Which Mushroom Should I Grow?

Joseph Krawczyk
Co-owner
Field & Forest Products
Field & Forest Products, Inc

- Peshtigo, WI.
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Outline:

- Introduction
- Whatcha got?
- Cultivation Steps
- Conclusions
All sorts of substrate types!

- Logs
- Straw
- Compost beds
- Woodchips
- Other!
Basic Raw Materials
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Timber stand improvement cuts
Basic Structures
Basic Structures
Wine Cap
Stropharia rugoso-annulata

Wine Cap - Grows on straw and wood chip beds
Recycling of “siftate”
Growing on Wood Chips

- Choose the right bed location
- Add a layer of wood chips
- Sprinkle in spawn
- Cover with more chips
- Maintain & be patient
Growing on Straw

Only an Annual Crop
Improves soil quality
Oyster Cultivation on Straw
Straw-based cultivation of Oysters – Process

- Making the substrate “selective” for Oyster mushroom mycelium

- “Fermentation”: 3 day soak
- Hydrated lime 24 hour soak
- Bulk pasteurization: 60 minutes at 145-160F in hot water bath
Straw chopped to 2 - 4”
The Hydrated Lime method
Very Important!!

No Magnesium in hydrated lime

6-12 g hydrated Lime /gallon water

Target pH = 12
24 Hour Soak
Pasteurizing
145-160F for 45 minutes
Bag color is important.

Black bag for lime soak

Clear for pasteurized straw
Lookout!
Pay Attention
Straw-based cultivation of Oysters – Results
Log-based cultivation of Oysters – Process

- Obtaining inoculum
- Selection of appropriate wood
- Inoculation of logs
- Incubation of logs
- Mushroom production and harvest!
Inoculation method

- Totem Method works best
  see our 2016 catalog page 17!

- Easy to do

- Logs produce more and last longer
Log-based cultivation of Oysters – Results

- Totem Method generally works best
Inoculate oak rounds and bury. Reishi or Ling Chi.
Lion’s Mane

Grow on Beech, Aspen or Sugar Maple
Log-based cultivation of Shiitake – et al

Process

- Obtaining inoculum
- Selection of appropriate wood
- Inoculation of logs
- Incubation of logs
- Mushroom production and harvest!
Wood Resources

Bolts from precommercial thinnings
Bolts from timber harvests
Our Future?

Coppice management of oak for future Shiitake logs
Not all Hardwoods are Suitable

- The net results on Green Ash are not good!
Types of Spawn
Log-based cultivation of Shiitake – Process

Drill & Fill Method – Sawdust Spawn/Plug spawn
Use the Proper Tools!
New tools are increasing efficiency
Inoculate at the proper rate!
Seal spawn into log to prevent drying
Log-based cultivation of Shiitake - Process

Log Incubation – colonization is occurring now
Log-based cultivation of Shiitake - Process

Mushroom production & harvest!
Production through forcing
Natural Production
Nameko
Black Cherry only!
Nameko on Sweetgum

Also on Sugar Maple and Aspen
And other substrates
Almond Agaricus
*Agaricus subrufescens/blazei*

- Almond Agaricus – Grows on animal & homemade compost beds
A necessity in the north for multiple cropping
Turning the pile
Lay down a layer of compost 4-6 inches deep
Inoculate at a heavy rate, cover, and maintain moisture
Spawn run or colonization under feed bag and straw cover
Peat moss casing layer adjusted with hydrated lime to pH 7-7.4
Recover and watch for pins
Harvest as buttons for best quality
Conclusions

- Substrate drives mushroom choice
- Access to simple structures can modify environment enough to extend seasonality
- Market drives production method
- Questions…..?