

The Bath and West Show.

The Bath and West and Southern Counties Society of England held a very successful exhibition at St. Alban's on May 27th to June 1st. The number of entries, as compared with those of 1895, shows a marked increase. The horses numbered 220, compared with 136 last year; cattle, 574, against 490; sheep, 226, against 212; while in most of the other departments the display was of fully average merit. The total entries of 1896 were 1,850, and of 1895, 1,664.

The draft horses shown at this exhibition are always largely of the Shire breed, of which there was a much better than usual turnout this year. It seems a little strange to us that gray stallions received the championship and reserve awards. The former, Mr. A. P. McMullen's Iron Chancellor, by Chancellor, is spoken of as a massive horse of great width and weight, and is grandly furnished. Lord Rothschild's old Gray Paxton was the reserve number. Young stallions were numerous and good, but mares with foals were not very largely represented. Mature mares without foals made up a beautiful class, headed by the well-known winner, Rokeby Fuchsia, who also was the recipient of the Shire Horse Society's gold medal. Shire fillies were a grand lot.

A small number of Clydes, chiefly from the stud of Lords A. & L. Cecil, made up some nice classes of mares and fillies.

The section for any agricultural breed, for geldings only, brought out a number of very useful animals. It is worthy of note that a Clydesdale won first in the four-year-old class, followed by a horse of the Shire breed.

Hunters made up well in the programme, and Hackneys were quite keen in competition, although the numbers were not large. Notably among the latter were a number of fine mares from the stud of Sir Walter Gilbey, several of which bore away well-deserved honors. No stallions are reported to have been present.

Cattle.—The forty-two entries of Devons, without an inferior beast, is a highly creditable number when the distance they had to travel to reach St. Alban's is considered.

The Shorthorn showing was notably large and good. Mr. G. Harrison's Champion Cup, one of seven entries, was awarded the sweepstakes award, and his stable mate, Lord Boycott 2nd, came next to him in this class. The first prize two-year-old came from the herd of H. R. H. the Prince of Wales. In calves, a pair got by Scottish Archer, and bred by Mr. W. Duthie, had it warm for first place. A prize of £10, offered by the Dairy Prize Fund Committee, for the best pure-bred Shorthorn cow or heifer in milk, was awarded to Mrs. E. Ross for Lady Peggy Farewell, which also won second in the cow class. This being a new feature, just two entries competed.

The Hereford section was well filled, there being in all forty-eight entries. Their robust constitution and aptitude to fatten, together with their uniform color and type, occasioned much admiration.

The Sussex breed demands considerable attention in the Old Land. This was evidenced by an entry of forty-four animals.

Jerseys and Guernseys filled, perhaps, the best sections in the cattle department. A goodly number of the best awards in the former were captured by Sir Gilbert Greenall and Lord Rothschild, who possess great herds. The latter breed made a record by its 71 entries of extraordinary specimens. Especially were the heifer classes to be praised, which indicates that the popularity of this valuable breed is growing.

Aberdeen-Angus cattle never occupy much space at the English shows, but upon this occasion the exhibit was better than usual.

Kerries are becoming more popular in England year by year. Deep milking on a poor soil is certainly a very desirable qualification, which this breed has, probably, a greater claim to than any other. A fairly good representation was present on this occasion. Dexters made an equally good representation in the bull and cow classes, with a large one of heifers.

Sheep.—Leicesters, Cotswolds, Devons, Longwools, Southdowns, Hampshires, Suffolks, Shropshires, Oxford, Somerset and Dorset Horns were all represented. Cotswolds, Southdowns, and Shropshires were notably large in entry and superior in quality. In the last named, 34 entries in shearing rams, 14 pairs of ram lambs, and 13 pens of ewes made up a great show. The well-known flocks of Mrs. Barrs, Messrs. J. Bowen Jones, A. E. Mansell, R. P. Cooper, P. L. Mills, and A. Tanner did most of the honor-taking. The chief among Cotswold exhibitors were Messrs. Russell Swanwick, Hulbert and Craddock, who shared the honors.

Goats and poultry had their places, which were by no means insignificant. Of the latter there were 413 entries.

The working dairy is a prominent feature of this show. Separators and other dairy appliances were at work each day, which, with the 283 competing female buttermakers, kept the cool, sweetly-kept building thronged throughout the days. On one of the days competition was confined to students of dairy schools, when splendid work was accomplished.

