Pasture Demonstration Studies

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Through the cooperation of Mr. F. A. Fisher, Illinois State Director of the Soil Erosion Service of the United States Department of the Interior, whose office is in Urbana, Illinois, the Division of Agricultural Education of Illinois State Normal University was able to conduct a series of demonstration plots involving seventeen different grasses and legumes on the University Farm in 1935 and 1936. The Soil Erosion Service furnished the seed which was planted April 16, 1935 immediately north of the farm entrance gate along Route 51 in plots 100 feet long by 20 feet wide. You may recall that we experienced drouthy conditions in the spring of 1935 although not as severe as those in the spring of 1936. Consequently these seeds grew slowly and the stand seemed quite uneven. The weeds made a much better showing than the pasture seeds did. The prospects of a good showing on the plots were discouraging. However, the seedings were allowed to continue with little attention being given them except that the tallest growth, mainly weeds, was clipped once during the summer of 1935 with the mowing machine, the sickle bar being elevated as high as possible during the operation.

While inspecting these plots early in the spring of 1936 it was again decided that for the most part there was no advantage to be gained in allowing these plots to stand and then in addition to that viewpoint a small tract of land was needed in a convenient location for the vegetable crops class. The first ten plots on the south end of the series were plowed under and fenced in for a garden. All of the legumes and timothy and redtop were in this group of ten plots. The seven remaining plots are grasses, six of them being somewhat unusual. These grasses stand from south to north immediately north of the vegetable garden as follows:

Kentucky Blue Grass
Fowled Meadow Grass
Harding Grass
Reed Canary Grass
Red Fescue
Brome Grass
Orchard Grass

The season of 1936 furnished us with about the most extreme conditions of drouth and heat that central Illinois has ever known. These conditions certainly furnished an acid test for any and all pasture crops and mixtures. In addition to the extreme weather conditions just mentioned there were eighty pigs and their mothers which were allowed to forage or pasture over these plots at will beginning early in the spring and continuing until late summer. Adjacent to these plots on the north and west was what I called a practically perfect stand of red clover with a little sweet clover mixed in. I do not need to remind you that most excellent stands of red clover were quite common during the spring and early summer of 1936. These pigs had the privilege of foraging over all of that fine clover in addition to these several kinds of somewhat unusual grasses.

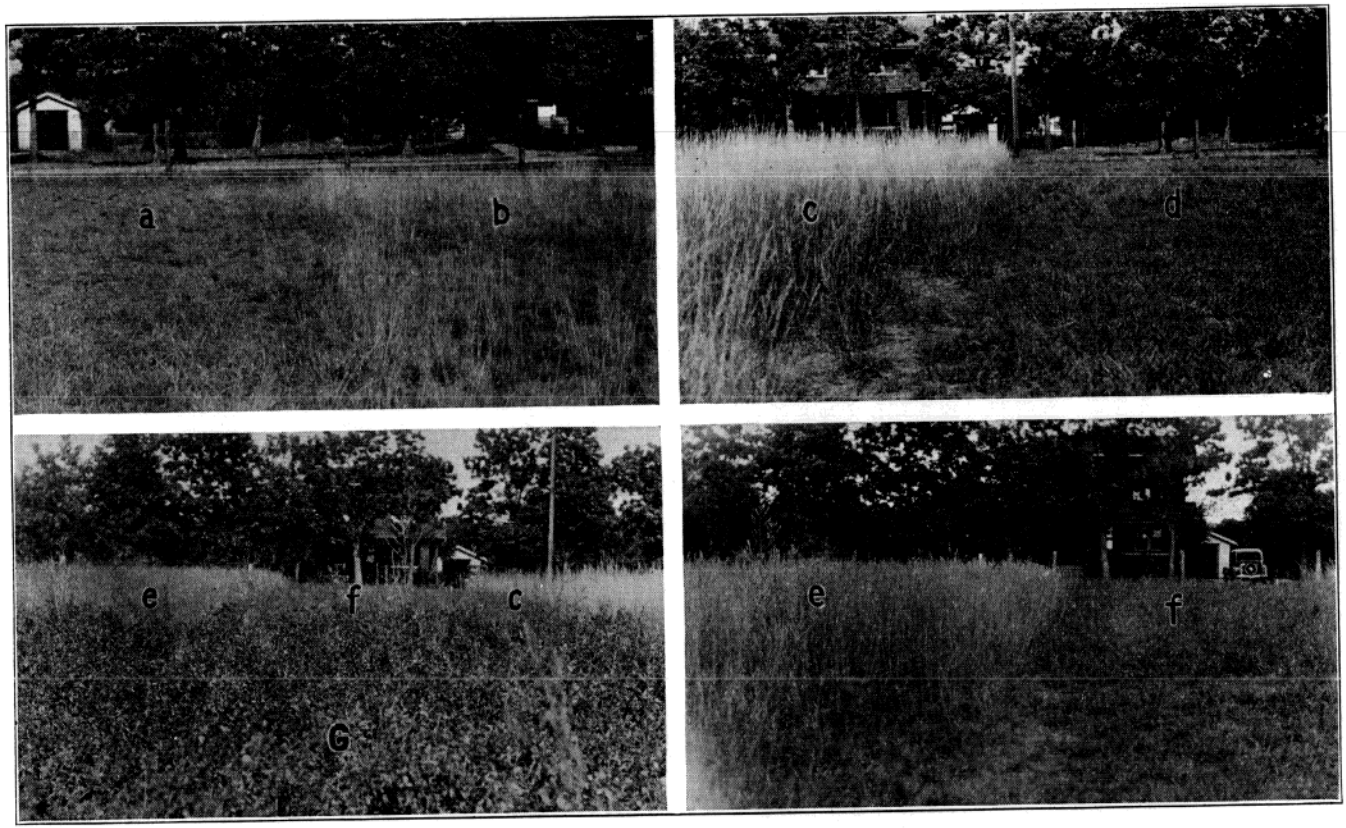

PLATE I.—GRASS DEMONSTRATION PLOTS.

a. Harding Grass; b. Fowled Meadow Grass; c. Red Fescue; d. Reed Canary Grass; e. Orchard Grass; f. Brome Grass; g. Red Clover.

Two of these grasses, namely Brome grass and Reed Canary grass, came through these tests with flying colors. While all the other grasses were quite brown and dry and appeared practically dead, Brome and Reed Canary grasses were strikingly green and they were eaten low to the ground showing that the pigs preferred them to the others. It seemed to me that this demonstration was an excellent one showing the relative palatability of these grasses. One of the plots—that having had Harding grass sown on it—shows that it must have been quite palatable but unable to stand close pasturing or drouth or both in combination since this plot was quite barren of any vegetation. The remaining grasses show a relatively small amount of pasturing having been done on them, which evidently means that the pigs preferred something else.

Brome grass and Reed Canary grass are characterized by having vigorous underground stem-like roots which no doubt in part explained the striking green color. The Reed Canary grass had a very close, thick mat-like covering over the ground.

I am informed that a number of experiences with these two grasses similar to those which I have mentioned have been reported in recent months, including those from the University of Illinois.

I should like to know how these two grasses along with perhaps a legume or two perform together in a pasture mixture. In fact we have sown a few pasture mixtures including these two grasses in order to observe their performances in certain pasture mixtures.

In summarizing the observations made on these plots during the season of 1936 I wish to repeat that without question these plots have been subjected to an unusual set of tests all in one season which ordinarily would have taken several years to have experienced.