

Marketing Special Forest Products in New York State

Section 1.1 Marketing Forest Cultivated Mushrooms



Cornell University
Cooperative Extension

About this publication

Increasing numbers of forest owners in New York are seeking new ways to offset the costs of woodland ownership or combine recreation with unique rural enterprises. Many forests are unsuitable for commercial timber management due to past logging practices, parcel size, terrain, or incompatibility with the owner's forest stewardship goals. Some farmers and forest owners are turning to special forest products as a hobby or source of supplemental income to increase their enjoyment of their woodlands.

The purpose of this publication is to illustrate the handling, storage, and marketing facets of special forest products in New York. Many existing forest product guides provide explicit production information, yet offer only vague remarks about marketing. Suggestions and references are provided in this manual to help forest owners recognize the most important elements of successful marketing of special forest products through direct and indirect sales.

This publication is the first version of what will become a more comprehensive manual about marketing special forest products in the Northeast. Suggestions about additional content, resources, worksheets, and contributors can be directed to Jim Ochterski at (607) 535-7161 or jao14@cornell.edu.

Each forest owner considering marketing special forest products will face different circumstances, based on experience, personality, income objectives, and location. Even with careful planning, some marketing efforts will not meet the intended objectives. Fortunately, there are many options and alternative marketing mechanisms for forest-derived niche products.

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Publication prepared by
Jim Ochterski, Senior Extension Resource Educator,
Cornell Cooperative Extension of Schuyler County, and a
member of the South Central New York Agriculture Team.

Robert Beyfuss, Agriculture Program Leader, Cornell
Cooperative Extension of Greene County.

Monika Roth, Agriculture Development & Marketing Specialist,
Cornell Cooperative Extension of Tompkins County,
and leader of the South Central New York Agriculture Team.

Editing and review by
Louise Buck, Senior Extension Associate, Department of
Natural Resources, Cornell University.

Kenneth Mudge, Associate Professor, Department of Horticulture,
Cornell University.

Stephen Childs, Extension Maple Specialist, Department of
Natural Resources, Cornell University.

Layout and design by Donna Boyce, Communications
Services, New York State Agricultural Experiment Station,
Cornell University.

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This section provides tips and guidance regarding the handling, storage, and marketing of forest cultivated mushrooms

Section 1.1

Forest cultivated mushrooms

Mushrooms are becoming increasingly popular and consumers are already changing the types and amounts of mushrooms they eat. Most of the mushrooms eaten in the United States are so called “white” or “button” mushrooms of the genus *Agaricus*, including white, crimini, and portabella. Like other food trends, consumption of mushrooms will continue to diversify, as consumers and food professionals try new flavors and textures (Zidenberg-Cherr, 2002).

This represents a good opportunity for woodland owners who would like to establish a small-scale crop in their woodlands.

This section provides tips and guidance regarding the handling, storage, and marketing of forest cultivated mushrooms like oyster, maitake, shiitake, and lion’s mane.

Forest cultivated mushrooms are grown on sawdust beds, logs, straw bales, stumps, and other dead or dying plant material. After inoculation and a period

of mycelial growth, these saprophytic fungi “fruit” into the form we call mushrooms. There is considerable information available about forest mushroom cultivation, available through Cornell Cooperative Extension and other land-grant university extension systems. The book, *Growing Gourmet and Medicinal Mushrooms*, 3rd Ed. by Paul Stamets (Stamets, 2000) is an excellent reference about mushroom cultivation.

Post-harvest handling of mushrooms

Harvest forest cultivated mushrooms with a knife, or by twisting the stem (stipe) so it breaks free. Gently brush off any dirt or debris, without washing the mushroom under water, and place each mushroom into an open basket, paper sack, or other vented container (Filip, 1988).

Mushrooms like shiitake that have a large cap are more marketable when the cap is still curled and somewhat closed. Wide, flattened

mushroom caps indicate over-maturity and will not be as valuable as the fresher-looking forms.

Refrigerate forest-grown mushrooms as soon as possible after harvesting. These mushrooms will remain fresh and marketable for several weeks. Do not seal them in an airtight container. Keep delicate mushrooms, like oyster mushrooms, in a single layer. More durable mushrooms can be separated into layers with paper towels. Make sure that your customer also has the appropriate refrigeration equipment, or if you are selling at a farm market or through a small retailer, that they can store your product adequately.

To maximize your mushroom enterprise income, try to focus on providing fresh mushrooms, rather than dried or frozen. Fresh mushrooms retain the best flavor and texture. Set up a system for rotating out or drying older mushrooms and maintain a consistently fresh supply of new mushrooms.

In an emergency, slice and dry the mushrooms with a convection dryer, rather than throwing them out. Dried mushrooms are not as desirable to some customers, but they keep for months and may be of interest at a lower price per pound for making soups and stews. However, off-season demand of these same mushrooms may make them very much worth storing in a dry and frozen condition.

Canning or pickling fresh, unopened mushrooms can be done at home with a pressure canner, but would require a food processor’s license in New York for retail sale of any kind. The marketability of such a product is unexplored. Usually only domestic mushrooms are used for canning and pickling as wild mushrooms are not recommended for this kind of preservation.

