

HUNGER SIGNS

The National Fertilizer Association, 616 Investment Building, 15th and K Streets, N.W., Washington, D. C., is revising the book, "Hunger Signs in Crops." It will be available at a later date.

A great deal of work has been reported (on the various food crops) supported by excellent color illustrations, but virtually no information is given on how to recognize hunger signs in the grasses. Recommendations for the nutrition of grasses largely are based on empirical data, observations and experience. Surely the grass family (of which corn and the cereals are members) must exhibit characteristic symptoms of malnutrition with respect to N, P, K, Ca, Mg and other nutritive elements if we but knew where and how to look for them.

A grass symptom of N starvation is a yellowing of the blades. In some species, this occurs after the starvation has become so acute that weeds already have gained a foothold. Phosphorus deficiency produces a purpling in corn leaves, but who has seen this in the minute blades of bentgrass?

Potash requirements in turf grasses are being studied at Pennsylvania State College and Purdue University; they offer some real hope in the future. Purdue Uni-

versity has reported excellent work on two bentgrasses (Notes: The Journal of the American Society of Agronomy, Volume 40, No. 3, March, 1948), with respect to Ca and P, but it is only a start.

Tissue testing is being explored with some promising indications, but it still is a laboratory procedure and has not gained a firm foothold among turf superintendents.

The Green Section supports the trend whereby the research workers in grasses pool their efforts from the forage and the turf standpoints. It has been our contention that the forage grasses, when mowed closely and frequently as turf is managed, exhibit their weaknesses more quickly and more prominently. In a study of the nutritional requirements of any single grass, it would appear that the growth requirements of that grass would be a constant factor, regardless of the use to which the grass would be subjected.

Balanced nutrition is the goal in the production of grass for whatever purpose it is used so that the full capabilities of the plant can be utilized to the maximum. Management of the grass always will be a particular problem of the purpose for which the grass is used.

WHAT PRICE RYEGRASS?

A recent visitor to the Green Section office was Dr. Davies, Director of Agriculture, Canberra, Australia. A great deal of ryegrass has been imported from "Down Under" for use in the United States. Apropos of recent work reported in The Journal of the American Society of Agronomy (TIMELY TURF TOPICS, November, 1947, p. 2), the question of the use of ryegrass in permanent seed mixtures was raised. Dr. Davies stated that ryegrass has been eliminated from all mixtures of perennial species for turf in Australia.

Similar action is being contemplated by the Turf Committee of the American Society of Agronomy. The Green Section will welcome your experiences and your statements regarding the use of ryegrass (Italian, common or perennial) in mixtures

with bluegrass, bents, fescues, Bermuda and other permanent species.

At the Beltsville Turf Gardens, the most troublesome weed is ryegrass, which volunteers in all plantings. The field where the turf plots are located once was seeded to ryegrass as a cover crop, and seed was allowed to mature.

Agronomists in Oregon and Washington, where ryegrass seed is grown, deprecate the use of ryegrass where turf is the objective. By no stretch of the imagination can ryegrass be considered a turf grass. It is a special-purpose grass and as such has a special place for winter turf, particularly in the South where the summer heat and the competition of southern grasses eliminate it completely after it has served its purpose. In mixtures with cool-