

up and doing, and thus trying to mend matters. Indeed, this is the most perfect antidote for grumbling that has ever been discovered. Those only who have tried it know how well it works, and if those who have not tried it would only do so once, they would never, like the man whose cart was stuck in the mud, cry to Hercules to come and help them, without first putting their own shoulder to the wheel.

The present wave of depression will not last forever. As surely as the tides rise and fall, so surely do prosperous and adverse times come and go, and if stockmen and dairymen can assure themselves that they are doing better even than those in other lines of agriculture, they have reason to be thankful.

### Dominion and Industrial Exhibition.

The Dominion Exhibition for this year will be held in conjunction with the Industrial Exhibition of the city of Toronto, and the managers of the latter institution are putting forth all their energies to make the joint effort a complete success. The grant of \$10,000 which accompanies the Dominion Exhibition has enabled the Industrial Association to largely increase the value of the prizes, especially in the live-stock and agricultural departments, and large additions and improvements, involving an expenditure of \$40,000, are being made to the already commodious buildings. The Secretary, Mr. Hill, states that the entries to hand quite exceed those of any previous year, justifying the confident expectation of the managers that in the merit and completeness of the display of agricultural products of the country the coming exhibition will surpass all its predecessors. Apart from the exhibition proper, a series of novel and amusing attractions has been provided, consisting of displays of fireworks, scientific representations of naval and military engagements, performances with balloons, feats of horsemanship, and other specialties. The Governor-General will formally open the exhibition on Tuesday, 6th of September.

The idea is pretty general throughout the country that the Toronto Industrial Exhibition Association is a joint stock concern, and that the profits derived from the holding of exhibitions go into the pockets of the promoters. Such, however, is not the case. The Association is composed of gentlemen elected each year from various agricultural, horticultural, live stock, poultry and dairymen's associations in the province, and from the Toronto Board of Trade and the City Council. Each of these bodies sends delegates to the annual meeting of the Association, and from these delegates the twenty directors are chosen. The Association holds a charter from the Provincial Government, which charter, among other things, directs that no member of the Association can occupy a position in connection with the Association to which emolument is attached, and that all the profits derivable from the Exhibition must be expended from year to year in improving the grounds and adding to the accommodation. The grounds are the property of the city of Toronto, the Association having a lease of them for two months in each year, for the purpose of holding the Exhibition. Two officers only, the secretary and the treasurer, receive salaries. All the directors give their time to the enterprise gratuitously, and some of them at considerable pecuniary sacrifice. With the exception of two small grants from the Western Dairymen's Association and the Dominion grant of this year of \$10,000, no pecuniary aid by way of grant or bonus has ever been received by the Association from any government or corporation, or from any source whatever except from voluntary subscriptions received from the citizens. The Exhibition has been

run from the first entirely on its merits as an institution for the advancement of agriculture and the industrial arts, and it rests its claims to the support of the public on its proved ability to bring together a complete collection of the best products of the farms, the factories, and the other productive industries of the country, and provide the necessary facilities to induce the public to come and examine, and study, and learn, and be benefited by the teachings of the great object lesson thus afforded. The Exhibition opens on the 5th September, and continues till the 17th. Those who fail to attend it this year will undoubtedly miss an exhibit the extent and value of which has never been surpassed in Canada.

### Feeding Swine.

The Ohio Agricultural Experiment Station has been making an experiment in feeding swine with the object,

1. To produce flesh at the least cost
2. To produce greatest weight in the least time, cost not to be considered.
3. To produce best edible lean meat regardless of cost and time.

The first lot were fed corn meal cooked with twice the amount, by weight, of skimmed milk; the second, pea meal cooked with twice the amount, by weight, of skimmed milk; the third, equal parts by weight of corn meal and pea meal, cooked with a quantity of whole milk, equal in weight to the two kinds of meal.

The following are the conclusions of Mr. W. S. Devoil in his report

- (1) That corn meal and skimmed milk is the cheapest of the three rations tried.
- (2) That pea-meal and skimmed milk is the best of the three rations tried for rapidly increasing the weight.
- (3) That the ration consisting of pea-meal, corn-meal and whole milk is least valuable of the three for any purpose for which the experiment was undertaken. For the production of lean meat also the first ration is the most valuable, the second ration next in value, and the third the least valuable.
- (4) That for the production of fat within the body cavity (omentum and leaf fat) the second ration appears to be the best adapted.

