were exposed to the same degree of cold as the Samoyedes, we should be able with ease to consume ten pounds of flesh, and perhaps a dozen of tallow candles in the bargain, daily, as warmly clad travellers have related with astonishment of these people. We should then also be able to take the same quantity of brandy or train oil without bad effects, because the carbon and hydrogen of these substances would only suffice to keep up the equilibrium between the external temperature and that of our bodies.

According to the preceding expositions, the quantity of food is regulated by the number of respirations, by the temperature of the air, and by the amount of heat given off to the surrounding medium.

No isolated fact, apparently opposed to this statement, can affect the truth of this natural law. Without temporary or permanent injury to health, the Neapolitan cannot take more carbon and hydrogen in the shape of food than he expires as carbonic acid and water; and the Esquimaux cannot expire more carbon and hydrogen than he takes into the system as food, unless in a state of disease or of starvation. Let us examine these states a little more closely.

The Englishman in Jamaica sees with regret the disappearance of his appetite, previously a source of frequently recurring enjoyment; and he succeeds by the use of cayenne pepper and the most powerful stimulants, in enabling himself to take as much food as he was accustomed to eat at home. But the whole of the carbon thus introduced into the system is not consumed; the temperature of the air is too high, and the oppressive heat does not allow him to increase the number of respirations by active exercise, and thus to proportion the waste to the amount of food taken; disease of some kind, therefore, ensues.

On the other hand, England sends her sick, whose diseased digestive organs have in a greater or less degree lost the power of bringing the food into that state in which it is best adapted for oxidation, and therefore furnish less resistance to the oxidizing agency of the atmosphere than is required in their native climate, to southern regions, where the amount of inspired oxygen is diminished in so great a proportion; and the result, an improvement in the health, is obvious. The diseased organs of digestion have sufficient power to place the diminished amount of food in equilibrium with the inspired oxygen; in the colder climate, the organs of respiration themselves would have been consumed in furnishing the necessary resistance to the action of the atmospheric oxygen.

In our climate, hepatic diseases, or those arising from excess of carbon, prevail in summer; in winter, pulmonic diseases, or those arising from excess of oxygen, are more frequent.

The cooling of the body, by whatever cause it may be produced, increases the amount of food necessary. The mere exposure to the open air, in a carriage or on the deck of a ship, by increasing radiation and apourization, increases the loss of heat, and compels us to eat more than usual. The same is true of those who are accustomed to drink large quantities of cold water, which is given off at the temperature of the body, 98·5°. It increases the appetite, and persons of weak constitution find it necessary, by continued exercise, to supply to the system the oxygen required to restore the heat abstracted by the cold water. Loud and long continued speaking, the crying of infants, moist air, all exert a decided and appreciable influence on the amount of food which is taken."

## TURNING IN GREEN CROPS.

Turning in green crops, is returning only to the soil the salts, silicates and geine, which the plant has drawn out of it, together with all the organic matter, the plant itself has elaborated, from oxygen and hydrogen, carbon and nitrogen, from whatever source derived It has decomposed, during the short period of its growth, more silicates and salts than the air only could effect during the same period, which being turned in, restore to the soil from which they grew, salts and silicates in a new form, whose action on vegetation is like that of alkalies.—But powerful as are the effects of green crops ploughed in, it is the experience of some practical men, that one crop allowed to perfect itself and die where it grew, and then turned in dry, is superior to three turned in green. The whole result is explained by the fact, that dry plants give more geine than green plants do. Green plants ferment —dry plants decay. A large portion escapes in fermentation as gas, and more volatile products are formed than during decay. The one is a quick consuming fire, the other a slow mouldering ember, giving off during all its progress, gases which feed plants and decompose the silicates of soil.

The power of fertility which exists in the silicates of soil is unlimited. An improved agriculture, must depend upon the skill with which this power is brought into action. It can be done only by the conjunction of salts geine, and plants. Barren sands are worthless; a beat bog is little better; but a practical illustration of the principles which have been maintained, is afforded by every sandy knoll made fertile by spreading swamp muck upon it. This is giving geine to silicates. The very act of exposure of this swamp muck, has caused an evolution of carbonic acid gas; that decompose the silicates of potash, converts the insoluble into soluble manure, and lo! a crop. That growing crop adds its power to the geine. If all the long series of experiments under Von Voget, in Germany, are to be believed, confirmed as they are by repeated trials by our own agriculturists, it is not to be doubted that every inch of every sand knoll on every farm, may be changed into a soil in thirteen years, of half that number of inches of good mould.

