URFGRASS is a most difficult crop to grow and to maintain because the harvest season is not limited. Because grass goes through a continuous process of growing and harvesting, nutrients must be replaced. For turfgrass to stay healthy, it needs a steady source of nourishment to ensure uniform, slow growth as well as year-round attention to environmental and cultural factors.

The maintenance and feeding program initiated six years ago at Somerset CC has resulted in some of the finest turf being grown today. The uniform growth that has

A Formula for Uniform Growth

By HOWARD J. MILLER Greens Chairman, Somerset CC, Somerset, Pennsylvania

Somerset's turfgrass program is a result of the combined efforts of a university, the superintendent and the greens chairman. The course, once "90 per cent weeds" is now considered one of the best in the Tri-State area resulted could only have been achieved by the proper balance of new ureaform, water-soluble nitrogen and natural organics.

The satisfaction of the members at Somerset is reflected in their boast about being able "to hit from a good lie to a good lie" any season of the year. And the continued success of this turfgrass program is assured because of the enthusiastic support of veteran golf superintendent Wilbur Yoder, who has spent 41 years in the turf field.

Somerset is built in one of the highest areas, over 2,200 foot elevation, in the Allegheny Mountain range at Somerset, Pa. A private course, the natural rolls and dips have been increased by the settling of exhausted coal mines.

Starting at Somerset when he was 15 years old, superintendent Yoder has grown up with the golf course business. According to him, "Forty-one years ago Somerset was like a lot of golf clubs today, 90 per cent weeds and 10 per cent grass. My challenge has been to learn how to keep it 100 per cent turf."

Today, the greens and the tees are bentgrass and both receive the same intensive care. The fairways are well-groomed bluegrass and fescue.

In the early thirties, Yoder turned to nearby Pennsylvania State University and Dr. Fred Grau for help in understanding turf and in developing a sound maintenance program. At that time the roughs at Somerset were mowed twice a year and the work was given to a local farmer. The fairways contained stumps and rocks in addition to the weeds and grass and were mowed once a month by a team of horses.

Through the years Yoder has kept abreast of the developing turf technology through local turf conferences and the programs from GCSAA. He did it out of necessity,





Superintendent Yoder (center) shows Howard Miller (right), greens chairman and manager, Kapco, and George Osburn (left) sales manager, turf products, Hercules, Inc., how well the ninth green is holding even after three hard frosts.

because there is not much topsoil over these old coal mine areas. With this limited soil depth, he estimates that the turf on greens, fairways and tees never has more than a three-to-five-inch root system. Today's mowing heights are one inch for fairways, one-half inch for tees and three-sixteenth inch for greens.

The real breakaway from "feastand-famine" fertilization, "hitand-miss" maintenance and "leanand-fat" budget hassles came for Somerset about six years ago when Yoder and I convinced the board of governors to let us initiate a complete feeding program based on soil test results from Penn State. The results of the soil tests indicated a complete change in the approach to fertilizer management.

The maintenance and feeding program, as discussed here, starts

with soil tests every three years from the university. Lime is programmed to keep the pH between 6.5 and 7.0. If the pH is not correct, grass will not respond to the rest of the feeding and maintenance program.

The greens are averaging 25 pounds per thousand square feet of lime each spring and fall until soil tests show the pH level is correct. The tees may require as much as 50 pounds per thousand square feet of lime, spring and fall. The fairways received 3,000 or 4,000 pounds per acre in the fall of 1966. After soil tests are taken this summer, the lime requirements can be determined for the next three-year program.

The right kind of fertilizer is important. We use the proper blend of water-soluble nitrogen, natural organics and new ureaforms. This blend permits us to program the fertilizer for a minimum of applications. The slow steady feeding prevents lush growth that invites disease. The balanced diet for the nine greens specifies annually, 10.5 pounds of nitrogen, 3.0 pounds of phosphate and 4.2 pounds of potash per thousand square feet. The specially formulated product used is a 10-5-7 with 50 per cent of the nitrogen ureaform. This product supplies two units of water-soluble nitrogen, three units of natural organic nitrogen and five units of slow-release ureaform nitrogen, as do the special fertilizers for tees and fairways. The spring, early summer and fall applications are made with this specially formulated fertilizer.

