

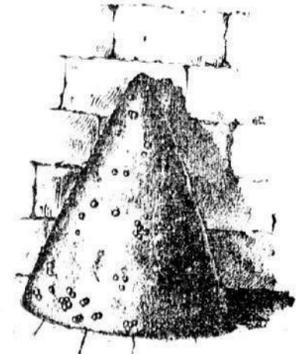
FARM AND GARDEN.

MATTERS OF INTEREST TO AGRICULTURISTS.

Some Up to Date Hints About Cultivation of the Soil and Yields Thereof— Horticulture Viticulture and Floriculture.

Culture of Mushrooms.

Some time ago a correspondent of the FARMER'S REVIEW requested more information on the growing of mushrooms, which we promised to give when opportunity presented. We will devote this article to the culture of mushrooms in buildings, because such culture is the only kind that is advisable during the remainder of the year. We hope that some of our readers will take interest in the subject sufficiently to begin cultivating them on a small scale. The outlay is small and the work not hard. Besides, mushrooms are not particular as to conditions, and may be grown in cellars, barns and other out-houses, especially old green houses. We believe that many a family might grow mushrooms with little trouble, and find in them a valuable food product, even if the family of the grower consumed the entire crop. Mushrooms are very nutritious. This is contrary to the idea of those that know nothing of them. Most people suppose, because of their rapid growth, that they are unsubstantial in texture and can possess little of food value. On the contrary, it is doubtful if there be any other vegetable possessing a like amount of nutriment. The statement is made that mushrooms possess as much nutriment,

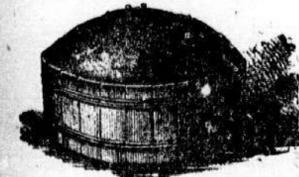


PYRAMIDAL MUSHROOM BED IN CELLAR. pound for pound, as beef. This is doubtless a fact, as mushrooms take in oxygen and throw off carbonic acid gas, as do animals, while nearly all vegetables do the opposite; that is, throw off oxygen and take in carbonic acid gas.

To those living within easy reach of cities, the culture of mushrooms presents a means of revenue. The demand for mushrooms is large and prices are high. France supplies most of the mushrooms used in American hotels and restaurants, and even then canned goods have to be used. With an increase in the supply of fresh mushrooms would come an increase in the demand. It seems strange that American gardeners have so long neglected growing this delicious vegetable.

In France caves and cellars are used extensively for the growing of mushrooms. Most of our farmers have cellars, either in houses or barns, that are suited for this vegetable. A few requisites are necessary: the cellar should be warm, dry and dark. Drafts by means of doors and windows are to be avoided, where the draft would come immediately over the mushroom beds.

Temperature and moisture should be uniform, from day to day, as nearly as possible. Sudden fluctuations of temperature or of moisture are not desirable. These are, however, but the requisites of a good cellar, and therefore any one that has a really good cellar can grow mushrooms. In some parts of the east where the market gardeners are beginning to grow mushrooms on a large scale, cellars are being built for this purpose alone.



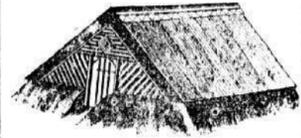
BED IN BOTTOM OF OLD CASK.

If it pays to excavate and build cellars for this crop it certainly will pay to grow them when the cellar is already at hand. As the mushrooms are to be grown in the winter as well as in the fall months, care should be taken to make the cellar impervious to cold, especially if the culture is to be on a large scale. If only a small bed is to be made, it will be better to experiment with the cellar just as it is, to save expense. If the culture is in sufficient magnitude to warrant the outlay, make the windows tight for the winter, by having double sash. This is needed anyway in most cellars to protect the vegetables stored there for winter keep. If a door opens into the open air, it should be supplemented by another door, thus insuring freedom from gusts of cold air when the door is open. But in most cases this is unnecessary, as there will be an entrance from the house above or from some other room. As to shape of beds, there is no prescribed rule. The above out shows only one form. They can be made flat if desired, or put in a box or on a shelf.

Some growers on a small scale utilize old casks, sawing them in two, and using both ends. In such a case holes should be bored in the bottom of each tub, and a layer of soil placed in first. The stable manure is then put in,

sometimes mixed with a small proportion of loam. The greater part should, however, consist of manure. When the tub is half full of this soil and manure, put in the spawn, and fill up the tub with manure and earth, well pressed down. The manure or compost may be rounded up if so desired.

