

of soil where no walls other than that which the dirt affords are necessary. If, however, a retaining wall of some kind is necessary, cheap poles and boards can be used, so that no great expense need be incurred for material. The roof, too, may be of earth thrown over poles, but a roof of this kind will need some sort of thatching in order to make it shed water. It would be better to have the roof made of boards that break joints, or if a more permanent structure with less regard to cost is intended, the roof may be shingled.

It is important that a dry place be chosen, and that it be sufficiently ditched around it, and the door should be on the south. There should be an alley-way through the cellar and a ventilator shaft through the roof, and then, if the door is on a level, or nearly so, with the floor, a side hill, with a southern exposure being selected as the site, there will always be good ventilation. Bins can be provided on each side of the alley-way and they should be raised several inches from the ground. The sides of the bins also should not be in contact with the walls, or they will attract moisture. Spouts may be placed at intervals through the roof, near the outside of the bins, through which potatoes may be poured into the cellar.

Such a structure can be cheaply built and will readily enough carry potatoes through until spring without sprouting. Some varieties of potatoes which sprout readily need to be turned over once or perhaps twice during the winter. There is no way to prevent sprouting except storing them in some such way as described and then using the scoop-shovel to turn them over, unless one can have access to cold storage. With cold storage, potatoes can be kept without sprouting until August, which is longer than is needed.

ABOUT HOG CHOLERA.

By PROFESSOR A. V. BITTING, D.S., Indiana Experiment Station, in *National Stockman*.

Professor Bitting has been making a special investigation of hog cholera in that state. He reports the losses for the past year at 670,000 head, valued at \$6,500,000. *Ed. Farmer.*

No two swine affected with the disease die alike. There is nothing characteristic of it. Some die of dysentery, others have lung trouble, others have a sort of rheumatism, and some die of constipation. The diseases of a hog are not far different from those of man. During the excessive hot weather many cases were reported where hogs had died of what was supposed by the farmers to be cholera. It proved to be nothing less than sunstroke—something that is not well understood by the farmer.

I am not prepared to talk regarding remedies. We have been testing patent preparations. About sixty have been submitted, many of them called "sure cures." While the tests are not complete, I hardly believe that there will be one that will be found worthy of the purchase. No less than a dozen of those submitted, when analyzed, have proved to be nothing more than the government formula, and I must say they were about the best.

The government formula is very cheap when the farmer buys it as such. Eleven pounds can be put up for \$1,

and it is about as good a remedy as I am yet able to suggest. The formula is as follows: bicarbonate of soda, 2 pounds; hyposulphate of soda, 2 pounds; sodium sulphate, 1 pound; sodium chloride, 2 pounds; sulphur, 1 pound; charcoal, 2 pounds; black antimony, 1 pound. The best way to give it is in the slops, twice a day, estimating one tablespoonful for every 200 pounds of stock. The patent preparations composed of these ingredients are sold for exorbitant prices—some as high as \$1 a pound. The use of carbolic acid or kerosene as a spray or in the slops is also very good.

The most essential things are pure water from wells, and to keep the animals away from highways. Hogs should not be allowed access to ponds, creeks or rivers, and they should not be put into fields adjoining highways, or into fields in which hogs having the cholera have been previously enclosed. Most cholera is spread by allowing hogs to get next to highways where cholera hogs are driven along to market. They spread disease, and I know of instances wherein whole stocks have been infected in this way. The bad influence of river water is amply illustrated by the advanced percentage of fatality from cholera in the townships skirted by the principal rivers of the state. It has been found that in the first tier of counties along the Wabash and White Rivers the percentage of cholera deaths for the last year was 28; in the next tier 21 per cent; and in the third tier only 16 per cent.

Another way in which communities are infected is by farmers buying hogs from stock yards. Every stock yard is permanently infected, and no matter how healthy the hog may be when he enters he will leave it bearing the germs of disease. Farmers should guard against this, and when they get new hogs be sure they have a clear record. Then place them in an inside field where the ground is high, and where cholera hogs have never been enclosed. Give them good, pure well water, and don't allow them to wallow in puddles. The disease does not wear out of the ground for three or four years, and equal precaution should be taken in having land with a "clean record."

