

# ENOUGH?

Last year's excessive rain and flooding will create turf problems for many superintendents this year. Purchases and personnel should be prepared to meet this extra burden by DR. JAMES B. BEARD

## 1973 FERTILIZATION PROGRAM

Excessive rainfall during 1972 has increased the degree of soil leaching, particularly nitrogen. This means that somewhat higher nitrogen fertilization rates will have to be utilized to correct the situation. Most frequently this increased nitrogen fertilization requirement, due to excessive soil leaching, does not become a problem until the following year. Thus, golf course maintenance personnel should be alert to this potential problem. Nitrogen fertilization levels should be adjusted somewhat higher if the normal turfgrass color, density and growth rate cannot be maintained with the nitrogen fertility levels utilized in previous years. The 1973 maintenance budget should also be adjusted to cover this eventuality.

## SPRING GREEN-UP

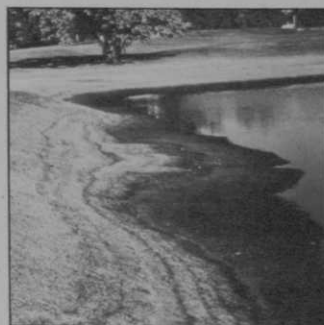
Spring is a period of great anticipation for the golfer. He wants the golf course to green-up and reach optimum playing conditions as rapidly as possible. This response

is controlled primarily by soil temperature. The earlier in the spring that the soil warms up, the earlier that turfgrass spring green-up and growth occur. The rate at which soils warm up is strongly affected by the soil moisture level. Wet soils are much slower to warm up than drier soils due to the high specific heat of water. Thus, if the soils are excessively wet during the spring period, the turfgrass maintenance personnel should not get overly concerned and attempt to stimulate spring green-up and growth by applying nitrogen fertilizer. Nitrogen fertilization does stimulate turfs to break dormancy and green-up earlier in the spring, but this response will not overcome cold soil conditions caused by too much soil moisture. The application of excessive nitrogen fertilizer under this condition will only result in an explosion in turfgrass growth at a later date that can be detrimental to the turf in the long run.

*A Final Note.* The six potential problems listed previously may or may

not occur. The soil compaction and nitrogen leaching problems will most probably occur. Whether or not the other four problems occur depends on the specific weather conditions during the winter and spring period and will most probably vary from region to region across the country. This discussion was presented in order that appropriate contingency plans can be developed in case one or more of these problems do occur.

Finally, a number of these potential problems can be avoided if an adequate surface and sub-surface drainage system has been developed. If this is not the case, an attempt should be made to map those areas where excessive soil moisture and flooding have occurred. Plans should then be developed to correct the condition. The plans should include a time table for accomplishing the projects as well as an adequate budget to cover such special projects. □



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# TORO



# MAINTENANCE MATERIALS:

## PRICE AND SUPPLY TRENDS '73:

No shortages of fungicides or insecticides seen; Fertilizer prices hold steady; Equipment trending to interchangeable units; Seed supplies and price seesaw  
by FRED V. GRAU



How will my budget hold out? Will I be able to get what I need when I want it? Should I stockpile?

These and many other questions are on the minds of superintendents as they meet with their chairmen and their boards to develop their 1973 budgets. Hopefully, the following survey, which is a cross-section of opinions from representatives within the industry, will help answer their questions.

**CHEMICALS** The costs of producing many chemicals are up sharply, due in large part, to the cost of trying to meet and keep up with governmental regulations. Registration and labels now must be fulfilled in 50 states, not just with the Federal government.

The rumor mill, if allowed to run unchecked, could be responsible for temporary shortages caused by buyers stockpiling or hoarding when there is no need. Prices for some herbicides, such as phenoxy materials, may be up as much as 8 per cent on the retail level, but there exists no real shortage of materials.

Fungicide prices tend to remain stable in spite of the unpredictability of weather, which could cause a sudden demand for certain chemicals designed to combat specific turfgrass diseases. We must remember that many manufacturers have been under price control ceilings. These held selling prices down, but had no control over production costs. Now that controls are relaxed, we can look for general increases. Meanwhile, no shortages are in sight. The word is, "don't

hoard—buy as needed," just as with herbicides. When a price seems out of line, check with alternative sources.

