

rance which prompts it—and arrogant ignorance *deserves* no charity:—if they are not sincere, and *think* differently from what they say, then they are *hypocrites*, and of the worst kind, too, for they serve as false lights that may lead others astray. If, however, in most cases, these persons had *ability* and *honesty* in the proportion that they have *arrogance* and *bigotry*, they might commend what they now denounce;—but happily for the cause of agricultural improvement, the influence of such individuals can constitute no very serious impediment to its progress—for, what is *truth*, will *prove* itself so, and must ultimately triumph.

It is stated upon good authority, that the wheat-growers of France have succeeded in doubling the product of wheat in that kingdom within the last ten years, chiefly through the agency of charcoal.

Now, who discovered the value of this important agent in effecting such results? Was it the conception of any of that class just alluded to, who distrust science because its application to agriculture is *new*, or who ridicule it out of pure ignorance and bigotry, or to cater for the gratification of deep-rooted prejudice and sapient self-conceit? Was it the discovery of any of the family of *Know-enoughs*,—the frothy declaimers against “book-farming,” who are satisfied with knowing as much as their fathers know, and *glory in knowing no more*? No—no. Agriculture is indebted to Science for this important discovery. It was the suggestion of French chemists that led the wheat-growers of France to adopt the use of charcoal on their fields—and the acquaintance, with this fact and the theory, no doubt, that led Mr. Pell, also, to use it for the same purpose and with such signal success.

To whom are we indebted for the great advantage which has accrued to our farmers from the knowledge of a remedy for our soils, and of the valuable properties of lime as an amendment to various grounds? Do we owe these discoveries to any of those boastful “practical men,” who sneer at the science and the learning of books? No:—this, too, is to be charged to the credit of *science*.

Such facts as these—*these alone*, indeed—are sufficient to confound with shame the shallow detractors of science as an aid to the farmer—and until they can originate discoveries by their boasted “practical experience,” as important as these, they will better act the part of Wisdom in holding their speech, than in betraying their stupidity in senseless slurs at that which is above their comprehension or too exalted to suit their grovelling inclination. Very truly yours, D.  
*New England Farmer.*

#### MODE OF MAKING MAPLE SUGAR.

Joel Woodworth of Watertown, Jefferson county, whose maple sugar, refined to the degree of loaf sugar, obtained the premium at the late Agricultural State Fair at Rochester, thus describes the process of manufacture in a letter to the Society's committee on that subject. We copy from the Watertown Jeffersonian.

Gentlemen—I herewith submit to your inspection 50lbs of my maple sugar. The following is a statement of making and clarifying the same:—

In the first place I make my buckets, tubs and kettles all perfectly clean—I boil the sap in a potash kettle, set in an arch in such a manner that the edge of the kettle is defended all around from the fire; I boil through the day, taking care not to have anything in the kettle that will give color to the sap, and to keep it well skimmed. At night I have fire enough under the kettle to boil the sap nearly or quite to syrup by the next morning; I then take it out of the kettle and strain it through a flannel cloth into a tub, if it is sweet enough, if not I put it into a cauldron kettle, (which I have hung on a pole in such a

manner that I can swing it on and off the fire at pleasure.) and boil it till it is sweet enough, and then strain it into the tub and let it stand till the next morning; I then take it and the syrup in the kettle and put altogether into the cauldron and sugar it off. I use to clarify, say 100 lbs of sugar, the whites of five or six eggs well beaten, about one quart of new milk and a spoonful of saleratus, all well mixed with the syrup before it is scalding hot; I then make a moderate fire directly under the cauldron, until the scum is all raised, then skim it off clean, taking care not to let it boil so as to rise in the kettle before I have done skimming it; I then sugar off, leave it so damp, that it will drain a little. I let it remain in the kettle until it is well granulated. I then put it into boxes made smallest at the bottom, that will hold from 50 to 70 lbs, having a thin piece of board fitted in 2 or 4 inches above the bottom, which is bored full of small holes, to let the molasses drain through, which I keep drawn off by a tap through the bottom. I put on the top of the sugar in the box a clean damp cloth, and over that a board well fitted in so as to exclude the air from the sugar. After it has done or nearly done draining, I dissolve it and sugar it off again, going through with the same process of clarifying and draining as before.

I do certify that the above is a correct statement of my mode of making maple sugar.

JOEL WOODWORTH.

#### PRACTICAL OBSERVATIONS ON DRAINING, WITH OTHER SUGGESTIONS FOR THE IMPROVEMENT OF LAND.—BY GEORGE BROWN.

1. Swinnerton, Macclesfield.

This little work shews more practical knowledge and scientific research than is generally found in so small a compass; and will well repay the reader by many useful and valuable hints. We extract from page 10 the following, in which we perfectly agree with the writer.

“One great error,” he says, “into which English agriculturalists have fallen, is the system of diagonal or cross-draining. By cutting across the hill, the drains may be so placed as not to touch those veins from which the water flows, and thus the whole of the labour and expense may be thrown away. For instance, suppose those layers of subsoil in which the water chiefly flows to be three feet perpendicular from each other, with a stratum of clay between, the cross drains may be so cut as not to touch either one or the other of them.

“Another great evil attending the system of cross drainage is, that the water falling on the surface naturally runs from the side of the drain above it till it comes to the one below. The ridges running in a contrary direction to the drains, divide and throw the water into the furrows, thus accelerating its course so as sometimes to throw it over the drains. By this system the water is not drawn from the centre as by the other plan, but is allowed to flow from one drain to another, and thus the distance between the drains is in reality doubled. But even supposing it to answer as well in drying the land (which is not the case,) the very fact that it requires nearly twice the number of drains is sufficient to condemn it. Let the fall be ever so great, there ought to be no deviation in the direction of the drains. They should be made to run up and down hill. By this plan you cut through the different strata of the subsoil and open a passage at the lower level into the drains for the water, which would otherwise burst out on the face of the slope.”

We quote the following statement of a fact which came under the author's observation, in conclusion.

“Of a field which was summer-fallowed for wheat, one half was drained, the other half not; in every other respect the whole field underwent the same treatment. The crops on the two halves were carefully kept separate, and it was found when the wheat was thrashed, winnowed and measured, that the drained half yielded just fourteen bushels per Scotch acre more than the undrained half. The Scotch acre is nearly a fourth part greater than the statute acre.”