that of the animal-heating process. Should this be proved to be the case, it will be another example of wise and most happy adaptation.

I have spoken of vegetables, as organizers, or the producers of organic compounds, for the support of animal life:—taking another view, animals may be considered as performing a part as essential to vegetable life, that of disorganizers; what is excrementuous from them being so reduced, as to have the character rather of inorganic than of organic compounds,—whether it be carbonic acid, with which they contaminate the air in respiration—their gaseous excrement:—or their liquid and consistent, derived from the other excreted organs and passages of the body. These matters which are destructive to animals, and not only to the animals that void them, but to animals generally, may be held to be the highest kind and most appropriate food of plants. And the more we reflect on this, the more we are convinced of its truth, the more we must admire the connection and mutual dependence. The animal enriching the air for the use of the plant;—the plant purifying the air for the use of the animal; and the same in regard to the soil,—afford a lesson to man of a very instructive kind,—most beneficial when carried practically into effect,—most injurious when neglected,—in one instance insuring fertility, and I may add salubrity,—in the other the production of sterility and disease. (*To be continued*).

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We give the following as it is extracted from the works of Prof. Baussingault:—

Experimental researches on the feeding properties of green fodder.—It is generally admitted that fodders consumed when green are much more nourishing than when they are dried; in other words, it is believed that a hundred pounds of clover, lucern or meadow grass, have a far greater nutritive value than the hay obtained from a hundred pounds of each of these elements. However, in carefully perusing what has been written on this subject, I have found nothing to justify that opinion. Indeed, two good observers, Messrs. Perrault and Jotempts, have ascertained that, to feed sheep, it will require 3lbs. 3oz. of hay, clover, or lucern to replace, 8lbs. 13oz. of the same fodder green; under the influence of either of these rations, there is a sufficiently satisfactory growth of wool and flesh. On the other hand, those agriculturists have practically ascertained that, in the winnowing, including the fermentation in the hay loft, and all the accidental losses, 100lbs, of clover or lucern are reduced to 23lbs of hay. From these results we draw this conclusion, that in giving to a sheep, 3lbs. 3oz of dry lucern, we administer to him exactly, in point of value, the equivalent of 14lbs. 6¾oz. of green; therefore, 5lbs. 8½oz. of green food more than is required when the ration is composed of the undried plant; and if a hundred pounds of clover or lucern, newly mowed, are requisite to feed an animal, it will require, to feed it in the same degree, the hay obtained from 163 pounds of the same fodder.

It may be easily understood that this mode of proceeding is too indirect properly to resolve the question we have in view. The discussion presented by MM. Perrault and Jotempts merely proves what no one thinks of denying, viz:—that the most advantageous way of using the produce of artificial meadows, is to have it consumed as much as possible while green, so as to avoid the expense, the loss, and all the casualties of haymaking. But this discussion does not in the least establish that the nutritive power of green fodder, is diminished by the simple fact of its being dried; the physiological question is thus left untouched. For many years I have made various experiments to resolve it. For that purpose I paid the greatest attention to the changes in the weight of thirty-two horses, on which my researches were made, from the alternate substitutions of dry and green fodder. The results have been at one time in favour of, at another against, the green diet; and, after very numerous weighings, I found that I was a little advanced as when I first began my experiments.

These contradictory results can be explained by the imperfection of the method I had adopted. It is quite evident that the hay with which the horses were fed, having been obtained, in the previous year, did not answer, as regards the quality, to that which would have been furnished by the green clover with which it was compared; and as for this last fodder, there was constantly a great uncertainty in the real weight of the ration given, in consequence of the greater or smaller proportion of water it contained. Some experiments which I have made on the drying of clover, show, indeed, how much that proportion varies according to the age of the plant, the nature of the soil, and especially, according to the meteorological conditions during which the cutting had taken place. This may be illustrated by examples taken on second year clover:—

May 19th, First cutting before flowering, 1000lbs of hay gave 212lbs. of water
June 3d, First cutting in flower, 1000 lbs. of hay gave..... 288lbs. of water
June 5th. (another district) first cutting in flower 1000lbs. of hay gave..... 305lbs. of water
July 28th, Second cutting in flower 1000lbs of hay gave..... 290lbs. of water
August, Second cutting—very much in flower—very woody; 1000lbs. of hay gave..... 360lbs. of water

We may add, that, during the drying, the clover experienced a considerable loss from the leaves