

the foot and hand to the depth required for the plant, when it is to be drawn three or four inches forward, to admit the plant to be put in at the cavity at the back of the spade, which is to be taken out and the earth closed to the plant by the right foot. Two persons are required to perform the work, one to use the spade and one to insert the plants.

The plants will require to be kept clean during the summer with the hoe, and the following spring a sprinkling of well rotted manure may be spread by the sides of the rows and neatly dug in with a spade. The next year the management is the same as regards keeping clean, &c. The third season the plants may be headed down to two or three buds or eyes, and the ground well worked and kept clean, indeed your live fences of this kind should always be kept in the best of order. The fourth year the plants may be headed down to within six inches of the root, and the sides cut thin, so as to form a hedge of a narrow roof-like appearance, or, to give a more definite idea, like the mane of a horse.

Training, or after-management.—When the plants are of a proper strength they are to be pruned or brushed once or twice a year—in the fall and spring, after the young shoots have made about six inches of wood. The hedge should be kept as thin as possible on the top, tapering from the bottom, which should be kept thick and above two feet and a half through. It should be increased to six feet in height which will be sufficient in most cases, but where it is required to be higher, it may be gradually allowed to attain a greater height. Keeping it clean and a regular management the first few years, is the principal object that must be attended to.

FEEDING HAY TO SHEEP.

I am located in a very hilly country, and of course my system of farming is various, but my intention is ultimately to confine myself to raising fine wool. I have tried many ways of feeding sheep hay. I have spread it on the ground, which I consider the most slovenly and wasteful. I have tied in board boxes, on racks made about 2½ feet wide and from 12 to 16 feet long, with a roof to keep the hay dry; they are made of boards about 1 ft. or 15 inches wide, nailed on 4 inch scantlings in each corner; the bottom board to stand on the ground; the next course to be nailed on 8 inches above, leaving that space all around the box for the sheep to put their heads through to the hay; but they will waste considerable hay fed in this way, if they are fed all they will eat. For the last two winters I have let my sheep run to the stacks, which may appear to be very wasteful and slovenly in theory, but I do not find it so in practice, owing to the manner in which I build my stacks. In the first place I take a pole about 5 inches diameter at the butt and about 3 at the top; blue ash is the best. I set this about 2½ feet in the ground and stamp the dirt firm around it; let it be long enough to project about 3 feet above the top of the stack, for convenience of the stacker in topping off; then take four blocks about 18 inches in diameter, place them around the pole, and on those blocks build a rail pen only 3 rails high; cover the ground with rails about 6 or 8 inches apart to keep the hay off the ground, and in this pen and around the pole, build the stack in the usual way. I generally put from 2½ to 3 tons in a stack; the sheep will eat out the hay under the rails clear into the pole, and the stack will settle down the pole, the bottom resting on the rail pen, until the sheep will eat it all up, with but little waste. Such has been my practice for two winters past, and I have this summer stacked all my hay intended for sheep in this manner. My sheep are Saxony and grade sheep, and I have about 750. I have tried various lengths for the blocks to build the pens on, and find about 18 to 20 inches the most suitable length; large sheep would need higher blocks.

It is now admitted among all intelligent farmers that there can be no profitable farming, without giving to the earth in proportion to the crop we hope to receive. How this can be done by interior farmers is the great desideratum in agriculture. They have no large cities to resort to for manure—the exhausting process will run out all concerned in it; and unless some substitute for animal manure can be found, the condition of farms in the country must deteriorate. We believe the day is not distant when all farmers, by the aid of chemistry applied to agriculture—may make a compost from the resources of their farms that shall be fully equal to animal manures.

We think it now pretty evident from the most exact and careful experiments, both in this country and Europe, that different material may be combined in compost, which may be equal in their nutritious properties to pure manure. Of this we propose to speak at large hereafter as soon as we shall have had time to put our house in order.

The Merrimac Manufacturing Company at Lowell, till very lately have kept a large stable of cows for the sole purpose of their manure to be used at some stage in the process of drying—but a distinguished chemist in their employ by analyzing this manure, has made a compound of other materials, on chemical principles, which possesses all the properties of this manure which is required in their business.

This chemistry can do to aid the farmer to obtain a substitute for pure animal manures, in scientific compost.

If farmers will but listen to the voice of science and encourage the efforts of scientific men, she will ere long be as powerful in their behalf, as she is to aid the mechanic or manufacturer.—*Boston Cultivator.*

Extract from an Address of the Hon. Chilton Allen, President of the State Agricultural Society of Kentucky.

