Environmental Stewardship

The Canadian mushroom industry is environmentally friendly!

- The composting materials used to make the substrate are waste materials such as soiled horse bedding, old hay and straw, chicken litter and corn husks.
- After harvesting the mushrooms, the organic and nitrogen rich substrate is used to make potting soil.
- The pasteurization process used in preparing the substrate guarantees that the mushrooms produced are safe to eat.
- Mushroom farmers use very few chemicals or fertilizers.
- The packaging used for mushrooms is either reusable or it can be recycled.
- Mushroom farmers and local planners work together to minimize odours for the neighbouring homes and communities.
- Mushrooms are grown in windowless, dark rooms that make it easier to control temperature and humidity. This conserves electricity.

Locally Grown - Fresh Daily - Really?

While the world has gone global, food consumers are going local! How many food choices in the produce section of the supermarket can claim to be local every day of the year, even in the middle of winter? **Mushrooms can!**

- Canadian mushrooms are grown locally, no transcontinental trucking, just local deliveries seven days a week, 12 months of the year.
- Fresh Ontario mushrooms have traveled a short distance from the farm to the store or restaurant.
- Growing mushrooms is not like growing other vegetables. Mushrooms are a type of edible fungus that does not contain chlorophyll, which means that they do not require sunlight to grow. Mushrooms are grown in the dark, in climate controlled buildings. Therefore, production and harvesting of fresh mushrooms occurs year round in Canada.
- From the moment of harvest, mushrooms are kept at a constant temperature of 2°C./32°F.
- Fresh, crisp mushrooms make your meals tasty, healthy and easy. Just sauté and serve!
- Remember, Canadian mushrooms are always ***fresh, simple, and good.***

Fungi Facts! Did You Know?

- Caution! Only eat farm grown mushrooms. Many of the thousands of wild mushrooms are toxic.
- There are over 2000 varieties of mushrooms.
- Only 100 are ones you can eat.
- Fresh mushrooms are nutritious. They contain fibre, vitamins and minerals (e.g., B Vitamins, folate, copper, iron, selenium, and zinc).
- A serving of fresh mushrooms contains as much riboflavin as a glass of milk.
- One portabella mushroom has more potassium than a banana.
- They are low in calories and are fat, cholesterol and sodium free.
- Mushrooms have the ability to enhance the flavour of food.
- Fresh mushrooms are grown year round in Canada.
- Good quality mushrooms should be firm and free of blemishes.
- The mushroom caps and stems we eat are the fruit of the plant.
- Mushrooms should be stored in a paper bag in the refrigerator to keep them fresh.
- Next to tomatoes, mushrooms are the highest value vegetable crop grown in Ontario.

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mushrooms.canada
Fresh. Simple. Good.

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Marvellous Mushrooms

Mushrooms Canada, a voluntary non-profit organization, was started in 1955. The Board of Directors represents British Columbia, Alberta, Manitoba, Ontario, Quebec and the Maritimes.

Mushroom growers, processors, spawn makers, suppliers, scientists, and similar industries are members. They are all dedicated to the production of fresh Canadian mushrooms. As well, they are promoters of food safety, good nutrition, environmental stewardship, proper care and handling of fresh Canadian mushrooms, and the health and safety of their workers.

Canada produces almost 113.4 million kg (250 million pounds) each year, which are worth $500 million dollars. Ontario produces about 55% of all mushrooms grown in Canada.

In the last three years, the Canadian mushroom farmers have spent over $30 million dollars for new technology. Canadian mushroom farmers are the most modern in North America.

There are six varieties of mushrooms available in the supermarkets or specialty food stores.

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How Do Mushrooms Grow?

