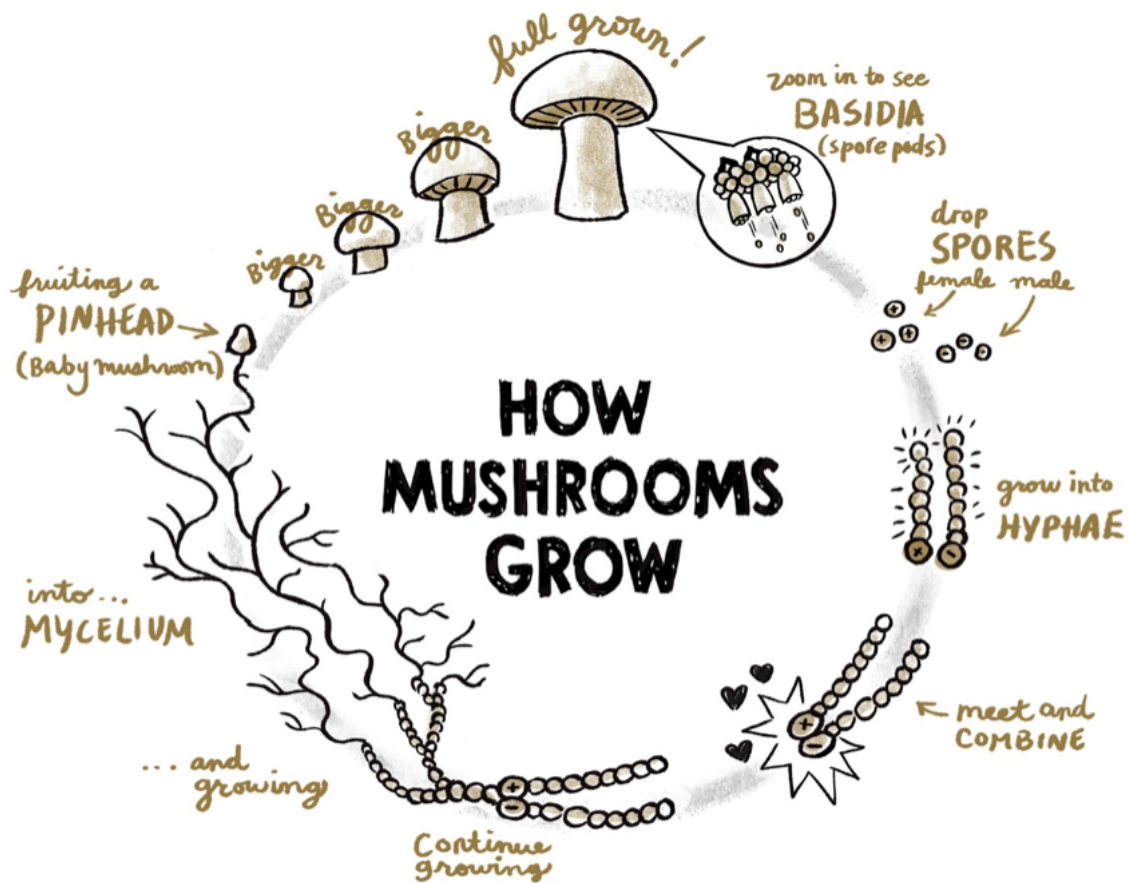


Mycelium For Healthy Land

Organic Grower's School 2019

I. What is a fungus? What is mycelium?



II. Roles of Fungi in the Environment

- A. Decomposition
 1. Chemical transformation of dead organic matter
 2. Exudates and enzymes
- B. Food source for microbes and insects
- C. Nutrient transport
- D. Building soil structure
 1. Increased porosity (water retention)
 2. Binding soil particles into aggregates (glomalin)
- E. Extending the plant root zone and connecting plants (mycorrhiza)
- F. Feeding plants (Soil food web dynamics)
- G. Carbon sequestration
- H. Strengthening organisms from the inside (endophytes)
- I. Population control (pathogens, parasites)

III. Types of Fungi

A. Saprobies

B. Mycorrhiza

C. Endophytes

D. Parasites

IV. Growing Mycelium

A. What do mycelia want?

1. Food
2. Moisture
3. Darkness
4. Air
5. Moderate temperature

B. Saprobe Cultivation

1. Garden beds
 - a) Dig ditch 6" – 12" deep
 - b) Fill with wood chips / straw and spawn
 - c) Cover in straw or cardboard
 - d) Incubate ~6 months
 - e) Stack functions
2. Container Pasteurization
 - a) Heat (1 hr @ 140-170 F)
 - b) Chemical (4 hr @ >12 pH)
 - c) Ferment (7-14 days submerged)
3. Mycorrhiza Propagation
 - a) Rodale Method
 - b) Spore slurry
 - c) Tissue culture
 - d) Korean natural farming
 - e) Compost
4. Compost
 - a) Inoculate piles
 - b) Spawn
 - c) Forest soil
 - d) Fungal foods (Woody or complex)

V. Benefits to the Landscape

A. Erosion control

B. Water Management

C. Increased nutrient cycling and availability

D. Plant root protection

E. Food source for other organisms

F. Soil building

G. Carbon sequestration

H. Detoxification

VI. Incorporating Mycelium into the Landscape

A. Inoculate Mulch

B. Amend Soil

C. Mycorrhiza

D. Compost

VII. Resources

Books

“Radical Mycology” - Peter McCoy

“Organic Mushroom Farming and Mycoremediation” - Tradd Cotter

“Teaming with Microbes” - Jeff Lowenfels and Wayne Lewis

“Mycelium Running” - Paul Stamets

Buying Fungal Spawn

Visit Mushroom Mountain Vendor booth

mushroommountain.com

fieldforest.net

Education and Events

<https://mushroommountain.com/t/workshops>

VIII. Contact Information

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IX. Upcoming Events

March 23rd - Gardening with Fungi

Mushroom Mountain - Easley, SC

<https://mushroommountain.com/products/gardeningwithfungi>

March 30th - Compost Demystified

Use Food Scraps Symposium @ Just Ripe Farm - Brevard, NC

<https://berightthere.info/events/use-food-scraps-symposium-education-and-entrepreneur-support-day-planning-underway/>

May 11th - Compost Demystified

Mushroom Mountain - Easley, SC

<https://mushroommountain.com/products/composting-demystified-may-11-2019>

May 13th-17th - Mushrooms, Molds and Mycorrhiza (with Tradd Cotter)

Mushroom Mountain - Easley, SC

<https://mushroommountain.com/products/mushrooms-molds-and-mycorrhizae-may-13-17-2019>