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The TEE-SOLE Wood design will take the terror out of fairway wood shots... help reach more greens in regulation.

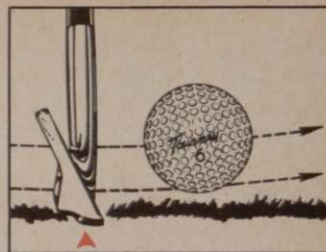
Turf drag on fairway shots reduces distance. So MacGregor made the sole of the



new TEE-SOLE Woods smaller to reduce drag. (The face area and head weight have not been changed.) It's almost like hitting from a tee.

New SPLIT/LEVEL IRONS

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Lite shaft.

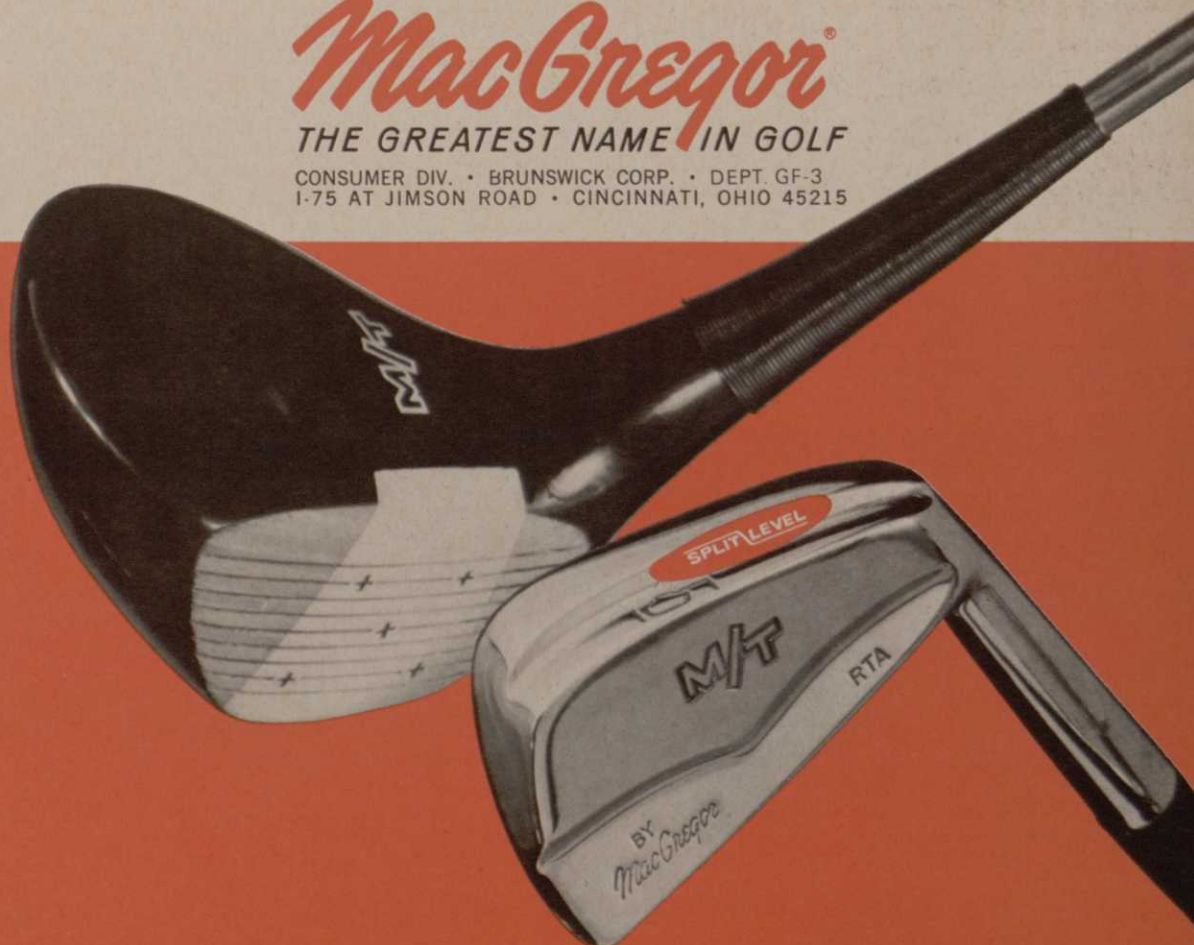
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Turf Product Prices: Will You Be Caught Off Guard?

