

for their organization. In any case they must foot the bill, with this difference, that the Government bill is always indefinitely more extravagant. Let this be the first step towards economy, the eight hour movement, and the slaughter of the parasites. The Knights of Labor do not accept Government appropriations for organization purposes; the essence of union resides within them, where it should be.

Our correspondent seems to think that the eight hour movement will increase the cost of his implements and machinery. This is a complicated question. If less labor is performed in eight hours than in ten, more men will be required to do the work, farmers will then have more consumers for their products, and the competition amongst them will thus be to some extent relieved, which may to some extent be an offset against the enhanced cost of production. The pay has little to do with the hours. Although the hours may be fixed, the pay will mainly depend upon other circumstances. What is wanted is to drive officials from non-productive and sinecure offices to profitable employments, thereby relieving the world of non-producing consumers.

Canadian Knights of Agriculture! You say you cannot organize owing to your isolated condition. You can. You have the power to accomplish these objects, but you have not the will. You possess the most independent and powerful organ in the Dominion in which you can talk your grievances to each other as if through a telephone—a privilege possessed by no other organization. Eschew those political organs that shout WOLF! to gain your ear, when there is no wolf there, and make it hot for those slander and scandal mongers whose aim it is to blind you against your real interests. Be independent and self-reliant, and unite with other organizations on any question founded on sound principles and established for the purpose of vanquishing the common enemies of yourselves and society. Then the short hours and the long pay will be yours.

Notice to Farmers' Clubs.

In answer to a number of correspondents who have written to us for information about constitution and by-laws suitable for farmers' clubs, we refer them to the report of the proceedings of the Middlesex Agricultural Council as published in our last issue.

It appears to be the intention to publish a small pamphlet containing introductory observations on farmers' clubs, with the constitution and by-laws of the Middlesex Agricultural Council, as revised by the committee appointed for that purpose. The pamphlet will probably also contain a form of constitution and by laws suitable for farmers' clubs. It has not yet been decided how many pamphlets will be printed, but as they will be sent free, it is not probable that there will be a sufficient number to satisfy all demands. Those friends of the Council who contemplate the organization of farmers' clubs, should send in their names to the corresponding secretary as early as possible, in order that their demands will be sure to be supplied. The corresponding secretary will also answer any inquiries relating to the Council.

Our friends should bear in mind that the organization of farmers' clubs in association with the Middlesex Agricultural Council is merely an experiment. An excellent opportunity is

offered to the farmers to unite for the purpose of discussing matters pertaining to their own interests, and if they do not accept it, we know of no power that can organize them. Never has there been greater need than at the present time. The Council is not a secret organization; the discussions are open to all. There will be no binding obligations further than that independence and self-reliance are to be observed in the promotion of our agricultural interests.

We may have insinuated that the Council desired farmers' clubs to co-operate with it. Perhaps it would be more correct to say that the Council desires to co-operate with the farmers' clubs, although we should like to see mutual co-operation. This relation has not yet been fully discussed by the Council, and, as will be seen in another column, we offer a prize essay on the subject. We hope to have a large number of competitors, and should also like to have suggestions from friends who have not time, during this busy season, to compete in the ordinary way. Should we fail to get a large number of replies, our ardor in the farmers' interests will be greatly dampened.

Canadian Phosphate Rock in Relation to Stock Raising.

The U. S. Consul at Ottawa has sent an exhaustive report to Washington relating to our phosphate mines and the extent of the trade. In 1882 the shipments were 16,585 tons, which have increased to 25,000 tons in 1885. He says it is one of the purest phosphates in the world, and is greatly sought after owing to its concentrated form, it being thus cheaply shipped, and a large percentage of phosphoric acid can easily be made available.

