

perplex in many instances the most gigantic minds. With the slipperiness of an eel and the elasticity of air, like the wild man of Godara, they so often refuse to be chained by human agency. Yet some of them have been chained, and it may be that all of them will yield to human power before the world will sicken and die. Many are the facts that have been determined in agriculture beyond the possibility of a doubt.

It is an indisputable fact that certain rotations are advantageous, and that continued cropping without returning anything to recuperate will quite exhaust the soil of the elements of fertility, but oh, the extent of the unknown that lies in the great depths of the unexplored, who can even surmise? Who would not like to know more of the mysterious principles that govern breeding, and who does not hungrily await further revelations regarding the nature of the laws that control the various changes of the weather?

We do not charge patentees with any injustice to the race when they hedge their discoveries with certain rights as an assurance that the discoverer shall be rewarded for his skill. If but one nugget of discovery is chipped from the flinty mass, the man who struck the blow deserves to reap the reward. The benefits of their discoveries often flow through unnumbered channels to the race, and although the patentees may reap a fortune, the world reaps one far larger.

But there are oftentimes facts and methods known and practised by a few, or even by one individual, that are of much service to the race, if these methods were but made public property, through the medium of the press. Sometimes they are withheld by the timidity or modesty of those who practice them. Sometimes because they are not accustomed to write, and occasionally (must we say it), from the selfish fear that the world will be made the wiser, and through the adoption of these methods, in some slight degree, interfere with the profits of the possession of such knowledge.

If there is one individual among the thousands of our patrons who possesses one iota of knowledge which might prove of advantage to his fellows, we would say to him in all earnestness, by all means make it known. A legacy of this nature is a great gift to mankind, and the consciousness of having been the instrument of contributing something to the world's great store of useful knowledge must be sweet indeed. We hope that neither timidity nor natural reticence, nor consciousness of defective expression, nor any other influence shall allow our friends to consign to oblivion one fragment even of useful practice, that would be advantageous for others to know. And we shall fondly hope that no Ananias-like methods of disclosing discoveries or experience shall be adopted—keeping in reserve a part—a course of action that could not be adopted by one of large sympathies.

Farmers usually profit immensely by the interchange of experiences. Even when these experiences are local in their nature much good is done. Thus it is that farmers' clubs in townships even have done an important work, and agricultural institutes may be made a means of imparting very much useful knowledge. Our patrons cannot please us better than by rendering the JOURNAL in a sense one vast farmer's club, at which our agriculturists of all the Provinces shall meet on leisure evenings to interchange experiences and to compare notes.

Some facts may be disclosed that seem of more importance to those who write than to those who read, but they will find their place ultimately in the proper niche of the estimation of men. It is very remarkable

how truly the balances of common sense do their work, and hence there is no fear but that the practice of years will stamp those new disclosures with their true value. On the other hand discoveries that seem of but little account to their possessors may prove of much advantage to the race, and should therefore by all means be given to the world.

### Providing Warmth for Stock.

In an experiment conducted by Prof. Shelton, of the Kansas Agricultural College, last winter, in feeding 10 Berkshire pigs, of which 5 were kept in a warm barn basement and 5 outside, it was found that 2877½ pounds of maize fed to those inside gave an increase of 604 pounds in the weight of the pigs, and 2844 pounds fed to those outside gave an increase of but 478 pounds. During the coldest period the pigs in the barn ate 1086½ pounds of maize and increased in weight 189 pounds, while those in the outside pens 997 pounds and increased in weight but 87 pounds, thus showing that during this period the pigs in the outside pens expended one-half of their feed in defending themselves from the cold.

The loss to our farmers from inattention to the requisites of warmth in keeping stock in our cold Canadian winters is simply enormous, more than most of us have any adequate conception of. It is probably putting it mildly to say that one-fourth of our feed during the cold period in the wintering of cattle and swine is sacrificed on the altar of inattention. The offering that is thus spontaneously given to the elements would very soon fill the country with basement barns to overflowing.

As things are, basement barns cannot be built in very many instances for some years hence; but much, very much may be done in the meantime to mitigate the evil. Every pen or building occupied by pigs or cattle with a floor may be banked with manure as cold weather approaches, as no stable can be kept warm with cold draughts blowing beneath. This must be early removed at the approach of spring, or the floor will soon rot. Every wall so occupied may be lined inside with boards (any kind will do) on the studding, the intervening space filled in with sawdust, or, more simply and sufficiently effective, chaff, or even straw. The objection is that harbors are formed for rats and mice, which may be true, but of the two evils, the rats are surely much the lesser.