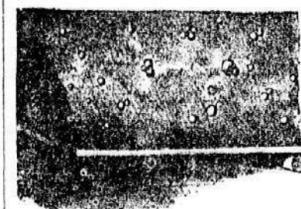
During the fall months, at least, mushrooms may be grown in the sheds or barns. If the beds are to be exhausted during the summer and fall months even the open sheds might be used, especially when they are in protected localities. It will be safer to use



A MUSHROOM HOUSE.

closed sheds, as then the beds will survive any sudden fall frosts. In the cow shed, the horse stable, the carriage house and tool sheds may be found warm corners where mushroom beds will thrive. If the shed is without a window, so much the better, as darkness is desired. If there is no room on the floor a shelf may be constructed on a side or in a corner. This has the advantage of being out of the reach of rats and mice. The beds should be made and treated the same as those constructed upon the floor or ground, and are said to be as productive. These beds will not do in winter after water will freeze in the sheds, unless they are carefully covered each night. It is best to use them only for summer and fall production.

The methods we have mentioned above may be easily adopted by nearly all readers of the FARMER'S REVIEW. The growing of mushrooms in green houses applies to comparatively few—those that have green houses, or that desire to conduct regular mushroom houses. Hot houses are generally too warm for the mushrooms to do well in them. Green houses are better, as the temperature is more suitable for the growth. Nearly all green houses are suitable, and the beds can be placed in parts that are not used for other things, as under benches. As most plants can not grow in the dark, dark places can be the better utilized for this purpose. In cool weather the beds may be covered with straw or old carpets to keep the temperature from getting too low. Above we show an illustration of a house made especially for growing mushrooms. It is a sort of green house, but no glass enters into its construction, being unnecessary and also a detriment. The building is especially designated for



SHELF BED IN STABLE.

growing mushrooms throughout the year without the use of artificial heat. It is built with the idea of rendering it independent of outside atmospheric conditions. An excavation is first made like a small cellar, and the dirt taken from this excavation is subsequently used for banking up. The walls are built hollow, thus giving a dead air space, and the house is banked up to the eaves of the roof. The roof may be thatched with reeds, slabs or anything that will keep out air and rain. A hollow space may be left in the roof to be filled with sawdust. The floor may be of burnt clay, or any material that will give a dry, hard surface. Drains may be necessary to keep the place free of water.

The illustration below shows three mushroom beds in an open garden in Paris. This represents winter culture in that city, where the temperature is not generally so low that the beds can not be protected. In the cut the beds are covered with old mats, carpets, etc., and held in place with stones, bricks and boards. The beds are covered at nights and cold days. Usually the method followed is this: The horse manure is collected for several weeks before it is to be used. All chips, stones and rubbish are taken out, and the manure is then placed in heaps two feet thick and pressed down with a fork. The bed is stamped down, watered and stamped again. It is then left for about ten days, till fermentation has begun to set in, when the bed is all forked over, care being taken to put the manure that was on the sides in the center. The bed is treated as in the first making. Ten days more elapse, and the manure is then in condition to be used in the bed. The permanent beds are then made, about two feet high and wide and as long as desired. The beds are packed solid and soon begin to heat



MUSHROOM BEDS IN PARIS.

again, but on account of the previous treatment are not so hot that the spawn will be killed. The spawn is placed in the manure near the base of the beds, and the whole is then covered with several inches of straw or other litter. In about ten days more the white filaments are seen spreading in the beds, and at this time a layer of about one inch of rich earth is placed over the bed. These beds have sometimes to be watered, especially if the season is very dry.

The Thistle Pest.

In the year 1846, Mr. Ambrose Stevens of New York presented an essay before the agricultural society of that state on "The Extirpation of the Canada Thistle." In this essay Mr. Stevens gives the results of careful experiments conducted during the years 1841 to 1845 in the destruction of this plant, and also an abstract of every article on the subject that had appeared in the agricultural journals and published transactions of the state up to 1846, summing up his evidence in carefully drawn conclusions.

ABSTRACT OF MR. STEVENS' EXPERIMENTS.

The thistles experimented on occupied three kinds of soil, viz: 1. A strong clay loam with some slate intermixed. 2. "A reclaimed swamp with a shallow upper soil of vegetable mould, alluvial deposit and clay resting on hardpan" (the timber before clearing chiefly black ash), and 3. "A rich alluvial creek bottom."

The first soil named was plowed nine inches deep in April, and the plowing repeated monthly until September, when wheat was sown. The thistles did not appear after the third plowing. The season was very dry.

On the second soil, three plans were tried. 1. "A plat was burned over by firing logs upon it until the upper soil was heated through to the hardpan." 2. "Another plat was burned over like the first, and in addition thoroughly salted." 3. "A plat was soaked down to the hard pan three times with strong brine." The thistles were completely destroyed in all cases.

On the third soil, the roots of the thistle penetrated to the depth of three feet, which was down to ground water. A plat was plowed deeply six times during the five months from April to August. But in September the thistles were more vigorous than ever. The next year this plat was planted with corn about May 20. The corn was plowed and hoed in June, July and August, and hoed in September, but in October the thistles were more vigorous than any previous time. A second plat was burned all over with log heaps. In a month the thistles were up through the burned ground as vigorous as ever. A third plat was burned over like the second, and in addition salted thoroughly three times, but in a month the thistles flourished as if they had not been molested.

