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PRESENTING THE PROBLEMS OF FEEDING

Agriculture

It has been the experience of the author that the teaching of feeding taxes the ingenuity of the agricultural instructor more than most other agricultural topics. The mere statement of principles without application or proof offers little of permanent value to the pupil. On the other hand, an attempt to pursue all, or even a small part, of the mass of data necessary to prove even a single principle, leaves the student groggy and confused. Neither is there time allowed in most courses for such procedure.

Since college classes are no exception to the rule, and the immediate practical application is often lacking, we have experimented with the use of problems as a means of securing the application of feeding principles, and of encouraging a research attitude. With the hope that some of these problems might be of use to the agricultural teachers of the state, a selected group are herewith presented.

As a boy on the farm I recall that it was customary to feed ten ears of corn or six quarts of oats to our farm horses as the regular grain ration. From the time that heavy work began in the spring until the plowing was finished in the fall, there was little if any variation from this ration. And yet the principles of feeding tell us that horses should be fed grain and hay in proportion to the work they are doing, and that on holidays the feed should be materially lightened. Feeding has been much improved since those days but much of it is still haphazard. Why not have a group of your pupils weigh some average ears that they are feeding, and determine their shelling percentages? By this means the weight of a given number of ears of corn can be determined. Now, if the class will work out rations for idle horses at moderate and at heavy work, a schedule of the proper number of average ears of corn to feed during different kinds of work can easily be ascertained. Similarly the number of quarts of oats to feed can be determined. While you are on the subject it might be well to have a few students who live on farms weigh the regular feed of hay also. Following this problem a comparison of the relative value and economy of corn and of oats and of the different kinds of hay can be made. You have now provided a motive and established a basis for the discussion of horse feeding principles.

A drive through any dairy community in the state, at any time of year, will usually convince one that, regardless of how much we have improved our methods of feeding producing cows, we fall short in the development of our dairy calves and heifers. As an introduction to the subject of calf feeding and development, ask the class to work out a ration for a calf two months of age, feeding skimmed milk, legume hay, and any grain mixture that is common in the community. The first question to arise will be the size of the calf, thus requiring the pupils to study the birth weight of dairy calves and the possibility of gains. Upon attempting to work out the ration, they will have difficulty in keeping the protein down to the prescribed amount because of a tendency to feed too much skimmed milk, and because of the too general opinion that a high protein concentrate is necessary in a grain mixture for calves. A little study will soon show that when