The danger from cold seldom comes from above, yet it is necessary to pay some attention to the state of the loft, lest cold currents blow down upon the animals in their stalls.

It is not only very unprofitable to allow animals to suffer from cold, but it is exceedingly inhuman. A farmer travelling, passes a night in a hotel with insufficient covering, while vainly trying to sleep. In the morning he pounces upon the hotel-keeper with the ferocity of a starved wolf, and yet a score of his cattle at home have been lying shivering all the night, with no one but himself to redress their uncomplaining wrongs. And this occurs in the case of the poor animal dependents not one night, but during every frosty night of the slowly passing winter. The awful accumulation of guilt in this one respect higher than the Rockies. It is only overtopped by that Himalayan height of enormity, the unfeeling cruelty that allows whole herds to die of untold sufferings on the storm-desolated ranges of the West. Wake up, ye slumbering embers of humanity in a large-souled nation, and obliterate the guilty stains!

Set to work, ye sturdy farmers, and build basement barns; we do not say build them, if your farms are deeply mortgaged, although Mr. Laidlaw, of "The

Fort," Victoria road, argues that it would pay farmers to borrow money to be expended in making their cattle comfortable, and we feel that, where judiciously expended, his idea is correct. But without borrowing capital a beginning may be made. Stones do not moulder, and these may be gathered at fitting intervals. As is being practised by Mr. Patteson, of Eastwood, they may be brought by the return teams, while conducting many operations of the farm. Sand does not decay; it may be drawn. Lumber sawed one winter, if carefully piled, will keep two or three years. In this way get ready for the work.

In the meantime prepare for the approach of next winter as indicated above. In early autumn make sure that your buildings are made warm. Beware of attending too many exhibitions. These in a very marked degree are making inroads on the farmer's husbandry at a very valuable period of the year. We do not mean that no fairs should be attended. By all means attend one of the large ones, and it may be in your county or township fair; beyond this be chary of the time you spend at them.

There is a natural tendency in the human mind to defer, which seems constitutional; but whatever else is deferred it should not be attending to the comfort of live-stock in winter. The preparation of the building to which we have referred cannot be well done after winter has come; and if not done, a whole winter attended with more or less of privation and consequent loss has to be undergone by the stock. It is well when we can hail the advent of winter in the attitude with which we receive an expected visitor for whose coming we are fully prepared. How much more pleasant such a meeting than being roused at midnight by the knocking of a stranger, whose arrival reminds one of the manner in which stockmen are often surprised by the arrival of the ice-king.

### Colonial Exposition in London, 1886.

We hope that our countrymen are keeping it well in mind that there is to be a Colonial Exposition next year in London, England, simultaneously with an exhibition of American products. Other colonies are at work, and it becomes us to retain the prestige which, time and again, we have secured when competing with the world.

The Legislatures of the respective Provinces will surely do all in their power to encourage those who may be minded, or who may be persuaded, to exhibit.

### Amongst our Friends.

"Am very much pleased with the JOURNAL."—Wm. G. Veale, Braemar.

"I think your JOURNAL the best paper of the kind I have yet seen."—M. Hoover, Cashel.

"I am prepared to venture a glowing prediction for the future of the JOURNAL. I have been minded again and again to write the editor who wields so graceful a pen, and who finds time to put so much personal work upon the JOURNAL, to give expression to my admiration of the talent and energy displayed in its management."—Rev. J. L. Robertson, Cooperstown, Vernango, Pa.

"I wish you every success. Certainly your paper so far has advanced wonderfully."—W. S. Hawkshaw, Glanworth, Ont.

"I am glad to see that the LIVE-STOCK JOURNAL continues to make such rapid progress. It is, in fact, one of the most interesting and valuable agricultural papers to come to my hands, and I think the present number (February) is one of the best you have yet produced. Hope the present year will see as much ground gained as the last one has."—George Hendry (Daily Free Press), Aberdeenshire, Scotland.

"I am very much pleased with the general get up of the JOURNAL. The cuts are really creditable."—Arch. Kennedy, Vernon.