The next year the three plats mentioned above were sown with red top grass seed, and wherever the grass became established the thistles were choked out.

The red top sward was tried on upland, but failed to destroy the thistles. Timothy and clover were also tried on the bottom lands, but they likewise failed.

The above detailed experiments were repeated until 1845 with similar results. In experiments made on poor, sandy loams, the thistles were readily killed by plowing. On rich, sandy loams they were choked out by sowing the land to clover.

From a careful study of his own and other experiments, Mr. Stevens deduced the following conclusions:

"Whatever will effectually exclude the plant from the light and air will destroy it. This may be done by plowing, in some soils, and in others by a close grass sod. Plowing, if repeated frequently, in soils where the root does not descend beyond the reach of the plowing, will, in dry seasons, always destroy the thistle, and often in moist ones. In soils which are light, deep, rich, friable, and of course permeable to the air, and are in some measure always moist, plowing will always fail.

"Wherever a dense soil can be formed, the thistle may be destroyed by seeding. The grasses, wherever they are adapted to the purpose, will be found the easiest means of destruction; although not so rapid as plowing, hoeing, salting or burning, where these latter are available.

"In the uplands, where the soil is of a depth admitting the root to be reached and affected in its whole extent by the plow, hoe, fire or salt, the thistle may be destroyed by these means, and they will be found the most rapid ones.

"In all bottom lands where the root descends deep and the soil permits access of air, neither the plow, hoe, fire nor salt will destroy the thistle; here the grasses should be applied, and will be found the best destroyers.

"Mowing will destroy those parts of the thistle which have thrown out flowering stalks; and will not in the least affect those which have not. Mowing should take place when the plant is in bloom.

"Whatever limits the thorough application of the means of destruction will proportionally diminish success. Hence it will be found difficult, in very stony grounds, ever to eradicate the thistle; the plow can not effectually reach its roots, and such ground is rarely a good grass bearer. Salad sheep, with the scythe, will be found best for stony grounds. In grounds filled with stumps, where the soil is rich and will grow a dense sod, the grasses will be best, and in such the plow should not be used, as it will not effectually reach all the roots. Fences that obstruct the application of the plow or hoe should be removed.

"If it be desirable to destroy the thistles by the grasses, it will be found best to make the land rich by manure. This will force the grass and enable it more readily, by vigorous growth, to kill the plant. And in the application of all remedies care should be taken to reduce the soil, by proper cultivation, to fine tilth, that all the seeds of the thistle in the ground may germinate, and not lie dormant. The seed is very hardy, and escapes all the ordinary means of reaching the plant, except fire."

A Useful Canal.

Some of the people of Pittsburgh are endeavoring to build a ship canal from Lake Erie to the Ohio river near that city, and a committee has been appointed to push the matter and make the necessary estimates. Engineers say that the water supply would be abundant, and it is calculated that the canal could be constructed for about \$25,000,000. It would have a capacity of 15,000,000 tons per annum twice as much as the railroads that cover the same territory. Probably congress will be asked soon to put up some of the cash for the canal. What public purpose can be served by it it would be hard to show, for however large ships it might bring from Lake Erie to the Ohio river, there is scarcely a month in the year when they could get down the river to the gulf.

It Has Struck of Gold.

Morgantown, N. C., thinks that it has one of the characteristics of the celestial city. It has streets of gold. The other day a Mr. Hinton was crossing Union street in that town when something glittering caught his eye. He picked it up and found it to be a lump of yellow metal of irregular shape. He took it to a jeweler, who pronounced it to be a nugget of almost pure gold, worth several dollars. The streets of Morgantown were macadamized with stone from placer gold mines just outside the city limits. The mines were worked in so crude a fashion that it is believed by many that they still contain valuable deposits of gold, though Mr. Hinton is the first one to strike it rich on the street.

She Caught Him.

Mrs. McLaughlin in Washingtonville, N. J., has demonstrated the utility of bicycles for policemen. A few days ago a negro burglar entered her house and stole her jewelry. She missed it immediately and being an expert cyclist she pocketed a revolver, got out her wheel and gave chase. She overtook the robber about a mile from home, and when he saw the revolver he made no objections to restoring the property on the spot.

An Arabian Horse.

A thoroughbred Arabian horse on an ordinary course can be easily distanced by a European racer, but for endurance of fatigue, docility and for speed maintained at long distances, so long as to appear incredible, the Nedjee horse acknowledges no equal. A good Nedjee will center for twenty-four hours in summer and forty-eight in winter without requiring drink.

Number of Tunnels.

