

COMPOSITION OF FODDERS.

To a right appreciation of the results hereafter to be discussed a knowledge of the composition of fodder plants in general is necessary. On pages 116 and 117 of the Annual Report of the Experimental Farms for 1890 I have made some remarks on the origin, relative value and functions of the various constituents which make up the composition of fodders. To these pages the reader is therefore referred for such explanations regarding the terms albuminoids, fat, fibre, carbohydrates, &c., as he may require in order to understand the conclusions here stated.

INDIAN CORN AND ENSILAGE.

In the table that follows will be found in the several columns the data obtained on examination of the samples of Indian corn and ensilage. The two samples of corn ensilage were taken from the silos of the Central Experimental Farm on the dates recorded. Both were in an excellent state of preservation, and mildly acid. The silos were filled indiscriminately with the corn of many varieties grown on the farm, including those analysed.

An inspection of the figures and averages in the following table reveals the following facts:—

1. That there is a general similarity in the composition of the dry matter of all the corns examined, so that between those cut on the same date no great difference, except in one or two isolated cases, are to be noticed.

2. That the percentage of water in the corn fodder cut 26th August, was considerably greater than that in the samples taken 19th September. This means that the percentage of "dry matter" in the corn of the latter date exceeded that in the corn of 26th August. Thus one ton (2,000 lbs.) of the corn of the later period contains on an average 455 lbs. of dry matter, while the same quantity of that of earlier growth (August 26th) contains but 384·8 lbs.

3. That the percentage of ash in the dry matter decreased materially as the plant matured.

4. That the percentage of albuminoids had decreased slightly in the dry matter during the period of growth between 26th August and 19th September.

5. That the percentages of fat, fibre and carbohydrates had increased during the same period—the two former, however, not to any marked extent.