

what a great tax a milk cow really has to put upon her system, and what a great amount of energy she must have to devote to the work. If we want cows to do greater work, then we must supply more energy. This will be shown more clearly by considering the work of the largest milk producers. Cows have produced 100 lbs. of milk a day, or 40 quarts. It would be a mighty good steer that could produce 40 lbs. of beef a day. A cow has produced over 27,000 lbs. milk in one year, 2,700 gallons or 10,800 quarts. Think of a steer producing 10,800 lbs. of beef yearly.

Do we stop to realize what we are taking from the cows? 7,000 lbs. of milk yearly, 2,800 quarts of milk of equal food value to 2,800 lbs. of beef? Just realize what an unselfish, hard working animal the modern milk cow is. Do not such figures show clearly the importance of giving her the very best feed?

FEED DURING LACTATION NOT SUFFICIENT

Under no possible conditions could we feed her anything like the amount of food she produces for mankind. She takes a small quantity of coarse food and turns it into a finer quality of food, suitable for the stomach of the most delicate child. Why the man who says he has discovered the secret of turning the base metals into gold is not in it in comparison with the humble, unassuming cow, who chews her cud placidly, whilst food that goes into her mouth is turning and turning, revolving and twisting, furnishing herself with sustenance and finally giving up to the dairyman or dairymaid (or calf) the very finest of food.

MILK FROM ENERGY STORED UP IN COW

We talk of feeding a cow for milk, but when we consider what a great increase in value the milk is over the food consumed we must look further for an explanation of the large milk flow. Could we expect a cow to turn the food she eats daily into milk when the cow is producing say, 80 lbs. of milk a day, 32 quarts, equal in food value to 32 lbs. of beef, or into 12 or 15 times the same units of food as the beef animal could produce from about the same feed? Even granted that the cow is a more economical producer of food for the human race, we must look a little further and deeper for the reason why a cow is able to produce so greatly.

It would be more correct, therefore, to say that the milk is derived from the energy possessed by the cow, and from her ability to devote her energy to milk production. We might say it is the feed she is given that produces this energy. But the feed a cow is given at the time the milk is taken has very little more influence upon her production than the feed she is given

a considerable time previous. A cow would go on producing milk after freshening, or, even while milking if we fed her nothing at all for some days. This is made possible owing to the motherly instinct implanted in her which induces her to give milk for her young whilst life lasts.

Farming on a Prize-Winning Farm

Having been asked to give us a description of his system and practice in farming for the benefit of our readers, Mr. Geo. W. McKenzie, of Thornhill, Ont., who won the first prize in the dairy farms competition carried on by The Canadian Dairyman and Farming World last year, has kindly furnished the following information:

"I grow a large quantity of mixed grains, such as oats, with barley and wheat. This mixture I find yields well and makes good feed. This past season I sowed all my barley and purchased bran, shorts and oil cake meal. These, with a few roots and ensilage, make a good ration for my dairy cows. I feed meal twice a day, with clover hay at noon.

"We grow a considerable acreage of corn each year. When possible, we choose a clover and manure it well for this crop. The manure is hauled out every day during the winter as it is made and spread off of the wagon or the sleigh, as the case may be. This manure is plowed in as soon as the ordinary seeding operations are over. We work this ground with a disc and harrow, making a good seed bed. We endeavor to have our corn planted about the 20th of May. We prefer to sow the corn a little thick and as soon as it is up a little, we harrow it. By having it somewhat thick, it will stand considerable harrowing without making the stand too thin. This early cultivation helps the corn and at the same time destroys a lot of weeds.

USES A CULTIVATOR

"The main part of the cultivation in our corn is done by means of a two horse cultivator. This implement does excellent work, at the same time being easy upon the man, the driver riding and guiding the cultivator with his feet. This cultivator can be used with the best of results until the corn attains a height of three feet or more. We are sowing more corn this year than usual as it comes in very handy for fall feeding to cut green when the pastures are short.

"Every farmer should have a silo. With the silo, one can get a great quantity ready for use at one operation. When building silos, it is better to build two small ones than one large one, for by so doing, you can have one for winter feeding while the other can be used during the summer. Two silos 14 by 28 feet, when built

closely together, are easily braced to the barn or stable and will give the best of satisfaction.

"The most of our grain crops are seeded with clover. In a good season this clover makes a lot of fall pasture. We grow some four acres of mangels of the improved varieties. These mangels make a lot of winter feed and are a good supplement to our silage and other fodders."

Storing the Hay Crop

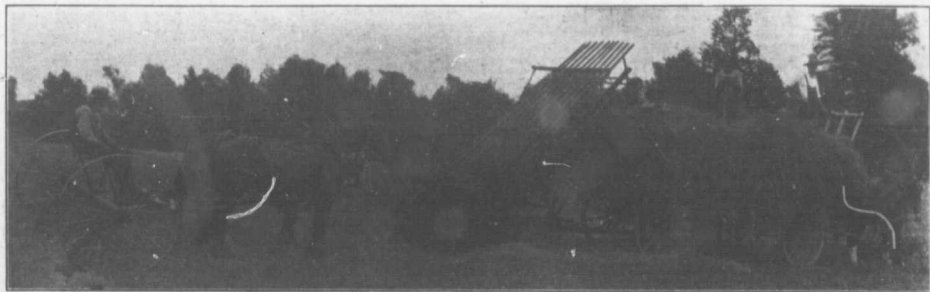
N. C. Campbell, Brant County, Ont.

Hay that is put into the barn in so dry a condition that it will not pack well, will not make fodder of first quality. Hay should be taken to the barn with just that amount of moisture which will allow it to settle compactly when treaded down. Such a condition can scarcely be described but is well known to all of us who have had years of experience in making hay. This desirable condition will be approached more accurately where the hay has been cooked and allowed to sweat over night. When taken from a windrow or from the swath either by hand or by means of a hay loader, it is difficult to tell just what amount of moisture it contains or what condition it really is in. After being cooked for a time and then exposed to the air in flakes, any superfluous moisture which the hay contains is soon diffused in the air and the hay becomes in an ideal condition for hauling.

A quality that is little reckoned with by the casual observer is the aroma of hay. The aroma, though an unweighable quantity, is of real value in rendering hay more palatable. All are agreed that green colored, sweet smelling hay is much to be preferred to the bleached, straw-like product which is too often made. The aroma is best preserved in hay by getting it into the barn as quickly as possible and preserving it from exposure, to dew and rain.

Personally, I always prefer to salt the hay when drawn to the barn, though some of our best authorities upon hay making talk against this practice. It has been my experience that salt renders the hay more palatable and should the hay be stored in an unfavorable condition, it tends to prevent the formation of moulds and mildews, and checks fermentation.

If it is necessary to feed new mown hay, it should be fed with caution. The stock are particularly fond of it and are inclined to eat too much. The new made hay is laxative and therefore should not be fed to hard working horses as their flesh will become soft through its use. Not until the sweating process has been completed in the mow and the whole mass cooled off can new hay safely be fed.



THE HAY LOADER AT WORK ON THE FARM OF MR. D. DUNCAN, OF THE DON.

Mr. Duncan has been using a hay-loader on his farm for many years and probably was one of the first farmers in Ontario to use one of these implements. Some of his hay fields are very uneven but he is able to use the loader in them all. Mr. Duncan may be seen on the hay rake. (Photograph taken specially for The Canadian Dairyman and Farming World.)