CENTRAL CANADA EXHIBITION.

Sheep.

The exhibit of sheep was not as large as it might have been.

COTSWOLDS.—A. J. Watson, Castlederg, Ont., was the only exhibitor.

LEICESTERS.—There was a little more competition in this section. Messrs. W. A. Rennie and John Kelly, of Shakespeare, were out with good exhibits, and Mr. Baxter, of North Georgetown, Que., had out a few representatives. He obtained first place for aged ram, third place for ram lamb and for aged ewe. Kelly won first place for shearling ram and ram lamb. Rennie secured all the rest of the awards, and also diploma for best pen.

SHROPSHIRE.—John Campbell, Woodville, was the only exhibitor.

SOUTH DOWNS.—The flocks of John Jackson, Abingdon, and Robt. Shaw & Sons, Glanford, were the only ones present. Mr. Jackson's winnings were first and third for aged rams, first and second for shearling rams, first for ram lamb; first, second, and third for aged ewes; first and second for shearling ewes; first for ewe lamb; and diploma for pen. Messrs. Shaw secured the other awards.

OXFORD, SUFFOLK, AND HAMPSHIRE DOWNS.—Where two or more breeds are judged together it is a difficult matter to do justice to each breed. In this instance Mr.

Kelly secured for his Hampshires first for aged ram; first for shearling ram; second for ram lamb; first for aged ewe out of a ring of six entries; first and third for shearling ewes out of another ring of six entries; first and second for ewe lambs, and the diploma for best pen. The rest of the awards went to Peter Arkell for his Oxfords.

DORSET.—Major McGilivray, Uxbridge, had out his flock in good shape, and Mr. Bowman, Guelph, had forward a few animals with which he secured good places.

MERINO.—Robt. Shaw & Son, Glanford, was the largest exhibitor. Mr. Cummings had a few, and secured good places.

FAT SHEEP.—Mr. Kelly had forward the only representatives of the long-woolled sheep, and Mr. Campbell the only short-woolled ones.

Swine.

BERKSHIRES.—Geo. Green, Fairview, had forward the herd that had been so successful at the other shows, and won here again. He secured all the first places and lost two second to Reid & Co., Hintonburg, who had out a few good animals, but not good enough to win first places in such extra strong company.

YORKSHIRES.—The exhibitors were Jas. Featherston, Streetsville; J. G. Clark, Ottawa; and Mr. Ross, Douglas. The latter had out only three animals, an aged boar on which he secured second place, and two sows under six months which were awarded first and second places. J. G. Clark made a few entries, but secured a prize on each. He showed the best yearling boar, a right good one; his year over six months had to take third place, but his boar under six months was placed first. He was not quite so successful with his sows—his yearling sow was awarded third place, and his fine young sow over six months was awarded the same place. He captured the prize for the best litter of pigs. The rest of the awards were captured by Featherston.

CHESTER WHITES.—The battle here was again between Wm. Butler & Son, Dereham Centre, and H. George & Son, Crompton. In the section for aged boars first place went to the Crompton herd, and second and third to Messrs. Butler's good hogs. Butlers had the only yearling boar, and also secured first for boar over six months and first and second for boar under six months. Messrs. George were awarded second for boar over six months. In the female sections the Crompton herd had the lead and secured first and third for aged sows, third for yearling sows, first and second in the two young sow sections, and the diploma for the best herd. Messrs. Butler had to take second place for aged sows with an animal that had won first elsewhere. This threw them out of the herd prize, but having sold some of their best animals at London, they were not quite so strong as they were at the other shows. They also won first and second places for yearling sows and third in the younger classes.

POLAND-CHINAS.—Messrs. Jones, Mount Elgin, had things all their own way, as there was no opposition.

TAMWORTH.—Messrs. George, Crompton, had the lead in this class. Reid & Co., Hintonburg, showed three good, useful animals, securing first for over six months and under a year, and second places for sows one year and over and over six months.

