

On the contrary, farmers and dairymen should always aim at securing a fair quantity of protein in any food which is meant to supplement a ration of corn fodder, hay, ensilage, or other home grown feeds. Pea bran, however, is not entirely useless, and might, under certain conditions, serve as a useful component in a maintenance diet.

MIXED CHOP.

In the twenty-one samples of chop analysed the percentage of protein was found to vary between 8.37 and 20.66. The average protein content of these samples was 12.81 per cent. A glance at the table will show that what is ordinarily called chop may be a mixture of various grains grown on the farm. The mixture of oats and corn shows a low protein content when compared, for example, with peas and oats. The practical conclusion to be drawn from this fact is that the feeder should, other conditions being equal, select the richer of the two to supplement a ration made up largely of hay, ensilage, and roots, more especially if this ration be intended for dairy cows.

The above table of composition shows that chop is valuable food; and where the average farmer has an abundance of such food at his disposal it would be folly for him to purchase many of the by-products at present sold without any guarantee as to their composition. Furthermore, experiments conducted by Professor Day on fattening steers appear to indicate that a ration containing a rather wide nutritive ratio will give more economical gains than one possessing a relative narrow nutritive ratio. For fattening purposes, therefore, we believe that chop, such as mentioned in the foregoing table, would supply all the nitrogenous material necessary. If, however, the production of milk were the object, then it might be advisable to select a food containing a greater quantity of protein.

WHEAT MIDLINGS.

Upon inspecting the analyses of the samples of middlings, recorded in this Bulletin, the reader will be struck by the uniformly low percentage of moisture. The average percentage of moisture recorded by American chemists is approximately two per cent. higher than that found in the twenty-one samples analyzed in our laboratory. I may state that as soon as these samples arrived in our laboratory they were at once placed in bottles with ground glass stoppers to prevent any evaporation of moisture, and in every case extreme care was exercised in determining accurately the moisture content of the samples. The fact that any sample of food contains a low percentage of moisture is of great importance to the feeder, inasmuch as, other things being equal, he obtains a larger amount of nutritive material in a food containing a low percentage of moisture than he would if the moisture content were even one per cent. higher.