FARMER'S ADVOCATE. THE

DAIRY.

Handling Saturday Night's Milk.

Miscellaneous.

THE BEST BREED OF PIGS. J. MOSES, Osgoode:—"Will you let me know through your valuable paper what breed of pigs are really the best, and whether the Berkshires or Polend Chinese contact the methy and the set of Poland-Chinas come to maturity first.

This is a very hard question to answer, as it is much the same as the question which crops up at all dairy conventions-which is the best breed of cows? Much depends upon the care, feed, attention, locality and market requirements.

THE KERRY COW.

J. C. PENROSE, Port Sidney :- "Will you kindly let me know through the columns of your valuable paper the names of breeders of Kerry cattle?

We do not know of any person who is breeding them in Canada, and would be glad if some of our subscribers would answer this question.

DOES BUCKWHEAT ENRICH THE SOIL?

The question is asked :- "Does buckwheat enrich the soil, as in some sections it is regarded as an improver of poor soil? Does it add anything to the productiveness of the soil, and if so, in what manner?

We cannot do better than give the answer to this question which was given by such a wellknown authority as Prof. Roberts, of Cornell University :-

"Buckwheat does not add any fertilizing material to the soil, as it is not a nitrogen gatherer, but, from the fact that the land for this crop is usually prepared in warm weather, it gives opportunity for nitrification to take place, and thereby makes the plant food available. The tap root of the buckwheat plant does serve to bring the ground into a good mechanical condition. This, of course, would improve the productive power of the land; so, while it may be said that buckwheat does not enrich the land, it does under many circumstances so improve the mechanical conditions that subsequent crops do better than they do after many other crops. A good buckwheat crop is due more to the condition of climate than of soil. It has the power of taking up and assimilating tough plant food ; that is to say, food that cannot be reached by such plants as wheat and barley, which require that their food be in the best possible condition; that is, readily soluble. This peculiarity of the buckwheat plant, in common with some others, is due, as it is supposed, to the power of the roots in excreting materials which act upon the plant food in the soil although this has not been proved. Usually buck wheat is raised on rundown farms in this locality, for the object of bringing up the land on which other more exacting crops cannot be raised. If the farm-er will cast in the fertilizers with a liberal hand, I can see no reason why a buckwheat crop may not only be profitable, but improve the land for other crops. Perhaps it is not known that corn does not do well after buck wheat.

SYMPTOMS OF TUBERCULOSIS.

A cheese factory patron writes us as follows :-· Our cheese factory was a couple of years ago, at considerable expense, fitted up for winter buttermaking; but I notice that the plant lies idle all summer long, which is neither good for the separator, etc., nor the shareholders. As has been the case in the past, a great deal of milk is sent in on Saturday nights; more so, perhaps, by the larger patrons, who have not arrangements made for cooling and holding over a great quantity of milk till Monday morning. This plan involves the factory staff working Saturday night and a great part of Sunday. Patrons who do not countenance operating the factory on Sunday manage, by a little extra work and trouble at home, to hold their milk over till Monday morning, when four milkings are sent in at once. This is, however, not altogether satisin at once. This is, however, not altogether satis-factory. Could we not have our Saturday night's milk made into butter, and so get over the entire difficulty?

Certainly. The Culloden cheese factory, in the Brownsville combination, overcame the difficulty Brownsville combination, overcame the difficulty in that very way. Making butter in the summer at Culloden gave splendid satisfaction to the patrons, who would not think of going back to making cheese Saturday nights. They found it necessary to have a good supply of ice, though the maker, Mr. Barr, thinks it might be done without, if there was a stream of good, cold water running through the factory; still, he would prefer the ice. The Saturday evening's milk is run through the The Saturday evening's milk is run through the separator, and by 10 o'clock all work is done. The cream is held over till Monday afternoon (ripening in the interval), when it is churned. Each patron s at liberty to take out butter for his own use, so that he is never troubled churning in the summer; or he may take out all that his milk makes, and dispose of it himself. The company charges 4 cents per pound for making, selling, etc., and, we understand, have this summer's make all con-tracted in advance to an Ingersoll firm, at 23 cents per pound. Their late fall and winter butter, of course, sold higher. The winter butter business was very satisfactory to all concerned, the patrons realizing about \$1.00 per hundred for their milksome more, others less, as they were paid by the Babcock test. The business also paid a good dividend to the shareholders. With regard to the skim milk, the patrons waited and took it home as soon as separated, both summer and winter, so there was no trouble on that score. We are pleased to be able to afford our readers this information, not only because it is a complete solution of the Sunday labor question, where a factory is fitted up for butter making, but is also strong testimony in favor of winter butter dairying.

