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THOMAS P. COOPER, Dean and Director

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Feeding the Dairy Cow Without Silage

By J. J. HOOPER

It is possible to formulate a good dairy ration even if silage is not available. The point to remember is that the cow must be fed a ration that will supply nutrients required both for the production of milk and for the maintenance of the body of the cow. Every day the cow should have 2.48 pounds of digestible protein and 15.81 pounds of carbohydrates and fats, or a total of 18.3 pounds of digestible nutrients, if she weighs 1,000 pounds and produces daily 3 gallons (26 pounds) of milk.

To meet these requirements, the cow may be fed a balanced grain mixture of 4 pounds corn-meal, 3 pounds wheat bran and 2 pounds cottonseed meal, all mixed together and fed at the rate of 1 pound of the mixture for each 3 pounds of milk, or 8½ pounds of the mixture per day for 3 gallons of milk. Feed the grain with 15 pounds of clover hay and all the corn stover or sorghum fodder the cow will clean up. If clover hay or some other legume like alfalfa, cowpea hay, etc., cannot be supplied, then more protein must be added to the grain portion of the ration by the liberal use of protein-rich concentrates, but instead of adding more cottonseed meal it will be well to employ linseed meal, gluten feed, soybean or peanut meal.

Tabulated, the ration suggested for a thousand-pound cow producing 3 gallons of milk daily, is as follows:

Digestible Nutrients Required

	Protein	Total Digestible Nutrients
For maintenance	0.70 lbs.	7.93 lbs.
For three gallons of rich milk	1.78 lbs.	10.37 lbs.
	2.48 lbs.	18.30 lbs.

Ration for cow when clover hay and corn stover are available:

	Digestible Protein	Total Digestible Nutrients
4 pounds of corn-meal	.30 lbs.	3.43 lbs.
3 pounds wheat bran	.38 lbs.	1.83 lbs.
2 pounds cottonseed meal	.74 lbs.	1.56 lbs.
15 pounds clover hay	1.14 lbs.	7.64 lbs.
10 pounds corn stover	.22 lbs.	5.22 lbs.
Nutrients supplied	2.78 lbs.	19.68 lbs.

Ration for a cow when poor hay is fed when millet, sorghum or corn stover constitutes the roughage it is more difficult to meet the requirements of the cow, for these are not rich hays; they are dry and are not liked by the cow. In such an emergency more of the concentrated grain mixture must be fed. A ration composed as follows may meet the requirements fairly well for the cow producing daily 3 gallons of rich milk.

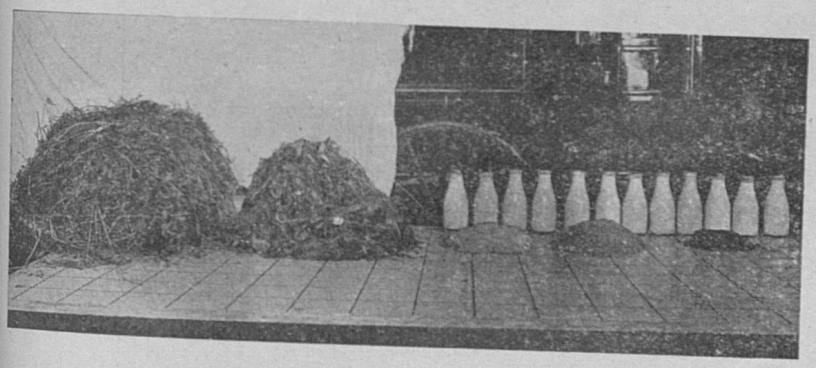
	Digestible Protein	Total Digestible Nutrients
2 pounds corn meal	.15 lbs.	1.71 lbs.
2 pounds wheat bran	.25 lbs.	1.22 lbs.
2 lbs. ground oats or rolled barley	.19 lbs.	1.41 lbs.
2 pounds cottonseed meal	.74 lbs.	1.56 lbs.
3 pounds linseed meal	.60 lbs.	1.56 lbs.
10 pounds millet hay	.50 lbs.	5.50 lbs.
10 pounds corn stover	.22 lbs.	5.22 lbs.
Nutrients supplied	2.65 lbs.	18.18 lbs

These rations are dry and the cow will miss the stimulating effect of a succulent feed like silage unless some green grass or wet beet pulp is supplied, but if pasturage is available the cow

will crop considerable green grass even in winter. Root crops like mangels and beets are excellent. Succulent or watery feeds stimulate milk production and also supply considerable nutrient.

If the cow does not relish the dry ration fed to her, a quart of blackstrap molasses, mixed with two quarts of water, may be sprinkled over the grain or hay. It is rich in sugar, is appetizing and is worth almost as much as an equal weight of corn-meal.

Every farmer who keeps cows should strive to produce most of the feed required by his dairy herd. He should produce a legume hay like clover, alfalfa, cowpeas or soybeans, and should have a silo in which to preserve the succulent corn for winter feeding. Having on hand a legume hay and silage the dairy farmer needs to purchase a minimum of feed for his herd.



A good ration for a thousand-pound cow producing daily 12 quarts of milk.

Reading from left ration consists of:

12 pounds clover hay
30 pounds silage
4 pounds corn-meal
3 pounds wheat bran
2 pounds cottonseed meal.

If silage is not available, more grain and hay must be fed, or beet pulp or pasture may be used.