Farmers' Clubs.

Dominion Farmers' Council.

[This Council meets on the third Thursday of every month at 2 o'clock p. m. All communications should be addressed to the Secretary, W. A. Macdonald, London, Ont. The Council has now on hand pamphlets containing its Constitution and By-laws, with an account of its origin, also pamphlets containing a form of Constitution and By-laws suitable for Farmers' Clubs, which will, on application to the Secretary, be distributed *free* to all parties having in contemplation the organization of clubs. Lactoscopes free to amalgamated clubs.]

The regular monthly meeting of this Council was held on the 17th ult., President Leitch in the chair.

COMMUNICATIONS.

A number of letters were received from clubs which applied for amalgamation, but as there were some irregularities, they will not be amalgamated until the next meeting of the Council, providing the returns be made in time. Several letters were read asking what advantages the clubs would have amalgamating with the Council.

Vice-President Anderson stated that these questions could be answered in a general way by reading the reports of the Council. He believed it would be a good plan to call a meeting of representatives of all the amalgamated clubs to discuss the best methods of advancing the interests of the clubs and the farmers generally. The farmers, he said, were rich and strong enough to protect their own interests, but they were not wise enough. They should learn to know that this end could only be attained by organization on an efficient scale, and they would never succeed so long as they delegated their interests to employes of the Government under our party system. The extent of the advantages which would accrue to clubs by joining the Council depended to a very large extent upon the number of clubs amalgamated, and the amount of harmony existing amongst them. It required a large number of clubs to fight the farmers' battles and make their influence irresistible. There were grievances which were more keenly felt in some localities than in others, and the clubs, by ventilating their grievances to the Council, could certainly promote their interests very materially.

TOP-DRESSING OF MANURES VS. PLOWING UNDER.

Mr. J. Hale, secretary of the North Dawn Farmers' Club, sent in the following report of their discussions on "Manures and the Best Method of Applying them :"

After routine the Secretary read an extract from the ADVOCATE, page 7, on the value of manures and fertilizers.

Mr. Knight thought that if farmers used the manure they made and plowed clover under occasionally, they need not buy fertilizers. He was in favor of top-dressing.

Mr. Brown thought that in top-dressing the manure lost considerable by sun and rain ; he would rather plow under.

Mr. John Kniffen favored top-dressing every time. He was at present drawing out manure on his fall wheat, and thought it would be as good as a blanket.

The Secretary thought that when manure was put out on top, it must lose a great deal, because you could smell it so far.

Mr. Kniffen said you could smell a skunk a long way, but when you came up to him he was all there.

After some discussion it was resolved that on our heavy clay it was better to plow under, especially when the land was not under-drained.

This report caused some discussion, the resolution of the club being generally concurred in. Mr. Anderson thought that a lot of valuable fertilizing material was lost by top-dressing—a quantity of ammonia escaped into the air. Mr. Little advocated plowing under, although he did not think there was much loss by top-dressing. His was a stiff clay soil, and plowing under improved its texture.

A MEMBER—What do the high authorities say on the subject ?

In answer to this the President went to the library to search the English authorities, and the Secretary brought down the German authorities from the German department of the library. The President read the following from Dr. Voelcker's conclusions from his experiments as chemist of the Royal Agricultural Society (paragraph 7) :

"On all soils with a moderate proportion of clay, no fear need be entertained of valuable fertilizing substances becoming wasted if the manure cannot be plowed in at once. Fresh, and even well-rotted, dung contains very little free ammonia ; and since active fermentation, and with it the further evolution of free ammonia, is stopped by spreading out the manure on the field, valuable volatile manuring matters cannot escape into the air by adopting this plan. * * * I am perfectly aware that, on a stiff clay soil, farm-yard manure, more especially long dung, when plowed in before the frost sets in, exercises a most beneficial action by keeping the soil loose, and admitting the free access of frost, which pulverizes the land. On light sandy soils, I would suggest to manure with well-fermented dung shortly before the crop is intended to be sown."

The Secretary then read paragraph 11, page 98, from Wolff's "Practical Manuring ":

"The manure is usually plowed under shortly after being spread upon the field. This must always be done when it is desired that the effects of the manure shall continue pretty regularly for three or four years. It should here be noted, however, that much loss of these constituents of plant food which have agricultural value need not be dreaded when the manure is left spread over the surface without being plowed under ; but under this circumstance the decomposition of the organic matter proceeds more rapidly, and the strength of the manure falls mostly to the advantage of the first crop, the effects upon the second and third crops being correspondingly less active. Surface manuring also, by the rapid disappearance of the organic matter, fails largely in producing its otherwise favorable effects upon the physical condition of the soil, the loosening properties being materially decreased—a circumstance which is of the greatest importance in a cold, clayey soil. During the colder months, when the decomposition of the manure proceeds very slowly, it may remain spread on the surface for a long time without undergoing material change."