Cleanliness in Relation to Cheesemaking.

BY J. A. RUDDICK, OF THE DAIRY COMMISSIONER'S STAFF, OTTAWA.

It is sometimes said that any improvement which may be made in the quality of Canadian seese in the future will depend very largely upon the amount of care and cleanliness observed in handling the milk and manufacturing it into cheese. On the other hand, it is claimed by some that the art of cheesemaking is shortly to be revolutionized through the agency of the science of Bacteriology. The former view implies that the principles which underlie the processes of cheesemaking are pretty generally understood, and that very little more is to be discovered along that line. My impression is that if every precaution were taken to protect the milk and curd from taints or contamination, either from the air or imperfectly cleaned vessels in which it is handled, the scope for the work of the Bacteriologist in the field of practical cheesemaking would be confined within very narrow limits. It seems, however, that it is impossible to protect the milk perfectly, and it is to be hoped that science will come to the aid of the cheesemaker by helping him to overcome, in a measure at least, the trouble caused by taints and injurious ferments so common at certain seasons of the year. Nothing practical is forthcoming yet along these lines, and we can only turn our attention in the direction of minimising the trouble by studying the causes of bad milk and seeking to remove them as far as possible. As to the patrons' obligations in this connection, I shall touch upon one point only-that of properly cleaning the milk vessels, especially the milk cans. Dirty cans are the source of much bad milk, and where the whey is taken back in them they constitute a medium by which injurious fermentations may be propagated from day to day in the milk and cheese. It will pay to remove the whey from the cans as quickly as possible after it is returned, in order to prevent the acid which it contains from eating the tin off. The milk in a "rusty" can always has a very bad flavor, and it is next to impossible to keep such cans clean. Cans should be thoroughly washed inside and out with tepid water to remove all *visible* traces of milk or whey (a little washing soda added to the water is very beneficial, | ready taiked of by some prominent dealers in Mil-and then scalded to kill the *invisible* germs or or-| waukee." Geo. Hodson, in Hoard's Dairyman.

ganisms, which no amount of washing with mere gamisms, which no amount of washing with mere warm water will destroy. The scalding water must be scalding hot in order to be any use at all, and I believe that very, very often the water used is not hot enough, and it is one of the most serious shortcomings in our dairy practices. When the cans are washed long distances from the house, as they sometimes are, they are never scalded, because the water cools in being carried so far. Of course the above applies to all milk vessels as well as to milk cans.

It is one of the evils of the co-operative system of dairying that the negligence or carelessness of one patron may nullify, to a certain extent, the efforts of those who try to do right, but it is not true, as is sometimes supposed, that one bad can of milk makes a whole vat quite as bad as it was. It will have a proportionate effect—nothing more. Every can of milk well cared for and in good condition improves the quality of the pool; if it were not so there would be little encouragement to any one to take any pains in the matter, and the theory of "one bad, all bad" has done a good deal to discourage people from doing their best.

And now, coming to the cheesemaker, I may have to say some things which, as a maker myself, I would rather leave unsaid, but as I will confine myself to facts within my own knowledge-facts gleaned by personal experience—I trust that my remarks will be received as coming from one who earnestly desires to see the work of making cheese placed on the highest possible level.

on the highest possible level. Many of our makers, by a little care and atten-tion, succeed in keeping their factories and their surroundings in excellent shape, but there are a great many who fall far short of the ideal in this respect. It is from the latter class that we hear the loudest complaints about trinted with the loudest complaints about tainted milk, and neglect of patrons in taking care of it, etc. Now it is a fact, that the man who keeps a dirty factory is much more likely to receive bad milk than the man who attends to these matters closely. The example and moral influence goes a long way, and it is very natural that the patron who sees every thing about the factory, including the man himself, neat and clean, will take more pains in doing his share of the work in a like manner.