**FERTILIZERS** The story is the same on the East Coast and on the West Coast. Prices of fertilizers will hold steady with little or no price increases. In the Midwest, where sales have begun to exceed plant capacity, we may see slight, temporary increases, but nothing major.

New formulae, which contain high percentages of slow-release nitrogen (as most turfgrass fertilizers do), will hold steady or show slight increases. Here, again, "buy as needed." This year, superintendents might do better to ask for low-phosphorus mixtures, because phosphorus is in short supply and could affect prices or formulations. Many turfgrass soils are over-supplied with phosphorus anyhow.

Ureaforms, long the standard for slow-release materials, are feeling pressure from resin-coated prills, which contain less costly ammoniacal and nitrate nitrogen. In some formulations each resin-coated prill contains an homogenous blend of N-P-K and trace elements, each prill identical in content to every other one. IBDU from Japan shows promise, but does not seem to be in general use. The most exciting news comes from a manufacturer that has produced what could be termed a time capsule, which, when blended with potting soil, feeds container-grown plants steadily and adequately for two years. Another

*continued*

## MAINTENANCE *continued*

manufacturer has gone the route of packaging its ureaform in the dealer's own bags. No price increase is predicted under any regime.

The picture for white soluble sulfate of potash (sprayable) continues to be cloudy. A plant at Salt Lake City that should have been on stream a year ago seems to be having a hard time getting this desirable turfgrass product on the market. Little is known about the price structure, but one can assume that it will stay in line, a bit higher than muriate of potash because of the plus value of the sulfur. The word is, "Keep the pressure on for soluble sulfate of potash and check all sources of supply." Prices will remain stable.

## EQUIPMENT

There is a note of optimism concerning new equipment that eliminates frills and extras which, while nice, do little for economical maintenance. The name for 1973 equipment in a large measure is interchangeable units. These are not frills, but can be termed innovative efficiency. An increase in price? Yes, but moderate and commensurate with improved efficiency. Selective, modest price increases along the line may be expected, but budgets will not need to be altered that much. Obsolete equipment will give way to the new labor-saving, efficiency machinery, one of which is a vertical mower for fairways that has powered units. Increased efficiency does not mean a lowering of turfgrass quality—actually the quality improves with more sophisticated machinery.

One midwestern manufacturer is concentrating on the necessity of processing the cores that result from aerating putting greens. Despite the costs of research, redesign and advertising, no price increases are anticipated and no problems of availability are foreseen.

## SEEDS

Several factors are affecting supplies and prices of seeds of all kinds. Last summer, in the producing areas of the Pacific Northwest, hot dry winds at flowering time reduced seed set and lowered yields.

Restrictions on field burning of

stubble (to control diseases and insects) have hiked production costs, which eventually will be reflected in the selling prices of seeds. Abnormally wet conditions in sections of the mid-continent made harvesting almost impossible. A cutback in highway construction also drastically reduced orders for erosion-control seeds. Because production continued unchecked, a market glut was created with prices greatly reduced. Crownvetch was one that was seriously affected.

It is of considerable interest to learn that proprietary grass seeds will show little change in price structure. The reason is that the dealers in the using areas contract with growers at a fixed price. Thus, the law of supply and demand is inoperative. Prices remain stable whether there is a large crop or a small one. Non-proprietary items fluctuate with supply and demand. We can expect husky price increases on some of these items, lower prices on others.

Redtop and tall fescues exhibit the greatest price increases. Harvest was affected by the abnormally wet weather. Demand is strong.

Red fescues are selling sharply higher, perhaps 30 to 50 per cent over 1972. Prices are considerably above those for the non-proprietary bluegrasses. Seedsmen say that they cannot recall a time when fescues cost more than bluegrasses.

European buyers favor the colonial and highland bents. But low demand for these items in the United States have resulted in a significant drop in prices. Astoria colonial, for example, is selling at about half the price that it brought a year ago. The answer seems to be that these grasses have been largely replaced in seed mixtures by superior types.

