

soil in forms which the grass cannot utilize. Personally, I believe we overemphasize fixation so far as greens are concerned, especially when the greens contain a normal amount of organic matter. As the organic matter undergoes decay, it produces compounds which tend to activate and dissolve phosphorous even from difficultly soluble compounds such as iron and aluminum.

The Massachusetts Station demonstrated this fact very strikingly. They grew grass and other crops in jars with iron phosphate as the sole source of phosphorous. Where a little citric acid was added in the water, the plants made a normal growth. Where it was not used, the plants could not utilize the phosphorous from the iron phosphate. It is my conviction that some of the iron chlorosis, which is becoming more and more common, is being aggravated by the excessive use of phosphorous.

Reserve Phosphate in Greens

Authorities in the fertilizer industry believe superphosphate may become a critical material before the present emergency is over. Not because of a phosphate shortage, but due to the fact that sulfur is in short supply. Many greens contain enough reserve phosphate so grass will not suffer for several years. A couple of greens at Brynwood have not received phosphate for two years without any visible difference in the behavior of the grass. This is not an attempt to stop

the use of phosphate. It is intended to emphasize the importance of an intelligent program. See that the grass gets what it needs with respect to phosphate and then stop worrying.

The basis of any fertilizer program is first to provide enough phosphate and potash, and then the problem is simply one of nitrogen.

We scare you by emphasizing that clover is increased by phosphate and potash. By way of emphasis, you are told that the pasture man who prizes clover uses plenty of lime, plenty of phosphate, and plenty of potash. That is true, but he does not apply nitrogen extensively because the legumes can use nitrogen from the air. They are independent of the soil supply. Give them the right kind of conditions to grow, namely, plenty of lime, plenty of phosphorous, plenty of potash and they will produce plenty of good protein feed. Grass must have phosphoric acid and potash, and lime is beneficial on acid soil. One need not worry too much even though phosphate and potash rates border on the luxury level, provided the nitrogen level is kept where it should be. In areas like Milwaukee with good conditions for growth during the summer, where more of the grasses are of the aggressive growing type of bent, such as Washington, Toronto, and so forth, it is not uncommon to use from 1½ to 1½ pounds, and sometimes even more of actual nitrogen per 1,000 square

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USGA COMPETITIONS FOR 1952

Curtis Cup Match — to be played in British Isles; place and dates not fixed.

Women's Amateur teams, British Isles vs. United States

(Dates entries close mean last dates for applications to reach USGA office, except in the case of the Amateur Public Links Championship. For possible exceptions in dates of Sectional Qualifying Rounds, see entry forms.)

Championship	Entries Close	Sectional Qualifying Rounds	Championship Dates	Venue
Open	May 19	June 2	June 12-13-14	Northwood Club, Dallas, Texas
Amateur Public Links	(X) May 29	(XX) June 15-21	Team: July 5 Indiv.: July 7-12	(not determined)
Junior Amateur	June 30	July 15	July 23-26	Yale G. C. New Haven, Conn.
Amateur	July 21	Aug. 5	Aug. 18-23	Seattle G. C. Seattle, Wash.
Girls' Junior	Aug. 4	None	Aug. 18-22	Monterey Peninsula C.C. Pebble Beach, Cal.
Women's Amateur	Aug. 7	None	Aug. 25-30	Waverly C.C. Portland, Ore.

(X) Entries close with Sectional Qualifying Chairmen.

(XX) Exact date in each section to be fixed by Sectional Chairmen.