Mushrooms need to be treated to stop maturation before freezing, usually by steaming. Soak mushrooms in a mixture containing 1 teaspoon lemon juice or 1.5 teaspoons citric acid per pint of water for 5 minutes to reduce darkening. Steam whole mushrooms 5 minutes, buttons or quarters 3.5 minutes and slices 3 minutes. Cool promptly, drain and package, leaving 1/2-inch headspace. Place small packages in the freezer for fast cooling (Andress & Harrison, 1999).

Selling points

- Forest cultivated mushrooms have more fiber than white mushrooms, very few calories (4 - 10 per ounce), little or no fat, no sodium, and no simple sugars, like sucrose.
- Specialty mushrooms have a wide range of flavors, from mild to robust that allow buyers to create more sophisticated cuisines in their homes.

- Forest-cultivated mushrooms are thought to have a wide variety of medicinal properties, which are alleged, but not proven (so avoid definite claims):
 - Lion's mane (*Hericium erinaceus*) - augmenting nerve growth, immune system response, anti-cancer
 - Maitake (*Grifola frondosa*) - antiviral, anti-cancer, diabetic regulation, anti-infection
 - Shiitake (*Lentinula edodes*) - cholesterol treatment, anti-infection, hypertension treatment
 - Oyster (*Pleurotus ostreatus*) - cholesterol treatment, anti-tumor
- Specialty mushrooms can be cooked in a variety of ways, including grilling, sautéing, stir-frying, or baking. They can be added to enhance to any vegetable, egg, or meat dish. Mushrooms make up an important texture component in meatless meals.
- Mushrooms are a good value with reasonable pricing.
- Mushrooms are a source of B-complex vitamins like riboflavin and niacin, and the mineral selenium.
- Forest-grown mushrooms are cholesterol free.

Keys to marketing forest-cultivated mushrooms

One of the most important aspects of marketing an unusual food like specialty mushrooms is your reputation (Boyle, 2004). You must be able to provide clean, sound, contaminant-free mushrooms. The idea that the mushrooms are cultivated, rather than harvested from the wild, helps ensure the reliability of your product and reduces concerns about accidental poisoning.

Every one of your customers has to trust you and your product. For this reason, buyers like restaurants and individuals like to buy from an individual or business they know. If you bring a box of oyster mushrooms to a buyer, every single mushroom must be in good condition. Remove any that are questionable, as they will ruin the others, and your reputation.

Once you establish your trustworthiness, selling mushrooms will become easy. It may boil down to having a list of contacts - families, bed and breakfasts, restaurants, other growers - and calling them one-by-one to sell what you have growing. Keep written records about who buys

what and how much. If you unexpectedly get a large fruiting, it will be easier to spot who will readily buy them. Ask your customers if they would be willing to become a surplus buyer at a discount.



Develop an easily identifiable set of mushroom packages. For example, use all white paper bags with a clear label that identifies the mushroom, the package weight, and storage information. Every package you sell should have your contact information clearly marked.

Ask your buyer if some level of processing would help. Labor to process mushrooms in a restaurant (cleaning, slicing, etc.) is expensive and sometimes hard to find. Packages of sliced mushrooms, or caps only, may be a more attractive product, but you won't know unless you ask.

Once your customers catch on to the flavors and textures of forest-grown mushrooms, they will likely start asking for additional types. Plan to expand your enterprise accordingly, adding on new types of mushrooms, in keeping with your goals as a forest crop grower.

Normally, mushrooms are sold in grocery stores in the produce section. Smaller fresh produce stores, ethnic markets, and farm markets stock mushrooms as well. Most of the time, you will see only *Agaricus* mushrooms for sale, with a few bins of specialty mushrooms.

It is going to be hard to compete on price because mass-produced mushrooms are so inexpensive and easy to obtain. Rather than quantity, focus your efforts on providing consis-

tent quality, service (delivery, slicing), education (recipes, advice), personal attention, and a trusting relationship. You are providing a special, hard-to-get product. You are in the business of meeting a buyer's needs, rather than simply growing mushrooms for sale.

Mushrooms are almost always sold by weight. Specialty mushroom prices shift around, but you can expect \$8.00 to \$20.00 per pound, if you sell by the pound. A high-quality product will sell for more. Smaller packages can be sold at higher unit prices. For example, one Central New York mushroom grower receives \$4.00 for a 4 oz. bag of shiitake mushrooms. Blends of two or more mushrooms can be considered a premium package, a "gourmet mix." Prices will vary by season and the quality of your product.

No matter the price, make sure that your weights are accurate, and maybe a little on the generous side. In other words, make sure a "12 ounce bag" of your mushrooms weighs at least twelve ounces.

When you establish good relationships with buyers, as this section recommends, you may have to reduce your price to satisfy your customers periodically. Sometimes fruiting comes unintentionally and you are sitting on a lot more mushrooms than you expected. Older mushrooms are worth less due to reduced flavor, toughness, and rapid perishability. In these situations, work to keep the customer, rather than throwing out

a bunch of mushrooms or converting them to a low-value dried product as a result of a relationship gone wrong.

As with all special forest products, low or inconsistent quality does not sell. Once you have worked out your production methods, consistently supply your customers and contacts with predictably excellent mushrooms.

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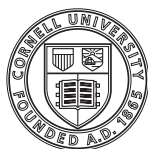
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