



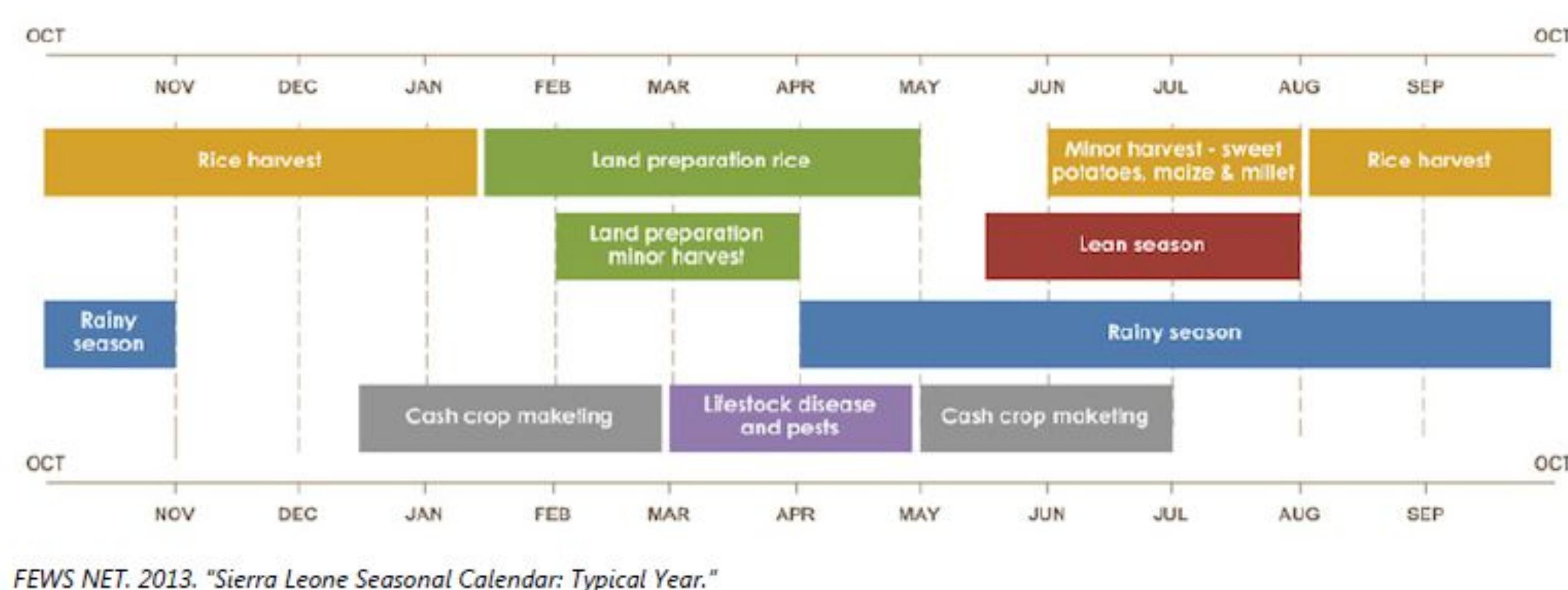
Thera Metrey: Mushrooms in Sierra Leone

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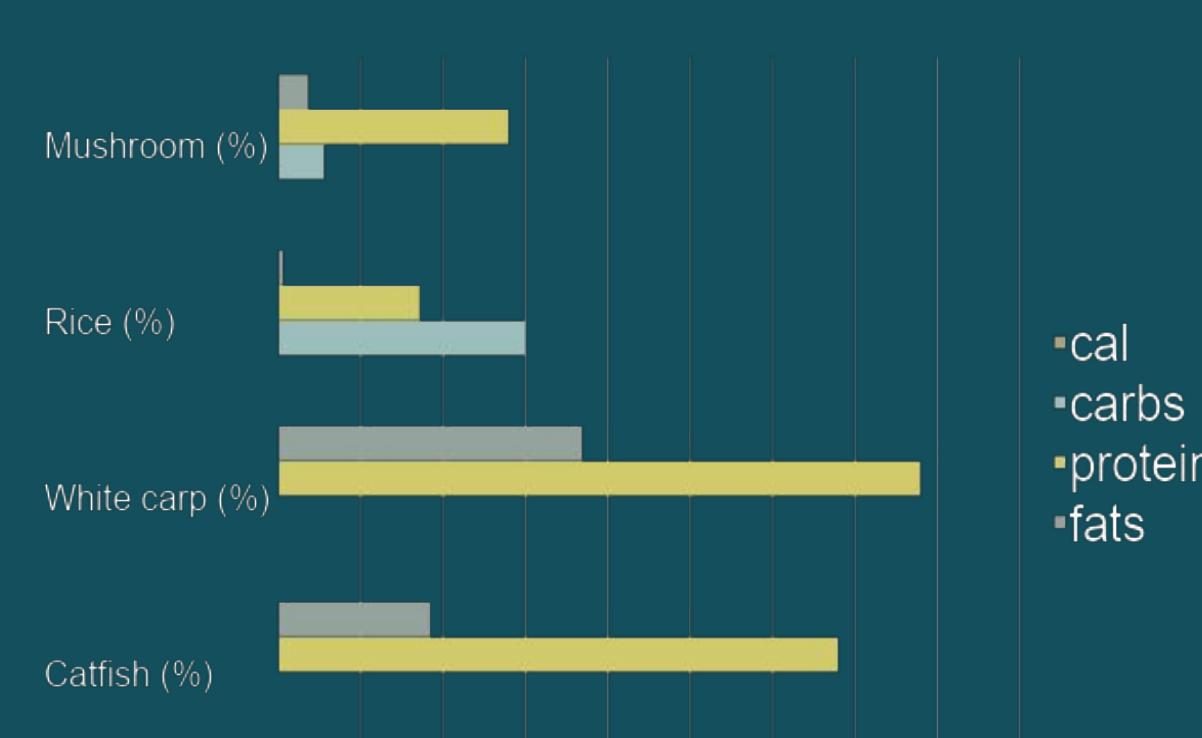
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Sierra Leone Stats

85% of agriculture is rice farming, the majority of which is harvested during a four month period. This creates a large level of seasonal unemployment. 46% of households are food insecure, according to a measure of per capita access to calories by FAO. 83% of preschool aged children are anemic, as are 60% of pregnant women (WHO).



Macronutrient Profile



Micronutrient Profile



