The Farmer's Advocate
AND HOME MAGAZINE.

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think of breaking away from the co-operative system and the system should be given due credit for any price increase which comes after its inception; such credit in fact that no co-operator could be induced to break away from co-operation no matter what inducements those anxious to break the movement hold out.

Publicity to Prevent Food Speculation.

We have, on previous occasions, pointed out that in a country situated as Canada is and producing large quantities of food for export that the main good any interference with the law of supply and demand and private dealing in food products could do would be to control speculation or dealing in futures, for instance, on the wheat exchange. Food speculation is possible largely because people generally have no knowledge of the quantities of food such as flour, meat, eggs and butter and other products stored or held in obscurity. Almost all speculation is based on the ignorance of the public in general, as to actual conditions. It is possible by overworking the storage idea to create an artificial scarcity, which inflates prices and which in return makes dollars for the speculator. On the other hand, the storing of products is a legitimate and necessary business and the public should expect to pay for storage and the losses which naturally occur in storing. But the storages, or the speculators should not be left in a position to take advantage of people through their ignorance of quantities on hand. We believe that every legitimate business should return a fair profit to the man operating it, and there should be a means in connection with food products and storage of preventing undue speculation and profits which are out of reason. It would not be impossible for a Government agency to gather data from month to month regarding quantities of food in storage as well as quantities in the raw state, and this data should be regularly placed before the people. This would automatically put an end to any undue speculation which might occur. A visible supply of which the people were aware would leave the law of supply and demand to work, as it should work, unhampered. Once established such a system should be retained in peace as well as war times. Storages are good and necessary to the welfare of the people, but the food speculator is unnecessary either in times of war or peace. On the other hand, the food dealer is entitled to a fair margin of profit on the business which he does.

Indexed For Reference.

We wish to draw the attention of our readers to the index, which appears in this issue. This is not a new feature. "The Farmer's Advocate" has been indexed half-yearly for many years, but we simply direct our readers to this index that they may see something of its importance and realize the usefuleness of each issue saved and compiled in book form. Questions on every phase of practical agriculture are answered in these papers, and the index will direct those desiring information to almost anything they want to know in regard to practical agriculture. It is a good plan to save all the issues of the paper and then remember that the last issue in June and the last issue in December contain a full and complete index which will help solve many of your farm problems.

We Get Only by Giving.

BY ALLAN MCDIARMID.

It strikes me that this campaign of thrift and economy is being carried a little too far in certain directions. I read a letter recently in which the writer advocated the doing away with the feeding of grain of any description to the animals on the farm, so that the said grain might be utilized for human consumption. His idea was to grow corn and roots to a larger extent than is being done at present, and make them the staple feeds for cows, pigs, hens and horses. Then all the grain grown in the country could be turned to account as food for man. He seemed to look on silage as a sort of general-purpose stock ration that would take the place of anything in the shape of grain. Even hens could eat it if it was cut fine enough.

Now it seems to me that this is going back to the old times when the farmers used to half starve their cattle and got paid back by being half starved in return. I can remember in my younger days breaking off the ears of corn and feeding the bare stalks to the cows, as a matter of economy. I sold the grain, but I have figured since that I lost about four times as much as I gained by this practice in lessened production and in the direct loss of animals as well. If it is good policy to sell all our grain in time of war for human consumption, then some of the men who are supposed to be our best farmers, have been working along wrong lines all along. The grain they have turned into milk, cream, butter, cheese, eggs, pork and beef, should have been sold and sent to feed the nations of the world. There would have been, of course, a certain amount of these other products for sale, and the question is, which is the most profitable method of procedure? There is no use treating this grain-selling as a temporary measure, for no one knows how long present conditions will continue. It is a question of what will be best in the long run. Can we make a success of raising live-stock and selling dairy produce, and of grain farming at the same time?

I don't think it can be done. In the first place take the case of the farm horse. Without his grain ration he cannot do a full day's work. Nothing has ever been found to satisfactorily take the place of oats as a horse feed. A poorly fed horse will not only waste his own time but that of his owner or driver as well. It is poor econony to save a bushel of oats and waste a couple of dollars' worth of time.

As to the dairy cow, I have had some experience with her and I know that she must, during the winter at least, get a fair grain ration if she is to give a reasonable amount of milk, and at the same time keep in good flesh. A cow that is turned out in poor condition in the spring will take the best part of the summer to build up and get ready to produce enough to pay for her keep. By that time the pastures are getting short and her opportunity is gone. The cow that comes on to the grass in good condition milks up to her capacity for a time at least.

With pigs, a profit can be made, it is claimed, of 100 per cent., by buying all grain and feeding them nothing else of any practical value. This statement was made to me by a man who said he kept track of every item of cost, and so is in a position to know the facts. So, if ten dollars worth of grain will make twenty dollars worth of pork, or if it makes only fifteen dollars worth, it seems to me that it is poor economy to sell the grain in its original condition. If food production is the all important thing in war-time let us do it in a scientific way, and give the produce of our fields to the world in a form that will be of most service to it. The idea of fining farmers for feeding certain kinds of grain to live stock, as they are doing in some countries, is the shortest of short-sighted policy. They are destroying the possibility of creating a more valuable food than they are saving, and they are bringing about a state of poverty of the land that will take them years to recover from.

