BRIEFER ARTICLES.

BASING ALFALFA YIELDS ON GREEN WEIGHTS.

In field experiments with alfalfa it is customary to determine and report the yields as "cured hay." The term "cured hay" is indefinite. It is customary in many sections to weigh the hay when the plant stems are sufficiently dry to break readily and without exuding water. Usually when the hay reaches this degree of dryness it is considered "cured hay." Alfalfa is cured in cocks, and great variation in the degree of dryness reached at a given time results from the different sizes of cocks, from variations in the moisture content of the surface soil beneath the cocks and from various other causes. In addition to these causes of variation, the personal equation is important, since the estimate of whether or not the hay is "cured" rests almost entirely on the personal judgment of the field man.

A further disadvantage of using "cured hay" weights is that the alfalfa is subjected, while curing, to serious damage from various causes. Such agencies as wind, rain, stray live stock, etc., frequently destroy the results of experiments or seriously impair their value. Any reliable method which would reduce the danger of damage from these causes is worth consideration.

It seems clear that the use of green weight determinations as a basis for determining yield differences might be preferable to "cured hay" determinations, if it is found that the green weight of alfalfa is reasonably constant under different conditions. Some determinations made on irrigated alfalfa at the Bureau of Plant Industry field stations at Huntley, Montana, and Fallon, Nevada, in 1913, will throw some light on the question of the reliability of the method of using green weights, and perhaps suggest further investigation.

Determinations at Huntley.¹

At Huntley, 28 ten-pound samples of green alfalfa were taken on 12 different dates from June 14 to September 12. Six of these samples were taken from the first crop on three different dates; 11 were taken from the second crop on four different dates, and 11 were taken from the third crop on five different dates. Most of the samples in each crop were taken at intervals of five days. The samples were placed in burlap bags and weighed as soon as cut, and

¹ These determinations were made by Mr. Dan Hansen, superintendent of the Huntley Experiment Farm.