

dignity; and to them I shall first direct my attention. Here, again, I shall be under the necessity of recurring to chemistry, in order to derive my lights and explanations; for the whole process carried on in the growth and sustentation of plants is nothing else but a mysterious and beneficent application of chemical laws, modified a little by the powers of life, under the management of the Great Author of nature. Such of my readers as have either preserved, or can now have access to my tenth and eleventh letters, will review them attentively, imbibe the rudiments which are there taught, and thus furnished with knowledge, will come prepared to reap the full benefit of the present inquiry. To the ignorant and unlettered clown these letters must be unprofitable and unavailing; and without some effort on his part to master the science, and drink at the sacred fountain of philosophy, it is totally impossible for me to lower the tone of expression, and to familiarise the illustrations, to the dulness of an unenlightened understanding.

I shall appropriate the present communication, to point out and enumerate what are meant by the animal and vegetable manures and make a few observations descriptive of their general character.

All animals, when they die, quickly pass into a state of corruption. The elements of which they are composed, being no longer fixed and retained by the living principles, begin to separate, and hasten into new combinations.—This arises from the joint action of heat and air; and also from the affinities and repulsions which are ever taking place among the minute particles of matter. The body, whether left exposed on the surface, or buried in the ground, will in a short time disappear, and moulder into dust. The bones, although last in the order of dissolution, will exhibit gradual symptoms of decay, and in the end submit to the common wreck of organised existence. This decomposition in every stage of its progress, is accomplished by the continual principles of the body becoming fluid and sinking downwards—or assuming a gaseous form, and escaping into the atmosphere—the common receptacle of acriform fluids.—The carcass, which has lain under the earth for an hundred years when disturbed in its asylum and dug up, has almost entirely vanished, and left nothing in its place to render visible either its forms, its bulk, or its consistence, except a black mould, as the last vestige of its being. Its volatile part has passed upwards, enriched the soil in its ascent, and again lives either in the vegetable or animal world.

(To be continued.)

### SOURCES OF PLANTS.

*Apples*—All varieties of apples are derived from the crab apples, which are found in all parts of the earth.

*Asparagus*—This was brought from Asia to America.

*Almonds* are the fruit of a tree which grows chiefly in the Indies.

*Barilla* is a plant cultivated in Spain for its ashes, which are said to afford the purest alkali for making glass and soap.

*Bread Fruit Tree* is a native of the South Sea Islands—especially of Otaheite.

*Coffee* is a native of Arab Felix. It is now cultivated in various parts of the torrid zone, especially in the East and West Indies.

*Cork* is the bark of a species of oak, which grows in Spain and Portugal. After the bark is taken from the tree a new bark is formed, and in the course of six or seven years it is renewed.

*Camphor* is the concrete juice of a tree, a species of laurel, which grows in Borneo, Sumatra, and other parts of the East Indies.

*Chocolate* is made of cocoa, which is a nut grown in the

East Indies. The kernel of this nut is parched like coffee, pounded into dust, made into paste, then dried and made into cakes.

*Cocoa*—This nut grows in both Indies, on trees 50 or 60 feet high. They grow in bunches of seventy-two.

*Cloves* are the flower of a plant which grows in the Hallee and East Indies.

*Cabbages* was originally brought from Holland.

### HISTORY OF GUANO.

Guano is the deposit of sea birds which has been accumulating for centuries on the islands of the coast of Peru; the birds resort to these places to lay, hatch and rear their young—a great many of the young die there, or are killed by being trodden under foot by the old birds. They exist in countless numbers, and living almost entirely on fish, their manure is of the richest kind produced. It never rains on the coast of Peru; the fertilizing properties of the bird-manure, therefore, are not subject to being washed out; and as very little of salts can be evaporated in a dry atmosphere, it retains nearly all its fertilizing properties for ages. This dry climate is peculiar to the coast of Peru. Guano coming from Chili or any other quarters of the globe cannot therefore be so good as the Peruvian.

### WORMS AND CATERPILLARS.

I have heard much enquiry concerning the best method of destroying the worm or caterpillar, which makes such havoc with our apple or peach trees; the course I pursue is as follows: I take a half inch auger, and bore as nearly as I can judge, into the heart of the tree, fill the hole with sulphur, plug it up with a branch cut from the same tree, make it air tight, and in forty eight-hours the result is seen. This plan I have found efficient, and if the information is of any importance to you, it is at your service.

W. S. CHAPIN.

### News.

#### CANADA.

**IMMIGRATION.**—Within two days, just passed, six thousand immigrants have arrived!—all looking fresh, healthy, well-dressed, and in excellent spirits. We have accounts from the Quarantine station, at Grosse Isle, which are happily of the most favorable character.—The number of patients admitted into hospital there (even with this sudden and overwhelming influx of strangers) being most inconsiderable, and the cases such, only, as occur in the most healthy season of immigration. In the Marino and Emigrant Hospital of this city, notwithstanding the very large number of shipping arrivals, with their human cargoes—6000 immigrants, exclusive of masters and seamen attached to 200 ships—the number of admission into the institution was but 14! and of these some were surgical cases.—*Quebec Gazette*, 22nd Instant.

**LOSS OF THE COMMERCE.**—The inquiry into the circumstances connected with the wreck of the *Commerce* took place at Port Maitland on Friday the 17th instant. It was conducted by Dr. Jarron, Warden, and Messrs. Farrell and Imlach, magistrates of the District of Niagara. After a most minute and careful investigation, the masters of both vessels were bound over to stand their trial at the next Niagara Assizes. Agents from an Insurance Company, and for Macpherson & Crane, were present at the inquiry, with, we understand, a view towards procuring evidence on which to found a civil suit against the *Despatch*.—*Globe*.

**CHANGE FOR THE BETTER.**—It is our gratifying task to announce, that Mr. Justice Draper opened a Maiden Assize in this town on Tuesday. Not a criminal in gaol for trial. This change has extended itself to the Civil Docket. Instead of the usual