The reading of these paragraphs from the leading agricultural authorities of the world put an end to the discussion.

EXHAUSTION OF THE SOIL.

At a previous meeting of the Council, it was resolved to have a paper read on this subject, and the question being a complicated and technical one, it was decided to have the paper published a month before the discussion took place, in order to give the members an opportunity of preparing their arguments, but the paper was crowded out of the ADVOCATE. However, printed proof sheets were sent to the leading members of the Council, so they were prepared for the discussion. But some of the members confessed that they had never given the question much thought, and had come to learn. There was a very lively discussion, but it was confined to a few members. The gentleman selected to prepare the paper was Mr. Robert Brodie, of Montreal, who has given considerable attention to such subjects. It reads as follows :

In the older and thickly populated countries of Europe, where the soil had become barren and sterile from long continuous cropping, the attention of the farmers was directed to the fact by scientists, especially those conversant with chemistry, that something must be done to prevent the country from becoming a barren wilderness like ancient Palestine, which at one time was exceedingly productive. But it was not until about the beginning of this century that the farmer became awakened to this fact, and that any great advance was made to rectify this evil, which took the shape of a more systematic cultivation of the soil by better tillage, drainage, and rotation of crops. The expectations of the farmers were satisfied for a time, as this system utilized a large quantity of plant food that was lying latent in the soil, but after a few years they were again abruptly aroused from this mythical dream by the fact that their land was again becoming exhausted, showing that this better system of tillage did not prevent the depletion of the soil, but only made available the remainder of the plant food that was lying dormant in the soil. This failure necessitated further investigation in order to discover what was lacking. The agricultural chemist's skill then came into play, which consisted in analysing the soil and the plants to find out what was really wanting. The result was the discovery that phosphoric acid, potash and ammonia were the plant foods found lacking, and that they were the chief constituents necessary for the successful propagation of all plants. This theory is still recognized to be quite correct, and no soil, however fertile, contains inexhaustable supplies of these three essential constituents. With these facts staring the farmer in the face, he had either to let his land become barren and sterile, or get a supply of these ingredients, in some shape or other, to take the place of the waste going on.

A new departure was then adopted in the shape of mixed farming—that is, keeping a certain number of stock, principally dairy-stock, to utilize all the rougher produce of the farm and have it converted into manure and put back into the land. This was to be the great cure-all for the prevailing evil, and, indeed, is considered by some of our farmers of this young country as being all that is requisite not only to keep up, but also to restore, the fertility of the hardly used soil, and this is one of the myths that is very hard to eradicate from the minds of our farmers in this country. Observation (so far as their experience permits) seems to verify this conclusion, for in many cases where this method is fairly well carried out, the land became much more productive than it was when grain crops were taken off continuously, and although we are pleased to admit this fact as far as it goes, yet we may rest assured history will repeat itself, and we have only to look up the records of some of the older countries to find that, with the most careful system of mixed farming, where nothing is sold off but milk, butter, and cheese, as the case may be, along with some beef, the soil gradually becomes depleted of plant food, and although it may take much longer time to accomplish this end as compared with raising and selling of grain, yet the fact remains the same : exhaustion is just as surely and steadily going on.

What says Ville : "In the past the following was made an axiom for good farming, 'We must have plenty of hay, pasture, cattle, manure.' But I assert that this proposition is an agricultural and an economical heresy."

The farmer who uses nothing but farm-yard manure produced on the farm, exhausts his land. Whence comes the manure but from the soil ? and if anything is sold, we are selling away part of the manure ; or, in other words, part of the plant food taken from the soil.

As a fact, farm-yard manure does not make up for the loss of the phosphoric acid, lime, potash and nitrogenous matter which it had to submit to through the carrying away of part, at any rate, of the crops grown on it. Where meat is sold the loss is less than in the case of grain, but there is a loss which in due time will be felt to be a serious one. I repeat, then, that this axiom, which has hitherto been made the foundation and palladium of agricultural science, is nothing more than an expedient.

I have said that farming founded on the use of the manure made on the farm alone is, economically speaking, against common sense. But if, besides the profit, we increase from the first year the crop of straw, is it not evident that, instead of growing meat in order to have grain, there is a manifest advantage in reversing the recognized order of things and commencing to grow grain in order to gain the earliest advantage ; in fact we get grain first and manure afterwards.

I repeat then that the soil cannot do otherwise