

viously to require it in order to give the protective capabilities of the soil fair scope. What we propose drawing attention to at present is the much greater cheapness with which drainage operations can now be effected, in comparison with a few years back, in consequence of the greatly reduced price at which tiles can be obtained. Mr. Wm. Gibbs, of Yorkville, is now prepared to furnish pipe tiles of the very best description, at his yard, Yorkville, at the following rates: 2 inch tiles, \$5 per 1000, each 13 inches in length; 3 inch, \$10 per 1000; 4 inch, \$15; 5 inch, \$30; 6 inch, \$50. The 1½ inch tile will be furnished at \$4½ per 1000. The length of all the sizes is the same, 13 inches. It is to be understood that these prices are strictly for cash on delivery. The rates are not more than half what the same description of tiles were sold at in this country two or three years ago, and we believe are quite as low as they are now sold at in England, where labor is so much cheaper, and drainage operations have been reduced by skill and experience to the lowest possible cost. Mr. Gibbs has from one to two hundred thousand tiles on hand, and is prepared to manufacture as many as may be required at the above rates, which we believe afford him only a very slight remuneration for the labor and material employed. There are other manufacturers in various parts of the country, who we presume will soon be able to furnish tiles at corresponding prices, but farmers who at present are unable to obtain them nearer home, if living near any of the railroads, can obtain them from Toronto at no very great cost of carriage. All strong clay lands, whether they appear naturally wet or dry, are benefitted by thorough drainage, as are all lands, heavy or light, containing springs, or subject to overflow of water, and in fact lands of almost every description, except the light and loamy soils upon naturally dry sandy or gravelly subsoils. The winter season, while the sleighing is good, is as favorable a time as could be selected for drawing home tiles to be laid in when field operations commence.

### On Breeding.

#### *Editors Canadian Agriculturist.*

Having noticed in the *Agriculturist* of Dec. 1st, an article over the signature of W. A. C., on the principles of breeding, I consider the sales there laid down all very good, (except the 11th), and I presume few, with this exception, would be found to differ from them. The objections, which I shall attempt to urge are

against the spirit of the article, which in my humble opinion is calculated to make a wrong impression, though not so intended, and it is the more dangerous, containing as it does, so much that is really good, while at the same time it would discourage experiments, the very root of all improvement.

Your correspondent is a little inconsistent in his reasoning, when, in his introductory remarks he says, "We cannot believe we have penetrated beyond the mere threshold of this art," and in the next sentence recommends for a guide "the most successful practice of modern times until further discoveries enable us to add to or modify such as already known." How I would like to ask are those discoveries to which he alludes to be made, if not by experiments in crossing breeds—the only means by which all improvement in the art of breeding has or ever can be effected—surely not by standing still. If W. A. C.'s principles had always been acted upon where would we be in the art of breeding, and where some of our most valuable breeds? And if so much has already been accomplished, what may we expect from the future? Who would be willing to say that new breeds may not be established in Canada equally, if not better adapted to the general wants of the country, than any which we now have? It is not to be expected that new breeds can be established without much care and pains, but enterprise and perseverance might accomplish much.

I have been highly interested in reading the remarks of W. C. Spooner on cross-breeding, containing much valuable information, and which I trust may be the means of inducing experiments that will result in improvements in the art of breeding.

Having commenced crossing the French Merino with the Leicester, I am encouraged to continue, and feel satisfied that they can be made profitable for more than slaughter, although Mr. Spooner alludes to the unsuccessful attempt in England to cross the Merinos and the Southdowns. But where carcass is evidently the chief object, nothing else could have been expected. In connection with this question I would beg to notice your remarks on S. King's letter in the *Agriculturist*, Dec. 16th, when giving the opinion of Manufacturers and not his own. You say, "Few who have studied the theory and art of breeding would concur with him," and dispose of his question by referring him to the letter of W. A. C., which I presume embodied the views of the Board in their decision not to allow a prize on the cross referred to. As I was the exhibitor, and consequently an interested party, allow me to ask one or two questions. As rule 11th is all that has any bearing on that point:—1st. What facts are there adduced to prove his statements? 2nd. If those are the views on which the Board decided "that no cross of distinct breeds should