Coghill Country Club is also adding 18 new holes to their present courses. The new course is designed by Dick Wilson. It should be one of the finest new courses in the Midwest.

The new nine hole course in Lansing was dedicated on September 16. A plaque was placed on the course in memory of the late Ben Hagge, the General Mana-

The Kankakee Country Club is building nine new holes this fall.

River Woods Country Club is nearing completion.

In a recent statistical review of the operations of 50 clubs the firm of Harris-Kerr-Forester and Company report that the average maintenance cost per hole was \$3,307 for 1961-62 and this is 3.9% greater than 1960-61. The past ten years also shows a steady rise in golf course maintenance costs and the 1961-62 average of \$3,307 per hole exceeded 1952-53 by 45%.

Our last monthly meeting was held at the beautiful Racine Country Club, Racine, Wisconsin. This is one of the most attractive courses I have ever seen. The natural beauty of the course cannot be surpassed. The The Wisconsin course was in excellent condition. chapter is to be congratulated for making the arrangements at such a fine club.

Warren Bidwell and his Education Committee have been working hard during the past two weeks making

up a very enticing program. This is to be our 10th Annual Fall Clinic. An anniversary is certainly in order. In order to make this a success we should have a large attendance. Try to make this program. The dates again are Tuesday and Wednesday November 27th, and 28th. The complete program will appear in the November Issue of the Bull Sheet.

The October monthly meeting will be held at the Edgewood Country Club. Troy Menees will be the host Superintendent. The Club is loctated in La Grange,

There is no Educational program scheduled for this meeting because of our Annual Golf Tournament. Paul Voykin the Chairman of the Golf Committee promises us that there will be prizes for everyone playing in the tournament. Come early and have fun.

SOIL COMPACTION

DONALD V. WADDINGTON University of Massachusetts

I. General Considerations

Compaction is a term used to designate the condition of being pressed or packed closely together. Compacted soils are a major problem to turf growers, because herein lies the cause of many undesirable conditions.

A look at some of the symptoms or indications of compaction will bring into light some of these undesirable conditions. Some of the most common conditions which are associated with compaction are:

1. Platy soil structure

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- 2. Hard soil
- 3. Dry spots
- 4. Standing water and wet spots
- 5. Shallow root systems
- 6. Tolerant plants such as knotweed and clover

Any one of these conditions is a good reason for one to suspect compaction in that particular area.

The causes of compaction are well known and, unfortunately, often well practiced. Some of the most mentioned causes are:

- 1. Traffic by man and machinery
- 2. Excessive tillage
- 3. Rolling wet soils
- 4. Raindrop action

Some of these causes cannot be eliminated because they are an important part of the operation of turf Maintenance equipment cannot be eliminated

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from any turf area. Players are necessary in order to fulfill the objectives of areas such as athletic fields, playgrounds, and golf courses. Although equipment and players cannot be eliminated as causes of compaction, it is possible to minimize the compaction from these two sources. Soils are more susceptible to compaction when they are wet. Traffic should be restricted on wet soils. Only essential maintenance operations should be performed, and if possibble, some regulatory action should be taken on the amount of player traffic.

The roller, especially when improperly used, can be one of the most severe compaction devices available to us. Rolling should not be done when soils are wet. Using a heavier roller than is necessary for the particular job adds to the compaction problem. Tillage operations usually increase the total porosity and air space of a compacted soil, but extreme pulverization and rolling may lead to a decrease in total porosity and air space.

The small raindrop is a most effective compacting



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ROKEBY CHEMICAL COMPANY P.O. Box 267 - Marietta, Ohio - Phone: FR 3-1394 agent at the soil surface. A thin compact layer is formed by the raindrop action from either irrigation water or natural rainfall. Upon drying, this compacted layer is called a "crust". The impact of the drops disperses soil aggregates, positions soil particles into a close arrangement, and pack them tightly in their new location. The soil pores may be further blocked and reduced in size by inwashing of soil particles carried by the infiltrating water.

The effects of rainfall are most severe on newly prepared seedbeds and young turf areas. The foliage of mature turf greatly minimizes these effects by reducing the energy of the falling drops.

(Continued in the next Issue)

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