How (Agaricus) White, Crimini and Portabella Mushrooms Grow

Step 1

Making the Substrate

Growing mushrooms takes several weeks. First, the mushroom farmer must prepare the compost or substrate. The quality of the substrate is important for a good crop of mushrooms. The substrate is the mushroom's food source. This is what mushrooms eat to grow. Substrate is made from wheat straw or hay, poultry litter and stable bedding plus high protein supplements such as soybean meal and feather meal. When this is mixed with water, a nutritionally-balanced growing substance for mushrooms is created. During this process, intense heat is produced (71°C/160°F), which destroys any pests and bacteria. This is called pasteurization. The substrate is pasteurized to guarantee that no bacteria or micro-organisms remain in the substrate before the spawn (fungal seed) is added. Simply stated, mushrooms grow in 'clean dirt'.

Step 2

Spawn

Mushrooms grow from microscopic or tiny particles called spores. They do not grow from seeds like other plants. Spores are produced under the cap of the mushroom in the gills. Mushroom farmers use spawn that contains mushroom spores as seed to produce the mushroom crop. Spawn is made by inoculating or injecting a piece of sterile or clean grain with mushroom spores. Spawn is produced in sterile laboratories. Farmers buy the spawn. Next, the farmers spread the spawn on trays full of substrate, which are in rooms that are climate controlled to promote proper mushroom growth. The ideal growing conditions for mushrooms (dark, humid and damp) are kept constant in the buildings throughout the entire year.

Step 3

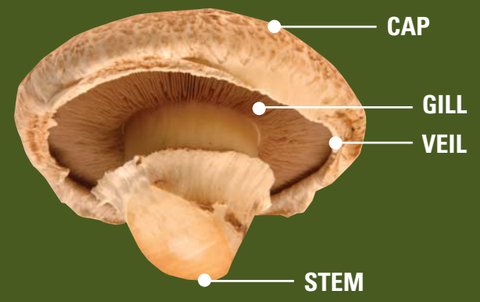
Mushroom Growth

The root system looks like white fuzz and is called mycelium. The mushroom spores get their nutrients from the substrate through the mycelium. The substrate is covered with a layer of peat moss. In three weeks pin-like mushrooms appear. One week after the mushrooms start pinning, they are ready to harvest (except for the Portabella mushrooms). Portabella mushrooms are full grown crimini mushrooms. They are left on the bed for approximately 4 or 5 days longer, which allows them to grow to their gigantic size.

Step 4

Harvesting the Mushrooms

Harvesting is done by hand. Mushrooms are packaged and refrigerated quickly before being shipped to restaurants or food stores. From the moment of harvest, mushrooms are kept at a constant temperature of 2°C/32°F. This temperature is maintained from the farm all the way to the grocery store. This is all done within 24 hours of picking the mushrooms. The production process from substrate production to market takes about 3 months. Since growth does not depend on weather, Canadian mushroom farmers produce fresh mushrooms all year.



Fresh Mushrooms - Nutrition Information

Serving - 125 ml or 1/2 cup fresh or cooked

Fresh mushrooms are nutritious. They are low in calories, and they are fat, cholesterol and sodium free. In addition, they contain many vitamins, minerals and fibre.

Career Profile:

Mushroom Farm Manager

Joe Cartier manages all phases of mushroom production and harvest at two Rol-land Farms in Ontario. He earned a Diploma in Agriculture (Horticulture Specialty) from Ridgetown Campus of the University of Guelph. The mushroom production course stimulated his desire to start a career in mushroom farming. As professional development, Mr. Cartier has taken three technical training courses in Holland. He is certified in Pesticide Application and Safety and is a Class 4 Engineer.

Joe's job description includes:

- Management of 13 supervisors
- Covering procurement of raw materials
- Preparation of substrate
- Maintenance of machinery and equipment
- Mushroom growing and harvesting
- A member of the senior management team

Mushroom Farms and Technology

- Specialized machines are used to make the compost or substrate.
- Special sterile laboratories prepare the spawn.
- Computers are used in many stages of the process of producing Canadian mushrooms.
- Temperature control is needed to make certain the substrate is free of any bacteria.
- Proper temperatures are required throughout the growing process.
- Conservation of energy is maintained throughout the growing stages.