



HON. THOS. BALLANTYNE.
Foremost among the founders of Canadian Dairying.

all the States. There are many reasons for believing that more than 5,000,000 head of sheep and lambs were fattened on rape pastures alone in the year 1900, in this country, to say nothing of the other uses to which this plant has been put in providing food for other lines of stock, as cattle, swine, and fowls. The seed is now imported from the Continent by individual seedsmen in carload lots. It would not be possible at the present time to predict the extent to which this plant will be grown for forage uses over the entire continent.

4. In 1893 the writer began experimenting in growing summer forage for sheep—that is, in growing for them pastures or green food other than grass. The idea at the time was to cut the food and feed it to the sheep folded hard by where the food grew. This work was begun at Guelph, but during that summer the writer returned to Minnesota. The authorities on your side, in their wisdom, sold the sheep and broke up the experiment. This work was taken up again in Minnesota as soon as practicable, but with the difference in plan that the sheep were made to graze the food grown rather than to consume it in the soiling form. It was found that in this way 100 sheep and lambs could be abundantly grazed the whole summer season on ten acres of land not naturally fertile. Already food is being grown more or less for sheep on this plan, in various States and Provinces of Canada, from the Atlantic to the Pacific and from the Great Lakes to the Gulf of Mexico. The reader will pardon the personal character of these illustrations, except the second. They are given because of the certainty of the knowledge of the facts stated.

The avenues are many through which financial gains can come to a Province as the outcome of correct agricultural teaching and judicious experimentation. It would doubtless be correct to say that more fertility is wasted, say in Manitoba, every year than would pay the entire cost of an agricultural college. This, in a country whose interests are almost entirely agricultural, is peculiarly harmful. It is just about on a par with the course adopted by the spendthrift who is not content with drawing all the interest which accrues from his bank account, but also draws from year to year on the principal. The agricultural college would not at once stem the tide of this regretful waste, but its influence would be felt in that direction. In the production of live stock the teaching of the agricultural college would be simply beneficial in connection with the experimental work conducted there. The young men from the farm could be instructed in the characteristics of all the useful breeds of domestic animals. They would be drilled in judging them. They would be instructed in the correct principles that govern animal breeding. They would be informed as to the most approved methods of managing farm animals from birth to maturity. And they would be shown the immense advantage of improving common stock through the simple medium of up-grading. The information thus obtained by a young man in the course of two or three winters spent at such a college would be more and superior to what he could glean in a lifetime in the absence of such aid. Any institution which would aid in any considerable degree in impressing upon Western farmers especially the great importance of keeping their

soils well supplied with humus would bestow a gift of untold value. A similar result would follow from showing the farmers the incalculable worth of a simple, intelligent and practical rotation. The trend of the teaching of such an institution would be in these directions, and the same would be true of the benefits accruing. Likewise, great good must result from the departments of forestry, horticulture and entomology at such a college. The harvest accruing therefrom would be progressive and never-ending while the college was manned in a way that would enable it to do efficient work.

There are States and Provinces in which the benefits resulting from an agricultural college are minimized, or at least greatly lessened, by natural conditions. A bleak and mountainous country, whose interests were chiefly mining, would be much less benefited by an agricultural college than would one whose interests were largely agricultural. The dominant interest in most Canadian Provinces to-day is agriculture. So will it be to-morrow, and the next day, and through all time. The prosperity of these Provinces, therefore, is intimately bound up with the prosperity of agriculture. Whatever, therefore, can be done to improve the agriculture of the State should receive the most respectful consideration from every citizen of the State. In this age of keen competition in all lines of agricultural production, the choice in a Province sustained by agriculture lies between maintaining an agricultural college that will do good work or falling behind in the race for agricultural supremacy. Viewed from this standpoint, farmers of Manitoba, it rests with you to say which you will have.

If the establishment of an agricultural college should be the outcome of the present agitation, a word of caution may not be out of place with reference to the relations of such an institution to a provincial university. Theoretically, it sounds well to say that the agricultural college ought to be so closely affiliated to the university that in many lines—as botany and chemistry, for instance—the lectures given on these subjects will suffice also for the agricultural students. Beware of such reasoning! In practice it has been found that those lectures are away over the heads of the short-course students in the agricultural college. By short-course as used here is meant a course of instruction covering two or three winters, for, say, six months in each year. The university can render but little aid to students taking such a course. The instruction is beyond them; hence the time thus spent is spent to but little purpose.