The case of the hen and of egg-production is worth a little notice. This is claimed to be a profitable line of business by most farmer's wives at least. The majority of men are not so sure of it. I heard one man say this spring that he had kept two hundred hens all winter and they had given him one egg, which had cost him just one hundred dollars. If this was the case it was probably owing to the fact that the hens had been fed on a very poor quality of grain since the previous fall, as oats especially, were not up to the usual standard last year. Admitting, for the sake of argument that hens can be kept at a profit in normal times, the above case proves that grain of good quality can be increased in value by turning it into eggs, as nothing else can take its place, apparently.

The important point, however, in this question, is one that has already been referred to, namely, that of keeping up the fertility of our farm lands. Some people talk as though the war and food shortage would be a matter of short duration, when in all probability the question of the world's food supply will be one that will require a good deal more than usual attention for several years at least. Consequently it is up to us to see that our farms are fed if we want them to feed ourselves and others. And if the high price of grain tempts us to sell it, or prevents us from buying it, when we run short, then we are reducing the amount of plant-food, in the shape of stable manure, that should go into the soil, and we are stealing from the future years for the sake of a very temporary advantage in the present. One of the worst tendencies of the present generation is that which makes people forget posterity and think only of self. It will be a bad one on some of us if we should have to go through this world a second time. We might get a chance then, to reap what we had sown.

A text for a sermon that I heard recently made a good deal of impression on me. It was this. "There is that scattereth and yet increaseth, and there is that withholdeth more than is meet, but it tendeth to poverty." It seems to me that this statement applies to the question under discussion particularly, and to farming in general at all times. We can continue to get only by giving, and we don't want to let this war, or any unusual conditions it has brought into existence, cause us to forget it.

Nature's Diary.

BY A. B. KLUGH, M. A.

One of our commonest butterflies, and certainly the most abundant species in our gardens, is an imported insect—the White Cabbage Butterfly. It was first noticed on the American continent at Quebec in 1860, when a single species was captured, and was not seen again for two years. In 1865 it was observed to be extending its range, in 1868 it reached Montreal and in 1872 Ontario. It now ranges practically across the continent.

This well-known species has a wing expanse of about two inches, the female has two distinct black spots on the fore-wings, while the male has only one such spot, though in both sexes the fore-wings are tipped with black. The eggs are pale yellow in color, turnip-shaped, strongly ribbed and large enough to be seen with the naked eye. They are deposited singly on the underside of the leaves of cabbage and other food-plants, and hatch in from 4 to 8 days. The caterpillar is the familiar velvety green "worm" with a faint yellow stripe down the middle of the back and a row of yellow spots along each side. This caterpillar is not a form which we take much pleasure in seeing at any time, though most of us prefer to meet it alive rather than cooked. The caterpillar is a greedy feeder and grows rapidly, attaining maturity in from ten to fourteen days after hatching. It moults four times, the first time at the end of two days, the second time two to three days later, and the third and fourth times after further periods of one or two days. It then pupates, changing to a chrysalis which is of a gray, green or yellow color and about three-quarters of an inch in length. The pupal stage lasts from seven to twelve days in the summer but in the case of the later broods it lasts through the winter. Thus the life cycle during the summer is completed in from twenty-two to thirty-four days, and there are three broods in the season.

The caterpillars feed on the leaves of plants belonging to the family Cruciferæ, such as the cabbage, cauliflower, turnip, kale, radish, mustard and horseradish among vegetables, and the nasturtium, mignonette, and sweet alyssum among ornamental plants, their favorites undoubtedly being cabbage and cauliflower.

The butterflies feed on the nectar of flowers of various kinds, being especially fond of that of flowers belonging to the family Cruciferæ and of the white aster, heliotrope and thistle. They are on the wing from early morning until dusk and are capable of flying long distances. The loss due to the ravages of this insect on cabbage is estimated at $1,300,000, or one-tenth of the value of the entire cabbage crop of North America, and the loss on cauliflower and other crops is also heavy. Before the use of sprays became general it was not unusual for the entire cabbage crop of a localty to be completely ruined by this species. If it were not for certain natural enemies this pest would be far harder to control than it is. One of the most efficient checks upon it is a small Ichneumon-fly, purposely introduced from England in 1883. This insect lays eggs on the body of the caterpillar, the larvæ on hatching burrow into the body of the host, feed upon its tissues and weaken it so that it dies before developing into an adult. Some species of wasps also render valuable aid by preying on the caterpillars, as do also many birds such as the Chipping Sparow and House Wren.

A great many remedies have been tried in combatting this insect, and the two which have been found to give the best results are arsenate of lead and Paris green. Of these the former is preferable, as it is less