

GILMORE'S BEE FEEDING SUBSTANTIATED.

Please insert for the encouragement of many who have been misled by an unjustifiable attack upon Gilmore's system, the unsolicited opinion of Prof. Smith of Baltimore, Md., extracted from the *Cultivator* of Jan. 1861.—Dr. G. B. Smith stands high as a naturalist and a man of science.

An examination of the plan of Mr. Gilmore, has afforded me much pleasure, and led me to a desire to draw public attention to the improvement of the valuable argument of rural economy. Many, nearly every one, suppose that the bee collects honey from the nectar of flowers, and simply carries it to its cell in the comb. This is not correct. The nectar he collects from flowers is a portion of his food or drink; the honey deposited is a secretion from its melific or honey-secreting glands, (analogous to the milk-secreting glands of the cow.) If they were the mere collectors, then we should have the comb frequently filled with molasses, and the bees had fed at a molasses hoghead. The honey-lag performs the same functions as the cow's udder; merely receives the honey from the secreting-glands, and remains till a proper opportunity presents for its being deposited in its appropriate store-house, the honey-comb. Another error is, that the bee collects pollen incidentally when in search of nectar improperly called honey. It goes in search of pollen specially, and in search of nectar specially. When the pollen is ripe for the bee's use, there is no nectar which is ripe for it. It is generally supposed also, that the bee collects the wax from some vegetable substance. The wax is a secretion from its body as the milk from the cow. It appears in small flakes under the rings of the comb, and is taken thence by other bees rendered sticky by the bee's saliva, and laid on the walls of the cell with the tongue, as the mason uses his trowel. The reader must understand that the bee will make honey, no matter what food it may eat, if it be appropriate for the bee, and it will not eat it if otherwise. The flavor of the honey will be affected by the aroma of the flower or other food, but the article will be honey, not molasses, or sugar, whether the bee feed on flowers or molasses or sugar.

Gilmore's plan seems to the writer, to afford greater advantages than any other. With a bee house to accommodate as many hives as he means to keep made tight to a window to afford light to the attendant; he has some hives simply constructed, sawed in three pieces, which being kept from striking together by slats, the two lower stories can be separated at will, and thereby afford opportunity to change the old comb out, and by being placed side by side with communications between the bees when multiplied pass into new hives without swarming, with a queen at their head. But the greatest improvement of Gilmore's is his feeding plan. By his liquid placed in a feeding cup, bees are saved the trouble of and time required to go abroad by which they are enabled to produce more honey than they do on the old plan. And what adds the bee produces better honey, is well secured against moths and robbers, is more healthy, winters better, and is more sure to live longer.—*Utica Testator*.

CINNAMON TREES.

In the afternoon I visited the cinnamon plantations, of which there are many in the vicinity of Colombo. The trees are not as shrubs are planted in rows; their height does not at the utmost exceed nine feet, the stems are white and scabrous. From the fruit, which is a small nut, oil is obtained; when the fruit is crushed and boiled the oil swims on the top; it is used for lighting, mingled with cocoa-nut oil. The cinnamon harvest takes place twice in the year; the first, called the great harvest, from April to July; the second, the little harvest, from November till January. The tree is pulled off the stem for branches with a knife, and dried in the sun, by which process it acquires a yellowish brown color. The finest cinnamon is of a light yellow, and about the thickness of a card board. The finest cinnamon oil used in medicine is obtained from the cinnamon bark, it is shaken in a vessel full of water, in which it is steeped for eight or ten days; the whole is then strained into a still, and distilled over a slow fire, on the surface of the water thus obtained the oil after a few days collects, and is removed with the greatest care. It is found in India.

NATURAL HISTORY.—THE COCOA.

The Cocoa is a tree which delights in the sands of the sea shore, where but little else will vegetate. Its root is possessed of innumerable cord like fibres, no longer than ones finger, yet exceedingly tough and very strong. These interlace each other and insinuate themselves into crevices of the rocks, where longer root could find no sustenance. The tree is consequently tenacious of life and exceedingly difficult to uproot.

Besides this beautiful adaptation to circumstances by its Creator, there is another in the arrangement of the thickly coated nut with its hard shell, that makes it so buoyant, that the winds and waves waft them at times to the shores of islands forming by that wonderful worker of the deep—the coral insect—where, among the scanty sands, they vegetate and add beauty and worth to desolation.

It is affirmed of this tree in India, that there is no part of it not applied to some useful purpose. Not cabins only, but frequently large houses, are constructed entirely of materials furnished by the cocoa. The trunk furnishing in various ways the frame work, often fastened together by cords made from the fibrous envelope of the nut, whilst its leaves plaited, form the roof and sides, rendering them impervious to wind and rain.

Dr. DEUCAN, mentions that the fibrous envelope of the nut has been woven into cables by which 74 gun-ships have safely out rode heavy gales of wind, and that, even when European cables have parted. The fresh leaves are much relished by the elephant. The ashes of the wood are so much charged with potash or soapy matter that the native fishermen of Ceylon substitute them for soap.

It is a fruitful tree, two or three products being gathered annually, to the amount sometimes of 100 nuts or more. It bears from its eighth to its sixty-fourth year. The half ripe nut contains frequently three or four pints of a clear aqueous liquid, fragrant and pleasant. The nut itself is highly nutritious. Cutting the extremity of the sheath whence the flowers sprang, a white, sweet, liquid disengages from the wound. This is called Palm wine, and is obtained also, from other species of the palm. This, when concentrated by boiling, deposits sugar.—If fully exposed to the air, it acquires vinous properties, and in twenty-four hours becomes vinegar. The nut yields an oil, but little inferior, it is said, to that of sweet almonds. Of the shell, cups and various small articles are manufactured.—*Rural New Yorker*.

