us many new organic materials such as DDT and Chlor-dane to control chinchbugs and ants and flies and mosquitoes around the clubhouse, too.

Research and practical experience have taught us how to use fertilizer to better advantage. We've learned to use organic nitrogen for more uniform growth. Research is going on at present with synthetic organic compounds which release nitrogen slowly. These may supplement the supply of natural organics. We are learning to time our fertilizer applications to benefit the turf grasses instead of feeding the weeds. We are learning the value of opening up the soil with aerifying machinery to permit deeper fertilizer placement, thereby feeding the turf grasses more efficiently and eliminating waste of plant foods with runoff water.

We have made progress in disease control. Back in 1923-24 we had Calo-clor compounded of two parts calomel and one part carboxylic sublimate. The material is difficult to use because of the danger of discoloring the grass. Today we have Crag 531 to control small patch and Tersan for control of large. Incidentally, we like to recommend using a combination of Tersan and Calo-clor to control both diseases. One ounce of Calo-clor to four ounces of Tersan with five gallons of water to each 1000 square feet is used. There are other diseases these may not control. Pink patch, pythium, copper patch are controlled by Cadminate used at the rate of one ounce of the chemical in five gallons of water per 1000 square feet. Cadmium compounds are one of the newer products being used successfully in turf work.

One of the biggest advances has been

the selection and development of improved turf grasses. The USGA Green Section deserves the credit for leading in this field. Better bent grasses, bermudas and zoysia grasses have come out of the work done by the Green Section. Merion bluegrass is an example of an improved grass. B-27 (Merion Bluegrass) was found on the Merion course in 1936, and developed by the Green Section. Merion can be cut lower than ordinary bluegrass; it will grow at 1/2 inch cut. It has greater disease resistance than commercial blue-

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### ARCHITECTS' O.K. GOLFDOM'S COURSE

For 25 years GOLFDOM, under the able management of Joe and Herb Graffis, has been of inestimable service to those, both professional and amateur, who direct the affairs of golf.

The American Society of Golf Course Architects takes this opportunity to salute an ally, and to wish them the success they deserve for many years to come.

**WILLIAM B. LANGFORD**  
Pres., American Society of Golf Course Architects.

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grass, grows vigorously and keeps out weeds and can survive with a minimum of water.

Penn State is working to develop improved fescues. The Experiment Station at Tifton, Georgia, has developed fine-leaved bermudas.

We know how to test soils, both for pH and plant food content, and we know the value of using these tests as a guide to what materials should be applied. Guess work is being eliminated. More recently tissue tests have been developed so we can tell which nutrients are being taken up by the plant as well as the elements present in the soil.

### Maintenance Is Big Business

Progress in golf course management has been not only in the field of turf production. We have learned that golf course operation is a business and must be handled in a business-like manner. Many of the conferences include talks about record keeping, operating efficiently on a budget, etc. We realize that this is part of the golf course superintendent's job.

At Merion we always did keep complete records. We know how much it costs to mow, water, fertilize and apply chemicals. We know how much it really costs for the upkeep of 18 greens under different management procedures. We know it costs us

more to mow roughs on one course than to mow 40 acres of fairway turf, in spite of the fact that we cut a 16 foot swath on roughs.

We have the figures on what it cost when we had to have three men and three horses to mow fairways and we know what it costs now with one man and one tractor doing the job. It cost a dollar a day to hire each horse and another dollar a day to feed each horse—this in addition to the men's wages. We could only mow fairways twice a week by this method whereas today fairways are mowed every other day.

We were the first in the Philadelphia area to use a tractor with gang mowers to cut fairways. Use of machinery in general has reduced costs. Even though labor costs have increased, the use of machinery has offset those costs so it is less expensive for us to mow now than it was when horses were used.

### Labor Management Studied

Labor management is another factor which enters into the superintendent's job. We recognize the importance of this subject, and discuss it at our educational conferences. As I mentioned, new machinery has cut down the number of laborers, so even though wages are more than double what they were after the first World War, the overall expense for labor has not increased.

We know that the old custom of laying off golf course labor during the winter is poor economy. It takes time to train a man to do his job properly. Laying off trained help and starting each season with inexperienced men isn't satisfactory and in the long run costs more. At Merion no one has been laid off for ten years. We have learned that labor must be treated as a friend. If you handle labor in a human fashion, they will accomplish much more than you expect.

Looking back over the past twenty-five years, we have made much progress. It has been the result of the cooperation of many people and many organizations.

Turf research has been directed and coordinated by the Green Section. Sectional and national superintendents organizations have worked together to use the information which comes out of research. Golf course superintendents have been organized not as a labor union, but as an educational organization. Agronomists, botanists, pathologists, entomologists—we have gotten these men together to explain the many phases of turf production and maintenance. For ten years I have been Chairman of the Education committee in our section. If we need the advice of an entomologist, we get an entomologist to tell us the up-to-date information on insecticides, how to use them

and what to expect. We try to make clear what to do and what not to do in order to improve the turf without spending money extravagantly.

We recognize the part GOLFDOM has played in advancing our industry. Information brought out at the many conferences has been published in GOLFDOM, available for reference when it is needed. And GOLFDOM has been a leader in demanding proper recognition for the golf course superintendent. Superintendents are better paid today than ever before. Club officials realize that cheap labor means cheap work. A good golf course is the club's most valuable asset and requires the management of a superintendent skilled in the many phases of golf course management.

These past twenty-five years of progress have not achieved perfection. It is a good beginning, but it is only a beginning because there is still so much research to be done. There isn't a power greens mower in the Philadelphia district that gives the operation we need and will get with the manufacturers continuing their helpfulness. Present machines are too broad to take care of the undulations on greens—a gang of three 14 or 15 inch mowers would provide greater flexibility and save labor. Present machines create undue compaction and deterioration of the turf making it necessary to use the Aerifier or some other tool to open up the ground.

One of the biggest problems is 40 acres of fairway turf. Very little has been done in the way of research on fairway improvement. Greens have received the major attention. But little by little we will correct the defects—and we can be sure that as we learn the answers, GOLFDOM will be a leader in publishing the information as it becomes available.

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### CHEERS FROM THE MANAGERS WHO CHEER 'EM UP

Let me extend to GOLFDOM my sincerest congratulations on 25 years of publication.

Your magazine has served to knit into one great family of fine fellows those who play the game of golf and those who make the game possible.

May this 25 years be only the first lap of a long race.

PAGE CURRAN  
Vice Pres., Club Managers'  
Assn. of America.

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