"But the great disadvantage under which American agriculture has had to labor, is the neglect of the government. When we have seen that the ancient Egyptian, Assyrian, Persian, Phœnician, Jew, Chinese, and the inhabitants of ancient India, became great and prosperous by bringing the power of government and religion in aid of individual industry in cultivating the earth: when we have seen that all the modern governments of Europe have discovered and are now practising upon this ancient principle of national improvement, is it not astonishing that our National and State governments are the only ones in the world that give no direct assistance to tillage? Our surprise is increased when we read the following words from the last message of President Washington to Congress:

"It will not be doubted that with reference either to individual or national welfare, agriculture is of primary importance in proportion as the nations advance in population and other circumstances of maturity; this truth becomes more apparent and renders the cultivation of the soil more and more an object of public patronage.

"Institutions for promoting it grow up, supported by the public purse; and to what object can it be dedicated with greater propriety? Among the means which have been employed to this end, none have been attended with greater success than the establishment of boards composed of proper characters, charged with collecting and diffusing information, to encourage and assist a spirit of discovery and improvement.

"This species of establishment contribute doubly to the increase of improvement by stimulating enterprise and experiment, and by drawing to a common centre the results everywhere of individual skill and observation and spreading them thence over the whole nation. Experience accordingly has shown that they

are cheap instruments of immense National benefits."

What wizard spell—what fatal darkness has blinded the eyes of our public councils so long to the great agency of human prosperity, and to the parting council of the father of his country?

Why in the name of the experience of the world are manufactures and commerce more entitled to governmental protection than agriculture? While it is true, that seven-eighths of our population live by agriculture, is it not strange, passing strange that, in a country possessing free institutions, it is also true that, from the foundation of our government up to this time, there cannot be found either in the statutes of the State, or the Nation the word AGRICULTURE; while it is true that the National code from 1789 to 1836 is replete with provisions for the protection of manufactures; while it is true that commerce in every place on the globe is under the shield of National power, is it not strange, that it is also true, that there never has been appropriated, either from your National or State treasury, one dollar for the direct encouragement of the art of husbandry.

The question of domestic manufactures has occupied the widest space in the public attention. Behold the power of commerce! From 1816 to 1836, for repairs and increase of the navy we have expended \$22,000,000; during the same period the whole naval establishment cost \$66,000,000. At this expense, our nation, very properly, has made the stars and stripes wave over every ocean and upon every sea, for the protection of our commerce.

Reference to a single recent historical fact will illustrate the ascendant power which commerce has acquired over the councils of our country, and the sleepless vigilance with which it is guarded in the most remote parts of the earth, in the year 1831, the merchant vessel *Friendship* from Salem, was captured and plundered on the pepper coast of the island of Sumatra. After the capture of *Friendship*, Capt. Endicot, her commander, told the islanders that he belonged to a great nation on the other side of the globe, that would, before the end of twelve months, send a big ship to punish the outrage that had been committed upon him. They laughed at the idea of the existence and power of the United States. The news of the capture of the *Friendship* was brought to our government. The powerful ship *Potomac* happened just at that time to be ready for sea, and she was forthwith despatched to avenge the outrage which had been committed upon the commerce of the United States. Time rolled on; the 12th month had nearly elapsed; the 13th moon was nearly at hand, in two days more the pirates would hail the anniversary of the capture of the *Friendship*. All but a very few were deriding the idea of the threatened visitation of the big ship; yet they could not dismiss the ominous threat from their minds. On the morning of the 17th February, 1832, just forty-eight hours before the expiration of the twelve months, the sun rose on Sumatra; and behold! there stood, sure enough, the terrible big ship! They saw, in the stars and stripes, as they floated on the breeze, the fate of the pirate and the murderer. Their forts were stormed, and their town laid in ashes; and such a terrible impression made of the power and justice of the United States, that, since that time, the smallest American vessel can float in safety in these remote piratical seas.

Thus, it was to protect an inconsiderable branch of our commerce, upon the opposite side of the world, that a national ship circumnavigated the globe, in a voyage of four years, doubling the Cape of Good Hope in going out, and that of Cape Horn in coming in, at the cost of probably a million of dollars. If the national mind, if the national resources, could be brought to bear thus directly on agriculture, what glorious results would follow! The expenses of this single expedition would have established an agricultural college, with