The British Dairy Farmers' Association will hold their annual excursion and conference this season at North Wales, June 9th-12th.

FARM.

Observations.

LUCERN.

Dropping in to see Mr. H. Elford, of Holmesville, Huron Co., Ont., the other day, we were especially struck with his very fine crop of lucern, which he was cutting and feeding to his cows and horses. At the time of our visit (May 30th) it was about two feet high on the average, and Mr. Elford, Jr., informed us that they had been feeding it since May 6th. The plot contained about four acres, about half of which had been cut, the remainder being about to be cut for hay. The earliest cut was growing up again very fast and would soon be ready for a second cutting. The soil and subsoil are gravelly loam. This plot was seeded in the spring of 1895 with barley, on land that had been in hoed crops in 1894. For the second year this is, we think, the best stand we have yet seen. Fifteen pounds of seed were put on (sown at same time as the barley), seed falling in front of drill hoes and then harrowed.

Mr. Elford gives his cows all the lucern they will eat twice each day, and is well satisfied with results. He intends to stable his cows all summer during the day. His stable is a model of sweetness and cleanliness. With a clean stable, soiling crops, and housing during the day in hot weather, Mr. Elford is on the way to sound success in dairying. He needs a Babcock milk tester yet to grade and weed his herd, and he intends to have one soon. Mr. Elford and family are most hospitable and genial, and will be pleased to show strangers what they are doing.

A HYDRAULIC RAM.

For an outlay of \$14 Mr. J. W. Hill, of Summerhill, Huron Co., has a No 4 hydraulic ram that is one of the complete arrangements for supplying water for farm use that we have yet seen. A drop of three feet from the spring to the ram constitutes the head, and with this head about 1½ gals. of water per minute are raised to the dwelling-house—about a 30-ft. lift. From this a tank is filled that supplies the stable, hog pen, etc. All the piping, drains, tank, etc., cost Mr. Hill about \$70. He knows how to build a water tank. His is first an ordinary 1½-in. stove cistern (about five feet across and six deep), hooped. The whole is covered with two-inch plank, which extends six inches beyond the tank all around. A curb six inches wide is put all around the outside bottom of the tank, and then boards up and down, leaving a 6-in. air space, then two sheets of tarred paper all around, then another sheeting of inch stuff; a similar false cover on top. Frost has no effect on the contents. Sawdust filling is not to be compared to it, either in efficiency or durability. Mr. Hill has built a very neat little cheese factory on his farm that is completely equipped. His son, G. W. Hill, took a course at Guelph Dairy School in the winter session of 1895.

In many ways we considered Mr. Hill a utilizer of his advantages much beyond very many in the profession of dairy farming.

OBSERVER.

Cultivating Corn.

To the Editor FARMER'S ADVOCATE:

To corn growers the perusal of E. F. White's article in your last number should be valuable information, and in connection therewith I would suggest some points in the cultivation of the corn plant, and if followed out drouth need not be feared:—

1st. Shallow cultivation—not more than one and one-half inches. The reason therefor is that about 70 per cent. of the roots of the plant are between two and four inches of the surface, and if deeper cultivation is adopted root pruning is the result.

2nd. Frequent cultivation to prevent evaporation, as mentioned by Mr. White.

3rd. Cultivation immediately after a rain storm, so as to break up any crust that may be formed on the top of the ground.

4th. Cultivate with flat knives instead of shovel teeth, and what will be found of great assistance: take a 2x6-in. plank (length in proportion to the width of the rows), drive four rows of four-inch wire nails through—one and one-quarter inches apart and slanting back a little. Hang this behind the cultivator and the ground will be thoroughly pulverized. Last year was very dry, but with this cultivation our corn did not feel the drouth, and at no time was the ground dry at one and one-half inches from the surface. Try it.

J. E. G.

Ontario Co., Ont.

Salt as a Remedy.

To the Editor FARMER'S ADVOCATE:

SIR,—Your paper lately contained paragraphs relating to the ravages of the wireworm, etc. My small experience may be of some use. I had seven and a half acres of oats on sod, part plowed last fall and part this spring. On the 20th of May I observed the crop failing, it then being about two inches high. On examining it I found that a dark blue grub about an inch long and the wireworm were the cause of it. One corner of the field they were just getting into. I plowed all up but one acre at this corner and on this I sowed 600 lbs. of salt in two doses at an interval of two days. At this date (June 2nd) the oats are looking well and the ravages of the pests seem effectually stopped.