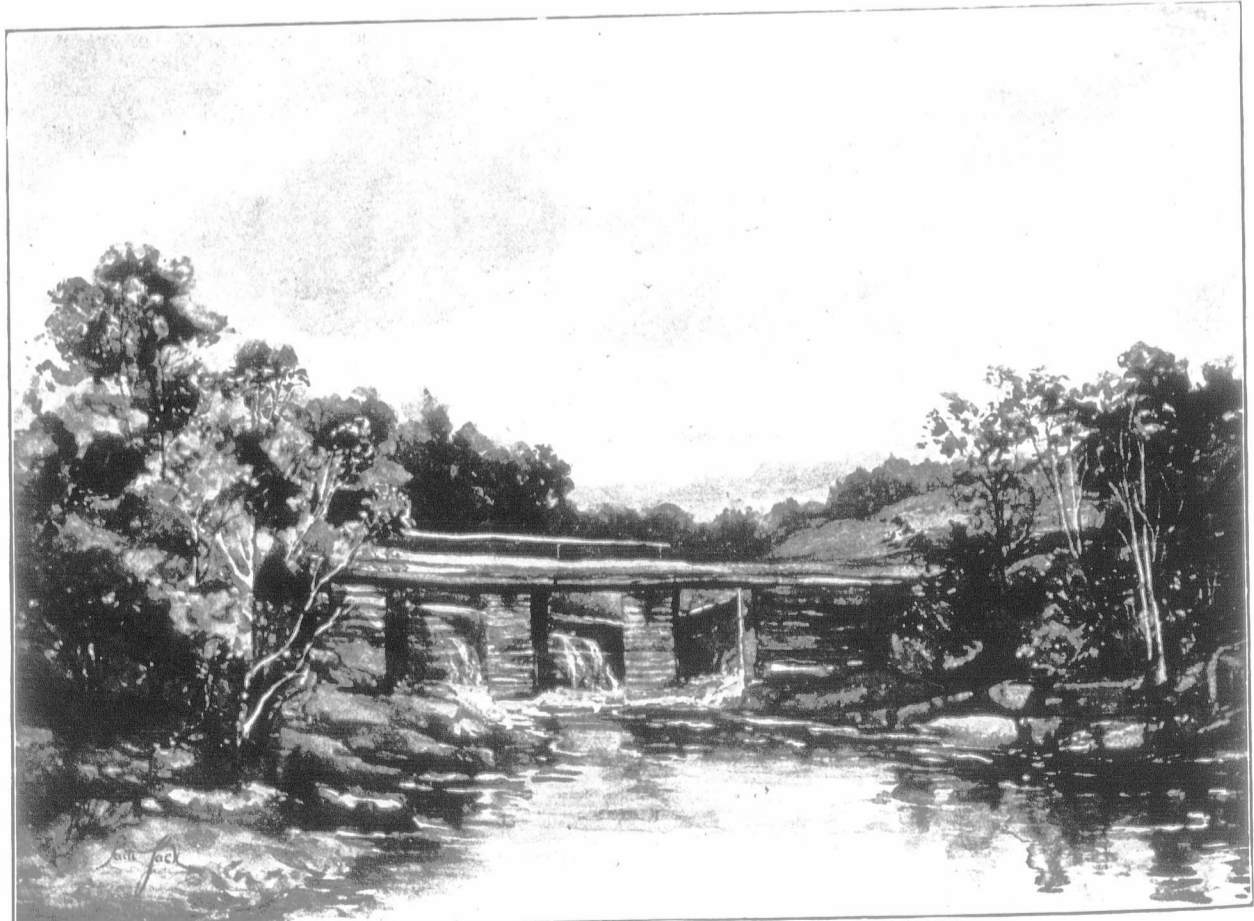
Does it follow, then, that a full staff of professors shall be maintained to give instruction at the agricultural college? Not necessarily. One man may give the requisite instruction in two or three lines, as, for instance, botany and horticulture. The instruction in chemistry, botany and kindred subjects must be special, and specially prepared to meet the needs of the students in agriculture. It may be more expensive to maintain an independent staff to do the work required at the agricultural college, but the work thus done will be more effective. It will be better suited to the needs of the students.

Should there be no affiliation, then, between the agricultural college and the university? That depends on the nature of the work that is to be done. If the college is to aid men who are going back to the farms, such affiliation is in no sense necessary. If, however, it aims to prepare teachers in agriculture as well, affiliation to some extent may be advantageous. For instance, while the University of Minnesota is not asked in any way to instruct the students who take the three-years course at the School of Agriculture, it is asked to aid in instructing students who, having graduated at the School of Agriculture, go on and pursue subsequently the four-years course in the College of Agriculture. The students who graduate from the School of Agriculture usually go back to the farm, while those who pursue the long course have in mind preparing themselves for teaching agriculture in one or the other of its lines. Even with such an object in view, the students complain that much of the instruction given to them—as, for instance, in botany—is aside from their needs.

While, therefore, the university may be made helpful to the agricultural college in the sense indicated, every care should be taken that it shall not dominate the same. In every State in the Union where the university has dominated the agricultural college, failure has been written on the work of the college. It has been found impossible in these to get any considerable number of students to take the course in agriculture where such relations exist. With such results hung up before it in the firmament of the experience of other places, that Province would be doing a suicidal act that would establish an agricultural college dominated by university interests.

The tendency in the agricultural college to-day, even with its independent staff, is in the direction of making the standard too high for the present needs of the country. Much time, for instance, is spent in instructing the student in botany, at some of these institutions, which should be spent in field agriculture or live stock. The danger is considerable that even in the agricultural college men will squeeze into the college staff who have in their make-up considerable of the scholar but precious little of the farmer, and much of the experimentation of to-day is done away up in the clouds rather than on the earth. The agricultural college that will best aid the largest number of farmers in their everyday work is that which will best fulfill its mission. Hence, at the present time, the course of instruction at these colleges should be easily entered upon, not labored or complicated, but intensely practical. The Provinces which have yet to establish an agricultural college have this happy advantage, viz., that they may, if they will, avoid the mistakes which have been so frequently made when such a work was undertaken.

A little fellow I know couldn't refrain from asking questions, and he happened to have a mother who tries to evade answering him. One day he said to her: "Say, ma, where do the cows get their milk from?" And she said: "Well, where do you get your tears from?" He thought awhile and then asked, "Do the cows have to be spanked?"



From a painting by Pitti Jack.

"OLD TIMBER SLIDE,"
At Chelsea, on the Gatineau River, P. Q.