

3048. AGARICUS CAMPESTRIS.**Mushroom.**

From France. Received through Mr. W. T. Swingle, April, 1899.

Blanc de Champignon vierge (Virgin spawn). "The cultivation of mushrooms is carried on extensively in Paris. The tunnels of the abandoned stone quarries, with which the ground on which the city is built is literally honeycombed, are used for this purpose. The beds used are of composted manure, and are built up into conical ridges 18 inches to 2 feet wide at the base and 18 inches high. There are often from three to ten parallel beds in each tunnel. M. Lecaillon has over 20 miles of these beds, and many other growers have as much space in cultivation. In preparing the beds horse manure, which has been fermented for three weeks, is used. When thoroughly composted the manure has very little odor. It is then very firmly packed into shape in the caves or tunnels by men who tamp it with their hands and knees. When the temperature is right, pieces of spawn the size of one's hand are inserted in the right side of the bed every foot or so. When the spawn has grown through the manure the bed is covered with one-half to three-fourths of an inch of quarry dust. The mushrooms appear in about two months, and the spawn continues to yield for two or three months, depending on the temperature. Cool weather is the best for the growers, because the mushrooms grow slower and more perfectly, and the ventilation is better. In summer, when the air in the tunnels is colder than outside, there is no ventilation except that induced by fires, which are built at the bottom of shafts in order to cause a circulation of air constantly in one direction. Eddies should be avoided. Mushrooms are never allowed to open before being picked—they could not then be sold in the Paris markets.

The spawn soon runs out, and new spawn must repeatedly be obtained. If taken in an early stage the spawn can be propagated, but never after mushrooms have been gathered from it. As a matter of fact, there are considerable variations in mushrooms, and, should a method be found to propagate spawn indefinitely without allowing it to fruit, the industry would be revolutionized. The mushroom growers are continually on the lookout for new spawn, which they usually obtain from the gardeners, who force melons in small hotbeds. The spawn is prepared as rapidly as possible, and a portion of it forced until it produces mushrooms. If these prove to be good, the rest of the spawn is set in the beds and fruited; if not, the whole mess of the spawn is destroyed. Recently Dr. Repin has discovered a method of raising spawn from spores of the best mushrooms, and this is the spawn included under this number. It is claimed not to contain any bacteria or other organism which might cause disease. This virgin spawn is sold in the form of sterilized and compressed slabs of manure, freely permeated by the spawn. These slabs are about 10 inches square and one-half inch thick, and may be planted whole or divided into two 'sets.'" (W. T. Swingle.)

3049. HELIANTHUS TUBEROSUS.**Jerusalem artichoke.**

From France. Received through Mr. W. T. Swingle, April, 1899.

Topinambour patate. A tall perennial with annual stems producing underground tubers. Largely cultivated in Europe. The tubers are a violet red, slender at the bottom and swollen in the upper part, where they are about 2 inches in diameter. The tubers form very late in autumn and should not be dug until the stems have nearly ceased growing. The flesh is sweet and very watery. The tubers are planted in March or April, 12 to 14 inches apart in rows 3 feet apart. They require about the same cultivation as corn. This artichoke is commonly grown for food for hogs in America. In Europe they are used for making alcohol, and there are some especially fine varieties which are grown exclusively for the table. These are said to be very fine when baked like sweet potatoes; and they may be cooked in a variety of other ways. This new variety called "Patate" is distinguished from the ordinary Jerusalem artichoke. It is plumper, with angular tubers of a yellow color. It is of equal value for starch and alcohol manufacture, and yields decidedly more than the ordinary sorts. This variety was grown from seed at Verrières, from seed obtained in Corsica. It was first introduced to the trade in 1884.

3050. SOLANUM TUBEROSUM.**Potato.**

From France. Received through Mr. W. T. Swingle, April, 1899.

Royal ash-leaved kidney. This and Nos. 3052 and 3054 are the earliest varieties of potatoes used for forcing in the market gardens about Paris. They are usually sprouted before being planted. This is accomplished by placing the tubers in an