DURHAM-JERSEYS.—Messrs. Butler and Tape Bros. were the only exhibitors. Tape Bros. had the lead for boars one year and over, winning first and second places, Messrs. Butler having to take third place. In both sections for younger boars Messrs. Butler had the lead. Tape Bros. had the two best sows one year and over, and Messrs. Butler was given third for a sow which farrowed shortly after being judged, having a litter of eleven nice pigs. Messrs. Butler was first again in both the sections for young sows, and Tape Bros. were awarded the diploma for best herd.

The Apollo Harp.—One of the most interesting and attractive new things that we have met, in the musical instrument line, for a long time is the Apollo Harp. It combines the capacity of the piano with the sweetness of the zither, and yet is so simple in its system of playing, that anyone with a good ear for music, whether he understands music or not, can master it in a short time. The symphonic-slide attachment is a marvellous invention, not only enabling one to play in different keys and to change the key instantly, but also it renders discords impossible in any key, even for the beginner. We heartily welcome this new-comer as an important musical feature in home attractions.

CORRESPONDENCE.

"KEEP MORE SHEEP."

Editor of FARMING:

SIR,—In regard to your articles on "Keep More Sheep" we would say that they are very apt and timely, and we think that if rightly and sensibly read they should be productive of much good. We think you have opened the subject with some likely hints. Agitate the minds of the people to the fact of a greater and ever increasing trade with Britain in mutton, both live and frozen; the facilities that are likely to be given in way of transportation; the suitability of our climate for wool and mutton production; and how comparatively free we are from disease. Urge the making of this province the centre of attraction for purebred stock of all the breeds. Western men must select their breeding stock from flocks that have had the attention and experience of the best breeders and feeders of older settled countries. Ontario is peculiarly adapted to supply such kind of stock.

Rape is being largely introduced for feeding of lambs. Lambs do well on it, and it flourishes well in this climate. It does to supplement pastures. Wishing you more success in your advice to "keep more sheep," we are yours truly.

JAMES COOPER & SON.

Kippen, Ont.

Editor of FARMING:

SIR,—We quite agree with your articles in FARMING regarding keeping more sheep. There is not now half the quantity of sheep kept here that there used to be. There is no stock kept on a farm that pays better than sheep. Their wool will always pay for their keep, besides being less trouble than other stock. It does not matter how cold they are kept as long as they are kept dry, and there is no animal kept on the farm that keeps down weeds like sheep. They also keep up the fertility of the soil better than other stock. We hope in the near future to see ten kept to every one now. We hope your articles in FARMING will be the means of opening the eyes of farmers to the value of sheep. Wishing your paper every success, we are yours truly.

F. BONNYCASTLE & SONS.

Campbellford, Ont., Sept. 30.

BACKING UP PROFESSOR DAVENPORT.

Editor of FARMING:

SIR,—I was very pleased indeed to read the interesting article on colt-breaking published in your columns of October 5th. It is so plainly and painfully evident that the greater number of horses, both in this and other countries, do not receive the proper treatment required that I trust I may be allowed some of your valuable space to back up what Professor Davenport so ably puts forward.

For many years I undertook this special work on some of the large sheep and cattle stations in Australia, where we very often had as many as ten or fifteen colts in the yards at one time. Naturally, in such cases, we were unable to give as much time to mousing, etc., as we would have wished, the horses in many cases being ridden and given light work the third or fourth day after being brought in.

The first day was invariably spent in the circular yard where bags, paper, the stock-whip, etc., would be brought into action, until at length the youngster, being perfectly satisfied that no hurt comes from them, stood it all quietly and became as tractable as a child—at least, almost! Needless to say that "blood will tell." As a rule, the better bred a horse is, the easier to train. However, a man must use his own judgment, and break a horse in as he would a child, carefully studying its temperament or any peculiarities, the great secrets being kindness, patience and common sense.

On Oondooroo, one of the largest stations in Queensland, there was hardly a horse out of the five hundred and forty carried but would come up to you in any yard at the crack of a whip and the holding up of one's hand—all broken in the way I mention.

Apologizing for taking up so much space in your paper, but at the same time hoping that I may help others to see the force of Professor Davenport's advice, believe me, yours, etc.,

C. T. LONGLEY TAYLOR.

Lakefield, Ont., Oct. 7th, 1897.