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MUSHROOM FARMERS: THE ORIGINAL RECYCLERS

Mushroom growing, recycling on display at 103rd PA Farm Show

Avondale, PA, January 7, 2019 – Did you know that mushroom farmers are considered the “original recyclers” due to their use of the byproducts of other commodities during the mushroom farming process? While today’s mushroom farms are highly technical operations, mushroom production includes reprocessed materials and repurposed ingredients, making mushroom farmers leaders in agriculture recycling.

Learn about the mushroom growing process, including the materials used, at the 103rd Pennsylvania Farm Show in Harrisburg, January 5-12. Mushroom farmers will be on hand to answer questions, and visitors will be able to participate in other mushroom activities in the popular mushroom booth, sponsored by the Mushroom Farmers of Pennsylvania (MFPA). Find the mushroom booth in the Main Hall.

“Instead of asking what gets recycled during the mushroom growing process, the question should be what doesn’t get recycled,” said Lori Harrison, director of communications, MFPA. The answer is not much. From the beginning of the process – compost preparation – to post harvest, mushroom farmers are great stewards of the earth, using and reusing the natural materials needed to grow mushrooms.

Mushrooms are grown on nutrient-rich material called substrate. In creating substrate for mushroom crops, the mushroom farm community is also providing a valuable service by recycling byproducts from other agricultural sectors.

- One of the main components of mushroom substrate is straw-based horse stable bedding. Mushroom growers can use hay that is not suitable or has been rejected as feed hay. Grass hay, a renewable resource, is also a common ingredient, and can be grown on land and soils not suitable for other crops. In central and western states, local wheat straw is the main component of mushroom substrate, which provides a market for this byproduct and a secondary source of income for wheat farmers.

- In addition to the recycling of stable bedding, mushroom substrate may include crushed corn cobs, cottonseed hulls, soybean hulls, peanut hulls, leaf litter and cocoa shells, providing a solution for byproducts that would otherwise pose waste management challenges for other agricultural operations or go to landfills. In many cases, mushroom farms are often strategically located near local sources of these materials.

- Nitrogen-producing materials such as brewers grain, seed meals, horse manure and poultry litter are then introduced into the composting process of making substrate. Once again, the mushroom farm community is extending the value of these byproducts and decreasing the direct application of items such as poultry litter on the land, as well as the need to handle or store these items. This is especially important to the Chesapeake Bay Watershed and other sensitive watersheds throughout the United States. Also, the water required to create mushroom substrate is re-captured and used to irrigate adjacent compost piles.
To begin the process of growing mushrooms, indoor facilities containing vertically stacked rows of wooden or aluminum growing beds are filled with the substrate. During a process known as “spawning,” natural materials such as rye grain, wheat, millet or other small grains are used as the host for mycelium, the “root” system that supports the mushroom fungus and introduced into the beds. Using these grains provides an ecologically sound, all-natural solution for introducing mushroom spawn to the substrate-filled growing beds.

After the mushrooms grow, harvesters typically cut the stems, or stumps, off the mushrooms before sending them to the packing houses. Instead of throwing away the mushroom stems, they are gathered along with unmarketable mushrooms and added to the compost pile, reducing the stress on local landfills and introducing additional organic material to mushroom compost.

On the farm, once the final crop of mushrooms has been harvested, the substrate is removed from the mushroom growing beds. Research has shown the material retains nutrients and other qualities that make it an ideal crop production and landscaping component. Marketed as mushroom compost, it is rich in organic matter and has high value for conifer tree production, turf grass managers and landscape contractors. Mushroom compost has been used successfully for runoff mediation and river bank buffer projects, green roofs, certain wood-decaying fungus suppression, evergreen farms, athletic fields, landfill caps for establishing vegetation and more.

Mushroom farmers continue to find ways to reduce their impact on the environment. Through the recycling of agricultural byproducts, the U.S. mushroom farm community is embracing environmental management and creating a strong, more sustainable future for its farms and neighbors.

“The mushroom farm community is proud of its long-standing record as one of the leading stewards of the earth’s resources, turning the waste products of other agricultural commodities into a delicious, nutritious food,” Harrison said.

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Mushroom Farmers of Pennsylvania (MFPA), headquartered in Avondale, PA, is a state-wide, voluntary group representing the growers, processors and marketers of cultivated mushrooms in the state of Pennsylvania. For more information, visit www.pamushrooms.org.