The Influence of Domestic Ryegrass and Redtop Upon the Growth of Kentucky Bluegrass and Chewing's Fescue in Lawn and Turf Mixtures

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The inclusion of large percentages of so-called "nurse grasses" in lawn seed mixtures is a common practice. Grasses such as domestic ryegrass and redtop have an advantage over the desired turf grasses in that they are quicker starting; thus producing green cover sooner, reducing the time that the soil is left bare, and cutting down on possible erosion. However, these "nurse grasses" inhibit the growth of the desired grasses and once past the seedling stage have the disadvantage of being coarse and rough; they do not produce the fine, even turf which is desired.

In an ideal mixture, the "nurse grass" should get an early start, not be unduly competitive, and should disappear entirely after one season's time, allowing the desired grass to dominate at an early stage. In practice, however, the "nurse grass" dominates for the first season and very often persists for several seasons. Thus, several years are necessary to establish a turf which is free of coarse grasses. It is therefore frequently advisable to use a pure species or a mixture of desired grasses and to omit the faster growing, coarse nurse grasses from the mixture. If a "nurse grass" is to be used, the percentage in the seed mixture should be at a minimum which will produce an initial cover but yet not unduly retard the growth of the desired grass or grasses.

In order to secure more specific information on the competitive effects of the "nurse" grasses, an experiment was set up in a greenhouse, maintained at approximately 70°F, at Michigan State college in the winter of 1946 which was designed to study the effect of two common nurse grasses on the establishment and growth of two common turf grasses. The rate of seeding alone and in mixture and any inhibiting effect which one grass had upon another were studied and observed.

REVIEW OF LITERATURE

The initial rapidity of seedling development of Italian ryegrass was observed by Davies and Thomas (4) when working with pure species seedings of grasses. Findlay (5) reported that meadow fescue would not compete against ryegrass the first year, and that the quantity of orchard grass and timothy in both hay and pasture was increased by reducing the quantity of perennial ryegrass. Bell and Tedrow (2), in their studies of turf under airport conditions, found that creeping red fescue did not compete with perennial ryegrass even where well

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3Figures in parenthesis refer to "Literature Cited", p. 689.