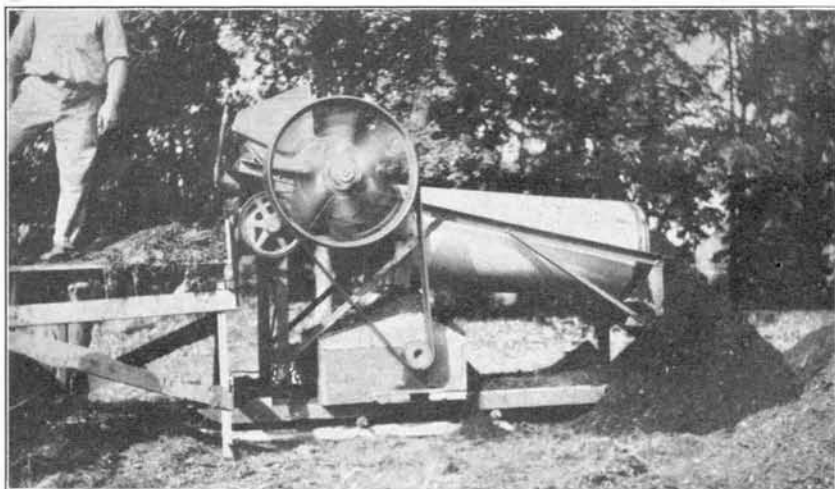


A Letter Regarding a Compost Mixer

H. E. BUCKLEN, *Christiana Country Club, Elkhart, Ind.*

Enclosed is a photograph of our mixer in operation. You will note the sheet-metal guard over the front gears and the wooden hood at the mouth of the feed. We have mounted this machine on four-by-four skids with heavy crossbars and a flooring, with the motor fastened solidly to the same. The motor is all closed in except for the flooring, which is open for the forced draft to circulate air around the motor fields and rotor. A



COMPOST MACHINE

three-horsepower, single-phase Wagner motor is driving the machine with ease. The view shows the sheet-metal covering over the quarter-inch screen and being used as tumbler or mixing barrel for fresh manure and muck and a slight portion of marl. The compost mixture is to be plowed under the green after the turf is carefully removed. The turf will then be replaced over the new soil. We use one-third sheep manure and cattle manure to two-thirds black muck.

This work has shown me decisively that compost piles will decay much better if ground through this machine before allowing them to stand for the two-year period. This mixture starts working rapidly. Next we start on our compost heaps; and this breaking up of the hard lime layers and pulverizing of the manure and soil together means money and time saved. We would not be without it now.

Brown-Patch in South Florida

J. R. BROOKS, *Palm Beach, Fla.*

In the season of 1919-1920 the greens of the Palm Beach Country Club, at Palm Beach, and of the Miami Country Club, at Miami, Florida, suffered considerably from the attacks of the brown-patch fungus, and during the following season the situation was still worse, more than 50

per cent of the areas of some of the greens being very badly infested within three weeks after planting the seed. It had been the practice to sow the greens about November 1 with a mixture of about one-third each of redtop, red fescue and Italian rye grass, using three to four bushels of seed per green. The courses were open for play about January 1, so that the grasses on the greens never got much beyond the seedling stage even at the end of the season. Every remedy that could be imagined and all the cures that friends could suggest were tried in combating the brown-patch fungus, but with very poor success. The best results were obtained by dusting the greens two or three times per week with Bordeaux powder.

In the summer of 1921 Dr. Piper came to see us and suggested that we try out a variety of different grasses and try to find one which would be immune to the attack of brown-patch and which would, at the same time, be suitable for our greens. We accordingly prepared a seed bed, and through Dr. Piper's good offices the United States Department of Agriculture furnished us with seed for the trials. The following varieties of seed were sown at Palm Beach on January 10, 1922, in different plots which had been prepared: Kentucky bluegrass, Canada bluegrass, redtop, Italian rye grass, perennial rye grass, Wimmera rye grass, timothy, orchard grass, tall oat grass, meadow fescue, white clover, slender wheat grass, European red fescue, rescue grass, and black medic.

The following seed mixtures were also tried:

Redtop, Kentucky bluegrass, and Italian rye grass; one-third of each.