In regard, however, to the cost of production the conclusion reached will not be a safe guide for Ontario conditions. The corn-meal was estimated at 80 cents per 100 lbs., and \$1.67 per 100 lbs. for the pea-meal. Here in Ontario we can get peas oftentimes cheaper than corn, under these conditions the ration of pea-meal and skimmed milk would be the most favorable in every way, except in the production of a larger quantity of fat in proportion to the lean.

Our own Ontario Experimental Farm might do good work here. The pork merchants are calling to us for pork with a large proportion of lean to the fat. Will our good college tell us, as the result of experiment, how best to produce this?

### The Advantages of Soiling.

BY JOHN I. HOBSON, MOSBOROUGH, ONT.

This very practical paper was read by Mr. Hobson at several of the farmers institutes held last winter. The lesson which our farmers have been taught by the drought of the past season will surely not be unheeded by them in time to come, as soiling crops are especially valuable in such a season.—ED.

As the quantity and quality of crops depend upon the fertility of the soil, so does the condition of our domestic animals depend upon the quantity and quality of the food which the soil produces.

The variations in domestic animals which have tended to produce the best breeds of sheep and cattle, have been largely brought about in two ways—judicious selection of animals to breed from and liberal feeding coupled with careful treatment in other respects. There is but little use in studying up pedigrees and buying high-priced animals unless the farmer at the same time feeds liberally. There is no use at this day of enlarging upon the advantage it is to any farmer to have a correct knowledge of the art of feeding, or to say much about the influence of food in developing the valuable characteristics in the meat-producing and milk giving animals of the farm. The principles of feeding as practised by our best stockmen are no longer of an experimental character, but are based on the correct laws of science. Successful breeders and feeders have not now to learn the importance of keeping their stock warm, and comfortably housed in the winter, and protected during the changeable weather of spring and fall, and that they thrive best when they have a full supply of nutritious food during the whole year.

Now, if what has been stated is correct, it may be well to consider what is the best way of bringing about those desirable results. And my purpose is to try and show in this paper that soiling, when properly carried out, would be an important factor to that end, and would as well in these days of keen competition, by greatly increasing the productiveness of the soil, place us in a better position to hold our own with the competitors of other lands. I may here say that in any papers which I have written for these institute meetings, I have been careful not to advocate any system which I have not in a greater or lesser degree practised myself, or, in other words, I have kept clear of what might be termed mere theory. I have noted carefully during the past seven years in all parts of Ontario the practice and the system followed by the most successful stockmen and farmers whose farms I inspected, and found that whenever a partial system of soiling has been practiced, that in all cases the results were most satisfactory, and in no case did any farmer speak of returning to the old plan of depending solely upon pastures for summer feed. And it is to be borne in mind that the experience of these is in accord with that of many of the most progressive farmers in other countries where agriculture occupies a leading position relatively with other industries. We find that the German and French beef-growers adopt largely a strict soiling system and produce a higher average weight at a given age than people who depend alone on pasture. We find that Stewart, the author of the best work we have on cattle feeding on this side of the Atlantic, states that the English have adopted a system of beef-raising upon a partial pasturage—soiling and grain-feeding combined, and the result is an average much greater than is produced by pasturing alone. In the Eastern States it is very commonly practiced, and with the most satisfactory results. And on all high-priced land, near towns and cities, both on this continent and Great Britain, it is the universal custom to feed the cows which supply these places with milk, on the soiling system. I may still further say that any number of individual cases could be given establishing the position which I have taken, that on the best class of tillable land in Ontario a partial system of soiling can be carried on with the most satisfactory results, and with largely increased profits as compared with pasturing. One or two cases it may be well to mention. Some years ago, when driving through the county of Oxford with Mr. Drury, M. P. for one of the ridings of Simcoe, we called at some of the cheese factories, among others one at Innerkip, and wishing to know a little more about the cheese industry, we called on Mr. Malcolm, a most intelligent farmer living near by. When speaking of the season's returns he informed us that his whole herd of cows yielded an average of \$60 in the season. This being so much higher than the average of even the best herds, we wanted to know how this was brought about. I have never forgotten his reply. He said that, in the first place he selected good cows, and then he was careful in supplying them during the whole milking season with an abundant supply of milk-producing food. Again, near the town of Simcoe we inspected another large herd of cows, kept for supplying the town with milk. From this herd was realized even a much higher average. The same thing again—soiling was the secret of the success. Just one more instance will I mention. Mr. McKellar, on the Richmond road, near Ottawa, who sends in milk to Ottawa of the annual value of from \$8,000 to \$10,000—the average annual returns from