This rock is known to geologists under the name of "apatite," and on analysis ours has been shown to contain 88.91 percent of insoluble phosphate of lime. It is greatly in demand in France, Denmark and Belgium, where large quantities of the sugar beet are grown. The writer says that the present demand is entirely European, Great Britain and Germany being our chief customers, though France is grasping for the entire output; but in 1883, 254 tons were shipped to the United States, and 221 tons in 1884, Great Britain having exported, in 1883, to the U. S., 1,262 tons of the crude and 7,766 tons of the manufactured material in the form of superphosphate. That is to say, Canadian phosphates were shipped to England, manufactured there, and then returned to America. The writer then says:

"The United States Government admits this article free of duty, and the Canadian Government and people are inviting us to come and get it. Neglecting to do this, we are allowing Continental Europe to gobble every pound of the production, pay the freight twice across the ocean, with all the incidental expenses attached to such procedure, and with no known check on its adulteration, we complacently purchase it at last at a value that necessitates its resale to the agricultural community at a price that virtually amounts to prohibition. Canadian phosphate would have supplied one-half the United States demand in 1883, and the entire demand in 1884. The average cost of Canadian crude, as paid by the foreign buyers in 1883, was \$21.67 per ton; the average value as entered in United States customs, imported from foreign countries in 1883, is \$9.78. It was purchased in the lump, freighted to Europe, there crushed and pulverized, by grinding or otherwise, and returned to the United States valued at half its original cost. When we con-

sider that Canadian phosphates yield 75 to 90 percent of pure phosphate of lime, and that its equal in purity is not found elsewhere in any appreciable quantities, is it not surprising that its intrinsic value should be so little recognized by those who require it to the extent which characterizes the known wants of American agriculturists? And, too, when by a little effort on our part (I speak as an American), every pound needed can be mined here by American industry, placed direct in the American market in its purity, and at a largely reduced cost, quality considered? There is now about \$1,000,000 of capital invested in this country adjacent to Ottawa. The demand for proper fertilizers is limitless, and must remain so. "The grain exported from Montreal alone, in a single year, has been estimated to contain 2,547 tons of phosphoric acid, which implies the total exhaustion, so far as phosphates are concerned, of 75,000 acres of wheat land, the renewal of which would necessitate the application of 6,000 tons of phosphates." If this be true—and it comes from the highest authority—what would be written of the steady exhaustion of the great agricultural districts of the United States, and their present and future necessities?"

The first idea that strikes us upon reading this report is that our ideas about exports and imports should be revolutionized. Our politicians will no doubt boast that they have created an extensive trade in the products of our apatite mines, whereas if our farmers and fruit-growers understood the value of phosphates, and knew how to apply them, they would have been exported in the form of grain, meat and fruits. There is very little land in Canada that would not be benefited by phosphates, and a few bushels per acre added to half the usual application of farmyard manure would often enable the farmer to double the number of his acres now fertilized.

All this blatherskiting about raising more beef in order to get more manure for the soil, is a cry got up in the interests of live stock speculators. It is true that many feeders are making money by buying up two and three year old steers from our farmers, and the organs endeavor to impress it upon our minds that the country is becoming enriched by the transactions. The farmers, however, are losing money, for it is impossible for them to raise store steers profitably, and sell them for three or four cents a pound, live weight. If they use these steers merely as manure makers, it would probably be more profitable for them to give up the business and buy phosphates to keep up the fertility of their land. However, we are in favor of investigation, and we can see no reason why our farmers cannot make more profit from cheap phosphate than farmers in other countries can make from the dear article.

Farm Drainage.

No. XI.

Drainage for Health.—One of the effects of the most practical importance is the action of drainage upon the health of the farmer and his stock, and this advantage alone will often pay more than the cost—even counting the direct saving in the bills of doctors and veterinarians—besides enjoying the pleasures of health to the good.

Some diseases are natural to animals and plants in soils affected by stagnant water; and if these maladies do not always manifest themselves, the vitality of the growing plants or the grazing animals must suffer to a greater or less extent. The herbage, especially in wet seasons, grows coarse and lacks in nutritive value,