Senator Edwards and St. Louis Show.

To the Editor "Farmer's Advocate":

Sir,—I notice quite a number of your subscribers make reference to the matter of the St. Louis Exhibition, and the part the Canadian stockmen are to take or not to take in that great event, and it seems to me that Canadian breeders and stockmen should freely express themselves upon the subject. For my own part, I may say that Mr. Flatt's recent letter in your columns gives expression to my views upon the subject. I think it most regrettable that a hitch of any kind should have occurred, and, further, I cannot understand the grounds for difficulty. The American Government has the right to make its own customs regulations, and if we are to show in their country we must conform to their requirements, and if any change is sought it must be sought by our Government from the Government at Washington, and not from the fair managers at St. Louis. The conditions, even as they are to-day, are the same as they are for those who show annually at the great International at Chicago, and much preferable to what they were at the time of the Chicago World's Fair. Then those who showed had to go through a ninety days' quarantine in returning to our country. Personally, I have never known any justification for the position taken by the breeders' associations on this subject, and feel that a mistake was made, and I cannot believe that the majority of the Canadian breeders support what was done, and as one of the number I take this, the only means at my disposal, of expressing disappointment and regret at what has been done, and further express the hope that the mistake may yet be remedied.

As a Canadian, if I were permitted to make a suggestion to our American friends, it is that so far as possible it would be desirable to bring judges for the various lines of live stock from across the seas, but even this is a matter for them to decide, and we have no right to complain if they do not do so. Yours truly,

Russell Co., Ont. WM. C. EDWARDS.

Care of the Lambs.

The unusual severity of this winter, and the unusual depth of snow has doubtless prevented the ewe flock from getting the amount of exercise necessary to the uniform production of strong, vigorous lambs, and the probability is that a larger percentage of weak lambs than usual will be born. In this case closer attention at lambing time on the part of the shepherd is imperative if he would save a good share of the lambs. When lambs come weak and unable to find their own way to the fountain of strength, it is well to have the ewe and her lamb or lambs placed in a small pen by themselves, till the lambs get strong enough to follow their mother. For this purpose short, light hurdles, tied together in corners of the pen, answer very well. If a lamb is too weak to stand and suck, and the shepherd is alone, a good plan is to lay the ewe gently on her side, and kneeling on one knee, with the other foot across her neck, draw the lamb on its side, or upon its knees, up to the udder; milk a little into its mouth, and then place the teat in its mouth, when if it is at all likely to live it will catch on and help itself. A heavy feed at first is not the best, nature's plan being a little at a time and often. As soon as the lambs learn to help themselves and follow the dam, it is better for both to move about with the flock, as a little exercise is good for both, and besides there is danger of overfeeding one ewe by herself, causing udder trouble. In the case of twins and an insufficiency of milk, it is often possible to draw on another ewe that has only a single lamb, and has some milk to spare. It is better to try this expedient than to resort to cow's milk, carrying the hungry lamb along until a ewe loses her lamb and may be used as a foster mother. She may be made to take to her new charge by stripping the skin from her own lamb and fastening it on the one to be adopted, tying the ewe for a few days in a small pen where the lamb may be always near her, and holding her if necessary while it sucks. If cow's milk must be used, let it be from a fresh cow, and always from the same cow, fed from a bottle with a rubber nipple attached, and fed in moderation.

When the lambs are about ten days old their tails should be docked, about the second or third joint from the rump. The safest way to do this is to cut up from the lower surface of the tail against the thumb held on the upper surface. This obviates any jerk or shock of the spine. It is rarely that excessive bleeding follows docking at this age, but if it does it is easily stopped by tying a soft string around the stump, which should be cut away next day. In case the ram lambs are to be sold for the meat market, they should be castrated at the same time as the docking is done, and immediately preceding. This may be done when a few days old by clipping off the scrotum and contents with a pair of shears, or by cutting off the end of the scrotum and drawing the testicles out separately, casings and all, with a pair of forceps, or with the teeth, as the Old Country shepherds generally do.

FARM.

Twenty-five Bushels per Acre, or Fifty, Which?

Brother farmers, take your choice: Take your seed oats in the spring from a bin of inferior quality, grown for years from seed unselected, unchanged, and it may be on the same field; scatter it on a seed-bed imperfectly prepared, and you will probably harvest not more than twenty-five bushels per acre of yet poorer sample than the seed sown. On the other hand, select the very best seed you can procure, say from some neighbor who took a prize at the local fair; buy early lest your neighbor's bin happens to be empty when you call on him, or the rush of work prevents you from looking for new seed when seeding time comes; then, having secured the right kind of seed, run the oats through the fanning-mill, turning on a brisk wind, using also a suitable sieve or screen, thus discarding all the lighter grains and selecting the very best for seed. Sow this seed early in the spring on well-prepared ground, fall plowed, and expect confidently at least fifty bushels of first-class oats per acre. You may get more, but my average has been about fifty bushels (on clay loam) when I have fulfilled the conditions stated; and this without manure, or with very slight manuring. This is not an exaggeration, but the statement of facts, verified by my own observation and practical experience.

