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Shiitake Mushrooms

Each year we get a number of phone calls at the Extension office about mushrooms in the yard, on trees, and shrubs. In most cases the mushrooms are non-edible, a nuisance, or destructive. But, there is a mushroom people look forward to seeing, the Shiitake Mushroom.

The Shiitake (pronounced she-tah-key) mushroom (*Lentinus edodes* [Berk.] Singer, is the major edible mushroom in Asia. In the past several years Shiitake mushrooms have become a favorite in oriental food stores, supermarkets, and restaurants in the U. S.

Shiitake gets its name from the word “Shii” which means host tree and “take” which means mushroom in Japanese. The Shiitake mushroom is a beneficial wood-rotting fungus that grows on a wide variety of deciduous hardwood trees. In Florida water oak, southern red oak, laurel oak, and turkey oak are used. There are non-beneficial species of wood-rotting fungi that decay of railroad ties, bridges, and wooden houses.

The actively growing fungal cultures that are used in producing the mushrooms are called “spawn”. There are different spawns for different parts of the county. It’s important to know which is best for our area.

When selecting logs be sure they are free of internal decay and cut from living trees in the winter. This helps to prevent moisture loss in the log and reduce the number of other fungi and bacteria from invading the logs. Logs should be cut and used within 15 days of cutting. Logs that have been cut more than 15 days old have less moisture content and can be contaminated by fungi or bacteria. Logs are generally 3 to 4 feet long and 4 to 8 inches in diameter for easy handling.

Holes are drilled into the logs and the spawn is inserted into the holes. The holes are a half inch in diameter and are $\frac{3}{4}$ to $1\frac{1}{4}$ inches deep. An average log 4 feet long and 5 inches in diameter may have as many as 40 holes. Wax is used to seal the holes to prevent moisture loss.

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After inoculation the logs are placed in a shady area and stacked parallel layers called “ricks”. The logs are placed so they are exposed to rain and good air circulation. Don’t place logs in sunny areas since the sun will dry out the fungi in warm weather. Optimal conditions for the mushroom production are 60 to 80 degrees Fahrenheit and 80 to 85% relative humidity. Logs should be sprinkled in dry times during production.

“Fruiting” or production occurs under natural conditions generally in the fall. In our area we can produce mushrooms in the spring. I know of a person who submerged one of his logs in a cooler of ice water during a warm spell and had mushrooms in just a few days. This process is what commercial producers do to produce mushrooms.

The formation of the mushroom is called “pinning”. It will take two to eight days before the mushroom will be ready to pick. Mushrooms can be eaten fresh or can be stored for later use. Yields will depend on the number of holes on the log, care, and spore type used. One to five pounds per harvest have been reported. Production will continue until complete rotting of the log occurs or the log is over run by contamination.

Shiitake mushrooms are easy to start and fun to produce. The University of Florida/IFAS-Bay County Extension will hold an educational program on Shiitake Mushroom Production. The class will be on January 13th at 6:30 PM at the Bay County Fair Grounds. To make reservations call the office at 784 6105. Space is limited. There will be a \$10 registration to cover cost of spawn and logs. Each participant will prepare and inoculate their own log. Please bring a drill, power or cordless, with a 5/16th inch bit, and a hammer, if possible.