Benefits of Mushrooms



- ❖ Grown year round
- ❖ Grown on agricultural waste such as rice straw husk
- ❖ Can be used as a meat
- ❖ Possess antiviral qualities

Spawn Cultivation

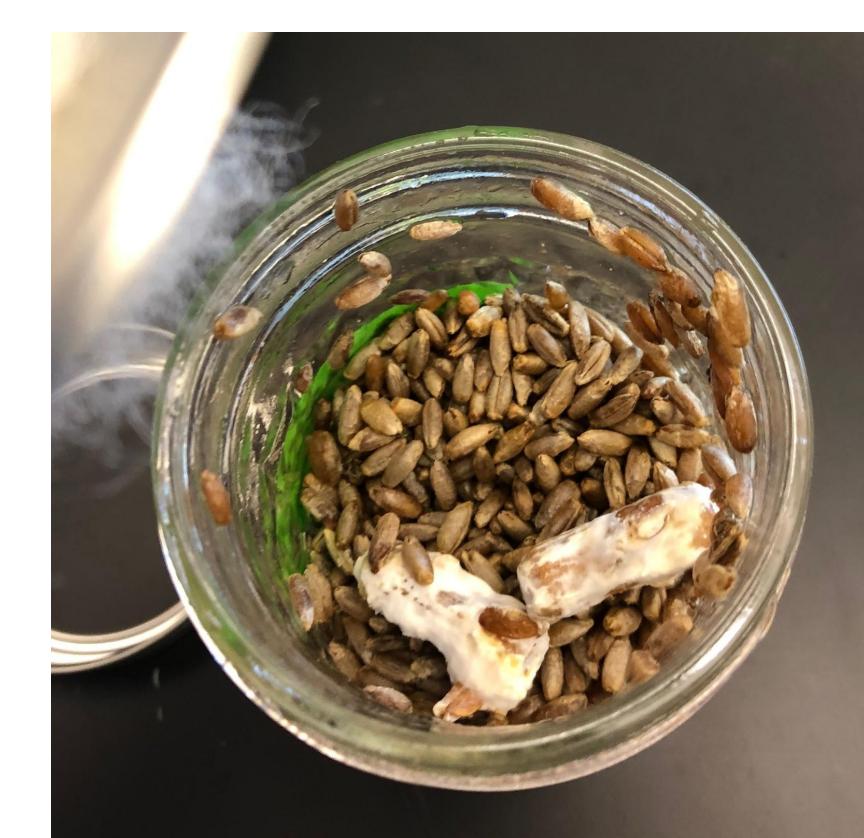
A grain spawning method requires modest lab conditions and is easy to replicate. Grains are soaked for 24 hours then boiled for 15 minutes (A). They are dried, jarred, and sterilized for 90 minutes (B). Each jar is inoculated with healthy mushroom mycelium (C). The jars must be incubated in a dark area at approximately 27°C (D). The spawn will be ready for the fruiting bags after two weeks (F).



