

Sanitary Water Supply on the Farm.

Editor "The Farmer's Advocate":

It may be a little strange to question the sanitary conditions on the farm, but this is what I am about to do, although the healthful conditions of farm life have been extolled for ages. No doubt the occupation is healthy, where even moderate care is taken, but in many cases the farm stead- ing is a prolific source of disease.

Let us look into the condition of the water supply. We often see it really obnoxious: An old well covered with rotting planks, where any animal, from a pig to a mouse or a toad, can topple in, and go through the process of decay, till perhaps disease attacks the family, and the well, for the first time, is pronounced unhealthy, often furnishes a surprise upon examination, when mice, cats, skunks or rats are found to be the cause of the trouble. The defective covering referred to is not the only trap for disease germs. We often see a fairly good well platform, where ducks, hens, geese and turkeys are continually about, sipping up the drips of water, when the boys run hastily when thirsty and pump an overflowing cup, the overflow taking the droppings down to leach back into the well, after having supplied the old sow with enough water to work up into a first-class mud hole, in which she seems to enjoy the most exquisite pleasure. This is not an exaggerated description of some country wells.

There are others to be found much better in appearance, but nearly as dangerous. I refer to where the well is near the back kitchen door, where the slops are thrown thoughtlessly to percolate into it and contaminate the drinking water. This drinking water is often filled with the bacteria of typhoid fever, ptomaine poisons, and other disease germs. More than that, the throwing of slops at the door makes a breeding place for the house fly, which, in turn, puts its germ-laden feet into all the foods we eat, tickles the nose or blinds the eyes, and is an indescribable torment on the bald heads of so many of our old and young men.

How can this be remedied? By attending to some simple plans that anyone may understand.

Knowing that much, if not all, typhoid fever is due to the drinking of bad water, our first object should be to have that water pure. Soils, and the natural drainage, should be studied. In digging the well, gauge it so that a three-foot concrete tile, such as is used in culverts, will slip down readily. This, for a house well, is large enough, as it is not advisable to have a great quantity of water lying stagnant, as is found in many holes that go by the name of wells. If a good spring is struck, well and good. We then proceed to make it proof against rats, mice, toads and worms.

Having packed some nice clean gravel round the first length of tile, each succeeding tile should have concrete poured around it, and the same done to each length to the top. If about two inches is allowed over the diameter of the tile, the concrete may, if very fine and watery, be poured in from the top. This will render the well proof against every visible animal.

To guard against surface soakage, clean the surface of all impure earth, and place a layer of concrete, sloping away from the well, around it, and drain thoroughly away from this.

The covering should also be of concrete, forming a lid, which is in two pieces. It need not be very heavy, but may be augmented by heavy wire, angle iron, or some of the iron usually sold to the old-iron merchant. Make a wooden lid to cover the well, sufficiently close to prevent concrete from going through, then place a strip of stiff pasteboard round outside of the lid edgewise, which will be the limit of the cement or concrete lid. This should be kept in place by damp sand placed against outside. A round block should be placed on the wooden lid, which may be kept in place by nails. On this block, on each side, place a saw cut, to receive a piece of fairly stiff sheet-iron, extending to the circumference, one on each side. This will form the division in the lid, and the block will form the hole for the pump. To form holes for bolts, if an iron pump is used, half-inch pins may be placed in the lid, according to marks taken from the holes in the base of the head of pump, and another pin for brace to pump. I place the pump on one side of well, so that, if at any time it should be found necessary to go to the bottom, the piping will not interfere. All is now ready to put cement in for lid, excepting greasing well all parts where cement touches, inside of rim, plug, pins and cross-pieces, so that cement will not stick. Have the concrete ready, and shovel or pour carefully, so that neither rim, plug, pins nor strips of sheet-iron will be misplaced. Do not tamp hard, nor forget to put in the irons to strengthen.

As well, if properly made, should rarely get dry. If a good iron pump is put in, it should need no fixing for practically a lifetime.

Where the soil is likely to cave in, the tile should be allowed to slip down as the well is being dug.

There is no reason why a farmer should not have wholesome water, and everyone should know that healthy surroundings are cheaper than doctor's bills.

Bruce Co., Ont.

WM. WELSH.

THE DAIRY.

The Care and Management of the Dairy Cow at Time of Parturition

THIRD-PRIZE ESSAY.

While the dairyman with the grade Shorthorn may be unconcerned at the time of parturition, the owner of the pure-bred dairy cow, for which he has paid a "long price," will feel easier when she has passed the fourth or fifth day, and he finds that all is well.

It is the care of the latter which I will attempt to outline.

I always take the pregnant cow from the herd when she becomes heavy with calf, as she otherwise might receive some injury, and keep her in a small field by herself.

It is impossible to quote a measured ration of feed, but in my experience I have found cows to do well during their dry spell on half their usual rations of meal, roots and silage, with hay; or good pasture alone is enough.

I prefer a mixture of ground oats and bran as a grain ration. About two-thirds oats and one-third bran, and a pound of linseed meal to each cow, twice daily. I like to see them freshen in good condition. Their dry spell is their period for recuperation, and they should not be starved.

During the last ten days of her pregnancy, the cow should be carefully fed, or diarrhea in the calf may be caused. Proper treatment at this time will also ward off trouble later. I cut off the silage, roots and grain, and substitute about four pounds bran and one pound linseed meal, scalded, and given as a mash twice daily, with good clover hay.

As a laxative, I give from three-fourths of a pound to one pound of Epsom salts, or just enough to produce a mild action, but not enough to weaken or pull down the cow, commencing a week or ten days before calving and giving each alternate night.