The world's tunnels are estimated to number about 1142, with a total length of 511 miles. There are about 1000 railroad tunnels, ninety canal tunnels, forty conduit tunnels, and twelve subaqueous tunnels, having an aggregate length of about 350 miles, seventy miles, eighty-five miles and nine miles respectively.

A Septuple Star.

In the constellation of Orion there is a star known as Theta Orionis, which, when viewed through a powerful telescope appears as a septuple star, thus presenting magnificent panorama of seven suns revolving about each other. It is to be supposed that each of these suns is encircled by planets and these again by moons.

A New Kind.

A new form of delirium tremens has attacked a New York toper. While under the influence of a lively jag he was shocked by an electric wire. Now, when he has taken too much whisky, he fancies he sees sputtering electric wires and writhing snakes, which shower him with sparks.

Napoleon's Shirts.

One of the three shirts possessed by Napoleon at St. Helena and divided at his death among his companions, has been sold at auction for 150 francs.

Russia, Roumania and Servia are the most illiterate countries in Europe, 80 per cent of the population being unable to read and write.

It doesn't cost a man anything to have opinions. It's ventilating them that is expensive.

Many a man who would like to reform the world has a front gate that won't stay shut.

Hall's Catarrh Cure is a constitutional cure. Price, 75c.

Men show their character in nothing more surely than in what they think laughable.

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The woman who is tired, and has heavy, dragging-down sensations, pain in the back, and headache, should take warning in time. Dr. Pierce's Favorite Prescription is the best tonic and nerve at this time. It's a positive remedy for all irregularities, weaknesses and derangements of the female system.

The "Prescription" cures Ulceration and Falling of the Womb, Leucorrhoea and Uterine debility.

Miss MAGGIE CROWLEY, of Jamestown, N. Y., says: "I feel as if I had a new lease of life since taking the 'Prescription.' I trust that others will find the same benefit from your wonderful medicine as I have."

THE PLAN OF SELLING MEDICINES ON TRIAL, PIERCE'S IS PECULIAR TO

WE WILL MAIL POSTPAID a Free Panel Picture, entitled "MEDITATION" in exchange for 18 Large Lion Headed, cut from Lion Coffee wrappers, and a 5-cent stamp to pay postage. Write for list of our other fine premiums, including books, a knife, game, etc. WOOLLEN SPICE CO., 40 Huron St., TOLEDO, OHIO

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It Hurts Their Religion.

A Toronto paper thinks that sojourning in the United States does no good. Commenting on the fact that some 10,000 of these people, who have been making a longer or shorter stay in this country, have lately returned to their homes in the dominion, it says: "Their wanderings will scarcely have made them more dutiful children of the church. Having been so long beyond the reach of their spiritual guides and superiors, they are likely to be somewhat unruly parishioners. They were not the most submissive, even before they went away, for one reason assigned for their migration was the heavy tribute they had to render to the church. Now they will probably be more restive under these exactions and the poisonous example may leave the whole mass."

Reduced the Record.

In ten years American cyclists have reduced the mile record from 2:13 to less than 2:00, a feat once supposed to be impossible. The improvement has been gained by better machines and tracks and pneumatic tires, as well as general skill and muscle among riders.

Of all the passions, jealousy exacts the hardest service and pays the bitterest wages.

I want every man and woman in the United States who are interested in the opium and whisky habits to have one of my books on these diseases. Address, B. M. Woolley, Atlanta, Ga., box 377, and one will be sent you free.

Some people are born expressly for fools, and if they undertake to be anything else they spoil it.

For Impure or thin Blood, Weakness, Malaria, Neuralgia, Indigestion and Biliousness, take Brown's Iron Bitters—it gives strength, making old persons feel young—and young persons strong, pleasant to take.

To have in general but little feeling seems to be the only security against feeling too much on any particular occasion.

The Modern Beauty Thrives on good food and sunshine, with plenty of exercise in the open air. Her form glows with health and her face blooms with its beauty. If her system needs the cleansing action of a laxative remedy, she uses the gentle and pleasant liquid Laxative Syrup of Figs.

According to a quaint writer, a preacher should begin slow, proceed slow, rise higher and catch fire.

Karl's Clover Root Tea, The great Blood purifier, gives freshness and clearness to the complexion and cures Constipation, 25c, 50c, \$1.

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"Hanson's Magic Corn Salve." Warranted to cure, or money refunded. Ask your druggist for it. Price 15 cents.

You can praise one man to another without offense, providing the man who is praised is dead.

For Dyspepsia, Indigestion and Stomach disorders use Brown's Iron Bitters—the Best Tonic. It rebuilds the system, cleans the blood and strengthens the muscles. A splendid medicine for weak and debilitated persons.

What ails the world most just now is the great amount of uncommon sense floating around.

If the Baby is Cutting Teeth, Be sure and use that old and well tried remedy, Mrs. Winslow's Sooty Star for Children Teething.

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