Depend on International Diesel Engines to provide the power needed for fairway watering. The International PD-40 Diesel is shown here.

For Efficiency and Economy, Use INTERNATIONAL Diesel Power

Fairway watering demands dependable and efficient power to operate the pump. And the budget demands that this power be economical. The best answer to these requirements is found in International Diesel Engines. They combine the advantages of International Diesel design with the economy of Diesel fuel to give high efficiency and low operating costs. Back of them is a reputation for outstanding performance on a great variety of stationary-power work. Investigate International Diesel Engines for pumping water, generating electricity, and any other power needs. The nearby International industrial power dealer or our Company-owned branch will give you full information. There are other International Engines ranging up to 110 max. h.p. for gasoline, distillate, or gas operation. The International Fairway Tractor is also available in the International line for construction and maintenance work.

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The Yale Golf Club, New Haven, Conn., keeps its greens in perfect putting condition with the Worthington Overgreen.

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The Worthington Overgreen cuts in concentric circles giving you always the same nap or grain for your ball to travel over on its way toward the cup. Overgreen cutting eliminates the alternately "fast" and "slow" strips or ribbons which old-fashioned methods of cutting produce. It means "truer," more accurate greens and fewer putts.

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Prominent clubs the world over use Worthington equipment with complete satisfaction and get better playing surfaces at tremendous savings in upkeep costs. 44 out of the 56 championship courses in the United States, Canada and England, on which the National Open and Amateur Championships have been played, used Worthington mowing equipment to keep in championship condition.

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Your Turf Problems... and their solution

Our fairway soil is moderate to strongly acid pH 4.8 to 5.4 with available phosphorus very low, but potash is reported as satisfactory. Please suggest a fertilizer program for the next several years. We wish to encourage Kentucky blue grass.

**QUESTION:**

**ANSWER:**

Kentucky blue grass is a lime-loving plant and requires a high level of available phosphorus, whereas bent and fescue can withstand considerably more acidity, and need less phosphorus. The practical significance of these facts is often overlooked. More lime is needed on acid soil for blue grass than for fescue or bent, and phosphate fertilization is likewise more important for blue grass.

Since soil is strongly acid, fairways should receive finely ground limestone this fall or during early winter. Use about one ton per acre where reaction approaches pH 5.5, and increase the rate to one and one-half tons where reaction is pH 5.0 or lower.

No mention is made of soil content of available magnesium. If this is low, be sure to use a dolomite limestone. One containing from 20 to 30 percent, or more, of magnesium oxide or its equivalent should be selected. This information can be obtained from the producer.

By using the quantities suggested, additional lime will not be needed for a period of 2 to 3 years. It is not necessary to raise reaction to pH 6.0, or higher, immediately.

Because available soil phosphorus is low, phosphate fertilizer should be applied generously early this fall. The rate should approach 300 to 600 pounds of 20% grade superphosphate per acre. For other materials, or superphosphate of different analysis, adjust rate to supply the equivalent quantity of phosphoric acid. Approach the lighter rate on sandy soil, and the heavier rate on silt and clay loam soils. With this initial heavy rate of phosphate, subsequent fertilization can be with a fertilizer containing from 1/3 to 1/2 as much phosphoric acid as nitrogen, as long as a satisfactory level of available soil phosphorus is maintained. In any event phosphate in quantity will not be needed for a period of two to four years.

Since available soil potash is adequate, nitrogen is the only other fertilizer element needed. For best results, the major portion should be supplied from true organic sources, such as Milorganite, cotton-seed meal, etc. In these fertilizers over 90% of the nitrogen is water insoluble, but is converted by soil organisms into soluble and available compounds as needed by the grass.

Since grass is a voracious feeder, the organic fertilizer (Milorganite) should be applied this fall at rates of 700 to 1500 pounds per acre. Approach the lighter rate where turf is fair to good, and the higher rate where grass is poor to fair.

During 1939 and 1940, omit use of lime and phosphate, and confine feeding to the use of the organic fertilizer. Specific recommendations will be furnished early each spring.

Tell us about your Turf Problem. The facilities and services of our Soil Testing Laboratory and Field Agronomists are at your disposal, within reasonable limitations.

Turf Service Bureau

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THE ORGANIC-NITROGEN TURF FERTILIZER
The most modern quick-coupling valve for fairway sprinkling

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With removable Valve Cylinder and Supplementary Shut-Off

- Operating valve removable from top of casing without disconnecting from water main or disturbing turf.
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Send for Nelson Catalog describing the "Silver Top" Valve and many portable sprinklers.

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Brown patch need never gain headway on greens because Dolge DIWORMA will effectively control it.

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EVEN your club driving range cannot escape the march of progress.

The old time bucket of balls for your practice shots is now definitely out-moded and classed with the "things that used to be."

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An attractive illustrated folder describes the AUTO-TEE and tells the complete story of this amazing new source of extra profit in detail.

