

contains but very small quantities of the substances to be decomposed, and in which the raising of the temperature is not necessary. In sand, therefore decomposed dung suits better, and it lasts a longer time in it.

The best manner of using dung would be to make a compost of it.

If we leave the dung spread upon a clay soil, the only inconvenience which results is that it does not warm the land. Upon a flinty soil there is some risk that a part of the fertilizing principles may be carried down by the waters into the subsoil.

The whole art of the farmer is reduced to setting in action the principles serving for the nourishment of plants which are found in the soil; in manufacturing from them grain, meal, &c., and in taking care that there should be restored to the earth, by a sufficient manuring, the solid principles that have been taken from it.

It is not with dung only that the farmer makes his produce. Dung only restores to the earth the fixed elementary principles which have been taken from it. There is a kind of circulation of the elementary principles which have been taken from it. There is a kind of circulation of the elementary principles of the plants that are found in the soil: they are changed into plants and cattle: the farmer sells especially the atmospheric principles; the solid principles that he sells at the same time must be replaced by the purchase of bones, ashes, &c., if he does not wish to impoverish his fields.

The new truths contained in the theory of Liebig are:

1. The principle that crops are in accordance with the eight inorganic and solid elementary substances of plants, which are found in the earth in a state of dissolution.

2. That the atmospheric principles, ammonia and carbonic acid, are not really less necessary to plants than the others, but that they are furnished in sufficient quantity by the air, *when the inorganic principles exist in sufficient quantity.*

3. The combination of carbonic acid and azote with the dung has for its principal results the dissolution of the nutritive substances of the plants which are in the soil, and the raising of the temperature.

4. The faculty which arable soil possesses of absorbing the nutritive principles of plants.

5. The manner in which plants draw their nourishment from the earth, by the cells, which are found at the extremity of the radicles.

One of the greatest merits of Liebig was that of having scientifically proved the injury that is done to agriculture by the loss of the excrements of the inhabitants of towns, and the damage sustained by a country in the exportation of grain and bones.

ADAM MULLER.

## Agricultural Intelligence.

### EIGHTEENTH EXHIBITION,

OF THE PROVINCIAL AGRICULTURAL ASSOCIATION,  
TO BE HELD AT KINGSTON ON MONDAY, TUESDAY, WEDNESDAY, THURSDAY, AND FRIDAY,  
SEPTEMBER 21, 22, 23, 24, & 25, 1863,

### RULES AND REGULATIONS.

#### MEMBERSHIP.

1. The members of the Agricultural Societies of the several Townships within the County, or Electoral Division, or United Counties, wherein the Annual Exhibition may be held, and the members of the County or Electoral Division Society, shall be also members of the Association for that year, and have members' tickets accordingly; provided the Agricultural Societies of the said Townships, or the Society of the said County or Electoral Division or United Counties, shall devote their whole funds for the year, including the Government Grant, in aid of the Association, and shall pay over the same, accompanied with a list of the members of each such Society, to the Treasurer of the Association two weeks previous to the Exhibition.

2. The members of the Board of Agriculture and of the Board of Arts and Manufactures, the Presidents and Vice-Presidents of all lawful organized County Agricultural Societies, and all Horticultural Societies, are members of the Association for Upper Canada, *ex-officio*. The payment of £1 and upwards constitutes a person a member of the Association for one year; and \$10 for life, when given for that specific object and not as a contribution to the local funds.

3. Members can enter articles for competition in every department of the Exhibition, at any time previous to the dates below mentioned, and all who become members previous to or the Saturday preceding the show week will be furnished with tickets admitting them to the grounds during the whole time of the show, without additional charge.

#### ENTRIES.

4. No one but a member shall be allowed to compete for prizes except in class 44 section 11 to 16, class 47, and class 54.

5. All entries must be made on printed form which may be obtained of the Secretaries, Agricultural Societies, or of Mechanics' Institutes, free of charge. These forms are to be filled up and signed by the exhibitor, enclosed a dollar for membership, and sent to the Secretary of the Association, Board of Agriculture, Toronto, previous to, or on the following named dates:—

6. Horses, Cattle, Sheep, Swine, Poultry. Entries in these classes must be made by forwarding the entry form, as above mentioned filled up, and member's subscription enclosed, on or before Saturday, August 15th, five weeks preceding the show.

7. In the classes of Blood Horses and pure bred cattle, full pedigrees, properly certified,