

## Farm and Dairy

AND  
Rural Home

"The Farm Paper for the farmer who milks cows."  
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The paid subscriptions to Farm and Dairy approximate 20,000. The actual circulation of each issue, including copies of the paper sent to subscribers who are not eligible to receive it, and sample copies, varies from 20,000 to 22,000 copies. No subscriptions are accepted at less than the full subscription rates.

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### OUR GUARANTEE.

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Argues shall not use our trade at the expense of our subscribers, who are our friends, through the medium of these columns but we shall not attempt to adjust trifling disputes between subscribers and honorable business men who advertise, nor pay the costs of honest bankruptcies.

**The Rural Publishing Company, Ltd.**  
PETERBORO AND TORONTO

Read not to contradict and to contrive, nor to believe and take for granted, but to weigh and consider.—Bacon.

## A Happy New Year

As if we stand upon the threshold of a new year, we give our readers greetings. Behind us lies old 1917 with its many joys and sorrows, its dark stains and its bits of burnished gold. Before us the new year unfolds its page, white and spotless like snow freshly fallen on the countryside. Yes, it is given to us unstained, and when we have finished in turn with 1918, we will find that it is what we have made it.

The New Year season is a time for stock taking. Merchants are going over their establishments, making inventories; they are finding out what lines of goods pay for the handling and weeding out the poor sellers; they are dusting off their shelves and replacing empty boxes with full; they are preparing for their annual clearing sales.

Let us, like the merchants, take account of our stock before entering into the new year. Let us look back over 1917 and see what in the year was really worth while. How insignificant now seem many of the problems that came up for solution during the year, though when they stood before us, they looked like veritable mountains. We think of the chap who once said: "I've had many troubles," and then added, "but most of them, come to think of it, never really happened." And in looking back we see that the things that have really counted during the year have been the kind deeds, the kind words and the smiles we have given or received. These little bits of kindness shine like gold against the dark background of worry and disappointment that characterizes every year, these particular years over-shadowed with the clouds of war.

So let us go in at once for a real clearing sale. Let us get rid of our grouches, and start in with a

brand new stock of cheerful words and smiles. There is no use repining over opportunities which have passed away with 1917. Just as many will come in 1918. Let's resolve to quit worrying right away. We will likely break our resolutions before the year is very old, but it does one good to make high resolves, even if they are broken after a while. We at least get a bit benefit in the meantime. And if our folks will go out into the new year with the resolve to bring a little happiness into this sorrowful world, they themselves will find in 1918 a full measure of the happiness that we wish for them.

## The Air in Dairying

MANY cows are fed bountiful rations of roughage, grain and water, but are starved for air. We pay anywhere from thirty dollars to eighty dollars a ton for grain and concentrates. We could sell our hay for ten dollars to fifty; dollars a ton. Even the water must be piped and pumped at considerable expense if cows are to get it under the most favorable conditions. But air is free, absolutely free. At the same time it is a necessary part of the cow's ration. Failure to supply it must then be due to failure to appreciate its value.

In breathing, the cow takes in oxygen and expels carbon-dioxide, which is a suffocating gas, a lot of moisture and small organic elements which are extremely poisonous. In model stables, ventilating systems are provided to remove the suffocating gas, the excess of moisture and the organic elements, all of which are detrimental to health, replacing them with pure air. The supply of oxygen, which the cow's system must have before she can properly assimilate food, is thus kept at a maximum and the health and vigor of the cow increased accordingly.

The simplest form of ventilation is provided by mullin curtains in a part of the space that would otherwise be occupied by window glass. More efficient, however, is a ventilating system modeled on either the King or Rutherford plans. Both of these systems have been described several times in Farm and Dairy and complete specifications for their installation may be had from the Department of Agriculture at Ottawa. A few dollars invested in material and a few hours' surplus time this winter will install a most modern system in any dairy barn in Canada. The cow in the unventilated barn is not getting a complete ration and maximum profits from the herd cannot be expected.

## The Business of Farming

THOUSANDS of farmers are just awakening to the fact that farming is a business. For this awakening we must thank the Food Controller. When maximum prices on farm products were first suggested, farmers were asked many direct questions as to the cost of producing these products. Very few of us could submit definite statements of cost. We had been accustomed to running our farms carefully and conservatively, producing as cheaply as possible and selling at the best price the market afforded. Few of us ever drew up a balance sheet of the year's operations. Few, very few, knew what it cost to produce any given crop.

But now farmers must have some knowledge of costs in order to protect their industry. The factors which enter into the cost of producing farm products are more carefully considered now than ever before. Whereas in the past we considered only feed and labor, we are now finding that such items as interest, rent, depreciation and risk, all constitute a direct charge against overhead expenses and all must be given their proper emphasis. We are being educated into being business men, and those of us who have learned this lesson,

with Food Controller Hanns as the unconscionable tutor, will be in a better position to present the case for the producer a year from now than we are at present.

## Oleomargarine as a Food

OLEOMARGARINE manufacturers are now carrying large advertisements in city newspapers. Through these advertisements city people are being taught to believe that oleomargarine is a purer food product than butter and that one pound of oleomargarine contains just as much food nutrients as one pound of the best creamery butter. As the dairy interests have no organization through which to conduct a counter demonstration and advertise the merits of their products, consumers are in danger of being misled by the sophistries of the packers and to a considerable extent, may substitute oleo for butter on their tables.

That oleomargarine made under government supervision is a pure and sanitary food product, we freely admit. That it is of equal nutritive value with good butter is a claim that cannot be substantiated by facts. There is a vital principle lacking in the substitute that is essential to growth. Dr. E. V. McCollum, of John Hopkins University, America's leading authority on food products, has conducted numerous experiments with rats to determine the effect on growth and reproduction of different kinds of food. In these experiments, rats receiving milk fat grew to normal size and reproduced themselves, but those receiving vegetable and animal fats from which oleomargarine is made, were scrawny and did not complete their growth or reproduce themselves until milk fat was substituted for the vegetable and animal fats they had been receiving.

There is every reason to believe that Dr. McCollum's experiments with rats indicate the influence of different forms of fat on human growth and reproduction. Miss E. L. Amery, of the Wisconsin Agricultural College, states that in German hospitals the wounds of soldiers did not heal properly until their rations contained butter. It has long been known to the best dietitians that growing children must have milk fat before they will develop properly.

From the standpoint of calories of heat produced, oleomargarine may be equal to butter. But the housewife, who concludes on the strength of a chemical analysis only, that she can afford to dispense with butter and substitute oleomargarine, may unwittingly do a serious wrong to her growing family. "This is a subject that should have been investigated more carefully by health officials before going to the length they did in agitating for the letting down of the bars against oleomargarine in Canada.

## Editorial Notes

Fertile land is the first need in farming for profit, the only kind of farming which we wish to encourage. Poor farms mean poor farmers, receiving little from their hard work—and poor farmers mean poor merchants, poor bankers and a poor country. Bringing back and maintaining soil fertility is therefore not only a farmers' problem but it is a community problem in which everyone is interested.

The beneficial effect of manuring is most marked on the average soil during the first three years after manure is applied. There is usually a marked falling off in crop yields in the fourth year and a gradual decrease for the fifth and sixth years. In ordinary farm practice it is advisable to manure the land every three to six years, depending upon the supply of manure and the system of crop rotation.