By FRED V. GRAU

Look for a sharp
rise in the prices of
high-quality seeds.
Fertilizer prices will
also swing upward

As the sun swings north once more and the peepers in the swamps herald the re-birth of nature, many superintendents begin to figure out how much seed of various kinds they will need to repair the scars of winter and disease. They look at the budget and run their finger down to the item, marked "seeds." Was enough leeway allowed? Is the price of bent up this spring? What kind of crop was produced?

In the seed business we can tell what has happened as of this date, but to predict what will happen three or four months from now—well, clairvoyants we are not. When these lines were written, the harvest had been virtually completed with losses far less than in 1968 when unexpected rainstorms soaked the windrowed grass. The subsequent sprouting ruined a large proportion of the seed and as a consequence, prices rose.

Blue Tag Certified Penncross bent for greens (Putting Green Quality) dropped about \$2 a pound between November 1, 1968, and the same date in 1969. This is significant because there is no uncertified Penncross (and never again will be) and it is costing the grower more to produce this high-quality stock. It is difficult to interpret demand, but it appears that the need for this seed holds steady.

Merion Kentucky bluegrass exhibits the sharpest rise in prices from a year ago, especially in those classes that are "*Poa annua* free." The sod industry is demanding this high-quality seed. With the heavy drain on available supplies, the price structure is affected. Most bluegrasses have held steady. In general the picture is good. There are plentiful supplies of most varieties and budgets should be able to cover whatever is needed.

Newer superior varieties still are in short supply and their cost will be high compared to Merion, common, Park, Delta, Prato and the like, particularly Fylking and Pennstar. Last year everyone was sold out of Fylking early in the season. This year the few thousand pounds of Pennstar were sold before the growers had finished cleaning the seed. As I see it, price is not going to stop many turfgrass managers from using the better varieties. With better performance of the grass and with better machinery to get the seed in contact with the soil (scarifier-seeders), one needs to use lower rates per acre to get satisfactory results.

The fine-leaf fescues took a jump clear across the board with not one declining in price compared to a year ago. Demand is strong and yields have suffered as a result of the anti-pollution measures taken against burning. Burning is the growers' way of eliminating trash, insects, weed seeds and diseases. No one is quite sure as to what will happen if fields cannot be burned now and then.

The sturdy tall fescues are up significantly in price. I see a joint effect of reduced yields and heavier demand. Highways, parks and golf courses

Continued

Continued

draw heavily on stocks of these seeds. I look for prices on these fescues to hold up and perhaps increase a little more.

Penncross is an example of one that will cost less compared to this time a year ago. All other bentgrasses are sharply up in price, whether certified or uncertified. A situation of this kind is not easy to explain. At this point I'm afraid we will just have to accept it.

There is little change detected in the price of the ryegrasses, even the improved varieties (Pelo, Manhattan, NK-100). Last year there wasn't enough seed of the improved types to go around, but the price structure has not been visibly affected. One of the most recent of the improved ryegrasses (it hasn't even been named yet) got off to a bad start because delivery was delayed in transit so that the seed didn't get into the ground in time.

Redtop is not a big item but it is interesting that the price is up sharply over a year ago. There has been great difficulty in getting good redtop seed free from yarrow. This could be a deciding factor in the higher price for this so-called "nurse" grass. It could result in less redtop in mixtures.

I have not had any figures on bermudagrass seed, but from all indications, there isn't much of a change. I can see an expansion of the use of hulled bermudagrass seed in the direction of courses on the N-S "grey zone." The scarifier-seeders make it possible to get seed effectively into contact with the soil without interrupting play. We might look for a slight rise in this warm-season grass.

In grass seeds it is good business to know your needs early and to place your order with your seedsman as early as possible. This helps him to schedule shipments from grower or broker and could result in significant savings

BUYING TIPS FOR TURF MATERIALS

When buying for the golf course, there are two points on which every superintendent should be clear, no matter how the buying is done: 1) have legal authority to make the purchase; 2) be ready, willing and able to justify cost and material purchased within the allotted funds.

