

it, on which are put 50 tons of grain in bags (5 tons on each section) evenly distributed. Mr. Mills uses grain for weight because it is convenient. In ten days, the out corn is pressed down level with the top of the pit, and the boards can be removed.

The two silos cost \$700. They hold about 600 tons, grown on 13 acres of ground, at a cost of less than \$500, including all expenses; equal to 80c. a ton! The contents of one silo were the only fodder Mr. Mills used last winter on his farm from the 15th of October to the 25th of January, during which time 120 horned cattle and 12 horses were kept in healthy condition with less grain than if they had been fed on the best hay. The second pit would, according to calculation, be enough to carry the stock on to the end of May. Is this worth imitating? I think it is, for, if 132 head of stock can be fed for 7 months on the produce of 13 acres of land, it follows that 10 head can be fed on one acre siloed; whereas, at 30 lbs. of hay a day for each head, a fair crop of 3,000 lbs. will only keep one cow for 100 days; or, that, whereas \$36 worth of hay at \$12 a ton, are eaten by a cow during the winter half year, only \$4.40 worth of ensilage are required to do the same duty!

Credat Judæus Apella,
Non ego!

I must say I could wish that the people of the United States would "draw it a little milder." What with 778 lbs. of butter per Jersey cow, per annum, when the best cows in the island do not exceed, on the finest grass land in the world, 400 lbs. per annum, it is very hard to attach any value to their figures. After all these practical remarks, Mr. Mills starts off with the stunning statement that, "the meat of animals fed on tares, rye, corn, &c., out for green-meat in the summer, is injurious to health, and that their milk is the frequent cause of dysentery and death amongst children; that butter and cheese produced from animals thus fed, are necessarily bitter and unwholesome. In short, Mr. Mills believes that the natural effect upon an animal of eating unripe fodder (green-meat) is to poison its product, because, as he says, "in consuming the unripe food it is only eating poison!" And then he goes on to talk about a farmer having on his hands in the winter a dozen, or so, of animals "sick with hollow horn," and, I suppose, with "tail evil," and a variety of like diseases, all of which are purely imaginary. All I can say is, that thousands of cows are fed every year on grass or other immature food—hay itself, if properly managed, is immature—without injury to themselves or to children and that no chemical action can take place in the siloes that can account for such a wonderful difference as Mr. Mills would make us believe exists between green corn freshly cut, and the same preserved for some days, weeks, or months, in a pit. If people will talk nonsense, they must expect to be laughed at.

But a lucid interval appears. Mr. Mills has not much opinion of fodder corn: he prefers grasses. He thinks his stock will do better on 10 tons of ensilaged grasses than on 40 tons of ensilaged corn. But again the shadow comes over him, and he talks about keeping 300 cows on a farm of 100 acres, using 30 acres for ensilage, and the other 70 to grow his grain on!!! Mr. Moulton, to whose account of Mr. Mills system I am indebted, concludes by stating that "the exhaustion of phosphoric acid and potash from the soil was, in 1879, equal in value to \$100,000,000, or 20 0/10 of the whole crop of corn. Does he not see that only a part of this can be true? Was none of it returned to the soil as manure? A pretty calculation to make, for any of my readers who like that sort of amusement: if maize contains 1.2 0/10 of ash, and the ash contains 50.70 0/10 of phosphoric acid and 28.37 0/10 of potash, what is the value of those manuring

matters in 500,000,000 bushels? I make it \$35,150,000 or thereabouts, and only the exported corn, whether in grain, in hogs, cattle, &c., ought to be lost, irredeemably, to the land.

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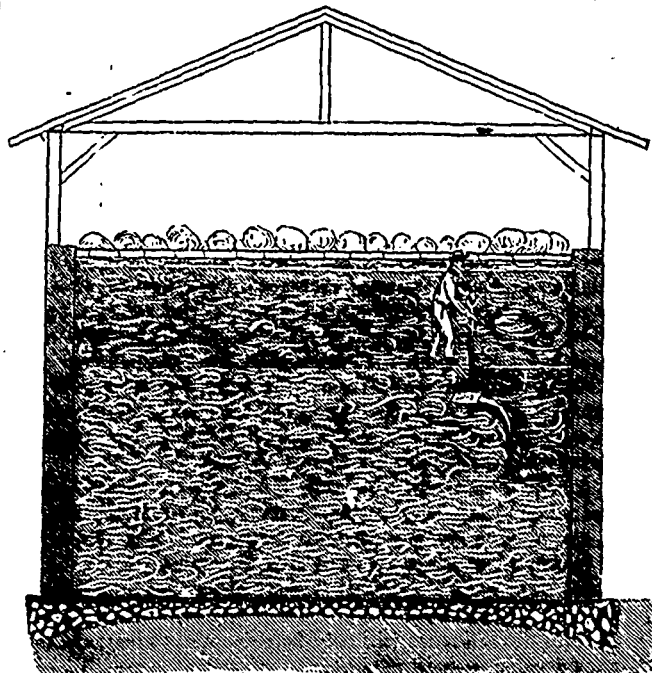


Fig. 3.

COPROGÈNE.

(Translated from the English by Arthur Thiboutot.)

It is always pleasing to a well constituted mind to see persons taking pains to benefit their fellow creatures. And when we know that the motives which actuate these persons are purely disinterested, our admiration of their endeavours is considerably heightened. Success does not always reward them. Failure, from causes utterly unconnected with their aims, may often disappoint them; but we must all reverence their devotion to the good of others, and though bound to expose their errors, we need not, by bitterness of criticism, exacerbate their feelings.

The work, of which the heading of this article is the title, appears to be the production of a certain Mr. Bommer, an American, apparently, of very ardent views. The copy I have perused is a translation of the original into the French language—and very well done too; Mr. Thiboutot has, in almost every instance, caught the meaning of the original.

One great mistake seems to pervade the whole work; that carbon, in the form of humus, is the one thing essential to the growth of plants; for, to show how to make humus, is the sole lesson taught in this work.

"Rain water is preferable to spring water because it contains more electricity. Since the nourishment of plants is composed of humus, &c." Again; "Sir Humphrey Davy says 'no substance is more necessary to plants than carbon! Therefore,' concludes the author of *Coprogène*, "the manure you apply to plants should rather contain carbon than nitrogen. The leaves absorb nitrogen, which the air contains abundantly, with facility; but assimilate very little carbonic acid gas." Which is quite a novel way of stating the question. Plants absorb carbonic acid gas, reject the oxygen, and assimilate the carbon. As to nitrogen, v. Lawes, *passim*.

If you look into any of the earlier works of Davy,