THE fundamentals of golf course maintenance may be said to be practically the same the country over, but the methods employed to achieve the desired results will vary according to locality.

I have been asked by GOLFDOM to state my methods of maintaining putting greens and handling course labor. Fenimore Country club (27 holes) is situated in Westchester county about 25 miles north of New York City. The condition of the soil is fairly uniform, varying from a clay to a clay loam throughout this section.

During September I start preparing compost for the coming year for the greens and tees. This consists of approximately 125 yards of top-soil, 75 yards of sharp sand, and 50 yards of stable manure. The reason for the sand being used is because the soil is a heavy clay loam and the sharp sand keeps the clay from caking and packing. Sand is also wonderful for propagating root development and also opening up the soil so that the water and oxygen can get to the roots, as it is through this medium that roots acquire the necessary food for plant development. The manure is used on account of the small amount of humus content in the top-soil; it also aids in retaining the moisture and adds to the physical condition of the soil.

Now with our pile of soil, sand and manure placed just outside the compost shed we are ready to blend all three materials together. The Royer compost machine and Fordson tractor are used for this purpose and the materials are blended and put under cover in the one operation for use in the coming year. I think a compost shed is an asset to any golf club not only from a greenkeeper's standpoint but from the players' standpoint as well because when a green is top-dressed with dry soil it can be worked in immediately with the back of a rake, steel mat, or brush broom, followed by a watering, and the green can be put into play without any ill-effects to the players' putting.

Top-Dressing Practice

In the past few years we have opened the main course between the 15th and 20th of April, weather permitting, so it has been my policy to have the greens rolled and top-dressed at least one week in advance to the opening. With this top-dressing 1 add from 20 to 25 pounds of sulphate of ammonia because poa-annua tries hard to take possession at this time of the year. It is about two weeks in advance of the bents, so the sulphate has a tendency to force or boost the bent along with the poa-annua and in this way gives the poa-annua something to fight. At this dressing we use approximately a yard and a half to a green, the greens averaging between 6500 and 7000 square feet. This starts the greens off to true putting for the coming season.
Green and trap areas like these at Fenimore demand close watch of costs

The next top-dressing follows in about four or five weeks and at this time only one yard of compost was used to a green with 50 to 60 pounds of Lecco, which I think is a well-balanced fertilizer for turf. This year I grub-proofed the greens with this application of top-dressing, using arsenate of lead at the rate of 20 to 25 pounds to a green.

The next dressing depends entirely upon the condition of the greens, but as a rule it is from four to six weeks when they start to go a little off-color. At the first signs we top-dress; this time with from four to six wheelbarrows of soil to the green using palls instead of shovels and by hand the soil is broadcast very lightly over the green. We also use from 50 to 60 pounds of Lecco to the green at this time. During July the same procedure took place in top-dressing with the exception of a fertilizer being omitted. I am of the opinion that the grass should not be forced during the treacherous summer months.

In September the same method was used as during August, adding from 15 to 20 pounds of sulphate of ammonia to a green. It all depends upon the weather and the condition of the turf during October whether or not a top-dressing is necessary.

Cutting Methods

Cutting greens plays a very important part in successful maintenance. Any of the new type high-speed putting green machines prove satisfactory in obtaining a good smooth cut. During the growing months in the spring I cut every day except Monday. The machines are all measured with a straight edge and rule to cut 3/16 of an inch and during the summer months they are raised to a 3/4 and kept there for the remaining season. When the cool weather sets in or around Indian summer the greens are only cut three times a week. The grass is always caught from the greens throughout the season.

What I consider one of the most important items in maintaining good greens is careful watering. Our system is adequate enough to sprinkle 18 greens at once as we have sufficient hose and sprinklers for each green. We water from 7 p.m. to 11 and four men water the 18 greens. During the summer I find every other night sufficient, but if it is exceptionally dry I water four and five times a week. My main difficulty is in educating the men to keep the sprinkler in such a position so that the edges and mounds outside of the greens are well watered. The first places on a green to dry out are the edges and so it is very important to water more than the green proper. Early morning watering has proven very successful also, but due to my labor organization it is not practiced at Fenimore.

