3. PRACTICES AND CONDITIONS DETERMINING THE MOST PRODUCTIVE PERMANENT PASTURES IN NEW JERSEY

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According to the 1925 census, pasture land of all classes occupied an area equivalent to 30% of all crop land in New Jersey. In spite of this fact, the importance of pastures has been regularly overlooked. Very little information has been available regarding the practices and conditions associated with the production of large yields of feed per acre. Pasture experiments are notoriously expensive and this accounts for a part of the lack of experimental data. Because of the expense involved, care must be exercised to apply the funds available in such a manner that a maximum of results may be obtained.

Accordingly, the first step in pasture improvement in New Jersey has taken the form of a survey of conditions in representative areas of the state to determine the conditions and practices as they now exist and the phases of the problem which are of greatest importance. The survey was begun in the spring of 1926 and pastures were visited during April, May, and June. The field work was continued in the spring of 1927, and completed early in July of that year. A detailed report of the work has been published as circular 141 of the New Jersey State Dept. of Agriculture. H. W. Reuszer of the New Jersey Agricultural Experiment Station collected all of the records reported from this survey.

The information obtained was of two general types, viz., (1) that obtained from the pasture directly, such as the area of the pasture, its topography, drainage, soil type, and the relative abundance of the various classes of vegetation occupying the soil; and (2) that obtained from the operator of the pasture, such as the details of management, including the number of stock grazed, the amount of additional feed supplied, and the milk produced by cows on pasture. Information of the latter type was obtained for the preceding year, but since the average condition of pastures was identical for the two years for which data were collected, they may be compared directly.

A total of 264 pastures was included in the survey, covering 4,710 acres. The pastures were located on 37 different soil types in the following five soil provinces: Glacial, Glacial Lake and River Terrace, Piedmont, Coastal Plain, and River Flood Plains. The pasture records were thrown into various groups for study, making the groups as large as possible so that the plus and minus errors would largely offset one another. The pastures chosen for the survey were those permanently in grass and grazed primarily by dairy cows. Many of the pastures were reported as having been in grass for many years, but those for which estimates were available had an average age of 13 years.

The vegetation occupying these pastures varied with the region, but in the northern half of the state over 15% of the total area of

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