

of it. "Who is this Johnny-come-lately? Why change or train the personnel? They stuck with us during the war — why change?"

Bat Manure Bonanza

Then there was the local man who discovered a bonanza of bat manure. The club wanted to buy it. I mixed it in surface and subsurface tests but no progressive results were noticeable in 15 days. I knew why but I didn't elaborate. This type of manure was pellet-like and had a shell-like substance similar to rice. Pulverizing would probably make its fertilizing value available. However, I checked out.

After that I gave up the golf course business but never got it out of my blood. Now I come to the reason for this gripe. If you were I, and wanted to go back to golf course work, what would you do? The greenkeeper may not hire you if you know too much. He won't hire you if you know too little. The green chairman knows what he wants but usually isn't qualified to pass judgment. The newspapers here never carry an ad for golf course personnel.

No Exams Given

The U.S. government has hundreds of golf courses but no examinations for greenkeepers. The city of (Name) doesn't either. That great metropolis took a tree climber and pruner and put him in charge of all the city courses. Very few people aside from myself know how many square feet of putting surface were ruined thru his ignorance of fertilization and even the setting of cutting machines, with one side scalping and the other side top clipping.

I am 47 years old and I am in the market for a job preferably in (State), salary no object. I will understudy a weak greenkeeping setup and, being rusty, would welcome a job of any kind on a course until the golf industry catches up with the rest of the business world in having a central hiring and firing system. My tone is naturally bitter and I feel I wasted time and study in a neglected profession. Although you may not agree with these facts I want you to feel free to use any material herein to possibly further the employment of golf course personnel who don't know where to look for work.

There is no publishable answer to the many questions in the foregoing letter. It describes all too clearly some of the difficulties encountered when a profession is in the process of finding itself and growing up after having emerged from

the "Dark Ages" era of "I've Got A Secret — find things out for yourself!"

For the real answer to this outpouring of misery just look at the status enjoyed today by the professional supt., the efforts of his association to place well-trained men in responsible positions and support of scholarships. Look too toward the universities that are training men in fundamentals, their talents to be sharpened by practical experience under competent supts. Consider also industry which has given generous support to the entire framework.

Poa Annua Control

Q. How much arsenate of lead should we use on our bent greens to help control poa annua? Why is it important to keep phosphorus levels low? (Virginia)

A. About 10 pounds of lead arsenate per 1,000 square feet a year is beneficial in reducing poa. Two applications of 5 lbs. per 1,000 square feet each is a very good plan (spring and fall.) Many who spray insoluble powdered nitrogen on their greens four times a year add 2½ lbs. per 1000 square feet each time to give a total of 10 lbs. for the year.

Phosphorus and arsenic act very much alike in chemical reactions. High levels of soil phosphorus counteract the effect of the lead arsenate. Phosphorus is a decided stimulant to poa and helps the poa to produce abundant seed crops. Research has proved that lead arsenate works best when phosphorus is low.

Wants To Extend Zoysia

Q. We plan to extend our zoysia nursery to all our fairways. At present we have large patches in the fairways and everyone admires it. Can you tell me what is the best fertilizing program for zoysia? (Indiana)

A. Your zoysia, to present top quality turf for play, should have five to six pounds N per 1,000 square feet for the season — equivalent to about 220 to 260 pounds N per acre.

Phosphorus and potash requirements are low, approximating two pounds per 1,000 square feet of each for the season, which can be supplied once a year with 400 pounds per acre (10 lbs./M²) of 0-20-20, applied spring or fall.

The best program is one which supplies nitrogen steadily throughout the season. With easily-nitrifiable materials you would make five or six applications through the season at one pound N per 1,000 square feet each time.

Aerifying Program

Q. I am new on a city course. We have thatch ¾ of an inch deep. We have an aerifier and a verti-cut. We aerified in April, will repeat in July, then triple aerify when play stops. Even after a heavy rain and a watering it is like walking on black top. We half filled the

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One sleeper in the shadehouse is a bluegrass known as A34. It requires a good deal less sunlight than Merion and only shows sign of fading or becoming dormant when it receives as little as 30 per cent of available sunlight.

Extensive observations of bents, fescues and bluegrasses are made in the Warren greenhouse. All are pure strains and great care is taken in keeping out foreign seeds or plants. The test for the vigor of these various species is made through observation of their leaves, color and density. Diseases are induced in some of the flats to find out more about resistance and control of the different types of turf, and some cross-breeding experiments are carried out.

POA Has Potential

Ben Warren and Tim Gaskin have studied poa annua long enough to feel that it has much potential. Like all bluegrasses, cross breeding is difficult but they are of the opinion that its longevity can be extended. They reason that this species doesn't actually die of old age, but year in and year out is the victim of disease. Thus, through selection and

proper management, its perennial characteristics may emerge.

In addition to the experimental activity that is carried on at the Palos Park nursery, the Warren company maintains bentgrass test plots at Huntley, Urbana, Springfield, Ill. and St. Louis, Mo. Selections under observation come from three Chicago area golf clubs — Bob O'Link, Northmoor and Twin Orchard.

Grau's Questions & Answers

(Continued from page 58)

aerifier holes with calcined clay. Next time I would like to use coarse sand. Just what is "coarse sand"? We have Pennlu greens. Should this grass be kept somewhat dry? We have much poa. Is there anything much we can do but try to get a good turf? I know we should mow 3/16 of an inch or less at least four times a week but we are not given enough help to do it. We are furnished some very good black dirt which comes from low ground and has just a few weed seeds in it. (Indiana)

A. Your aerifying program is sound. Filling holes with a 50-50 mixture of coarse sand and calcined clay has worked out well on many courses. Your dilemma is a common one. Your grass needs to be kept on the dry side which, of course, makes the greens feel harder. Grad-

ually the cultivation and 50-50 mixture will give the greens a softer feel, even when dry.

Coarse sand officially has these designations: Tyler scale (A.S.T.M. — 32 mesh); U.S. Number (N.B.S. — 35 mesh); Millimeters, sieve opening — 0.50; Inches, sieve opening — 0.0197.

Coarse sand should contain about 80 per cent of the particles of the above size class, some of the remainder may be larger, some smaller.

Poa will have to be battled for years to come. One good approach to the solution of the problem is to keep phosphorus low and continue to use lead arsenate. Your fertilization program is important. This should be outlined at an early date.

Use very little of the black dirt in your top-dressing, say about 10% by volume. No doubt it will test high in silt and clay, causing the greens to become hard.

Report on Experimental Green

According to Ray A. Keen, Kansas State U. Agronomist, the severe, dry, open winter of 1962-63 probably did a great deal of damage in the Central Plain States. On the University's experimental green, turf in sections with coarse sand mixes died. Turf in pure, fine sand suffered more than that where the sand was mixed with some soil and peat.

Fourth World Senior Tourneys to be Played in August

The fourth World Senior Golf championships will again be played at Broadmoor GC, Colorado Springs. They are scheduled for Aug 24-31.

Individual and team competitions are scheduled. It is expected that eight countries will send four-man teams to the Broadmoor event. India, New Zealand, Italy, Mexico, Venezuela, and Great Britain already have signified intent of sending teams and Japan and Australia or Peru are expected to.

Charles (Chick) Evans, former U. S. Amateur and Open champion, was instrumental in getting the World Senior started in 1960 as a contribution toward promoting world peace.

Countries that take part in the Team Challenge match compete for a \$10,000 perpetual trophy donated by Francis Brown.

The individual championship is limited to 176 participants.

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