Huron Co., Ont.

M. GLEW.

Underdraining with Tile -- How the Work is Done.

(Continued from page 183.)

BY R. G. SCOTT.

If a field has a fall of one inch in every hundred feet, it can be successfully tile drained. If the fall is greater, of course the satisfaction will be greater. Some farmers are losing money every year because they think their farms are too flat to tile drain. It depends upon the kind of soil how far apart the underdrains should be laid. If the soil is heavy clay, I want a drain for every 33 feet—that is, a rod on each side of each drain; if the soil is lighter, the drains may be farther apart. But as tile draining is a boon to almost all kinds of land, in dry seasons as well as wet ones, I want to be sure that the drains are not too far apart. With me, the soil must be light indeed if my drains are serving less than two or two and a half rods on either side.

The mistake in many places in the past has been in digging drains too deep. My judgment is that a drain three feet deep in stiff soil is just a half a foot too far down. A mistake might be made by going to the other extreme. If the soil is light and the fall good, a three and a half or a four foot drain will work and draw from a greater distance on each side. But I would prefer to expend upon the extra tile for closer drains than to pay the extra cost for digging deep ones. Of course judgment must be used regarding the depth, but my experience has taught me, for my land, that two feet three inches, and two feet six as an average, is the right depth.

Having determined the matters of depth and width for drains, the question presents itself, How is the drain to be dug? Ditching machines costing from \$350 to \$500 have been used in some places. But these are beyond the reach of farmers in general. Many are afraid of the cost and labor of draining by hand; and there can be no question as to the drudgery of cutting drains in the past. Take a man with 80 or 100 acres that he knows should be drained. How often is it the case that he simply does not start the work because he has not the time, he thinks, to do anything worth while upon it himself? He could do but a little in the spring before seeding, or a little in the fall when the rains come, but it would be so little! Then to hire an experienced ditcher at 35 cents or perhaps 30 cents per rod to have it properly done—well, that is very costly, he concludes; and so Canadian farmers by the score have said that they can't afford it. In this way hundreds of thousands of dollars have not been allowed to come to farmers in this young Dominion.

Notwithstanding this, however, a goodly number of farmers have gone to work with spade, shovel and scoop, themselves, and dug out their drains. Some others have had the work done by professional ditchers. I waited for years, hoping that something would turn up to lessen the labor and expense of digging ditches, but all the while I was under the conviction that I was loser by delay. Finally I made a start with the old-fashioned implements, but subsequently tried an American drain plow, which, though it cost me less than \$20, I now count the best implement on my farm. A team attached to an eight-foot whiffletree furnishes the power. It can be worked to a depth of three feet, a special attachment finishing the bottom for the tile. The depth of cut for each round is regulated by a curved slider between the beam and point. The drain may be started a foot wide and run down until at the bottom it is just wide enough for the tile. Two men and a good team can complete 700 feet of drain ready for tiling in a day.

When the drain is ready for laying, the workman begins at the outlet to place his tile. Special care must be given to fixing the mouth. Instead of having the tile come to the very mouth of the drain, it is better to set down a wooden box, say six feet in length, so that frost and atmospheric exposure will not crumble it. A piece of sewer pipe, if it could be got, would be better than wood for this purpose. With the end fixed to the satisfaction of a common-sense man, he is ready to get the bottom of his drain in shape for water-carrying purposes. If there is any part of farm work that cannot bear slipshod treatment it is the finishing of a bed for tile. The tile next the wooden or pipe end needs to fit, the next tile to that should be up close, the next to fit up to that, and so on. If the tiles are strung along the ground ready for him who is to handle them, he sometimes is satisfied to lay them as he stands at the top and fits one up to the other with a home-made appliance of a handle, say six feet long, with a ten-inch piece at right angles, and bored an inch from the end. With this he can let the tile down, and when down can strike it gently into place. But even with the nice groove in the bottom made by the gouge attached to my drain plow, I like to get down into the drain, fit one tile to its neighbor by hand, and walk on the tiles as the work is being done. It is, to me, delightful employment in view of what is to be accomplished by it.

Side drains running into the main drain have nothing special about them unless at the place where they join. A side drain, or lateral, as it is usually termed, may do with a tile of lesser size than the main. Tile makers want to be up to time with tiles for the junctions. When they can provide all the obtuse-angled pieces called for for the joining places of laterals and mains they will have done a thing that has been lacking in many quarters. A lateral should enter a main at an obtuse