Redtop and Kentucky bluegrass; one-half of each.

Redtop and red fescue; one-half of each.

Redtop, meadow fescue, and Pacey's Improved Short Rye Grass; one-third of each.

The brown-patch fungus appeared in some of the test plots soon after the germination of the seed, and no measures were taken to check it. The infestation reached its height two to three weeks after the seeds were sown. The following plots of grass were affected by the brown-patch fungus:

The redtop was infested over 50 per cent of the areas of the plot.

The mixture of redtop, Kentucky bluegrass, and Italian rye grass was infested over 20 per cent of the area of the plot.

The European red fescue was infested over 20 per cent of the area of the plot.

The mixture of redtop and red fescue was infested over 12 per cent of the area of the plot.

The mixture of redtop and Kentucky bluegrass was infested over 10 per cent of the area of the plot.

The mixture of redtop, meadow fescue, and Pacey's Improved Short Rye Grass was infested over 5 per cent of the area of the plot.

Of the remaining grasses, the orchard grass, the Italian rye grass, the timothy, the Wimmera rye grass, and the tall oat grass showed just a very slight tendency to "die back" in a few very small spots. This tendency was so slight, however, and of such short duration that it could not be decided as to whether this condition was due to the brown-patch fungus or not.

At the time of this maximum infestation by the brown-patch fungus the Kentucky bluegrass and the Canada bluegrass were only about 40 per cent germinated, and the perennial rye grass was only about 20 per cent germinated. All of the other grasses were apparently fully germinated and

showed a fairly vigorous and healthy growth, with the exception of the slender wheat grass and the rescue grass, neither of which ever did germinate.

The experimental plots were given the same treatment as the greens on the golf courses throughout the season except that no effort was made to combat the brown-patch fungus. The plots also were very frequently inspected, and the most promising grasses for putting-green purposes were the Kentucky bluegrass, the Wimmera rye grass, and the meadow fescue.

Seedling redtop is of a finer texture than any of the above-mentioned grasses and would be superior to anything we have yet tried for putting-green purposes in this section if it were not for the fact that it is so extremely susceptible to the attack of brown-patch. We have found, however, that in localities where brown-patch is not especially bad, as on the Palm Beach Country Club course, we can use redtop to considerable advantage on our greens by using with it two or three other grasses which are entirely immune to attack by the fungus. Last year our best green at the Palm Beach Country Club was seeded to a mixture of one-third part each of redtop, meadow fescue, and Pacey's Improved Short Rye Grass. There was never any brown-patch on this particular green last season, though it is true we dusted all of the greens about twice a week with Bordeaux powder to prevent the appearance of the fungus. The other greens were sowed with a mixture of about one-third each of redtop, red fescue, and Italian rye grass, and in spite of the dusting of these twice a week with Bordeaux powder the brown-patch was at times very bad.

The Wimmera rye grass is much finer than the perennial rye and stools out very nicely, making a dense, close mat. It is therefore thought that the mixture used with best results last year, namely, that of redtop, meadow fescue, and Pacey's Short Rye Grass, could be still further improved by substituting the Wimmera grass for the Pacey's, and it is our intention to try this mixture on at least one of our greens at the Palm Beach Country Club this fall.

At the Miami Country Club the brown-patch fungus has always given three or four times as much trouble as at Palm Beach. This may be due to the fact that the former course is built on low land close to the Miami River and that the soil is much heavier than at Palm Beach. We have had so much trouble with the fungus at Miami that it has been found advisable to eliminate the redtop entirely from the seed mixture used there. This fall we are trying a mixture of one-third each of Kentucky bluegrass, meadow fescue, and Pacey's Improved Short Rye Grass for our greens in Miami, and with this we hope to eliminate the fungus trouble entirely and to produce a very excellent green.

Creeping Thyme (*Thymus serpyllum*) a Valuable Plant for Fairways With Light Soil

MAYNARD M. METCALF, *The Orchard Laboratory, Oberlin, Ohio.*

On the great golf course at Woods Hole, Massachusetts, creeping thyme has come into a good many of the fairways and is rapidly spreading. It makes fine turf mats and its purple blossoms do not obscure balls which lie among them. The Woods Hole course has a rather light gravelly soil