FARM AND DAIRY
& RURAL HOME

We Welcome Practical Progressive Ideas.

The Recognized Exponent of Dairying in Canada

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

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Why Dairying Will Be the Farming of the Future

Conditions Will Demand a Large Quantity of Human Food From a Given Quantity of Roughage

"THE permanent agriculture of America will be composed very largely of intelligent dairy farming. Those of our people who see the handwriting and prepare early with any one of the recognized dairy breeds will be the ones to do the most good and reap the first harvest."

This is the conclusion arrived at by the National Dairy Show Association in conjunction with the National Dairy Council of the United States. After devoting considerable attention to the study of food prospects, these associations have come to the conclusion that within the space of a very few years we will be faced with knotty problems in the feeding of the world. Although as yet these problems have not become very serious in America on account of the unoccupied lands which were always available for extra production as the production increased, yet the time is not far distant when these unoccupied lands will be used up, when the dry lands capable of irrigation will be cultivated, and when the large areas of swamp lands will be drained and put to agricultural use. Then efforts toward the increased production of food must be along the lines of increasing the yields per acre, and making the greatest use of the food which may be grown. And it is because they believe the dairy cow capable of making the most economical use of foods, in themselves unsuitable for human consumption, that the dairymen present at the recent Dairy Show believe that America's future type of farming will be dairying.

Utilization of Refuse.

In the production of our field crops, there is produced a considerable quantity of material, valueless as human food direct, yet which can be made thoroughly useful if fed to stock. Of all these plants, corn is the most conspicuous. After a careful study of the facts available, the National Dairy Council have found that while land growing corn is producing 100 lbs. of digestible human food, it is producing as an unavoidable incident, 68 lbs. of digestible stock food. Although at present the corn stover is made but little use of in the large corn growing States, the time for such wasteful methods is soon to be a thing of the past.

What has been said of corn and its production of feed will apply with varying figures to wheat, oats, barley, in fact all cereals. True also of sweet corn, the stalks and husks and cobs making admirable feed while a small percentage only of the dry matter produced on the acre ever reaches the packer's can.

Other vegetable foods, such as beans and peas, produce a vine worthless as a food for man direct, but which provides considerable material for stock. In the production of our vegetables there are imperfect specimens of cabbage, potatoes, carrots, and pumpkins, which are excellent food for some sort of stock. About 60 per cent. of the energy value of American crops is without value to man direct.

There is a considerable and an increasing quantity of by-product refuse, such, for instance, as the bran of wheat or rye, gluten meal, cotton seed meal, linseed-oil meal, and at present, though maybe not for long, brewers' and distillers' grains and malt sprouts, all of which may be converted into excellent human food by first being fed to a food-producing animal.

Meadows and Hillsides.

When practically all of the available acres have been put to work, it will be found that there are still remaining many hillsides which should be kept in grass continually, or nearly so. It will be found, too, that there are natural meadows which cannot be drained because of their low level. There are immense meadows next to the ocean where large quantities of hay grow, which may must be gathered between tides. How is such material to be utilized as human food? It can only be done through the medium of some other animal.

To What Animal?

Naturally we would desire to feed this natural and by-product refuse to that animal which will yield the greatest amount of human food in return. According to Lawes and Gilbert, 100 lbs. of dry matter in the food will produce in the ox 6.2 lbs. dry matter, in the sheep 3 lbs., and in the pig 17.6 lbs., or, in other words, for the production of one pound of beef there will be required 16.13 lbs. of dry matter in food, for one pound of mutton 12.50 lbs., and for one pound of pork 5.68 lbs., the pig being most economical producer of the three.

It is not possible, however, to feed any considerable quantity of the refuse material mentioned to swine, because of their inability to handle large quantities of roughage. The pig, however, because of his great economy in the food that he can handle, will remain an indefinitely, long time with us as a sort of scavenger, as a mill by means of which refuse from tables may be reconverted into food for man. The sheep, though able to handle roughage to fairly good advantage, has many natural limitations, making it unfeasible to expect this animal to consume the large quantities of corn stover, hay and pasture grass, which our country will continually yield. This forces us to a consideration of cattle as the only practical method of converting this sort of material.

Flesh or Milk: Which?

The roughage material mentioned may be handled by either beef or dairy stock. Let us study into the nature of these two methods of food-making and determine to which machine we shall feed this material.

The gain per day of steers while fattening is indicated by the following table:

	Number of Animals.	Age— Yrs.	Mos.	Average Daily Gain.
Standard Cattle Co...	49,654	4	6	1.20 lbs.
Experience in Middle West	2,000,000	2—3		*2.25 "
Smithfield, England, Fat Stock Show ...	294	2	10	*1.74 "
Young Beef	...	1—2		*2.5 "

*Approximate.

The difference in the economy of the gross gain is due to the fact that the young animals make considerable growth, which means lean meat, and lean meat contains much water, while fatty tissue itself is comparatively dry. The tendency, however, is for feeders to push the animals while yet they are young, and to market them between 1½ and 2 years of age. With such a method it is entirely feasible to obtain a gain of from .2 lbs. to 2½ lbs. per day, but wait—what is the composition of such young animals?

Careful experimentation has shown that although young animals make a more rapid and economical gross gain than older and more mature ones, the increase is so largely made up of bone and water that per unit of actual edible flesh formed there has been a greater usage of feed stuffs.

Only 25 per cent to 30 per cent. of the live animal becomes edible dry matter. A 1200-lb. steer ready for market contains only about 360 lbs. of actual food. Neither can it be argued that time will develop a materially better grade of meat

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The True Cooperator

THE true co-operator has the principle of fraternity in him. If he understands his principles he has exchanged indignation for compassion towards the malevolent and the opinionative. The French adopted the formula "Liberty, equality, fraternity," but fraternity is the greatest, and should stand first. Without it liberty may be aggressive, and equality offensive. Fraternity of mind is therefore a sign of a co-operator. Not a foolish fraternity which patronizes imbecility and encourages inferiority, but a self-respecting fraternity, which seeks to promote the good and the energy of improvement in others. Co-operation implies the daily habit of considering the good of others, and therefore courtesy, deference, consideration for the interest, convenience and pleasure of others, will be more or less attributes by which he may be or ought to be known.—George Jacob Holyoake.