916

xplains n, fall usually aid Mr. on the kill the ver for 1 wheat

h

ductiveimit to said the inspecyears, I weather that he here is he farm at farms ng more

of the

olks

changed bushel t of the od crop, te. The nning to the mixwell in a boon

feeding ear, and owth. 1 tities of ally good hay that system ould deiry qualdevelop place for months fed, such ensilage, against d of the that are g system . If the If the e him to

ould feed o freshen fer's spsmonth is ers overn freshen st month flax seed ce a day. ession.

D

a I have ence, has able with riod than ge of the orn dead. most good as always feeds are riod? In he results

January 20, 1916

of experiments at the Wisconsin Experiment Stacion are summarized, and I would like to have their summary reproduced:

Effect of Feed Parturition

"Start a young heifers, all or apparent equal vigor, were selected. Group No. 1 was fed the products of wheat; group No. 3, the products of oats; rroup No. 3, the products of mixed grains, wheat, oats, and corn; group No. 4 was fed on the products of corn. Mark well that each group was supplied with the same amount of protein and other feed constituents. It was not long before the effect of the feeding was clearly seen in the physical condition of the heifers. The wheat group showed the least thrift, the oat group next, the group fed on mixed grains next. The corn fed group was greatly superior to the others in this respect.

"When it comes to calf bearing, this disparity of results was shown in a very marked manner. The wheat group and oat group lost all of their calves, the mixed grain group did a little better, while the corn fed group produced four welldeveloped and vigorous calves. There seemed to be something in the corn that alided greatly in the pre-natal nourishment of the foetus, as well as an improved condition of the mothers themselves."

This looks to me like a careful, intelligent experiment. I have never been very favorable to corn feeding, sticking close to my oats and bran with a little flax seed and oil cake. This experiment would make it appear that it would be worth while to mix considerable corn or corn products along with the oats. Let's try it.

Rational Feeding for a Year's Work* By V. E. Fuller

S OWS need food for three processes: Rebuilding tissue for their own bodies, building the bodies of their calves, and making their milk. There are three kinds of nutrients for these purposes; Protein, carbohydrates, and ash. The first makes blood, lean flesh, builds up the tissues broken down by the cow in her daily work in the dairy, gives the material for the body tissues of the calf, the udder of the heifer, and makes the casen in the milk.

Carbohydrates heat the body and provide energy for the work done by the cow.

The mineral matter or ash is used in the building of the cow's bones, to provide the small amount of ash in the milk, and to furnish the bony structure of the calf.

A ration in which the proportion of protein to carbohydrates is such that there is no waste of feed and the cow is giving her highest possible production, is a balanced ration.

"Summary of an address by V. E. Fuller, of Maplewood, N. J., before the Vermont Holstein Breeders" Club, at White River Junction, November 10.





The Entrance to the Cow Stable.

The illustration is from a photograph of the Drison Parm, Guaph, Ont. The connext walk runs from the stable to the farm creamery mear by. The practical way in which the big dairy herd on this farm is handled, was described in Perm and Dairy a few months ago.—Thoto by an editor of Parm and Dairy.

A maintenance ration is one on which the cow will be able to live and keep her body in good condition, when dry, with a stationary weight.

Wide and Narrow Rations

For every pound of protein, the cow should be fed from five to eix pounds of carbohydrates including fats. If less than five pounds of carbohydrates is fed to one pound of protein, the ration is "inarrow"; if more than 6.5 pounds of carbohydrates is fed to one pound of protein, the ration is "wide."

The four prime necessities in any well-selected ration are succulence, digestibility, palatability, and fats. Succulence renders the other feeds more palatable and more digestible; palatability will make a cow eat more feed, enjoy it more, and make better returns for it; digestibility is, of course, quite necessary to the distribution of the natrients and their conversion into blood, tissue, milk, etc. fats are necessary to aid in digestion and to put part of the fat into her milk and are valued at two and one-quarter times the other carbohydrates.

Cows need plenty of roughage to distend their paunches and help break up the grain feeds to make them easier of digestion. The latter is a valuable characteristic, as the energy which would be expended in digesting heavy grains is given to the making of milk. Two-thirds of the dry matter in a ration should be given in the roughage; and, as the dairy farmer usually grows his own roughage, he is thus getting two-thirds of the nutrients he feeds his cows off of his own farm.

Corn Silage is King

Corn silage, winter and summer, is the salvation of the dairy farmer. It is about the best possible succulent; it is not injuriously affected by changing seasons or drought; it is planted, cultivated, and atored economically; it is a favorite food with the cow herself; and is one of the cheapest feeds grown for the dairy. The New Jersey Experiment Station found by careful experiments that it was more economical to grow and feed than any soling crop. Droughts are almost certain in the summer, pastures dry up, and summer silage takes the place of pasture and keeps up the milk flow.

Dried beet pulp is a splendid succulent and also lightens heavy grain feeds, and may be advantageously fed with corn silage and roots or with either alone. It is especially good food for dry cows, as it is cooling and keeps the bowels in good condition.

Using too heavy feeds, concentrated and heating, is the rock many a dairy farmer splits on, and I am confident that the case of so many heavy-record cows becoming non-breeders is the use of too much concentrated heating grain in the rations. In any grain ration for a dairy cow, five-sevenths should be light and cooling and of the other two-sevenths one should be linseed oil meal, which is cooling--thus giving six-sevenths cooling and five-sevenths light.

When Care is Required

Two months before calving and 30 days after is the time to feed properly if we would have the dairy cow do the best work of which she is capable. She must grow her calf, make up her udder, and keep her own body in condition. If she is not given the requisite nutrients to do all these things, she will grow her calf first and best and will herself become poor and will not make up the good big udder she should.

The same principle applies to the dry cow, except for the udder building. Unless the dry cow is given the nutrient—especially protein she will come in in poor flesh and it will be needful to give her milk-making foods faster than is desirable. Her digestion is disturbed and her udder tender from the act of calving, and heavy protein feeds will upset her digestion and very likely cause udder trouble.

The rational way is to put protein on her body in the form of lean flesh before she calves so that after she calves so that after she can draw on it for the protein in her milk, thus doing away with the necessity for heavy protein feeding, which is usually heating.



French-Canadian Cattle Are Not Wide-spread, But They Have Their Advocates as Have Other Breeds .-- Photo at Central Experimental Farm. Ottawa

45