

Should We Support the Provincial Exhibition?

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—There is a growing feeling that our Provincial Exhibition should be stationary, and that the moving about from place to place is an unnecessary expense and therefore the centralizing of the exhibition in one place would do away with a great deal of the expense, and that the buildings and accommodation generally would be better, which is all true. But is the Provincial Exhibition for no greater and deeper use to the Province at large than this? The vital question in my mind is, would our Province continue to advance with the times in which we live in regard to our stock interests as it has done in the past, in such a case? I ask could the Provincial centralized be made so attractive to the extreme limits of our Province that new exhibitors would be drawn to it? If Toronto, Guelph or Hamilton, or any other central point were chosen as a permanent locality for the show, would the people of the Ottawa valley in the extreme east, or those of Essex and Kent in the west, take the same interest in it as if it made the circuit of these people every five or six years? The fact of the Provincial Show being brought into their midst would have the effect of bringing the farmers and their sons out, when they would learn what the real resources of our country are, which would stimulate them to come forward and try what they could do in the same line.

Again, is there any likelihood of this influence being felt in the same degree by those outlying districts from a central show in any one of the above mentioned cities? Would not the extra expense of coming so far tell materially against the more remote districts for all time to come, to say nothing of the hardship stock suffers in the long transit from one place to another, which outside of a radius of about seventy-five miles would be felt by all?

Another plan spoken of is to divide up the Government grant among the various central fairs of the country. This would not mend matters in the least, as the season is so short that most of these would hold their fairs in the same week. Exhibitors would then be effectually prevented from competing with those in other parts of the Province, so that we could not judge of the state of perfection to which any particular line of industry was being brought. The only remedy is, that one particular fair should move from place to place through the whole length and breadth of the Province, and give all parts of the country an opportunity of seeing what is being done. The money for keeping up the Provincial Show comes from all parts of the Province alike; therefore all parts should share alike, and rather than hamper the Provincial we should strive to help it on by seeing to it that we have honest and capable men on the board of directors, and rather than take from the grant, add to it. Twice the amount spent in this way will be a direct benefit to the country by developing its resources to their fullest extent.

WM. McCRAE.

Janeville, Guelph, Ont.

Restoring and Maintaining the Fertility of Soils.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

Will not some of your wise men of the east come to the rescue of such agricultural workers as are groping after facts, which shall denote the limits of profit in efforts to improve lands which need it?

After fertility has become impaired below a certain standard, their cultivation at least cannot be profitably continued, without the turning under of green crops and the liberal use of manure and of artificial fertilizers. So much we know already only too well. The usual practice with such lands is to keep them in grass as long as possible, looking to profit from the rearing and sale of animals, and the sale of their products. But in the 34th Annual Report of the Mass. Board of Agriculture for 1886, page 80, we are told that of the vast acreage of sterile lands in that State, which have long been abandoned to foul growth, a great part was formerly in "dairy farms," "good pasture land." One speaker declared that "within his recollection, they had been very productive lands," and he "believed that their loss of fertility was owing to the fact that they were fed years and years as pasture fields for dairy cattle." "They made large quantities of cheese and butter; they raised their cattle. There was a great deal of beef fattened in Berkshire

county," etc. So that even the droppings of animals, very much of it, no doubt, grain fed, nor the nutrition obtained by the herbage from the atmosphere and rains, sufficed to prevent absolute exhaustion and barrenness. So we are not helped much, at least not in all cases, by dairying.

Now, an agricultural teacher and close observer, a practical man of extensive and successful commercial experience with soils, gives his testimony as to manures; and admonishes us with earnestness and entire positiveness: "Manure must be freely applied. I never yet saw a soil of any kind that had borne a crop of vegetables that would produce as good a crop the next season, without the use of manure, no matter how 'rich' the soil may be thought to be. We believe the common practice of top dressing asparagus beds in fall to be a very wasteful one, in districts where it is not necessary to provide against severe freezing, for a plant is then dormant, the juices of the manure are either evaporated or else washed down by rains below the roots. All our practice, corroborated by direct experiment, has convinced me beyond all doubt that manures, either liquid or solid, organic or inorganic, are unprofitably employed when applied to plants in the dormant state." So, although we are instructed to use manure liberally, we must wait until the last moment to apply it.

Again: "Necessity for heavy manuring." "The crop of wheat is never expected to pay for the manure. It is the after crop of grass that we are laying the foundation for; and here is where the profit of the heavy manuring comes in. I have put on as high as twenty-four tons per acre." He goes on to say: "It is a delusive belief that manuring or tillage, no matter how good, will ever bring a poor thin soil into permanent fertility, unless the application of manure is yearly continued; for no ordinary amount of manuring or cultivation will maintain the fertility of any soil over two years, as it will then either have been taken up by the crops growing on it, or else have been washed down below the depth at which roots penetrate."