Putting material out to bid is not a common practice, at least not at private courses; however, it has some advantages. It is obvious that a savings can result by accepting the lowest bid. Less understood are some indirect advantages.

Large orders put to bid early in the season, or off season, are assured of prompt attention and delivery, sometimes at special discounts. (This also applies to non bid orders.) Some houses specialize in certain materials, and grouping of items in this category almost always results in low prices. The two big divisions are those which specialize in chemicals and fertilizers, and those which deal in equipment and sundry items.

Writing up an order, if done properly, will require the aid of catalogs, trade magazines and other published material, include an inventory of materials on hand and judgment of past performance of materials. The end result is better planning and a better informed course superintendent.

It is important to bear in mind that the low bid is not always the best buy. Final judgment should also take into consideration the reputation of the bidder, the quality of the material and the reliability of delivery. In a word—service. Many superintendents also place a premium on the personal attention they receive from a particular company representative.

With operating costs at an all time high, the labor supply marginal at best, and the weather as unreliable as ever, purchasing for the golf course is one area in which the superintendent controls the ball. Swing easy and follow through.

—Bill Smart

to the user. Last minute rush orders can throw monkey wrenches into well-oiled machines.

Fertilizer trends

For several years there has been unprecedented expansion in fertilizer mining and manufacturing facilities. The main impetus came in the name of "Fight Poverty" and "Food for the Starving." Now there is a surplus of food and fertilizer, both of which have been given away or sold at or below cost. A change is in the making. Production costs are up, labor demands higher wages, transportation costs may be hiked 10 to 11 per cent, money for plant

expansion and maintenance cost more. The end result will be higher prices for nearly all fertilizers simply because no one can continue to sell goods at or below cost and stay in business.

An unfortunate situation is that which prompts a dealer to cut prices as a way to get more business. This works for a time, but it ends up with no one making the profit; they must stay in business.

Fertilizer users should be aware of the conditions which have led to such low fertilizer prices. By the same token we should not be surprised when prices begin to reach a more normal level—normal as related to costs and prices of other commodities. □

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FLAT BED OR HOPPER



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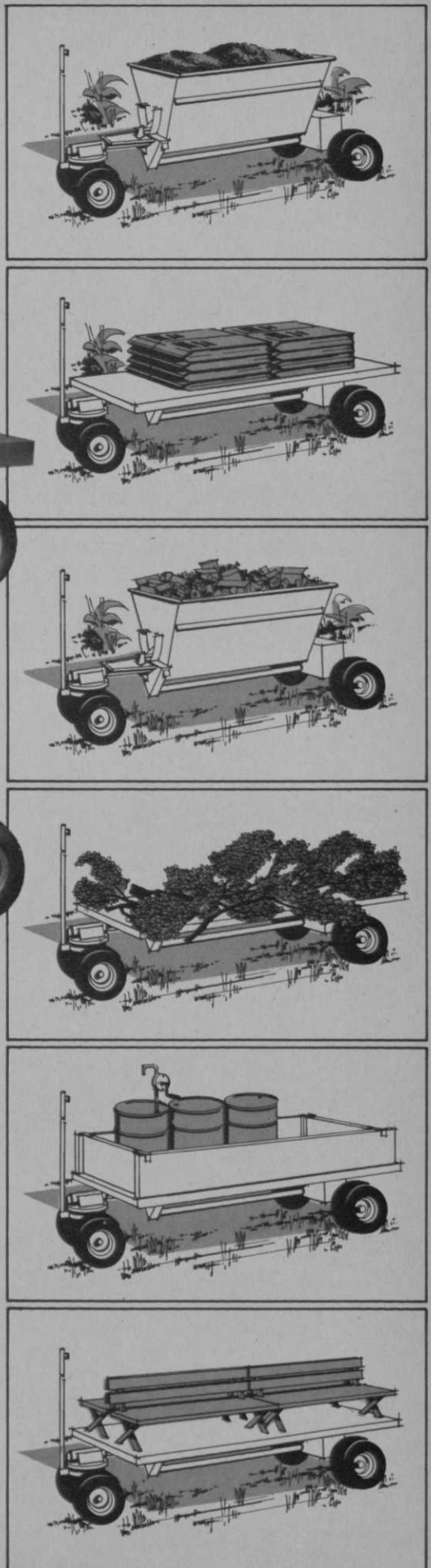
TERRA-TIRES Protect turf from rutting . . . Big, easy-rolling Terra-Tires spread the load over a 48" width of ground. You get the work done when needed without added problems of turf damage or ruts.

