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EDITORIAL.

The University Skirts.

Plausible to contemplate, but condemned by experience, are the arguments advanced in another column by a New Brunswick correspondent, who seems to reflect, in some measure, at least, the views of Dr. Jones, Chancellor of the University of New Brunswick, at Fredericton. University Senates and University staffs commonly believe that they can run agricultural colleges, and almost invariably make a dismal failure when they attempt it. There may be a very few exceptions where a strong leader is made dean of the course in agriculture, and gives it direction, impulse and character, independent of the university, but such men are exceedingly few. As a general rule, the agricultural faculty becomes submerged in the academic and much-too-impractical atmosphere and purpose of university life, fails to get into touch with the vital but stubborn everyday problems of the farm, draws few students to its courses; gives them a rather theoretical training, with much pertaining to the air, the rocks, the class-room and the laboratory, but little about the farm; and finally succeeds in turning out a few men indifferently equipped for agricultural professional life, and very few indeed inclined towards or qualified to succeed on the farm. Such a faculty is dwarfed by its own inefficiency.

New Brunswick need look no further afield than Truro, N. S., for a very typical and deplorable illustration of this tendency. In 1885, Nova Scotia established a chair of agriculture in connection with the Normal School there; in 1888 a farm was purchased near-by, and in 1892 a school of agriculture erected on this farm, the agricultural faculty being, however, still allied with the Normal School. The result was not quite a blank record of failure, but the next thing to it. It was not until the present excellent college of agriculture was opened, in 1905, under a new principal, and divorced almost entirely from the Normal School, that agricultural education in Nova Scotia began to make real progress. Since then the agriculture of the Province has been fairly revolutionized. The failure of the earlier attempt, and the magnificent success of the later effort, should carry an eloquent lesson for the educationists of New Brunswick, as well as of every other Province. In Manitoba there was a fight to keep the new agricultural college free from university absorption and control, for the success of which struggle the farmers of that Province have every reason to feel grateful. The splendid record of the Ontario Agricultural College, as a separate entity, is still another case in point, for the O. A. C., though allied with the University of Toronto for degree-conferring power, is in all essential respects a separate institution, with an identity, a purpose and an atmosphere all its own.

The suggestion that the university is already equipped in its scientific departments to teach many of the agricultural subjects, is born of complete misconception. A university professor may have his pate crammed with knowledge of chemistry, physics, botany, or entomology, and yet know very little of practical value concerning the agricultural phase of his subject. The truth is that any of these agricultural sciences is a large, specialized field, and unless they are taught by a specialist who understands what phases of them will be of most service to his students, and can adapt them to practical advantage, they will be of little use to his graduates. Chemistry is

taught by many an instructor in our High Schools and Colleges, but not one such master in a thousand is qualified to teach agricultural chemistry as it should be taught to an agricultural class. So with the rest of the scientific subjects.

Efficient agricultural teaching demands considerable expenditure for equipment, and the services of a large staff of trained agricultural specialists. These are not available at the University of New Brunswick, any more than they would be at Toronto or Winnipeg, and to provide them would involve larger outlay than the Province of New Brunswick would be justified in incurring for years to come, for, unless the thing is done well, it were better not attempted at all.

The halls of Truro, Ste. Anne de Bellevue, and Guelph are open to New Brunswick students on very favorable terms, and here a much better agricultural education can be afforded than an agricultural chair, at Fredericton could hope to offer.

The educational problem on which New Brunswick should concentrate her best attention is in the rational education of her public-school boys and girls, by encouraging and assisting in every possible way the more general introduction of nature study, school-gardening, manual training and domestic science, combined with an earnest effort all along the line to relate these subjects, if we may call them such, to the general work of the school, and to bring rural education into close touch with rural needs. To this end, suitably-trained teachers must be had, but we have no doubt the Macdonald College Normal course for teachers, if not, also, the special teachers' course at Truro, will be open to all the Normalites the Province of New Brunswick may care to send. When dozens of New Brunswick young men are taking an agricultural course outside the Province, when hundred of rural-school teachers are in need of and ready for special Normal training, and the New Brunswick Government is in a position to establish and liberally endow an agricultural college, with a Normal course for the special training of rural school teachers attached, it will be time to agitate this departure. Until then, effort may be better directed towards finding other ways of meeting the situation. And when such a college is established, keep it clear of the university skirts.

