

they were visited in the pasture they gathered around the visitors and seemed to invite being handled.

SPRAYING CATTLE PAYS

During the summer Mr. Stevenson sprays his cattle every night. For this purpose a small hand sprayer is used. "I can go over the whole herd of milkers in five minutes," said Mr. Stevenson, "and I believe that the money and time required for this work is a good investment. The mixture I use kills every fly it hits. I find that flies do not travel from one herd to another. Therefore, when I kill the flies on my herd I do not have much further trouble. Spraying the cattle once a week does very little good. I keep mine saturated almost all the time with the result that they are troubled very little with flies. When the cows are brought up to be milked they are sprayed first thing with the result that we can sit down and milk them with comfort. The mixture I use is one used on the animals in the menagerie at Manillito. It costs me \$1.25 a gallon and a gallon lasts a month. Even in the fly season when flies are at their worst we hardly see a tail switch when the cows are in the stable."

VENTILATOR WORKS WELL

When Mr. Stevenson used to enter his cow stable on winter mornings he frequently found the air heavy, and the ceilings and walls damp. Last year he installed two ventilator shafts which run from near the floor to well above the roof. "These ventilator shafts," said Mr. Stevenson, "have worked like a charm. They cost me only \$30 and they made a wonderful difference in the atmosphere in the stable. The air in the stable at all times now is fresh and nice."

FRUIT A LEADING CROP

A large quantity of fruit is grown on the farm, some 20 acres being devoted to this crop. The trees in a six year old apple orchard, comprising seven acres of Spies and Baldwins, were noticed to be in excellent condition. This orchard is given clean cultivation because Mr. Stevenson believes that young trees grow better when the ground is kept cultivated. The land is mowed about every three years with clover and manure. The old orchard is kept in soil and sheep are allowed to run in it. They eat the wormy apples and keep down the weeds. A little pruning is done every year and a thorough pruning every other year. The trees are sprayed every year.

Mr. Stevenson is one of those men who practices what he preaches. Those who have heard him address institute meetings and who have visited his farm can verify this.

Under-draining on a Prize Farm

Mr. George McKenzie of Thornhill, whose farm won the first prize in the good farms competition, conducted in the vicinity of Toronto during 1907 by The Canadian Dairyman and Farming World, is a firm believer in the benefits of under-draining. At the time the judges visited his farm, the crops on the low land were in excellent condition and showed plainly the great advantage of under-draining. A representative of The Canadian Dairyman and Farming World paid a visit recently to Mr. McKenzie and found him hard at work, with Mr. John Simpkins, of Thornhill, putting in a drain in a depression on one of the high portions of the farm where water was in the habit of accumulating in the spring and after heavy rains. The drain was being dug to a depth of two and a half feet and, although the higher land around was dry, water was running off through this drain in a small stream and thus afforded strong evidence of the need of the drain.

"Most of the drains I have put in," said Mr. McKenzie, "have paid for themselves the first

year. I not only realize more money from the increased crops obtained on lands that are properly drained, but I save time by being able to get on such land with a team, much earlier in the spring each year. When land is not properly drained, work on the farm is frequently impeded by once inability to get on such land, especially when it lies, as is frequently the case, between two higher pieces of land that are dry but which cannot be worked by one as long as the intervening section is wet.

"I started under-draining eight years ago and have done some draining practically every year since. There are now between two and three miles of under drains on the farm. I find that ground that is under drained dries out more quickly than the high ground on the farm and it does not pack down like the rest of the soil on the farm."

AN EXPERT IN UNDER-DRAINING

Mr. John Simpkins, who was assisting Mr. McKenzie, is an expert in under-draining, he having been engaged in this work almost all his life. He dug his first drain in England, 38 years ago. Some 23 years ago, he put in 13,500 tiles on one farm near Thornhill, in one year, and he told



Under-draining on the farm of Mr. Geo. McKenzie, Thornhill, Ont. The illustration shows Mr. McKenzie in the background. The other man is Mr. John Simpkins of Thornhill, an expert in under-draining. See adjoining article.

us that he understood that these drains were doing good work still. He uses a drain spade and a drain crumpler or hook.

When asked what it cost to under-drain a farm, Mr. Simpkins replied that it takes 15 tiles to the rod and that the tiles cost ten dollars a thousand. He was in the habit of charging 15 cents a rod for digging the drain. On heavy clay soil, the cost is a little higher. The average depth of the drains is about two and a half feet. Mr. Simpkins believes that where the soil is a clay loam, the increased returns from the crop usually pay for the cost of under-draining the first year that they are put in.

An Essential of Successful Farming

Henry Glenndinning, Victoria County, Ont.

A good supply of pure water is one of the essentials of successful farming in these days of feeding nearly all that grows upon the farm. On account of the high price of labor, the farmer cannot afford to pump the water by hand for a large herd, nor should dairy cows be turned out in the cold days of winter to drink at a trough once or twice a day. Even if it is just outside the stable, it is a loss of time tying and untieing them

and considerable loss in the milk flow from drinking a large draught of cold water which is apt to chill them and which retards milk secretion.

By using some kind of power to pump the water into a tank and have it fed into a drinking trough before the cattle, with a self-regulating valve, it does away with a great deal of extra work and the animals will be able to drink as often as they please. In this way, there is no danger of them ever taking so much as to cause them to chill. This same tank can be utilized for house purposes and save a great deal of labor in the kitchen. By having the pipes attached to the kitchen range, it will feed automatically and a full supply of hot water is always ready. This same tank will supply the bath room with both hot and cold water.

Silo for Summer Feeding

T. R. James, Middlesex County, Ont.

The advantages of the silo are as great for the summer as for the winter months. It is seldom that we have not a year in which during the summer the pastures become dry and the cows slacken in their milk production. For years, it has been advocated that soiling crops be supplied for the cows during these periods of drought and consequent short pasture. However, there are many disadvantages in growing soiling crops. In the first place, not knowing just when the drought and short pastures are to occur, it is difficult to have the soiling crops at the right stage for feeding when they are wanted. A feeder must have green feed coming on at all times during the summer and there must of necessity be waste as it all cannot be used for soiling.

On the other hand, if the summer feed is put into the silo, it is ready for use at any time. Where soiling crops are depended upon, it is often difficult and disagreeable to harvest them. Should it be raining, or even after a heavy rain, it is anything but a congenial task to handle these crops, to say nothing of the labor required at any time to successfully handle them. If the feed is already stored in a silo, it is ready at all times. No difficulty will be experienced and very little labor will be expended in getting it out and feeding it to the cattle, and it makes no difference whether it rains or shines.

Another disadvantage of the soiling crops is that they change much from week to week in stages of their maturity; besides there is apt to be irregularity in feeding these to the cows. With silage, however, that has been put into the silo during the less busy season of the fall before, it can be fed with ease each day and the quality of the product remains good no matter what the season may be. Should the summer be a favorable one and no soiling crop be necessary, there is no loss when the silo is depended upon for summer feeding, because silage, once put into the silo, will keep from year to year.

The manure spreader removes one of the greatest drudgeries on the farm.—W. H. Taylor, Brant Co., Ont.

It is a great mistake to put soil or sods on top of a gravel road. It simply means mud in wet weather and dust at all times throughout the dry season.—R. N. Scott, Reeve of Smith Township, Peterboro Co., Ont.

Weeds crowd the cultivated plants, depriving them of light and space in both soil and air. If corn or wheat are planted too thickly they cannot develop properly, because the plants do not get enough sunlight and the roots do not have sufficient feeding space. Similar results will be apparent if the extra plants are weeds.—Vernon H. Davis, Ohio State University.