Certified Penncross bent remains unchanged and supplies appear to be adequate. Fairway quality Penncross, certified, may be in moderately short supply. Demand has been strong.

Bluegrasses tend to be up in price, but the increase is moderate. There seems to be no shortage of any item except in the proprietary, named varieties. Merion tends to remain constant and in adequate supply. "Poa-annua free" on the label brings the price up a bit.

Demand for Pennstar and for Fylking is strong, but prices hold steady. Supplies of Fylking are adequate, but Pennstar will be in short supply until next harvest. Prospective buyers are urged to plant minimum poundage and stress better seedbed preparation and adequate fertilization to conserve available supplies.

We cannot pinpoint all the newer proprietary bluegrasses, but here are some of the other better-known varieties: Sodco, just about adequate; Baron, good supply, price down; Nugget, short supply, price up; Sydsport, should be enough, price steady; Prato, plenty in sight, no increase; Bonnieblue, very little in sight. (The name Bonnieblue may have to be changed; seems someone else had it first.); Kenblue, plenty to meet demand; Adelphi, very little seed available; Park, good supply, quality excellent, and Prato, ample supply, price steady.

Now we come to a most interesting phase of the turfgrass picture—that of the fine-leaf perennial ryegrasses. Each has a story to tell: Norlea, a Canadian import, has lost favor and is not even listed in the releases; Pelo, strong demand, should be in adequate supply, price steady; PaloMoRa blend, supplies may be sufficient to meet demand, no increase; NK 100, demand strong, should be enough; NK 200, new, short supply, limited distribution; Manhattan, heavy demand, supplies barely adequate, and Pennfine, there probably will not be enough supplies to meet the heavy demand.

A word of caution comes from a grower for those who buy by price. Some unscrupulous growers and dealers are offering uncertified Manhattan ryegrass at a lower price. Tests show that these cheaper lots contain from 3 to 10 per cent annual types, which are coarse-bladed and do not mow clean.

Contracts for Pennfine specify that only certified seed can be grown and sold. So, insist on certified seed for quality turf.

Not enough data came in to allow me to say more about Medalist II, Compas and Epic. There will be others soon. We expect the new varieties to be in short supply for a while.

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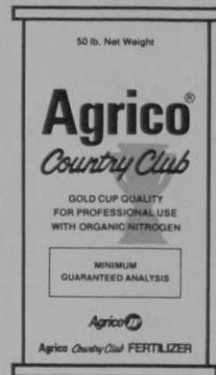


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### MAINTENANCE from page 54

For emphasis I repeat here that pricing on proprietary, named, varieties holds steady because of contracts at fixed prices with growers. It is the available supply that gives us concern.

One factor that has strengthened the bluegrass market is a short crop in Europe with domestically grown seed being exported in large amounts.

Merion demand is off a bit due partly to excessive moisture in the Midwest, which prevented fall seeding. Some sod growers in the East are reducing Merion in their blends and adding other varieties.

Fylking production was off about a third because of excessive moisture, which produced turf instead of seed.

### BLENDS

Monoculture is a "dirty word" in turfgrass circles for the most part. The professional turfman today has more flexibility than he has ever known. Nearly everyone is talking blends. Each grass, no matter how good it is, has one or more weak spots. Common bluegrass is highly susceptible to *Helminthosporium* leafspot. Merion is resistant to leafspot, but is vulnerable to rust and stripe smut. In a blend, the strength of one grass masks the shortcomings of another. *Fusarium roseum* can be highly destructive and disfiguring to a monoculture turf of Merion, but may not even be discernible in a blend of bluegrasses.

Now, with the new turf-type ryegrasses blending so well with the superior bluegrasses, we have a wide range of choices for our mixtures. If one is in short supply, just switch to another.

Turfgrass blends are not yet thoroughly accepted by the sod-buying public. Merion, the one that started the whole parade, is still the magic word with many, although this is beginning to change. Vegetative types, such as A-20 and A-34 are in widespread use and supplies seem to keep pace with demand. Wet weather hindered harvesting, moving and laying of sod over wide areas. These vegetative types are beginning to shift toward seed, which is an easier way to establish turf.

