

the weeds that are there, the need for repair, renovation, resodding, sprigging, seeding and fertilizer requirements. Soil samples should be taken and sent to the laboratory. This is very important as a reference point in the future. Closely connected with this grass survey is the availability of nursery stock for repair and replacement. Opposite each item in the field notes should be entered the probable cost of the needed item. Included also would be the condition of the bunkers and other features of the course, the need for sand, repairs to the roads, tree care and replacement. Good pictures along the way can be a valuable asset in any discussion about "What was it like when I came here?"

Establishes Reference Point

This little discussion isn't intended to tell anyone how a survey should be conducted because each situation will be different. It has been presented to stimulate thinking in the direction of having a solid reference point in any future deliberations. When a budget is prepared the value of such an inventory will be demonstrated very clearly. There will arise the very important consideration of salary and, of course, raises. Good records are extremely important in the business side of the supt's profession. He will advance faster with good records than without them. The report which will be prepared from the field notes will become a permanent record in the files of the club and the supt.

So, when you are discussing the new position with the committee, make it clear that you consider it your first duty to make a complete and detailed survey and inventory of every facility for which you will be responsible. You should be able to sell the idea for certainly it is necessary for the intelligent preparation of a realistic budget. The survey will have many other practical uses, too.

* * *

Q. Several years ago we started a putting green nursery of Penncross creeping bent from seed, according to your specifications. We are very much pleased with the nursery and our supt. feels it is the best grass for putting greens that he has ever come in contact with. But we have a question. Why is it when we take plugs of Penncross out of the nursery and set them into putting greens they are so slow in spreading? Is it something that we have done or haven't done? (N. Y.)

A. We are glad that the Penncross creeping bent seed has developed such fine turf and that you are pleased with it. We aren't

sure that the best way to use this grass is to plug it into existing greens except where there has been an injury and you need to make immediate repair. The grasses that you have in your greens at the present time are going to be highly resistant to invasion by another type of grass, and it may take several years before the newly set plugs of Penncross will begin to do any perceptible spreading. A far better way to use this grass would be to completely resod the greens with the sod from the nursery and then establish new sod in the nursery for another resodding job when it becomes necessary.

Another way to increase present Penncross sod area is to take the plugs from aerating, or the clippings from vertical mowing, and scatter them on newly prepared seed beds and let new turf develop from these. In that way you will be promoting those strains in the Penncross that have already proved themselves successful under your conditions.

Q. In some of your publications you recommend that common Kentucky bluegrass be mowed 1-1/2 ins. or higher. Then you say that Merion bluegrass will do better if cut 3/4 to 1 in. At other places you recommend a mixture of common bluegrass and Merion bluegrass. We are puzzled as to how we should mow a mixture of this kind, whether at the height to favor the common bluegrass or the height to favor the Merion. (Penn.)

A. The answer here is: "Effect a reasonable compromise". The lower cut is designed for Merion bluegrass grown in pure stand adequately fertilized and managed according to the needs of Merion. The higher cut is designed to help common Kentucky bluegrass overcome some of its weaknesses. However, when the two are in combination a compromise in mowing heights is perfectly logical. Actually, the level of fertility is as important as the mowing height. If the level of fertility is kept high you will find that both grasses will do well at medium height.

Q. What is the most effective chemical that you know of that will help kill *Poa annua* in Seaside Bent Greens? (N.M.)

A. To date, the most effective chemical to help reduce *Poa annua* in Bent Greens is arsenic. Arsenic may be applied either as sodium arsenite or as lead arsenate. Lead arsenate is easier and safer to use. It consists primarily in applying 10 lbs. of arsenate of lead to 1,000 sq. ft. spring and fall during the cool season and continuing the applications until you get results.

Sodium arsenite is best applied as a spray using a liquid preparation. A safe way would be from one 1/2 to 3/4 ozs. per 1,000 sq. ft. used every 10 days to two weeks during a cool season when *Poa annua* is active. It also may be applied by using slightly higher rates, perhaps up to 1 oz. per 1,000 sq. ft. mixed with sand or dry topdressing as a carrier. Frequency of application is the same as for spray.

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interested, too, and soon dad is out hitting balls and shopping for equipment. Ledwon estimates that two-thirds of his students take up the game with real seriousness.

The hole-in-one event is staged in March under the sponsorship of the Phoenix Lions' clubs with proceeds going to the Lions' Sight Conservation fund. Last year a \$500 prize was offered for a hole-in-one along with numerous special prizes donated by merchants.

A 60 x 80 green was recently built at the range, using 36 yards of sand and topsoil. The grass cover is 2/3 Australian rye and 1/3 Seaside bent. Rings six- and ten-foot in diameter are drawn on the green to provide incentives for special prizes.

During the two years the contest has been conducted, \$8,000 has been turned over to the sight fund and the event is snowballing in interest. The Phoenix press gives the contest good publicity.

Ledwon and his assistant, Leon Pounders of Omaha, Neb., both PGA pros, have built up a busy teaching schedule and the range's overall business is on the increase.

Ledwon started the Camelback range in 1953 after four years as an assistant pro at Encanto GC, Phoenix's municipal course. He obtained a quonset-type steel building

for his golf shop and has been improving the grounds each year.

With his promotional flair, Ledwon hopes to continue building his range into one of the Southwest's finest.

Grau's Answer

(Continued from page 63)

Actually the introduction of a stronger bent grass can help materially in reducing Poa annua. Penncross creeping bent is a stronger grass than Seaside. As soon as you can obtain some, I'd suggest you begin to introduce it into one of your Seaside greens so that they can become stronger and more resistant to the invasion of Poa annua.

Q. What strain of bentgrass seed do you recommend to be used this spring in reseed-ing our greens and "froghair" to help combat Poa annua? (N.M.)

A. On the greens I recommend Penncross creeping bent seed, using 1 lb. per 1,000 sq. ft. following thorough multiple spiking in order to get the seed down into turf. Follow with a light topdressing and keep continually moist for 10 days to two weeks in order to get the grass established.

For the frog hair or collars, I suggest that you give one of the fine strains of bermudagrass a thorough trial. Ugandagrass is one that