

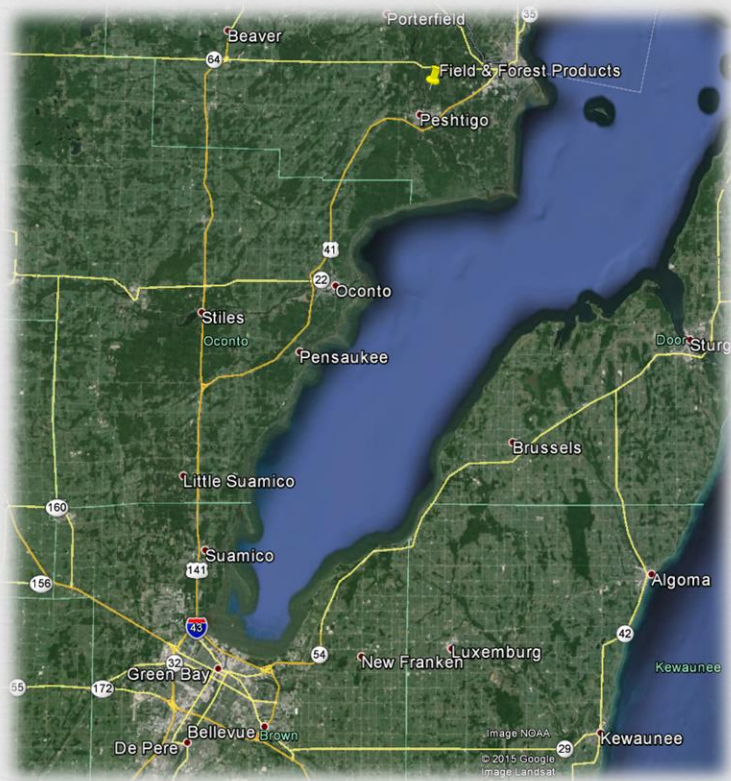
Which Mushroom Should I Grow?



Joseph Krawczyk
Co-owner
Field & Forest Products



Field & Forest Products, Inc



☞ Peshtigo, WI.

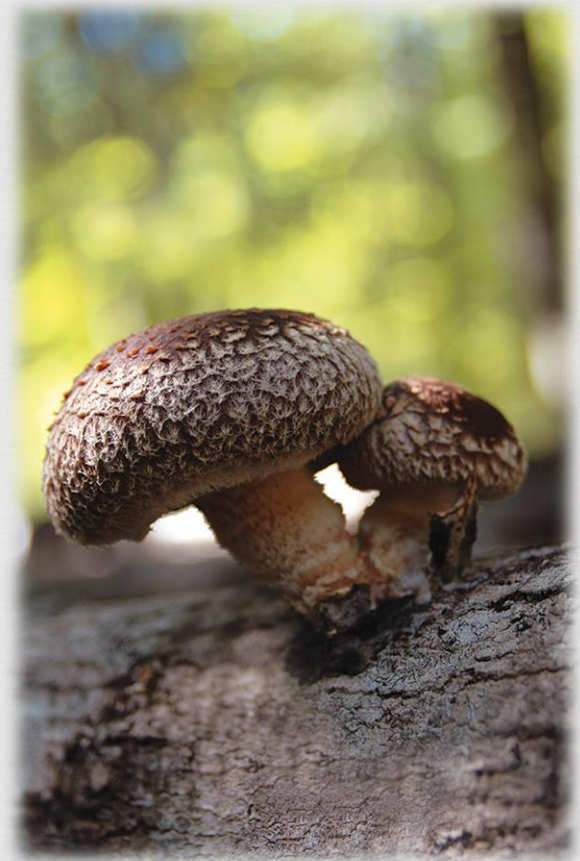
☞ Est. August 1983



Outline:



- ❖ Introduction
- ❖ Whatcha got?
- ❖ Cultivation Steps
- ❖ Conclusions



All sorts of substrate types!



- ❧ Logs
- ❧ Straw
- ❧ Compost beds
- ❧ Woodchips
- ❧ Other!



Basic Raw Materials



Basic Raw Materials



Basic Raw Materials



Basic Raw Materials



*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?



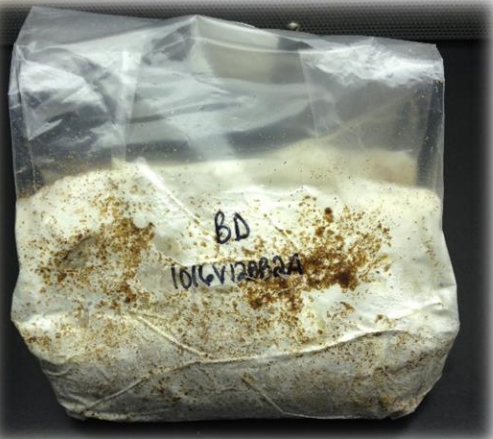
*Coppice management of oak for future
Shiitake logs*

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.....?*