

YOUR TURF PROBLEMS

... and their solution

QUESTION:

Present fertilizer practice on our greens consists of periodic topdressing, together with an occasional application of ammonium sulphate. Is this an adequate fertilizer program?

ANSWER:

As outlined, the program is not complete. It fails to provide phosphoric acid and possibly potash. Besides soluble nitrogen, some slowly available nitrogen is needed to insure more uniform growth. Need for lime is another possibility.

Because the drain on soil nutrients is greater, greens require more fertilizer than fairways. Continuous watering accentuates growth, and promotes leaching losses; furthermore, considerable plant food is carried away in clippings. Fairway growth is less abundant and as clippings decay, all their phosphoric acid and potash is restored and held by the soil in re-usable form. Hence, these elements are needed on greens, but are less important on fairways.

In deciding upon need for phosphoric acid and potash, character of topdressing is the deciding factor. All types are usually low in phosphoric acid, but they differ in respect to potash. When manure compost or mushroom soil is a component, they eliminate or reduce the necessity for potash.

All soils "fix" applied phosphoric acid and potash. Penetration beyond 1 to 2 inches seldom occurs before fixation takes place. Therefore, leaching losses are negligible, so one or two heavier applications are better than frequent light rates throughout the entire season. With the above proposal deeper penetration is more likely before fixation occurs.

Unless available soil phosphorus and potash are abnormally low, from 4 to 10 pounds 20% superphosphate, and from 3 to 4 pounds 50% muriate of potash per 1000 square feet (all subsequent rates on same basis), will suffice if applied once in early spring and again in late August or early September. Increase maximum suggested rate by 20-25% when rapid soil tests indicate low supply of either element.

Then fertilization becomes a matter of sup-

plying sufficient nitrogen. Major feeding should be in spring and fall. With the approach of summer, grass should show slight nitrogen hunger. From June to late August only enough nitrogen should be used to maintain color and growth. Leaves and stems should be sturdy at all times. This is even more important than brilliant green color.

Longer lasting organics (such as Milorganite) should be used to insure uniform, continuous growth, but some inorganic nitrogen is desirable also. The following scheme has been very successful on many courses. In early spring and again in early fall, Milorganite is applied at 15 to 30 pounds per 1000 square feet. When needed, half this rate is used in late May or early June. If topdressing contains manure, the lower rates are approached. In early spring from 2 to 3 pounds ammonium sulphate is sometimes used to initiate growth. In summer, feeding consists of ammonium sulphate at light rates only, from 1 to 3 pounds.

Soil may be acid, due to past use of ammonium sulphate, so greens should be tested for reaction. If strongly acid, make one application of ground limestone during late winter at 50 pounds per 1000 square feet, and half this quantity if only moderately acid.

To summarize: Apply needed lime during late winter. In early spring and again in fall make one application of superphosphate and muriate of potash, together with Milorganite, and repeat Milorganite in May or June at lower rate. During the summer use soluble nitrogen at light rates only. This program will give superior results to the one outlined in your question.

If you have a turf problem, we will be glad to aid you in its solution. Our Soil Testing Laboratory and Agronomists are at your service. Write:

Service Bureau

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