Ardlethin Premier [3971].

Three-year-old Clydesdale stallion. Imported by Smith & Richardson, Columbus, Ont. This horse has lately been purchased by R. W. Stewart, Aylmer, Quebec. (See Gossip.)

I have spoken of the oat crop as an example, but know also from practical experience that the law and rule enunciated above holds good for the various other farm crops. The average yield of wheat, of barley, of corn, etc., can often be doubled by careful and intelligent methods. The extra cost and labor involved in raising large yields are very slight, as compared with the results obtainable, and it is from the larger yields that the farmer's profits come. The smaller yields are often attended with actual loss. Indeed, the principal items of expense per acre are the same in both cases, namely, the rental value of the land, the taxes, and the plowing; the little extra cultivation and the somewhat greater expense of harvesting the larger crop being all there is to place on the debtor side of the crop account, all the balance being on the creditor side, and clear gain.

W. J. WAY.

Kent Co., Ont.

H. S. Berlanquet, Renfrew Co., Ont.: "Am much pleased with change of the 'Farmer's Advocate' to a weekly, which has been made without any sacrifice of quality."

Proper Conditions of Soil Moisture.

Land may hold water in two ways: as a sponge holds it, in its pores, and as a pail holds it, where it is prevented from running away. The former is the way moisture is held in well-drained soils, whether the draining be done by means of artificial drains or by means of a naturally open subsoil. The latter is the condition of undrained, wet and sour soils. The former is a condition favorable to plant growth, while the latter is most unfavorable.

In order to properly understand the subject of soil moisture, it is necessary, first of all, to understand the needs of plants in this regard. While we are safe in saying that water is the first necessity to all plants, and that nearly all plants require an abundant supply, we must add that it must be of the right kind and presented in the right form. The water held in the pores of the soil is useful and necessary to plants. That which saturates the soil, where free drainage is not allowed, is useless and hurtful. Water, to be of use to plants, must be living water; that is, it must be kept purified by exposure to the air. The water held in the pores of the soil, where free drainage is allowed, is of this nature, being constantly in contact with air, which is also held in these pores. The water held in a saturated, undrained soil is not. The air is prevented from mixing with it, for here the water fills the soil to the exclusion of air. As a result, such water is dead, sour, and poisonous to plants, and the roots of plants will not penetrate into soils that are filled with it. The action of plants toward such water may well be illustrated by the differences in the form of roots of trees growing on high, well-drained soils, and those growing in sour swamps. In the former case, the roots penetrate the soil very deeply; in the latter case, they spread flat upon the surface, refusing to grow downward into the water-logged soil. Briefly, then, we may say that plants, first of all, require a soil to be well drained, since stagnant soil-water is useless to them, and, beyond this, require the soil to hold a good supply of water in its pores. As it is our purpose to deal with drainage later, we will say no more about this aspect of the case at present.

The ability of a soil to hold water in a form useful to plants depents upon the size and number of its pores. Where the particles of soil are large, as in sandy and gravelly soils, the pores of the soil, though of good size, are comparatively few in number, hence such soils are poor holders of moisture, and generally are the first to suffer from drouth. On the other hand, soils consisting of finer particles, such as clays, are, if in a proper physical condition, good holders of moisture, and resist drouth well, since they contain a very great number of small pores. But while clays, if in a good physical condition, are good water holders, they may, if in poor physical condition, lose this power to a great degree. If we squeeze a sponge we reduce the size of its pores, reduce its water-holding power, and the water runs out of it. In like manner, if the size of the pores in a clay soil is reduced, as in the case when such soils are run together or baked, or have become very poor as the result of hard cropping, their water-holding power is very greatly reduced, and in this case these soils may become the very worst in water-holding power, and the first to suffer from drouth. It is highly important that such soils should be kept in good physical condition. Good cultivation, by pulverizing the soil, increases both the size and number of the pores, and, hence, the power of the soil to hold moisture. But something more is needed if the result is to endure. That something is humus.

Humus, or decayed vegetable matter, is a most important factor in the water-holding power of the soil. In itself, it is a great holder of moisture, and, mixed with sandy soils, uses this power to increase their water capacity. Mixed with clay soils, it has a double use. It holds much moisture itself, and, besides, acts to hold the particles of clay apart, prevents their running together and baking, keeps the pores of the soil from being reduced in size, and so increases the water-holding power of the soil itself. It is of the utmost