

difficult to overcome. When a green gets in this condition it should first be checked for acidity. The soil bacteria will more quickly break down this accumulated organic surface mat if the soil is close to neutral or on the alkaline side. The bacterial action which is necessary to break down the organic mat will also be greatly stimulated by aeration of the soil, so that spiking, or discing, can be of considerable value not only in letting oxygen into the soil but in allowing the lime to enter in case it is found necessary.

I KEEP POA ANNUA

Fertilizing Practice that Keeps Poa Annua Greens During Summer

By JOHN MacGREGOR
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POA ANNUA has caused greenkeepers more worry and sleepless nights than any other putting green grass because it dies out during the summer months—June, July, and August—the months in which there is the heaviest play. During the spring and autumn months, when play is light, *Poa Annua* greens usually are perfect.

What is the reason for this variability? Many have given their opinions on the subject, but none seems to be able to supply the remedy. *Poa Annua* is an annual as the name implies. It belongs to the bluegrass family, and bluegrass develops best in neutral or alkaline soil. It is very seldom one sees greens which are 100 per cent *Poa Annua*, as there usually is a fair percentage of either seeded or vegetative bent in those greens. Now I believe that the average greenkeeper does not cater to the wants of *Poa Annua*, but leans to the development of his bent, hoping that it will take possession of the green and in this way eradicate the *Poa Annua*.

I never have known this to happen, because *Poa Annua* is a prolific multiplier. It drops its seed at least three times a year, so no matter if the old plants die out, the seed will germinate and there will be more of the plants than there were before. Now why not cater to the needs of *Poa Annua* and develop a really excellent putting-green turf? It is agreed by all

good golf players that *Poa Annua* makes a perfect putting green.

The proper method to pursue in developing this turf is first to have the soil analyzed to determine the acidity, alkalinity, available nitrogen, phosphorus, and potash. I am willing to gamble that in soils which show an acidity value of pH 5 to 6.5, *Poa Annua* dies out during the summer months—I am now citing my own experience. My last experience with *Poa Annua* dying out was June, 1933. I had the soil in the greens analyzed and found the acidity to be pH 5.6, and also a great deficiency in phosphorus. During the hottest week of that year I applied 25 pounds of hydrated lime per 1,000 sq. ft. A week later I applied 15 pounds of 20 per cent superphosphate per 1,000 sq. ft. Of course I watered the separate applications thoroughly. By the middle of August the greens were in beautiful condition. By the end of September I found the roots of the *Poa Annua* had penetrated to a depth of two inches. The roots continued to develop during the growing season. Before going into the winter the roots had penetrated to a depth of two and one-half inches. During May, 1934 I applied a complete fertilizer at the rate of 15 pounds per 1,000 sq. ft. Although the spring season was extremely dry, I did not apply water to my greens until the first week in June. My reason for doing this was to encourage the roots to go deeper.

I applied light applications of ammonium sulphate only three times during the entire season. When I say light, I mean three pounds per 1,000 sq. ft. This is the first time in six years that my greens have come through without the *Poa Annua* dying out. I should like also to draw your attention to the fact that I have not top-dressed my greens at all this year. The turf has been so dense that I don't know how I could have worked any compost in to the grass.

The sooner this program is begun and carried through, the better. Do it now!

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