PASTURE STUDIES OF BROME GRASS,
BROMUS INERMIS LEYSS

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TWENTY-FIVE years ago Mosher (1) stated that "smooth brome grass makes a rank growth, and is gradually spreading over the whole United States. It was introduced as a forage grass, but lately has been considered of little value." Today agronomists are attempting to find the best methods of establishing and maintaining stands of smooth brome grass, Bromus inermis Leyss. It is the opinion of many investigators that brome grass ranks among the more important of the forage grasses in the midwestern states and will assume greater importance with increased knowledge of soil requirements, methods of seeding, and management.

In Illinois the acreage of brome grass seeded for pasture and hay is increasing; however, the total acreage is not large, presumably because of the slow establishment, difficulty of seeding, and attempts to grow the crop on soils of relatively low fertility. With an increased knowledge of the qualities of brome grass and a greater number of adapted strains of seed, the ultimate acreage can be expected to reach large proportions.

The Agronomy and Animal Husbandry Departments of the Illinois Agricultural Experiment Station are cooperating in a series of pasture investigations, including studies of smooth brome grass. This paper presents the results of experimental studies conducted during the years 1935 to 1940, inclusive.

TREATMENTS AND METHODS

The 5-acre field used in this investigation was previously used in a typical corn belt rotation of corn, corn, small grain, and sweet clover. It has a high level of productivity and has the added advantage of receiving some fertilizer elements through the medium of any excess surface water draining from experimental hog lots located at a slightly higher elevation. The slope of the field is gentle, approximating 2%, with a small ditch draining the field from north to southwest.

Following seedbed preparation, the field was seeded on April 20, 1933, with a mixture of Kentucky bluegrass 10 pounds, brome grass 15 pounds, redtop 7.5 pounds, and white clover 5 pounds per acre. Establishment of all species was good, but during the hot, dry summer of 1934 the white clover was destroyed and the grass species alone survived.

Forage yields and consumption by livestock were obtained during each grazing season, except 1934 when only yield data were obtained. The methods of sampling have been described in previous papers (2, 3). Yields and consumption data presented in this paper are the averages of the "A" or "difference" method and the

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3 Figures in parenthesis refer to "Literature Cited", p. 892.