



## HOLMES CORNER

By James L. Holmes

While calling at Medinah last week and looking over the big operation under Jerry Dearie's direction, I ran across a unique method for assisting in fertilizer application to his many acres of fairways. The above picture is of a hopper, designed by the American Plywood Association and built for Jerry in Minnesota, which holds approximately 22 tons of chemical fertilizer. Jerry backs his spinner type spreader under the hopper and loads two tons into the spreader in from 4 to 5 minutes. He said that it took him exactly 1½ hours to fertilize 30 acres at a rate of 140 pounds per acre.

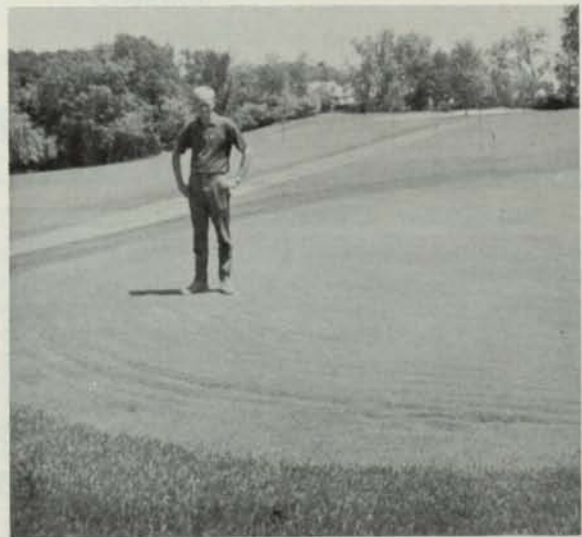
The hopper is filled from a bulk truck, which results in a saving of approximately \$5.00 per ton of fertilizer in bags. Further, Jerry said that it takes 3 men approximately 30 minutes to load the fertilizer spreader from bags. This by itself constitutes a saving of 1 hour and 45 minutes labor for each load of fertilizer.

I have often wondered why this type of arrangement is not more prevalent on golf courses and after observing Mr. Dearie's operation the wonderment increases.



The picture of Art Benson, Jr., on a newly established green at Butterfield Country Club, is a striking example of benefits obtained through the use of a synthetic mulch material which contains lacquer with a rubber base. This material, tradenamed Soil Gard or Soil Set, was applied to Penncross seeded greens in late October last fall. The area in which Art is standing was missed by accident. Hill erosion and lack of cover in this area is visible. Art said the primary reason he was able to obtain an adequate cover, which has allowed him to open this 9 holes for play, resulted from the use of this material. Anyone who is forced to stolonize or seed greens in late October or November should consider applying this type material. This coincides somewhat with the mulching work Jerry Cheesman did at Park Ridge last fall. After observing both of these operations, it would appear that better results were obtained with the liquid Soil Gard or Soil Set material over the mulches used by Cheesman. Further, when considering the variations in installation or application, the liquid material is more economic than solid mulches.

It was visibly apparent when calling at Butterfield that Art Benson has worked exceptionally hard in order to bring the golf course along to a playable condition, considering it was finished in late October.



Art Benson, Jr., Butterfield Country Club

Even though I have discussed the small slit trenches installed in putting surfaces in past Holmes Corners, I thought a picture would bring this out a little more clearly. Even though the trenches, which are filled with calcined clay, appear to be quite wide, actually they are only slightly wider than ¼ inch. I have talked to Bill Madigan, golf course superintendent at Lake Forest in Detroit, where these slit trenches are installed, on a number of occasions since the picture was taken. Bill reports that soil slits grew over in approximately 2 weeks and the effectiveness in draining this low, water-holding green has been absolutely amazing. Perhaps, installation of these small slits may eliminate the necessity of removing large areas of sod and filling-in low, water-holding depressions. I would be interested in hearing from anyone else who may have tried this method and their results.

(Continued on page 6)

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**Bill Madigan, Lake Forest Country Club, Detroit, Mich.**

I had the distinct pleasure of playing a round of golf at Olympia Fields a couple of weeks ago with the illustrious Roy Nelson, Oscar Miles and Mike Bavier. As I have come to expect, turf and playing conditions at Olympia were superb. I thought I had heard every conceivable excuse for hitting a poor shot, but on the tough 14th hole, Oscar came up with a new one. He hit his tee shot to the left and was under the over-hanging branches of a large tree. A 3 iron was used in order to reach the green or land the ball immediately in front. But, as can happen, Oscar hit a "fat" shot, almost shanking the ball, and wound up on the other side of the fairway in the creek. Forthwith, Oscar said, "Did you guys see that crabapple fall out of that tree and land immediately behind my

ball just as the clubhead was going to meet the ball?" Well, as can be imagined, this caused an immediate investigation. No crabapple could be found and some wiseguy pointed out that the tree was a poplar. We all agreed that rarely had we seen crabapples falling from poplar trees. In any event and regardless, Oscar beat us all soundly.

It seems I am having a terrible time getting Tom Guettchow's lead arsenate application situation straight. Another correction. Rather than the 3/16 inch holes which were drilled on the 12 foot steel pipe being placed on 1 inch centers, they were placed on 10 inch centers. This really was a typographical error as I was aware that these holes should be at least 10 inches apart, but Tom was kind enough to call me today, informing me of the error.

## MISCELLANY

Anyone can make money, but it takes a wise man to spend it.

Life is hard by the yard, but by the inch it's a cinch.

## FIGURING PPM

Most persons do not realize what a part per million really means. Unfortunately, some substances are accumulative which makes matters worse. We should have some idea of what some of these things mean or represent, notes the July, 1967, Massachusetts Flower Growers' Association bulletin, which picked up the article from Grower Circle News, '66.

Someone recently put together some facts and figures to indicate what one part per million really represents under various conditions:

One ounce of sand in three and one-fourth tons of cement.

One inch is one ppm of 16 miles.

One minute in 1.9 years.

One ounce of dye in 7,530 gallons.

One square inch in one-sixth acre.

One pound in 500 tons.

One cent in \$10,000.

One ounce in 62,500 pounds of sugar.

One-sixteenth inch in a pile one mile high.

How about one-tenth ppm?

One crystal of salt in five pounds.

One drop in 16 gallons.

One inch in 158 miles.

One thickness of a sheet of cellophane compared to the height of the Washington monument.

Here is a simple formula you can use in the greenhouse if tables are not available to you. It is not precisely accurate, but it is certainly close enough for practical purposes.

Multiply the percent of the element in any given fertilizer by 75. This gives the ppm of one ounce of fertilizer in 100 gallons of water.

For example, ammonium sulfate contains approximately 20 percent nitrogen. Multiply 20 percent by 75, and the answer is 15. This is the ppm nitrogen obtained from one ounce of ammonium sulfate in 100 gallons of water. To determine the number of ounces required to make up a 200-ppm solution, merely divide 200 by the 15. The answer is 13-1/3 ounces.