Harsh winters seem to be giving

the newer ryegrasses a hard time. We don't know the answers yet.

There will be attempts to improve prices for sod, which in some cases have been at a "dollar-trading" level. Some figures indicate that many sod growers would show a loss if they counted all costs. Eastern-grown sod could be in short supply in late 1973 because of the adverse weather in 1972. Top quality turf should bring about a one cent per square foot increase in 1973. Average quality sod will remain stable.

A factor that, so far, has been overlooked is that, with wheat in strong demand and short supply, and with prices bullish, many acres now producing turfgrass seeds will be growing wheat. Many acres that had been producing crownvetch seed will be planted to corn and wheat. We can look for an increased acreage devoted to the production of alfalfa seed. Prices are at a 10-year high. Although alfalfa is not a turfgrass, everything affects everything else in one way or another.

Native grasses appear to be stable. Bermudagrass yields were good and prices should be a bit lower. Odd, but no one even mentioned common ryegrass except in connection with increased wheat acreage at the expense of common ryegrass.

### SUMMARY

The word across the board is, "Keep cool." There's no need to stockpile or to hoard. Budgets need not be increased more than 3 to 5 per cent, depending on the items needed.

The words, "substitute freely" express the trend when one item is in short supply. Don't drive prices up abnormally by applying excessive buying pressure.

When a desirable seed is in short supply, try to use the least quantity that will assure results. Many experiments over the years have shown that superior results come from reducing the quantity of seed sown and increasing the amount of fertilizer. By all means, employ the type of equipment that is a miser with seed and which places the seed directly in contact with moist soil.

Buy the best; it will prove to be cheaper in the end. □



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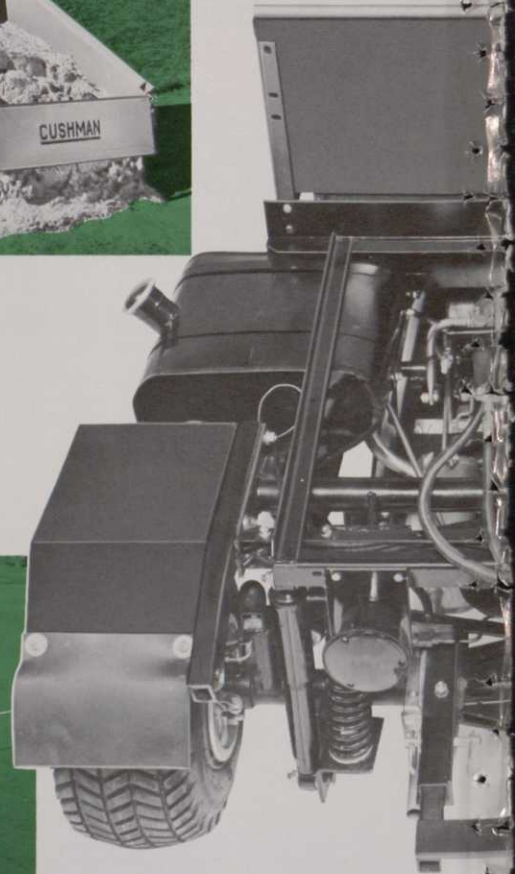
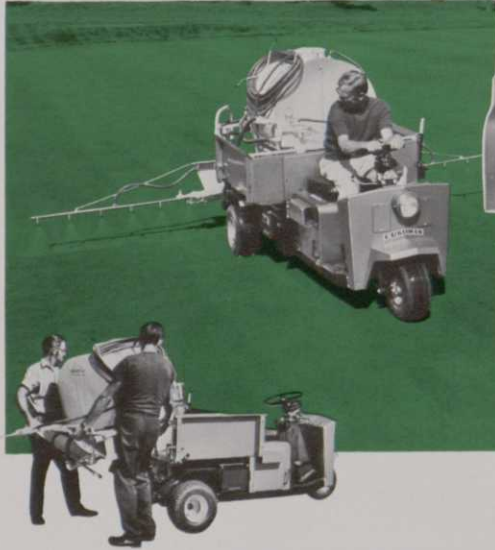
## HAULING

Converting the Turf-Truckster for hauling and dumping is simple. Pull out three pins, mount the pickup box or the long box, and replace the pins. That's it. No tools. No trouble.



