Turf Experiments at the Massachusetts Agricultural College

By Lawrence S. Dickinson

Six definite and separate lawn and golf turf projects, together with a number of minor projects, are being conducted at the present time by the Massachusetts Agricultural College, at Amherst. For many years the station has conducted hay and pasture experiments which have furnished much information valuable on the growing of the finer turf grasses, but it was not until 1923 that the present projects were started. Perhaps it would be more correct to call this work "demonstrations" rather than "experimental projects," as it is being conducted under actual growing conditions and not under completely controlled environment. The information being furnished by the projects is easily understood by the layman; and because of the "practical atmosphere" confidence is placed in the results.

Project 1 consists of 24 plots one rod square laid out on one of the campus lawns in 1923. The object was to demonstrate the changes of vegetation as brought about by the continued use of various fertilizers and fertilizer combinations. Each plot is top-dressed twice annually (mid-April and mid-June) with its designated fertilizer. These plots are maintained as an ordinary lawn as to cutting and other general care. Very noticeable changes in vegetation have taken place during the five years, and surprising results as to the acid toleration of certain grasses and clover have been noted.

Project 2, started in 1926, is a combination of grass and fertilizer experiments. Twenty plots of different grasses are crossed with 6 fertilizer strips. Fertilizer series 1 received its nitrogen from sulphate of ammonia. Series 2 has an equal amount of sulphate of ammonia, as 1, but in addition acid phosphate. Series 3 is the same as 2, with muriate of potash added. Series 4 differs from series 1 in that the source of nitrogen is nitrate of soda and cottonseed meal instead of sulphate of ammonia. Series 5 and 6 are as series 4, with the addition of acid phosphate and muriate of potash respectively. Thus we have acid and alkaline reacting nitrogen, nitrogen plus acid phosphate, and nitrogen plus acid phosphate and muriate of potash, acting on 20 different grasses. These plots are developing a very mottled appearance, and much information as to the particular food requirements of the various grasses is being obtained.

Project 3 consists of 18 plots started in 1927, and 18 more in 1928. With the aid of recording instruments data are being obtained as to the possibility of accurately forecasting an attack of brown-patch, the susceptibility of various grasses to the disease, and the effect of the various controlling methods on the grasses.

Project 4 consists of 9 plots devoted to shade-enduring grasses and mixtures. These plots are growing under typical shade conditions and will be fertilized alike with a complete fertilizer.

Project 5 is a large turf nursery in which new strains are developed and propagated and seed tested under growing conditions.

Project 6 comprises 59 plots planted in 1928 in cooperation with the United States Golf Association Green Section. This series of plots is one of the number of such areas planted throughout the United States. That it will give valuable results is needless to say, and that the data assembled from all such plots will be very comprehensive is most certain.

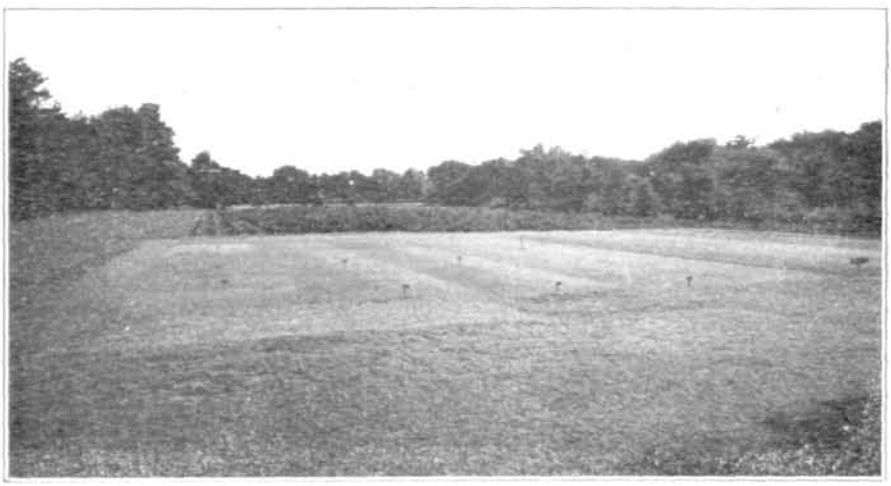
The area devoted to turf garden is about 1¼ acres. The soil for project 1 is gravelly loam over gravel; projects 2 and 3, light clay loam over hardpan; project 5, deep, light, sandy loam over yellow sand; project 6, clay loam over clay and hardpan.

These plots are valuable adjuncts to the teaching of turf culture and are visited by many persons during the summer months.

Experiments with Turf Grasses in Kansas

By J. W. Zahnley

In the summer of 1924, the United States Golf Association Green Section, through its chairman, Dr. Charles V. Piper, prepared plans for a series of experiments with turf grasses in cooperation with the department of agronomy of the Kansas Agricultural Experiment Station. The first plantings were made in the fall of that year. Since this beginning, the work has expanded and, under the direction of Dr. R. A. Oakley and Mr. H. L. Westover, has become an interesting and valuable experimental project. These experiments are financed cooperatively by the United States Golf Association Green Section and the State of Kansas. The Green Section contributes $250 annually toward the support of the work. The State sets aside $150 and in addition furnishes land, water for irrigation, horse labor, and compost material, and designates a member of the experiment station staff to direct the work. Hand labor, special equipment, and supplies are paid for from this $400.



Turf garden at the Kansas Agricultural Experiment Station

The Kansas turf garden is located on the campus of the Kansas State Agricultural College, at Manhattan. The soil is a loam of the Wabash series, second bottom, nearly level, very fertile, and with fair drainage. The area is nearly surrounded by timber and subject to heavy dews which frequently remain on the grass until nearly noon except in very dry weather. Perhaps it is due to this location that considerable trouble is experienced every year with brown-patch disease.