That the cause of fertility is derived from the decomposing power of the geine, and plants, is evident from the fact that mere atmospheric exposure of rocks, enriches all soil lying near and round them. It has been thought among the inexplicable mysteries, that the soil under an old stone wall, is richer than that a little distance from it. Independent of its roller action, which has compressed the soil and prevented the aeriel escape of its geine, consider that the potash washed out of the wall has done this, and the mystery disappears. The agents to hasten this natural production of alkali, are salts and geine. The abundance of these has already been pointed out in peat manure. Next to this, dry crops ploughed in; no matter how scanty, their volume will increase, and can supply the place of that swamp muck. Of all soils to be cultivated, or to be restored, none are preferable to the sandy, light soils. By their porousness, free access is given to the powerful effects of air. They are naturally in that state to which trenching, draining, and subsoil-ploughing are reducing the stiffer lands of England. Manure may as well be thrown into water as on land underlaid by water. Drain this, and no matter if the upper soil be almost quick-sand, manure will convert it into fertile arable land. The thin covering of mould, scarcely an inch in thickness, the product of a country, may be imitated by studying the laws of its formation. This is the work of "Natures' prentice hand"; man has long been her journeyman, and now guided by science, the farmer becomes the master workman, and may produce in one year quite as much as the apprentice made in seven.—*Dana's Muck Manual.*

*From The Farmers' Journal.*

## CABBAGE HEADS FROM STUMPS.

FRIEND COLE,—I do not know all that your Boston gardeners are up to, but I do know, that if cabbage stumps of my variety are set out in the spring in good order, that one, two, three, or even four good sound heads will grow on them—and this they will do year after year, until they die by accident.

They are managed in the following manner:—When the upper, *narrow-leaved ones*, which would bear seed, are carefully rubbed off, and likewise all the lower, *round-leaved* ones, which will form heads, except the number the strength of the stump and soil are capable of bringing to perfection.

At our Cattle Show, last week, Mr. John Drew presented several such stumps, with one to four heads of low Dutch cabbage on each, which have borne for three years. He sets them out in earth in the cellar in autumn, cuts off the heads when required for use, and places them pretty thick in the garden in spring. The labour is trifling, the cut worm gives no trouble, and the crop sure and abundant. JAMES BATES.

*Norridgewock, Maine,*
October 18th, 1842.

METHOD OF CAUSING CABBAGES TO HEAD DURING THE WINTER.—In the fall of the year when it is time to gather cabbages, we always find more or less of them that have not formed any heads. They may have grown well, and have a large stock of leaves, but have not closed up in the form necessary to make a good, solid, compact cabbage.

William Vance, Esqr., of Readfield, has practiced for many years, the following method, which effectually closes these loose leaves in the course of the winter, thereby furnishing him with a supply of the best kind early in the spring. In the fall of the year, just before the ground closes up he gathers all the cabbages which have not headed together. He then digs a trench eighteen inches or more deep, and of sufficient width to admit the cabbages. He then closes the leaves together by hand, winding a wisp of straw or something else around them to keep them together, and then puts them in this trench, with heads down and roots up. He then packs straw or leaves and earth snug about them, and rounds up the earth over them. The trench should be dug in a place where the water of the rains and snows runs off and will not stand about them. A board or couple of boards nailed together, in the form of a roof, and put over the mound, may be useful.

In the spring of the year open your trench and you will find that the cabbages are all headed firmly together, and if the water has not got in, will be solid and hard. Mr. Vance has had the goodness to send us a few heads which he has formed in this way, which were very nice. By following this plan, we not only preserve the cabbages well during the winter, but save much of the crop which is not considered worth much.—*Me. Far.*

A gentleman of Black Torrington has an otter that is quite domesticated, and so tame that it accompanies him about like a dog.—The animal is so under command, that it will go into the river, catch fish, and bring them out to his master.—*West of Eng. Courier.*