Irish Repatriation Movement.

"Is there to be a stemming of the tide of emigration from Ireland to America, or, rather, is there to be an immigration to Ireland from America?" asks our overseas contemporary, The Farmer's Gazette, of Dublin, in commenting upon a proposed Irish home-going movement, whereby 50,000 Irish residents in the United States are asked to return to the Old Country in 1910, to assist in the industrial revival which is so eagerly expected. The Gazette understands that the project has assumed considerable proportions, and that the promoters are confident a great influx of visitors, and possibly of residents, will take place. It is believed that Irishmen who have succeeded in the United States should carry back to Ireland ideas of government, manufacture, commerce and agriculture, besides capital, and the stimulus to agriculture that would follow increased population and introduction of new methods.

It is to be hoped the movement may prove successful, and that Ireland may be rejuvenated by her own sons. The present situation lends point to an observation of Thomas Augustine Daly, that the Irish and the Jews could control about everything they had a mind for—except Ireland and Judea.

Moisture; Aeration; Weed Destruction.

Every plant in the field is a pump, sucking up moisture containing plant food in dilute solution, the excess water being transpired through the leaves. In a recent editorial, the fact was mentioned that almost any of the cultivated crops withdraws three to five hundred tons of water from the soil for each ton of dry matter produced. The same article noted the fact that Prof. King, in some pot experiments, found that a three-inch mulch of earth, in one hundred days' time, saved from evaporation, at the rate of 331.6 tons of water per acre in a black marsh soil, to as much as 1,525.8 tons per acre in a virgin clay loam. Allowing for a lesser degree of efficiency from a mulch maintained in field practice, it seems clear that the extra moisture conserved by frequent surface cultivation should in many cases be sufficient to admit of the production of an extra ton of dry matter to the acre, equivalent to almost 4 tons of green ensilage corn. Another effect would probably consist in earlier maturity, with the resultant advantages of lessened risk from frost, and in some years greater feeding value. For the sake of conserving moisture, therefore, we must conclude that intertillage of corn and similar crops is well worth while. It acts favorably in two ways: first, by assisting in the rendering of more plant food available; secondly, in providing more abundantly for the transpiratory needs of the plants.

But this is not all. For the liberation of plant food in the soil, oxygen is needed, as well as moisture. Nature provides for the ventilation of the soil, as well as for the breathing of animals and plants. King explains six means by which the aeration of the soil is accomplished: (1) by the slow process of diffusion; (2 and 3) by the expansion and contraction of soil air, due to (a) changes in temperature, (b) changes in barometric pressure; (4) the suction effect of the wind, especially when it is gusty; (5) the air absorbed and carried downward by percolating rain water; (6) suction resulting from the abstraction of water, whether by drainage, capillarity or root action.

When the surface of the land is puddled, and then allowed to bake, or even to crust over, soil ventilation is impeded, consequently plant food is more slowly elaborated. "Liberation of plant food" is an illogical and an unscientific reason often given in favor of cultivating growing crops. It is true that such tillage does conduce to the liberation of plant food, but it does it indirectly by conserving moisture and facilitating the aeration of the soil.

The third reason for intertillage of growing crops is destruction of weeds, which otherwise would rob the crops of moisture and plant food, besides establishing themselves, to prove a nuisance in subsequent seasons. In many respects weeds are a great blessing. They compel shiftless farmers to cultivate. He who truly appreciates the benefits of cultivation in conservation of moisture and soil aeration, will cultivate independently of weeds. Except for a little special attention to the kind of teeth used on the cultivator, weeds will demand little extra work from a good farmer. What weeds require for their extermination, he would give, anyway, and more besides.

While there is such a thing as overdoing intertillage, experience and science point to the wisdom, under average conditions, of cultivating a corn crop half a dozen times throughout the growing season, running quite deep at first, say four inches or more in the center of the space, and