For big bulk loads, there is a Champion Trailer with 2 cubic yard hopper — See your equipment jobber or write for details.



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with enriched, liquid NI-TRI

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Self-Propelled. Coring aerator. Removes soil cores on 2" centers (36 per sq. ft.), over 3" deep.

SPIKEAIRE

Self-propelled disc spiker for relieving compaction, opening turf for fertilizer, fungicides, etc.



REN-O-THIN

Power rakes thatch. Loosens soil for seeding. Pulverizes and spreads aeration cores.



MATAWAY



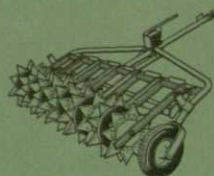
Heavy duty, self-propelled. Power rakes, deep slices, disc spikes for triple turf treatment.

LAWNNAIRE

Self-propelled aerator. Removes cores to relieve compaction. Holes 5/8" dia. on 5" centers.



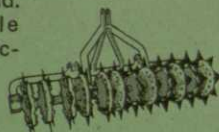
RENOVAIRE



Large area turf aerator. True contour design for rolling and level turf areas.

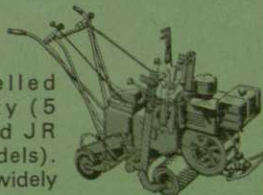
TRACAIRES

Large area turf aerator for level ground. Interchangeable tines for coring, slicing, renovating.

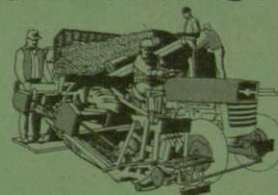


SOD CUTTERS

Self-propelled Heavy Duty (5 widths) and JR Units (3 models). World's most widely used cutters.



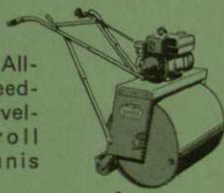
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for a superb finish to golf greens

Ransomes lawn mowers are the sophisticated end product of our 130 year of experience. In all that time, the company has been in the forefront of grass care progress, and have pioneered most of the worthwhile improvements in mower design. In brief, Ransomes know how to make mowers. More important, they know from an immense practical field experience, how you will use them, and the kind of problems you are facing and solving daily.

Mowers built in the light of this knowledge excell. Because of it, a vast range has been developed, with performance values that make work study worthwhile; that enable close and economical costing of mowing schedules with machines matched exactly to the job.

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A single micro hand wheel adjusts the height-of-cut from $\frac{1}{8}$ " to $\frac{3}{4}$ " at only $\frac{1}{64}$ " at a time.

Super strength cutting reel.

The ten-knife, impact resistant steel, cutting reel stays razor sharp longer—gives a perfect finish.

Dual Control.

Separate landroll and reel clutches enable easy control of the mower at all times.

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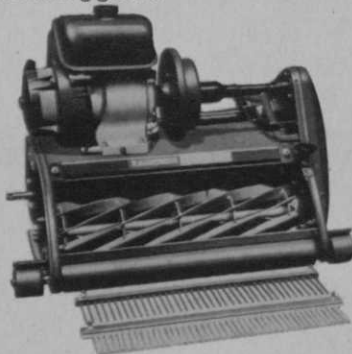
Power-driven transport wheels allow quick, effortless site-to-site transportation.

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Fitted as optional extensions to normal front roll—gives extra stability on undulating greens.

