



# CONVERTING WEED CROPS INTO PROFIT

A Business Case for a Formal Link between Forestry and Local  
Mushroom Industry

**A BRIDGE TO A BETTER FUTURE**





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# The Link between the Forest and Mushrooms

- Some mushrooms digest wood, breaking it down into the components of forest soils.
- They decay other dead plant and animal matter. The forest would be choked with piles of dead leaves and woody material, and starved for essential minerals and other nutrients bound up in the undecomposed debris.



# Mushrooms are Tree-Helpers

Some mushrooms form partnerships with roots of living trees.

The mycelium weaves itself around the root and form a communication network between trees.

The mushroom absorbs water and minerals for the tree, and in return the tree gives the mushroom nutrients, too.

Both partners benefit in this symbiotic relationship.





# THE POTENTIAL OF PROFIT

- The popularity of gourmet, medicinal and psilocybin mushrooms are growing fast, as more and more folks discover the great taste and health benefits.
- Almost ten million pounds of oyster & shiitake mushrooms were sold in the U.S. 2015.
- Break-through research in mental health benefits of psilocybin mushrooms.





THE NOW JAMAICA MUSHROOM GROUP

## Puerto Rico Finds Unexpected Source Of Growth In Agriculture

- Farming mushroom is an area of growth in Puerto Rico as they struggle to emerge from a 10-year-old recession and unfolding debt crisis.
- Farm income grew 25 per cent to more than US\$900 million in 2012-2014.
- Acreage under cultivation rose 50 per cent over the past four years, generating at least 7,000 jobs.



## Best of All

- Growing gourmet mushrooms doesn't require a full-time commitment.
- You can still have a full-time job. If you just have a few hours every week, even as little as ten hours, then you have enough time to be a successful mushroom grower.



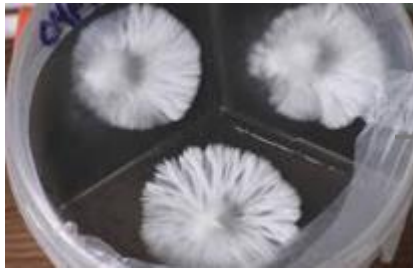


# WHAT ARE MUSHROOMS?

Mushrooms are the fruiting bodies of edible fungus. Mushroom does not require sunlight, prefers to grow indoors, uses no fertilizers or chemicals and produces a high value crop



Fresh Mushroom



Mother Culture



Grain Spawn



Mature Mushrooms



Grow Bags incubation



Agricultural waste,  
Bamboo, Lemongrass

# Micro-mini / Backyard Women Farmers can start for as little as \$JMD 50,000



# Mid-Size Mushroom Grower are needed to help deliver on the growing demand



# THE GLOBAL DEMAND FOR MUSHROOMS

**Global Mushroom Market Size & Share to Surpass USD 86.0 Billion by 2028. This offers an excellent opportunities to develop value-added mushroom products for export.**



# THE POTENTIAL GLOBAL MARKET FOR MEDICINAL PSILOCYBIN

- Psilocybin or magic mushrooms is now being studied to address mental health issues. The world's first Psilocybin Research centre opened a few weeks at the UWI.
- This is important because depression market was valued at \$14.51 billion globally in 2014 and predicted to grow to \$16.80 billion by 2020.
- This mushroom is already being used to treat addiction.



# Mushroom is a High Value Crop



## High Prices at home & abroad

JA2700 lb. for fresh locally produced oyster mushrooms  
Canada dry imported oyster sells for CA\$79.78 lb.  
Processed Oyster Mush. sells \$US 13.89 x 280 ML.



# There are many other businesses that grow from the mushrooms

- Create large market for local grasses
- Bamboo leaves are abundant and an unused resource.
- Lemongrass and vetiver grass grow easily in poor soil, are climate change resilient, grow fast, act as insect repellents to mosquitoes and some mushroom pests and are excellent substrate materials.
- Lemongrass & Vetiver (khus khus) grass are important industries in India and across Asia. The essential oils produced from these grasses are used in perfumes and cosmetics around the world.
- The essential oils produced as a by product of the substrate production is in very high demand as an additive to many the medical marijuana products, to treat blood pressure, and in aromatherapy to list a few.



# Identifying the challenges

- Demystify the cultivation of mushrooms and make it easier than growing chickens.
- Create one large centralized facility with the infrastructure and expertise to create ready to grow bags.
- Develop a centralised marketing and distribution system to ensure market & price.
- Implement campaign to educate customers and potential farmers.
- Re-purpose idle agricultural buildings and bauxite infrastructure in Manchester to grow substrate and manufacture mushrooms





# Pathways to success



Improve the farmers' success rate by eliminating the need to pasteurize substrate and work with spawn.

Delivers ready to grow bags and supplies to farmers much like Jamaica Broilers deliver ready to grow chicks and feed.

# Where are we now?

## **Now we know for sure that:**

- The low tech method of cultivation works in Jamaica
- There is a large and growing market and with the right branding program we can change the pallet of a significant segment of the population to eat mushroom like Diageo did with Vodka and Coolers
- Over 350 groups of women ( 10 to 45 members in each group) signed up to a waiting list to grow mushrooms
- We have the foundation team with the expertise, passion and tenacity to see it through

# Climate Change Resilient Agriculture Model

- Mushroom Incubation Chambers:  
Modified shipping containers buried for inoculation. Lemongrass and Vetiver grass growing on top act as natural insulation.
- Harvest grasses to produce substrate material for 5 years.
- Units will also offer extra protection in case of natural disasters and are an eco-friendly up-cycle use of waste.





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**THANK YOU!**