Taints or bad flavors in cheese do not all have their origin on the farm or in the milk cans, but there are many sources in and around the factories, such as dirty weigh cans, conductors, vats, strainer and sink cloths, and last, but not least, dirty whey tanks when the whey is returned.

During the progress of some investigations carried on recently in England, a peculiar mould, not visible to the naked eye but injurious to the flavor, was found in the cheese, and after diligent search it was found to come from a whey spout leading to the tank, which had one end opening into the factory.

Then there is that abomination, the hot water tank, into which all kinds of dirty pails are dipped, curd knives and other utensils washed off in, until the contents become very foul indeed. Our most careful makers now have the hot water tank placed high up from the floor, and draw off the water by means of a large tap, never allowing anything to be put into the water to pollute it.

As a mere matter of labor, it will pay to attend to these thinks; for instance, the time taken to clean the whey tank once or twice a week will be more than compensated for by improvement in the condition of the milk. A man who keeps a dirty factory can never attain to the front rank as a maker. All the most successful makers in Canada to-day are men who are noted for having everything about their places scrupulously clean. No qualification of a maker goes farther or helps him more to establish a reputation for himself. Let the young men starting out bear this in mind. Taking a general view of the question of cleanliness in relation to cheesemaking, let us look abroad for a moment and see what strict observance in this regard has done for other parts of the world. It is a well-known fact that certain sections of England and Scotland produce cheese of very fine quality. Now these cheese are made on large estates, where everything, including care of milk and making the cheese, is under one control, and attended to in the best possible manner. To borrow an illustration from the butter industry, look at Denmark with her unrivalled reputation for fancy butter, mark the high prices obtained for it, and then consider that the cleanliness of Danish dairies is proverbial.

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DAIRY FARMER :- "Would the ADVOCATE inform me what are the symptoms of tuberculosis, and how I can determine if a cow is ailing from that disorder?

In the chronic cases the disease may last for months or years unperceived even by a skillful veterinary surgeon; in acute cases it may prove fatal in a month. In early stages the cause of suspicion may be an occasional cough when the animal leaves the hot stable for the cold outer air, when it is suddenly raised in the stall, when it is run a short distance, when it drinks cold water or when it eats dusty food. The cough is usually small, dry and wheezing, and may be repeated several times. When run or driven rapidly the animal proves short-winded, At this time the animal may show as good spirits, as mellow a skin, as good an appetite, as rich and abundant a flow of milk, and as much propensity to fatten as its fellows. "In the advanced stages of lung tuberculosis," says Dr. Low, "everyone can recognize the consumptive animal. It is mierably poor and wastes visibly day by day, the dry coat of hair stands erect, the harsh scurfy skin clings tightly to the bones, the pale eyes are sunken in the sockets, tears run down the cheeks, a yellowish, granular, fortid and often gritty discharges flow from the nose, the breathing is hurried and catching, the breath fortid. The cough is weak, painful and easily roused by pinch-ing the back or breast or striking the ribs. Tapping the rips with fingers or fist and applying the ear de-tect far more extensive changes, including in many cases evidences of blowing into empty cavities (vonice) and loud gurgling. Temperature may vary from below normal to 107 Fahr."

The hypodermic injection of tuberculin is the only test known at present which will give evi-dence of the disease in the incipient stages. This causes a rise of three or four degrees in the temperature of an affected animal. That it is an infallable test is disputed by some.

When, we have learned to practice a greater measure of this virtue, which is said to be next to godliness, in our chéese factories, the local consumption of cheese will be very much increased.

"We believe the day is not far distant when a premium will be paid for milk run through a separator for family use, the cream and milk put together again and the rest thrown away. We made in inquiry of a man that runs a large creamery near here, as to how much dirt, etc., he thought came out of a thousand pounds of milk as it generally comes to the creamery. He thought it would be afe to put it at one pound to the one thousand pounds of milk. If that is the result with country milk, what must the milk be that comes from those filthy hovels near those cities? The matter of running milk through a separator for family use is al-