By watching the cow, I notice certain changes. The tendons become relaxed and the udder enlarged. This is my time to take all feed from her, and give 1½ pounds Epsom salts, presuming that the bowels have become normal since her last dose.

A well-bedded box stall should now be given her. If she has had pains for some time, I disinfect my hand and arm and make an examination, to be sure that the calf is in its proper position. After the birth of the calf, I cover the cow with a warm, dry blanket, or, if it be hot weather, a light sheet, and let her take nature's own way of caring for her calf for an hour. In the meantime the stall is cleaned, and plenty of dry bedding given her. It is best to tie her up now and remove the calf where she cannot see it, and give her a pail of water, warm enough that there is no danger of it chilling her, and in a short time another pail, if she will take it. Plenty of water helps the bowels to move. The cow will generally lie down now, and she should be closely watched until the afterbirth comes away, which will not be more than a few hours. When the afterbirth has been removed from the stall, the cow may be let loose and the udder rubbed with a little goose-oil or camphorated liniment twice daily. If the udder and teats are well distended with milk, the calf may be brought back and given a little from all four teats, taking care that it does not take too much from the cow. If the cow does not become excited over the calf, I continue this method for three or four days; but if she becomes restless and is bawling, I do not let her see or hear her calf, and commence feeding it by hand.

In suckling the calf or milking the cow, which I do three or four times a day at first, I take just enough to keep the udder soft, and still leave it fairly well distended with milk, taking a little more as time goes by, until the fourth day is past, and even then I do not strip dry for another day.

Although I believe there is little danger of milk fever if the cow has been properly treated, she should be closely watched for the first four days. If her appearance is dull, ears drooping, she does not chew the cud, and later has difficulty in rising, milk fever is pending. Another early symptom of milk fever is to be detected in the bawling of the cow to her calf. If the sound is unnatural, coarse and guttural, it is caused by paralysis affecting the glands of the throat; and if this symptom is marked, it is time for the inexperienced attendant to send for his veterina-

rian, but the experienced herdsman should always have a good milk-fever outfit on hand.

A few hours after calving, all being well, I give the cow a little clover hay, and later on a little scalded bran and linseed meal, and let this be her rations, with plenty of lukewarm water, until after the fourth or fifth day, after which she may be gradually brought back to her rations. For the sake of the young calf, I feed no sour silage for some time.

In feeding the calf, I try to have the milk at as nearly the same temperature as if taken from the teats. A pint three times a day is enough for a small calf at first, gradually increasing the quantity. I feed with the finger for some time, teaching the calf to take its milk slowly. I find that the calf which gulps down its milk in a few long swallows is a good subject for indigestion.

In concluding, I might say that, in my experience, cows treated ten days before calving, as indicated above, experience no sickness whatever, and chew the cud before and shortly after calving.

JAMES YOUNG.

Victoria Co., Ont.

The Ohio College of Agriculture is now giving practical instruction in the condensing of milk.

POULTRY.

Fall Management of Laying Stock.

Now is the time when a little extra care on the part of the poultry farmer will make or mar his flock for coming usefulness. The frosts have destroyed or sent to winter quarters, to a great extent, all insect life, which is one of the most important articles of diet for the growing pullet. To prevent any setback in their development, animal feed of some sort must be supplied. A few poultry-raisers have green-bone cutters and are using them to advantage, but the greatest care must be exercised in the feeding of cut bone or meat scrap, as a very little too much is apt to do more harm than good, by causing some form of intestinal trouble that will be hard to overcome.

One form of animal feed that may be fed in unlimited quantities, and be of the greatest benefit to build up and bring into laying condition the young pullet is milk. Give it to them sweet to drink, sour it and use it to mix up their mash with. Some claim that buttermilk is of greater value as a feed than sweet milk, but my experience has shown that it is very liable to cause bowel complaint, unless used when freshly made. With sweet milk or soured skim milk I have never had any trouble.

Besides animal feed, green feed must now be supplied in generous quantities. Turnip tops are good, and are greatly relished. When they cannot be had, use turnips or mangels cut in halves and suspended along the henhouse walls on nails, and placed high enough that the hens have to jump to reach them; this compels exercise.

Use every precaution to have your poultry houses clean before putting in the pullets. If not already done, get to work. A few lurking germs of disease and myriads of mites are liable to be in any neglected henhouse, and will work havoc with the best of pullets. Take two ounces corrosive sublimate and two ounces common salt, mix thoroughly with six quarts of water, and spray it into every nook and cranny of the henhouse. Before doing this, have everything ready, so that every corner may be reached easily. I take an old broom and sweep the walls and floor thoroughly before I start spraying. If a sprayer is not available, use an old broom, in which event a larger quantity of solution will be required. Follow this with a good whitewash. Wash the windows, and allow all the light possible into the building. Take off the old canvas, if you have canvas, as I have, on part of the window frame for ventilation; replace it with new, as the old will be too filled up with dust to be of much use. Just here, in regard to ventilation, when I first started I had a large window in the south end of the henhouse, which, though old, and not the modern style of building, still was well lighted, and apparently warm and comfortable. During the first winter, which was not at all severe, nearly every hen had her comb frozen, which retarded egg production considerably. For the next winter I removed three panes of glass in the top of the window sash, and three in the bottom, and covered the openings with canvas, instead. Since that, although we have had colder weather, not one comb has been frozen.

Be sure that your fowl are free from lice before putting into the cleaned house. To accomplish this, about four days before I clean, I dust all the fowl thoroughly with a powder made by taking one part of crude carbolic acid and three of gasoline, mixed up to a dry, pinkish powder with plaster of Paris. Then, the evening I put the fowl in, I go over them all again. This is