LEACHED ASHES.—Leached ashes are excellent for almost any land. In the process of leaching they lose most of their potash, but retain other valuable fertilizing properties. They are said to be of particular service to the oat crop, and on clay soils. Fifty, sixty or a hundred bushels of leached ashes, with half a dozen bushels of plaster, and a few pounds of bone dust, make a most excellent manure for corn, mowing or pasture land. Leached ashes vary in price, according to location and demand, from three to twelve cents per bushel.—*N. E. Farmer*.

CULTIVATION OF BASKET WILLOW.—Considerable attention is beginning to be paid to the cultivation of basket willow in the United States. The annual importation of the article into our country amounts to \$5,000,000; and this, large as it is, does not satisfy the consumption. The supply is derived from France and Germany mainly, and costs here from \$100 to \$130 per ton weight.

CLOVERING.—Never spare the seed when you sow clover. Four quarts are not enough to the acre, put on not less than six, and be not frightened if you scatter a peck! The great superiority of thickly sown clover fields over others for feed and manure, is too manifest to need demonstration.

A SECRET WORKER KNOWN.—Boil three or four onions in a pint of water. Then with a gilding brush do over your glasses or frames, and the flies will not light on the article washed. This may be used without the least apprehension as it will not do the least injury to the frames.

The New Orleans *Piceayune*, of the 24th ult., says.—“We were shown yesterday, in Lafayette, a large bush covered with flowers in full bloom, and of a deep red color, but no single flower larger than a good sized pea. They are called the ‘Piceayune Rose,’ and to us were great curiosities.”

OTSEGO TROUT POTATO.

When in Cooperstown, in June, 1839, I first saw the Otsego Trout, a seedling potato resembling the Peach blow in color, but harder in flesh, and equal if not superior to the old Red variety. I brought home six, which I planted on the 6th of July, and the next spring planted the product of these, and had in the fall of 1860, seven bushels. In 1851, three bushels, planted on clay ground, produced thirty bushels, and from two on sandy ground I had twenty-five bushels.

I have now planted them three years. They do not rot, and I find them superior to any kind I have raised for summer use, and very productive. My mode of cultivating is as follows—I have my ground mellowed and well prepared, and plant in April, covering but lightly—no deeper than my corn-market leaves its marks or furrows. They are ripe in October. I have sold forty bushels at \$1 per bushel, as I wish to spread the seed as widely as possible—thinking the variety of great value to the country.—*Cor. Rural N. Yorker*.

THE BEE MOTH.—PREVENTION.—In the *Rural* of the 26th of February, I see an enquiry in relation to preventing the depredations of the bee moth. Two years since I lost some two or three swarms by the bee moth. I then made new hives, and around the bottom inserted a piece of band iron so that the hive stood some half inch from the bottom board. This prevents them from laying their eggs around the hive. Since that time I have had plenty of honey, and have seen no sign of the moth.—*Ibid.*

THE ILLUSTRIOUS FARMER.—Custis, in his “Recollections of General George Washington,” draws the following portrait of the illustrious farmer: Fancy to yourself a fine noble looking old cavalier, well mounted, sitting firm and erect in his saddle, the personification of power, mellowed yet not impaired by time, the equipments of his steed all proper and in perfect order, his clothes plain, and those of a gentleman, a broad brimmed hat, with a small gold buckle in front, a riding switch cut from the forest, entirely unattended; and thus you have Washington on his farm, in his last days at Mt. Vernon. His ride on his extensive estate would be from eight to fourteen miles; he usually moved at a moderate pace, passing through his fields, and inspecting everything, but when behind time, the most punctual of men would display the horsemanship of his better days, and a hard gallop bring up to time, so that the sound of his horse's hoofs and the first dinner bell should be heard together at a quarter to three o'clock.

When you make a fence, make a good one. It may cost you more at first, but will cost less in the end.

INSECT BUILDERS.—M. Reaumer states that for a period of twenty years, he endeavored, without success, to discover the materials employed by wasps in forming the blue gray, papery substance, so much used in the structure of their nests. One day, however, he saw a female wasp alight on the eash of a window, and it struck him, while watching her gnawing away the wood with her mandibles, that it was from such materials as these she formed the substance which so long puzzled him. He saw her detach from the wood a bundle of fibres, about one tenth of an inch in length, and finer than a hair, and as she did not swallow them, but gathered them into a mass with her feet, he had no doubt but that his opinion was correct. In a short time he saw her shift to another part of the window, and carry with her a few fibres which she had collected, and which she continued to add. He then caught her and began to examine the bundle, and found that it was neither yet mounted nor rolled into a ball, as it is always done before used by the wasp in her building. He also noticed that before detaching the fibres, she brushed them into a kind of lint with her mandibles. All this he imitated with his pen-knife, brushing and piling the same wood till it resembled the fibres collected by the wasp; and so discovered how wasps manufactured their paper; for these fibres are kneaded together into a kind of paste, and when she formed a round ball of them, she spread it into a leaf, nearly as thin as tissue paper; and then she accomplished by moving backward, and leaving it with her mandibles, her tongue, and her teeth. And so the wasp forms paper, placing layer upon layer, 15 or 20 sheets deep, and thus preventing the earth from falling down into her nest.—*Sci. American*.