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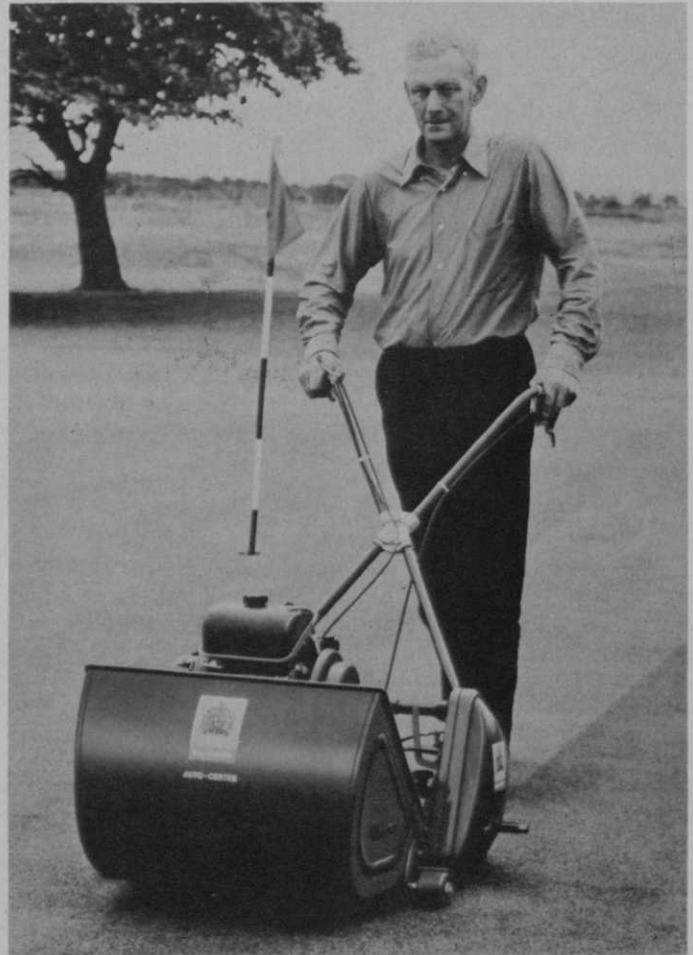
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GOLFDOM continues its rundown on the most frequently asked questions about automatic irrigation

Automatic Irrigation: Ask the Experts

By the EDITORS and FRED V. GRAU

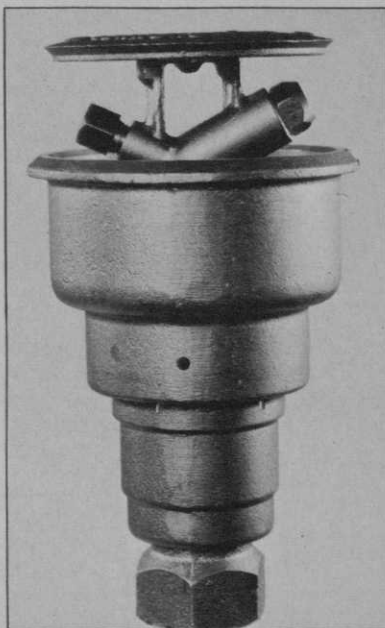
Some questions have been carried over from last month's article. Different manufacturers, however, have answered these particular questions. Again, the responses are solely the opinions of the individual manufacturers.

Question: Is an adequate source of water assured? Should we use city water, storage ponds or wells?

Answer: One of the most important factors to be considered in contemplating an automatic sprinkling system for the golf course is the water source, quality, the amount required and the cost.

Municipal water, when available, has the best assurances of a dependable supply and quality that does not need filtering. Cost in many cases includes the use of municipal water per 1,000 gallons or the cost of meter(s) or supply lines. Municipal water is usually delivered under pressure, which can reduce the pumping power cost to the golf course. In cases of high pressure, municipal water may eliminate pumps. The savings in initial pumping plant investment and power bills may offset the higher cost of municipal water.

Ponds or lakes are often most economical, particularly if well-located on the course and if the water can be easily replaced. Systems using pond or lake water carry the total cost of pumping plant and power, as well as screening or filtering of the water. Evaporation or seepage can increase cost, if replenishing costs are high. The cost of ponds and



their maintenance is usually offset by the beauty and other factors that they add to the course.

In many areas, wells can be developed at one or more points on the course from which sufficient water can be pumped directly into the automatic sprinkling system. If the wells are properly cased and developed, screening or filtering may not be necessary. Good wells do not have a replenishment cost, but the pumps will require more horsepower than lake pumps, because of the extra power required to lift the water from the water table in the wells.