## SPRAYING

Add a power take-off and the Fairway Sprayer to your Cushman 18 HP Turf-Truckster and presto, you have a self-propelled, self-powered spray rig. Sprayer unit comes equipped with 103 gallon epoxy tank, retractable boom, hand gun assembly, and 50 feet of hose.



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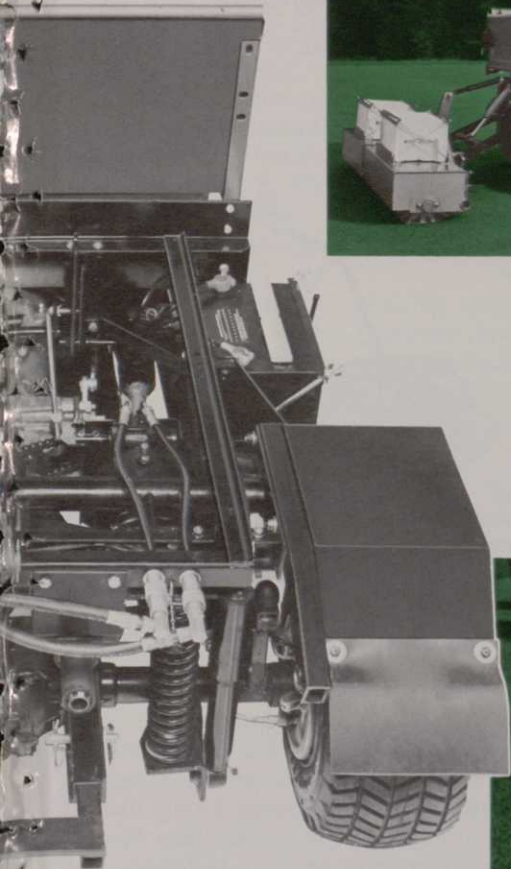
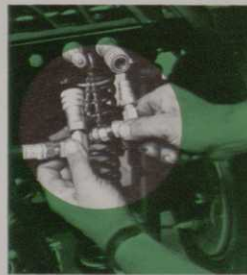
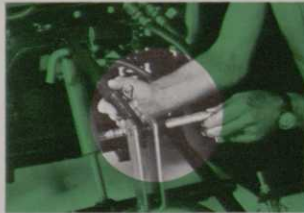


# the right accessory. And the ready for any job you throw at it.



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## SPREADING

Designed especially for the Cushman Turf-Truckster, the Cyclone Spreader is operated by the power take-off accessory.\* It provides a smooth, even application over broad areas for most any material. The unit can be mounted or dismounted in seconds on either the small or large dump box.

## Buy only the accessories you need. Then watch them do more work in less time. Think of the money you'll save.

The new Cushman Turf Care System is engineered to be more flexible than any other turf equipment in the industry. It's designed to offer you savings, convenience, and superior performance. The new Cushman Turf Care System can cut your time and labor costs as much as 50%, initial equipment investments as much as 35%, and save undeterminable amounts on maintenance and upkeep.

The concept is simple. First purchase one of the basic Cushman Turf-Truckster vehicles. They're available in 3 or 4 wheel models with 12 or 18 hp.

Then add as many of the new modular accessories as you need for the work you have to be done. The more accessories you add, the more jobs your Turf-Truckster can accomplish.

You can tow, mow, drag, haul, top dress, spray, and spike with the Cushman Turf Care System. You can increase capacities by adding a long box. Add a power take-off to spray, top dress, spread, and dump hydraulically.\*

You'll be able to change accessories in a matter of minutes because the new Cushman Turf-Truckster limits the need of tools for equipment changes. Pins hold most accessories in place. You'll be able to add new equipment when it becomes available without purchasing another expensive vehicle.

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