THE EFFECT OF DEW ON THE CURING OF HAY

H. B. HARTWIG

In times when it is difficult or impossible for the farmer to hire seasonal labor, it seems advisable to question the profitability of those practices involved in the harvesting of hay which seem to be merely traditional.

Several years ago, at the writer's request, many of the county agents of New York State designated the best hay-maker in their respective counties. To these "hay-minded" farmers a questionnaire was sent. One of the questions asked concerned the advisability of cutting hay while wet with dew. Thirty-four questionnaires were returned. Twenty-four of the 34 best hay-makers always waited until the dew was off before cutting.

In 1940, the writer solicited, by correspondence, the opinions of 12 agronomists in 12 northeastern states concerning the importance of dew in hay making. Seven of the 12 were of the opinion that hay should not be cut until the dew had dried; a belief also held by the writer. Two were of the opinion that various circumstances should affect the decision as to whether hay should be cut with the dew on or with the dew off. Three seemed to believe that the dew made relatively little difference or that other considerations, mainly labor, were more important. Since the literature contains only opinions unsupported by experimental data, an investigation was undertaken to determine the facts.

PROCEDURE

The work extended over a period of two years and dealt with the following: First cutting alfalfa (Medicago sativa) yielding over 2 tons in 1940 and 1 1/2 tons in 1941; second cutting alfalfa yielding a little less than 1 ton each year; timothy (Phleum pratense) stands yielding 1 ton and 1 1/2 tons in 1940 and 3/4 ton in 1941; and a mixture of orchard grass (Dactylis glomerata) and bluegrass (Poa compressa and P. pratensis) yielding about 1 ton each year. No study was made which included red clover (Trifolium pratense) or soybeans (Soja max).

The usual procedure was to cut one swath at about 8 a.m. on mornings when there was a heavy dew, then a parallel swath was cut after the dew had dried. The later time was most frequently between 11 and 12 o'clock, although on some occasions it was as early as 10 a.m. or as late as 1 p.m.

The hay remained in the swath until approximately 5 p.m. on the day of cutting, at which time samples ranging from 3 to 5 pounds were taken. It was necessary in 1940, because of weather conditions, to leave five pairs of first cutting alfalfa swaths and an equal number of the second cutting in the field an extra 24 hours or more before sampling. In most instances, both the "dew on" and "dew off" swaths were sampled in quadruplicate, although all of the 1940 first cuttings were taken only in duplicate. Each sample included at least three complete vertical sections for the entire width of the swath, taken in three different places.

1 Contribution from the Department of Agronomy, Cornell University, Ithaca, N. Y. Received for publication February 2, 1942.
2 Professor of Field Crops. The writer acknowledges his indebtedness to Dr. Richard Bradfield, Dr. H. O. Buckman, and D. L. Van Horn for helpful suggestions and for critically examining the manuscript.