Write for your copy today.
Fine hotels, restaurants, and clubs feature Pabst Blue Ribbon—the beer with a tradition of quality through five generations.

PABST GOOD TASTE FOR 94 YEARS
SUCCESS FROM SCRATCH

Back when the depression first hit, Val M. Brooks of Okoboji, Ia., had committed himself to build a golf course. This is the story of how he fought all obstacles to bring into operating perfection one of the outstanding new layouts of the middle-west.

ONE of the outstanding jobs of golf business promotion that is now bringing back big returns to those who have put time, money, and plenty of hard work into building up a golf club, is the case of the Brooks Country Club at Okoboji, Iowa. Val M. Brooks, manager, and co-owner with H. A. Ross of Des Moines, has built this semi-private course, located in the heart of the section's lake district, from a club that got off to a slow, stumbling start to one of the finest 18-hole layouts in the state. Brooks also hopped onto the ideas of Golf Promotion early enough so that he is now realizing some of the hoped-for benefits of the PROmotion plan of introducing the game to a greater number of people.

Garfield Harker, Brooks' pro, began giving free lessons in the local high schools about four years ago, and this, along with giving free lessons to caddies and members on certain nights, has developed golf enthusiasm to the point where today there's plenty of black ink on the right side of Brooks' ledger and a club roster of 250. Numerous bulletins and direct mailings to the membership to keep all informed on doings about the club or to announce some future event have proved very effective in maintaining interest throughout the season and in bringing the club to the attention of possible new members. Members are also informed whenever there is a special showing of golf equipment in the club's pro-shop.

GOLFDOM presents the following account of the Brooks Country Club, its method of doing business and successful promotion of the game, in Brooks' own words:

It was back in 1930 that we recognized the golf possibilities in a certain 150 acres of farmland, a cornfield at the time, which all agreed would make an ideal location for a golf course; ideal because it lay in the very heart of Iowa's lake region. After checking municipal golf courses in Des Moines, Sioux City and Omaha we were convinced that the game of golf would be a sound investment; it seemed to be a growing game and we felt golf was unequalled in health and recreational value. We had owners of municipal courses pay us a visit to check the location and to get their ideas on what volume of business they thought we might realize after we had really developed a championship golf course. They all seemed sold on...
The practice green is located directly in front of the clubhouse.

the possibilities of our lake region setup.

The next step was to engage the services of a well-known golf architect, Warren Dickenson of Des Moines, Iowa, to check the land to see if it would be suitable for a golf course. After spending a few days making a complete survey, he informed us that the contour of this land was more suitable for a golf course than any of the 83 golf courses he had designed in five Midwestern states. We then exercised our option and purchased the land. About 6 weeks after purchasing the property the Depression really hit with a bang and the bottom seemed to drop out of everything.

Went Ahead
Anyway

We'd already made an announcement on the building of a championship 18-hole golf course, so decided to go ahead with the project even though the future was not very bright. We engaged the services of men competent in their line to outline our needs in the way of water systems, equipment, etc. We tried to profit by mistakes of other courses and did not attempt to take any short cuts in the way of developing the course. We were convinced it would be false economy to try to save too much here and there as this would un-oubtedly lead to more difficult problems later on.

We did not put all our greens into bent immediately; we put all eighteen into blue-grass, and then started to transform them into bent greens the first fall that we were open. We have tried to build our greens properly with good drainage and proper foundations. With our limited budget, we were unable to convert more than two greens a year into bent; but all were made the finest possible and we should have fine greens for years to come. The course has now developed into wonderful turf and we feel it really has possibilities of becoming recognized as a truly championship course.

The main thought in the whole program has been to create a golf course that would bring the greatest amount of enjoyment to all classes of golfers. We feel that 90% of all golfers today do not shoot under 90 consistently. That 90%, naturally, represents 90% of our revenue. We have not tried to make this course “too tough” or to make a course with hazards that would more or less create many a lost ball trap. We have tried to place our hazards in places where they are more of a hazard to the long shooter than for the average golfer. We were favored with the advantage of having land that was ideal for a golf course and we have simply tried to bring out the best possibilities of this property.

Course Designed to Give Pleasure

Our greens have been designed to fit each hole of a course measuring 6,410 yards, representing complete outside and inside nines. There are no two holes alike either as to length or design, yet all are good golf holes. We have but two blind holes for the average golfer, and the two greens open up easily for a long hitter who can put two good wood shots together. Our players always have a nice target to shoot at and are never penalized for having a bad or unplayable lie after having executed good wood shots. There is not a steep hill on our course, yet it is not flat land. It is mostly land with nice gentle rolls. As stated before, what we have done has been with the thought of adding to the enjoyment of the game of golf for the average golfer.

We opened our course on July 1, 1932. In the spring of 1933 we visited sixteen surrounding towns on a sort of good-will program. We issued guest tickets in these communities which entitled bearers to one day’s free play during that season. This