F I WERE a golf pro I would see just how best I could secure the friendship of the members. I would set aside some mornings from 10 until 12 to give free of charge group lessons to women members and to children. This would include every shot in the game, starting at the green with the putt and working back. Each of these mornings would be given for the benefit of those whose inclination to learn golf so they could enjoy it and a low score at the same time were in harmony with mine to help those who wish to help themselves. This I believe would produce many applicants for private lessons and show the members I am interested in them, so they in turn would be interested in buying from me.

FIWERE a pro and in looking over our members' clubs found surprisingly few of them have niblicks in their bags, I would start right away and put four more loads of sand in the traps at our 18thgreen. Then I'd give FREE lessons on shots from traps. This would take about an hour every Sunday about one o'clock after the men are through and the women are getting ready to start out in their mixed twosomes. I know that not more than three percent of our men and none of the women can explode with accuracy or confidence from a trap at the green and I feel a pro can sell plenty of niblicks as well as give a lot of private lessons on this part of the game.

# Humus Characteristics and Use in Course Maintenance

" By C. M. MELVILLE

Grounds Supt., Fox Hills C. C., Wilkes-Barre, Pa.

HUMUS, AS IS USED generally on golf courses is primarily some form of decayed vegetation. Structurally, it is of amorphus nature, consisting of an earth-like substance very friable and ranging in color from a light brown to a jet black. It usually is found as the top layer of soil in peat bogs.

This substance called humus has been formed by chemical reactions that have taken place over a long period of time. Any form of humus must necessarily be of a very complex nature and made up of more or less undefinable chemical mixture of organic elements. The various substances found in growing plants such as cellulose, vegetable oils, proteins, resins,



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etc., go to make up this complex material which we call humus.

One of the most important factors in connection with the general structure of humus, is that the various elemental substances are found in colloidal state and this is perhaps the most valuable characteristic from a greenkeepers' standpoint.

On both greens and fairways, humus is that particular substance in the soils which gives the upper layer the natural dark or black color, water retaining capacity, friability, home for the beneficial bacteria, and last, but not least, a major carrier of that important plant food element, nitrogen. In most cases this top layer of humus has been put there through the application of top-dressing consisting in part of rotted manure, mushroom soil, natural humus as above defined, together with other organic and inorganic products that have helped to break down the elemental mineral substances in the soil, and assisted in the processes of decomposition.

While well-rotted stable manure consists very largely of these humus colloids, it may also contain such detrimental substances as weed seeds, vermin, and fungi of various kinds. The excessive use of rotted stable manure has very often wrought injury and havoc to golf course soils in many ways, and it is therefore much safer in the long run to use the naturally formed humus which is obtained from peat bogs, provided it is properly cured and prepared for use.

Any humus that is used on a golf course should be air-dried and cured, not artificially or kiln-dried, for it is only through this natural curing that the colloidal structure of humus can be retained. Artificial drying by means of high temperatures will invariably break down the colloidal structure, carbonizing the humus and thereby destroy its absorbency and water retaining capacity. Moreover whatever plant food content it may have originally possessed is either destroyed or becomes unavailable.

In the majority of cases, the limiting factor of available nitrogen naturally contained in soils is governed almost entirely by the actual content of the nitrogen in the humus of such soils. Moreover, any valuable form of humus that is added to soils will contain nitrogen in more or less available form, becoming an inherent part of the plant food element contained therein. From this fact, one can readily understand that the addition of such natural

humus will increase the general soil fertility.

In selecting natural humus for use on golf courses, it is preferable to obtain it from such sources of supply where cultivation of some form of crops has been carried on for at least two or three years, and at least one legume crop grown that has been ploughed under in the green state. This not only adds nitrogen but it also inoculates the humus with bacteria essential \_\_1 stimulating those processes that convert unavailable plant food elements into the form available for the growth of plants.

### "Golf-for-Healthsake" Campaign to Build Golf Volume

By George Aulbach Pro, Dallas (Tex.) C. C.

N SMALLER cities there is, occasionally a temporary let down in golfing interest.

When a few leaders lay off and their regular foursomes are broken up, it is not difficult to understand a natural loss of playing interest among the other members. When a club reaches such a condition something must be done or it may eventually lead to the club expenses being greater than the income.

Clubs may fall into these slumps through several circumstances. Perhaps a new city social club has carried away the social activity of the golf club. But in most cases the foundation of the depression can be found in the fact that the same directors, same committees and same personnel have been operating the club for years. When the interest in playing at one club drops off it may spread to the other clubs of the city.

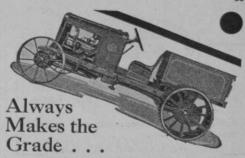
The city then needs a revival. It needs new players, new ideas, new interest and, in general, a good house-cleaning. We are now living in the age of ultra-modern ideas, of men who demand efficient, dependable and progressive service in everything they

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