I use the spraying method in treating brown-patch, using a 100-gallon power spray pump with one pound of Semesan to 1000 square feet or about six to seven pounds in 100 gallons of water to my av-
erage green. This application was used once on the 18 greens on the main course and the practice putting green and was followed up again the last week in July by another spraying, using four pounds of Semesan in 50 gallons of water to the average green of 6000 square feet.

The first week in August another application was applied, using three pounds of Semesan to a 6000 square foot green. This time we mixed nine pounds of Semesan in 50 gallons of water and sprayed three greens of approximately 18,000 square feet of putting surface. We used a very fine spray in applying.

I am very fortunate with the labor situation here; it is very convenient for all concerned. We have a large room in our implement barn which is equipped with electric lights, gas, bath, and 12 dormitory cots where the men sleep and eat. The only men that leave the place at night are my foreman and gardener and one tractor man. The fact that the men live on the course is very favorable because there are many times during the year when I need labor at the most unexpected hour and it is nice to know you have 12 men right on the job for these emergencies. This can be done with very little cost to a club and proves a great asset to any greenkeeper if some of his labor can live on the course.

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We Corrected Green Contour With Minimum Play Loss

By DE WITT GALLEHER
Green Chairman, Kanawha Country Club

Our No. 2 green is rather small, perfectly circular with no undulations and has a diameter of 70 feet. It was built six years ago in the side of a hill, which necessitated a deep cut in the back and a deep fill in front. The fill settled more than we anticipated and the result was that we had 4 feet 7 inches drop from the back of the green to the front of the green, which is equivalent to a 6.8 per cent grade, which anyone will admit is too steep for a fair putting surface.

We laid off a square in the middle of the green 33 feet by 33 feet. The turf was cut using a straight edge 8 inches wide, which was the width of the turf, making them all uniform as to width but not necessarily uniform as to length, some being 8 inches and some a little bit more. For cutting the turf we used a stationary blade from an old lawn mower, after fastening it to a six foot hickory handle. One man drew the blade while another held it down in the turf. The turf was then shoveled up and placed upon the fairway in the same position relatively it had occupied on the green, so that each piece of turf went back when the job was finished, to its original position.

After removing the turf the area was divided up into three sections, being 11 feet by 33 feet. Into the middle one we shoveled all the six inches of top soil from the outside sections. This permitted us to lift the sub-soil on the portion we were lowering and wheel it around to the section we wanted to raise. We fortunately found that our tile lines were deeper than is usual and it was not necessary to disturb them, and the finished job gave us about 7 inches of soil over the shallowest lines.

After rough grading and rolling the two outside sections, we proceeded to shovel the top soil back onto these two sections, which were properly graded by using grade stakes. At this point we had two outside sections graded but the middle section was not touched. The lower half of the middle section only required a few inches of top soil, which we were compelled to bring in from our top soil supply. The upper half of the middle section necessitated taking the top soil clear off and removing part of the sub-soil. After putting the top soil back on this section our whole square area was properly graded and blended into the four edges of the old green. This left us with a cup space area about 20 by 20 feet, with an incline from the top to the low side of about 4 or 5 inches which made a fairly level putting surface, and which is adequate slope for surface drainage.

The next thing confronting us was to get the turf back on the green. Of course, as the turf was shaved off the green they varied in thickness running from 2¼ to 3¼ inches in thickness, with irregular bottom surfaces. While the work of remodeling the green was in progress we had one man, equipped with a wooden box, 8 inches by 10 inches, and 2¼ inches deep, and further equipped with an old mower blade, with which he would scrape the bottom of the turf after it had been placed upside down in the wooden box. This gave him all turves of uniform thickness, 2¼ inches. The rich soil which he scraped off of the turf was broadcast on the green just before placing the turf back. Having cut the turf of a uniform width and shaved it uniformly it fitted right in relaying.