

These drawings illustrate in detail the flowers and fruits as well as roots, stems, and leaves of the weeds. A list of lawn weeds of secondary importance is also included. It comprises 10 annuals and 8 biennials or perennials.

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#### WATER REQUIREMENT OF KENTUCKY BLUEGRASS

All plants require water for growth but they vary in the quantity of water used to produce a pound of dry matter. This quantity is spoken of as the water requirement of plants. The water requirement of a plant may vary with conditions and with the treatment to which it is subjected while growing.

V. G. Sprague and L. F. Graber in Wisconsin studied the variation in the water requirement of Kentucky bluegrass under several different cultural conditions throughout the season, and a report of their work appeared in the *Journal of the American Society of Agronomy*.

The plants were grown in a greenhouse in the fall in such a way that the water used in growth could be measured. On April 9 all plants were cut to one-half inch. Half of the plants were given nitrogen whereas the others were not. One-half of both the fertilized and the unfertilized plants were cut to one-half

inch each week whereas the remainder were permitted to grow undisturbed until June 13, at which time all of the plants were given a final cut to one-half inch. The material produced was weighed and by comparing the production of dry matter with the quantity of water used the water requirement was determined.

The water requirement (the ratio between the water used and the dry matter produced) was with one exception higher for the plants which were cut each week to one-half inch than for those plants which were permitted to grow at hay height. In all cases the water requirement during the period following June 14 was materially greater than during the spring, being two to three times as great in the cut plants, but only one to one and a half times as great in the plants allowed to grow at hay height. This residual effect of the cutting prior to June 14 is striking. The water requirement during the summer period was decidedly higher for the cut than for the tall plants—2.75 times as high in the fertilized plants, but only 1.15 times as high in the unfertilized plants.

In all cases except one, the water requirements of the plants which had received the nitrogen were less than the unfertilized plants. This was

particularly true of the plants grown at hay height.

These observations are interesting, but it must be remembered when interpreting them that the investigators were comparing grass grown as hay with that cut once a week to one-half inch during the early part of the season. It would be interesting to learn if there is any difference noticeable in the water requirements of bluegrass cut at 2 inches as compared with  $\frac{3}{4}$  inch.

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#### FUNGUS CAUSING SNOWMOLD

At Pennsylvania State College last year an attack of snowmold was observed on Colonial bent which has been considered resistant to the snowmold caused by *Fusarium nivale*. The affected grass, therefore, was studied critically by C. C. Wernham, who found the causal fungus to be *Typhula itoana*, which had been described earlier by Miss Remsberg in Minnesota as causing snowmold "on turf and lawn grasses in the eastern United States." He reported his observations in a recent issue of *Phytopathology*. The same treatments apparently are effective in the control of the two organisms. Wernham refers to the disease symptoms caused by *Typhula* as "Eastern Snowmold" to distinguish it from the snowmold caused by *Fusarium*

*nivale*. He does not present any evidence, however, which would seem to justify his broad conclusion that "the work of Remsberg and the writer indicate that snowmold in the eastern part of the United States is caused by *Typhula itoana* rather than *Fusarium nivale*."

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#### HOW DEEP SHOULD GRASS SEED BE PLANTED?

This subject has been studied in the past and in 1939 R. P. Murphy and A. C. Arny in Minnesota have published a report of their researches in the *Journal of the American Society of Agronomy*. They planted seed in five soil types, varying in texture from a loamy fine sand to a silty clay loam. Several species of legume and grass seed were sown in each soil type, one set in a greenhouse and one in the open. Among these species was Kentucky bluegrass, which was sown on the surface and at depths of  $\frac{1}{2}$ , 1, 2, and 3 inches. In every case but one more plants of this species were established, both in greenhouse and in field plantings, when seed was sown on the surface than when placed at a depth of  $\frac{1}{2}$  inch, though on the average there was little difference in the result from these two planting depths when seed was planted in the field. At 1 inch few plants were established