In choosing the best water source, many factors should be considered. The cost of pipe for the sprinkling system will be affected by the location of the water source. The center of the course or a location just off-center at the highest elevation can make a

worthwhile reduction in main line pipe costs. Less pipe cost results in some cases where two or more water sources are used.

The quantity of water required depends on the acreage to be watered, the amount of consumption by turf under climatic conditions and evaporation losses. The total water requirements for maintaining good turf can vary from a maximum of two inches a week, in hot, dry desert climate to as little as one inch in northern, cool climates. The sprinkler system water requirements must be based on the maximum usage during the hottest, driest period of the year. The sprinkling system may only be operated during the night hours from the closing of play in the evening until the start of play in the morning—usually not more than 10 hours and in the case of lighted courses, eight hours or less. With the acreage determined, the inches of precipitation per week required and the hours per day allowed for watering, the engineer can quickly and accurately compute the water in gallons per minute required at the source.

(Buckner Sprinkler Company)

Question: Will first cost be the last cost?

Answer: No, not quite. An automatic irrigation system, like any other mechanical piece of equipment used on a golf course, must be maintained.

Aside from the initial cost of building the golf course, an automatic irrigation system is probably

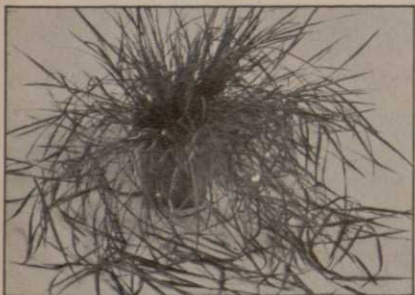
Continued on page 60

At last! A non-creeping Bentgrass that's easy to care for. **HOLFIOR** Colonial Bentgrass

CONSIDER THESE ADVANTAGES: It is non-creeping in contrast to the creeping bentgrasses. Its stems and leaves produce a dense turf with good texture. The tillers stand more upright with leaves which remain green all the way down to the ground. Avoid tufty appearance even when mowed short. Provides a uniform turf without ugly patching or puffiness.



Note the non-creeping growth characteristics of the Holfior Bentgrass above compared to the Penncross Bent below.



Want more information?

Write for Northrup King Turf Bulletin #3 on Holfior Bentgrass.



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ASK THE EXPERTS

Continued from page 59

the single largest investment a golf club will make. It stands to reason that a club will want to protect its investment with proper maintenance. For example, full-time mechanics are hired to maintain turf maintenance machinery that may only amount to one-third of the cost of an irrigation system. Similar attention should be paid to an automatic irrigation system. In other words, a part of the labor cost saved through automation should be diverted to maintenance. (Toro Mfg. Corp.)

Question: Are present mains usually adequate, or must all new lines be installed?

Answer: Present mains usually are not adequate enough, particularly where a quick coupler system is being converted to an automatic system. If the main is steel, as some are, the inside diameter size will have to be changed due to corrosion, increasing the flow loss. Also, new mains can usually be better placed and at the proper depth to accommodate a new design. In the overall picture, the main size is a very important part of a system, so the additional cost is more than warranted in our opinion. Also, manufacturers wish to give their products the best possible conditions under which to operate.

(Febco, Inc.)

Answer: Our answer, for the most part is no. If the golf course is not too old and the main lines are either asbestos cement pipe, cast iron pipe or steel pipe that has a cement mortar lining and is tar-coated or wrapped on the outside, then some sections of the pipe could possibly be utilized, but only if the pipe is of proper size to meet the demand of the engineered design of the new automatic system.

The following figures are taken

Continued on page 61



your private putting green

Now possible with new 0217® Brand Fylking Kentucky bluegrass lawn seed or sod! Fylking forms a dense turf with the greenest green, beginning in early spring and lasting into late fall. It doesn't require special golf course care, yet thrives when cut low as 1/2 inch for your own putting green. A hardy bluegrass originating in Svalof, Sweden, Fylking is drought and winter tough, doesn't show traffic wear and possesses more resistance to leafspot and stripe smut than most other bluegrass varieties. Proven in 12 years of international tests.

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