Real proof of the soundness of this greens program is demonstrated during July and August when every two weeks powder ureaform 38-0-0 is spraved along with a fungicide at the rate of 1.5 pounds per thousand square feet. And on a daily average one to 11/2 baskets of clippings are removed from each green, indicating a uniform growth. The tees are high in potash so the special fertilizer formulation used here is 10-5-0 with 50 per cent of the nitrogen from ureaform. The spring and fall rates are 15 pounds per thousand square feet. Applications are made during the May-August period as needed at the rate of 10 pounds per thousand square feet. The turf on these bent tees heals fast and the golfer can concentrate on his stroke and direction instead of the frustration of trying to find a spot to place the

tee. The fairways at Somerset receive annually approximately five pounds of nitrogen and three pounds of phosphate per thousand square feet. A 10-10-10, 80 per cent organic, with 50 per cent from ureaform and 30 per cent from natural organics, is applied spring and fall at the rate of 15 pounds per thousand square feet (650 pounds per acre). One application of the 38-0-0 plant food is made in June *(Continued on page 68)* (Continued from page 39) create a monopoly in the retail sales of golf equipment.

"Golf City filed the suit" according to its attorney Henry Klein, "because the owner, James Orange, is being eliminated from competition. Golf City is in the business of exclusively dealing in golf equipment, but it is unable to compete with the pro shops."

The attorney said that the PGA was included in the suit as a defendant because the law provides "anyone who benefits is liable."

In his ruling, Judge Comiskey declared in a memorandum of reasons for denying the motions:

"The court is convinced that the object of the conspiracy and its accomplishment are sufficiently alleged in the complaint so as not to be subject to any infirmity. The question which then arises is whether the plaintiff has alleged sufficient facts, details, or circumstances constituting the conspiracy itself.

"The defendants argue that these allegations are nothing more than bare legal conclusions and do not meet the requirements of pleadings set forth" in cases cited.

"It may well be that this contention has merit, but the court is of the opinion that determination of this vital issue at this time would not be the best course to take in this proceeding."

The Federal judge asserted he understood Golf City intends to file an amended complaint and suggested "the plaintiff should allege his full case now so that the motions to dismiss can be considered once and for all rather than in several phases.

"Therefore, without, in any way intending to rule on the merits of the motions to dismiss, the court directs counsel for the plaintiff to proceed with his proposed amendment to the complaint after which these motions will be set down for re-argument in the light of the amended complaint and will be ruled upon at that time."

At press time, Golf City had not filed its amended complaint. However, once this is done, the defendants would again have the opportunity to file for dismissal.

AMERICAN WINES

(Continued from page 45) the wine average Frenchman drinks daily.

In the field of high-quality wines, or "premium wines," American wines compare favorably with nearly all the Clarets of the Bordeaux district, as well as with many of the better white Burgundies. American wines come less close to the great red Burgundies, the Sauternes (though not to the dryer Graves), and is far from equaling the superior whites of Germany; the Moselles, the Rheingaus or the wines of the Rheinpfalz.

There are few, if any, American wines comparable to the better vintages of the Loir—the Vouvrays, the Anjous, the Pouilly-Fumés—or the finer Alsatians or the greats of the Rhône Valley. It may be doubtful at this stage, whether or not the American public is ready for such an array of vinous complexities, even if they were available. But many Ameri-

FORMULA

(Continued from page 53) or July at the rate of five pounds per thousand square feet. The 26 acres of fairways can be easily fertilized in one eight-hour day.

With a feeding program that requires minimum applications using minimum man-hours, Yoder and his two-man crew can manage the mowing, the preventive and curative fungicidal program and the other cultural practices. Few applications of herbicides are necessary because the healthy dense turf restricts the development of noxious weeds. A periodic insect and grub control program is followed as required.

The annual rainfall in Somerset averages 35 to 45 inches. Thus, Somerset does not need a regular irrigation system. This makes a program of proper liming, feeding and mowing even more important, because the turfgrass must at all times be healthy enough to survive the drought period as well as can wines have no import equivalents what so ever.

Wine sales in America are big business, and a growing one, too, In 1969 alone Americans spent well over one billion dollars for American wines, representing an ever-increasing trend and substantial increase over 1968. The opportunity for increasing wine sales in on-premise establishments is almost unlimited, because people are now spending about eight times as much for wines to consume at home as they do for wines to consume in the restaurant. Thus, it's more than patriotism for the club manager to know about American wines-it just makes good sense.

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the other normal hazards. Among these normal hazards is a golfing membership of 250 that puts 100 golfers on the course each day during weekends and holidays. This adds up to a traffic of 200 18-hole golfers on each tee, green and fairway of this course. Yoder with his easy-going, pleasant smile comments, "Over the years I've learned that I can measure the satisfaction of my golfers by the quality of my turfgrass."

Today, highly respected by professionals as well as his own club members, Yoder's course at Somerset was considered in 1969 by professional Chuck Scally of Pittsburgh and winner of the 1969 Somerset Pro-Member Tournament, to be one of the best manicured in the Tri-State area.

Part of the credit for Somerset's outstanding course, however, should go to the cooperation between Yoder and Howard Miller which enabled the program to begin.