



MOFGA Certification Services

7.0 GUIDELINES FOR ORGANIC MUSHROOM PRODUCTION

All aspects of mushroom production including pest control, processing, storage, packaging, and record keeping must conform to the USDA National Organic Program standard. The production environment must prevent contact between organically produced mushrooms and prohibited substances throughout the entire growing cycle, harvesting and post-harvest processes. Records must verify all practices, production, and sales (§205.103). Specific standards, unique to mushroom growing, are described below.

7.1 Spawn - Spawn is the propagation material for mushrooms. Organically produced spawn must be used except that non-organically produced spawn that has not been treated with a prohibited substance and has not been produced through genetic engineering may be used when organic spawn is not commercially available (§205.204).

7.2 Substrate – Substrate is the material on which the spawn grows; it provides the nutrient source for spawn to grow and produce mushrooms. Substrate materials must be reviewed and approved by MCS and must not contain any prohibited synthetic materials or pesticides (§205.203).

- Agricultural feedstocks such as straw or soy hulls are not required to be organic. Minerals such as gypsum must be mined and not chemically processed or contain synthetic additives. Newspapers or other recycled paper without glossy or colored inks are also allowed as feedstocks. Compost feedstocks must be reviewed by MCS. If the compost contains manure, compost production records must be available for review.
- Logs and other wood products must not have been treated with prohibited substances. Growing or substrate blocks must not contain synthetic glues or additives. Cheese wax made without synthetic ingredients or colors may be used as a production aid in log grown mushroom production. Beeswax is also allowed.

7.3 Production Inputs – Materials used during production and handling of organic mushrooms must be reviewed and approved by MCS prior to use. In general, materials that are allowed in organic crop production are also allowed in mushroom production. Non-synthetic materials are generally permitted unless prohibited or restricted at §205.602. Synthetic materials are allowed only if they are specifically listed at §205.601 for the intended use.

- **Fertility** – Non-synthetic materials such as soybean meal, alfalfa meal, feather meal, and mined minerals (e.g. limestone and gypsum) are allowed (§205.203).
- **Pest and Disease Control** – Operators must use management practices to prevent pests and diseases in accordance with the management practices at §205.206. Pests may be managed by manipulating the indoor environment or by introducing predators or parasites of the pest species. Pests and diseases may also be controlled through the application of non-synthetic biological, botanic, or mineral inputs, such



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as *Bacillus thuringiensis* (Bt) for gnat control and salt to control mold. If natural substances are ineffective to control pests and diseases, producers may use approved synthetic substances. For example, hydrogen peroxide and hydrated lime are both allowed for disease control (§205.206).

- **Post-Harvest Handling** – Only approved materials may be used in direct contact with the mushrooms for drying, sanitizing, and other processing activities. If chlorine is used in direct contact with mushrooms (including in wash water) at levels greater than Safe Drinking Water Act (4ppm), a water rinse must immediately follow the use of chlorine. Approved peracetic acid and hydrogen peroxide products may also be used in direct contact with mushrooms (§205.272).
- **Facility Sanitation** – Materials used to clean or sanitize equipment, tools, and other surfaces within the facility are subject to review and must be approved for these uses (§205.201, §205.272).