These statements are made on authority as weighty as any can be on such points. It seems, therefore, to be a race of diligence between the manure and the plant. The manure hastens to percolate through the soil under some cogent impulse, and if there is not sufficient hungry plant-life in readiness to appropriate it before it sinks, the loss is beyond control. And yet not only "annual" but "heavy" manuring is indispensable, if paying crops are expected.

Now the soils referred to were already in high condition. It must be assumed that they were well supplied with vegetable matter, and were, no doubt, selected with reference to the supposed tenacity with which they would "hold improvement." There appears, therefore, no escape from the conclusion that as to manures, the soil serves as little more than a filter.

Those of us who have been educated to believe that fertilizers became an integral part of the soil, amalgamated and homogeneous with it, mechanically and chemically, and that the retention of manure was dependent upon the character of the subsoil, will not relish what Sir John B. Lawes declares to be true in the matter of the "exhaustion of fertility" by cropping. Hear him! "While the restoration of the carbon and nitrogen, which a soil originally contained, can only be effected by very costly processes, for instance, ploughing two hundred tons of dung upon an acre of land, the condition of the land could be improved. A large crop could be grown every year by various processes. We use the word condition as signifying land which, by reason of artificial manure and the feeding of cake, is yielding much larger crops than the land is competent to yield from its own natural sources. My endeavor was to draw a distinction between the restoration of lost fertility and condition; the two are quite distinct in my mind." And Professor Lawes explains that by the use of "chemical salts" he has grown every year, for forty years, such and such large crops. Now (if he is understood by the writer) you can, by importing sufficient plant-food into the soil, grow pretty much what you please. But we think the considerations previously stated ought to be influential in determining the question of the financial economy of such undertaking.

Now, Mr. Editor, after hearing from these great agricultural lights, those of us who have been trying and hoping to improve poor lands, become very decidedly "pricked in our hearts," and are disposed to cry out, with the Apostles, "Men and brethren,

what shall we do?" Are we really engaged in such a work of moonshine as would appear from these promulgations? Large interests are involved in the solution of this question. The capital absorbed in North America in this undertaking exclusively must be countless millions, to say nothing of the results to those engaged in its prosecution.

INVESTIGATOR.

Virginia, U. S. A.

Nutritive Feeding Value.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Will you kindly publish the ascertained nutritive feeding value of rye straw as compared with wheat and oat straw?

Why are feeders so constantly recommended to feed ground oats? The miller's toll is costly, to say nothing of the cost of hauling and handling. The whole oats are, it would seem, sufficiently digestible. What is gained by grinding them or lost by not doing this?

Virginia, U. S.

PIEDMONT.

The following is the analysis given by Stewart, of those kinds of straw referred to:

ORGANIC SUBSTANCES.						
	Water	Ash.	Albumenoids.	Fibre.	Other Carbo-Hydrates.	Albumenoid Ratio.
Rye Straw.	14.3	4.1	3.0	44.6	33.3	1.26.85
Wheat "	14.3	4.6	3.0	40.0	36.0	1.26.63
Oat "	14.3	4.0	4.0	39.5	36.2	1.26.11

DIGESTIBLE NUTRIENTS.					
	Albumenoids.	Carbo-hydrates including fibre.	Fat.	Nutritive ratio.	Value per 100 lbs.
Rye Straw.	0.8	36.5	0.4	1:46.9	35
Wheat "	0.8	35.6	0.4	1:45.8	37
Oat "	1.4	40.1	0.6	1:29.9	45

The nutritive ratio is, rye, 1:46.9, wheat, 1:45.8, oats, 1:29.9. The albumenoid ratio is simply the relation between carbo hydrates and albumenoids, fat being reduced to carbo-hydrates, by multiplying by 2½.

The answer to the second question depends largely on the adjuncts fed along with the oats, and the animals to be fed. When horses are fed cut hay, it is better to have the oats ground and fed mixed with the hay, which precludes any waste of the former; but when fed long hay, it is questionable if it will pay to grind the oats. The same may be said of sheep and young calves. When fed to cattle on cut straw or hay, they are better ground, as then they are ruminated along with the former. When they have to be drawn a distance to and from the mill and the toll allowed, the profit of the process in any case is doubtful, but when ground by wind power at home, they can usually be fed more profitably when ground.

Ground Linseed and Oilcake.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—My greatest concern now is where to buy oil-cake, ground or unground, or unpressed ground linseed for stock purposes at a reasonable rate. Dealers here charge at the rate of \$40 per ton, which is at least \$15 too much. Now, Mr. Editor, where in Ontario or Quebec can this commodity be obtained at a reasonable price? Please give me the address of the largest oil mill or the largest linseed dealer in Ontario or Quebec, that I may be able to get this necessary article of stock food at a paying or wholesale rate.

WM. H. PRICE.

Butternut Ridge, N. B.

J. & J. Livingstone, Baden, Ont., own a very large mill, we think it is, perhaps, the only one in Ontario. There is one in Manitoba, but we cannot give the address. It is not to the advantage of those who manufacture oilcake or linseed meal to keep themselves so carefully hid that editors even cannot find out their whereabouts.—Ed.