A



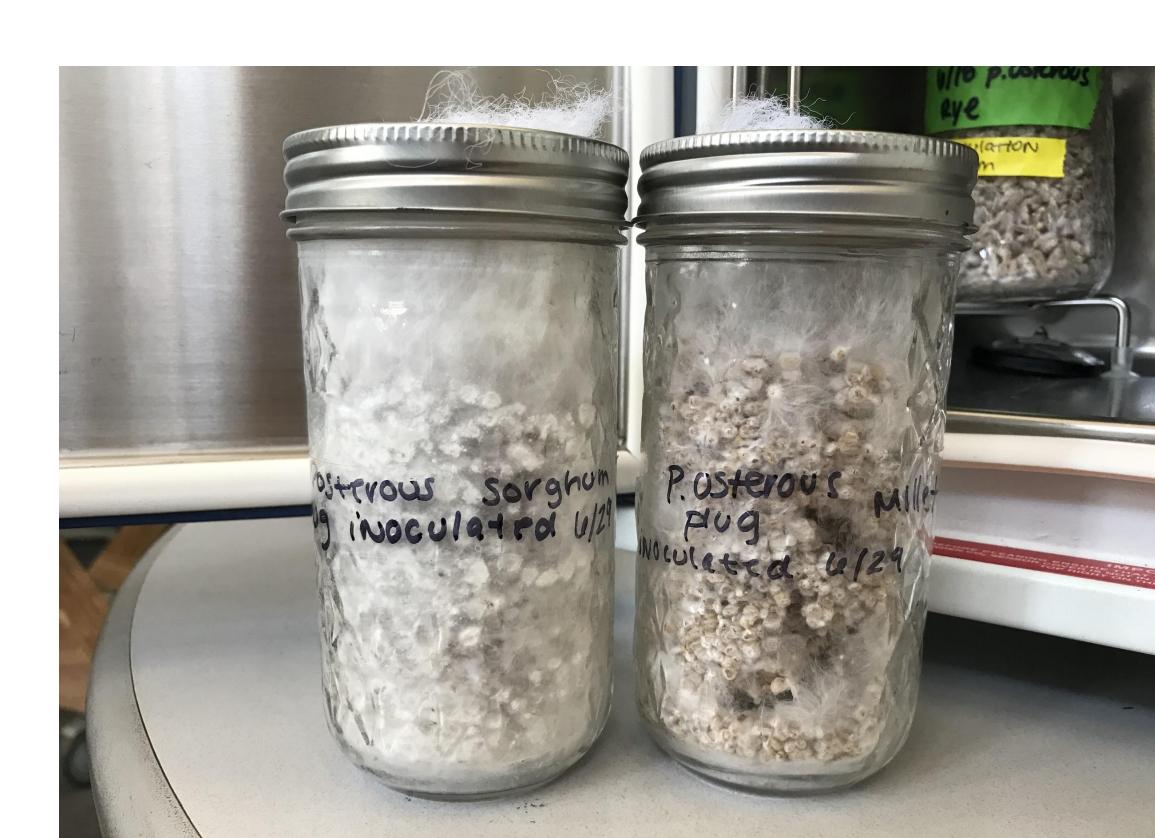
B



C



D

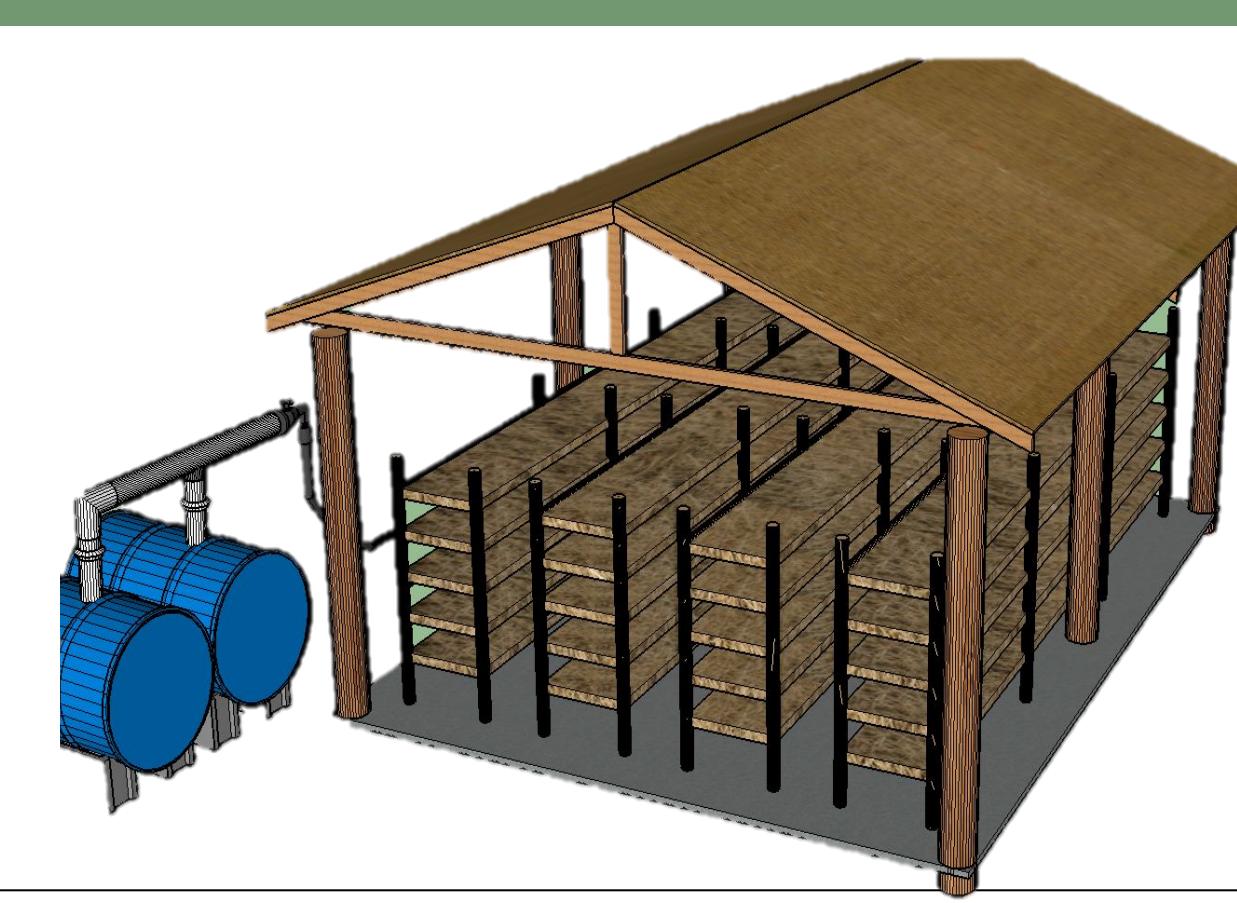


F

Mushroom Production Systems

Mushroom Production Systems are 6m x 8m houses designed for mushroom cultivation:

- ❖ Wooden frame and supports
- ❖ Plastic sheets for walls to retain proper heat and moisture
- ❖ Dark fabric to block out light
- ❖ Steel drums for steaming structure 3 substrate racks to hold grow bags
- ❖ Window for temperature control
- ❖ Thatched roofing material or aluminum covered with leaves.

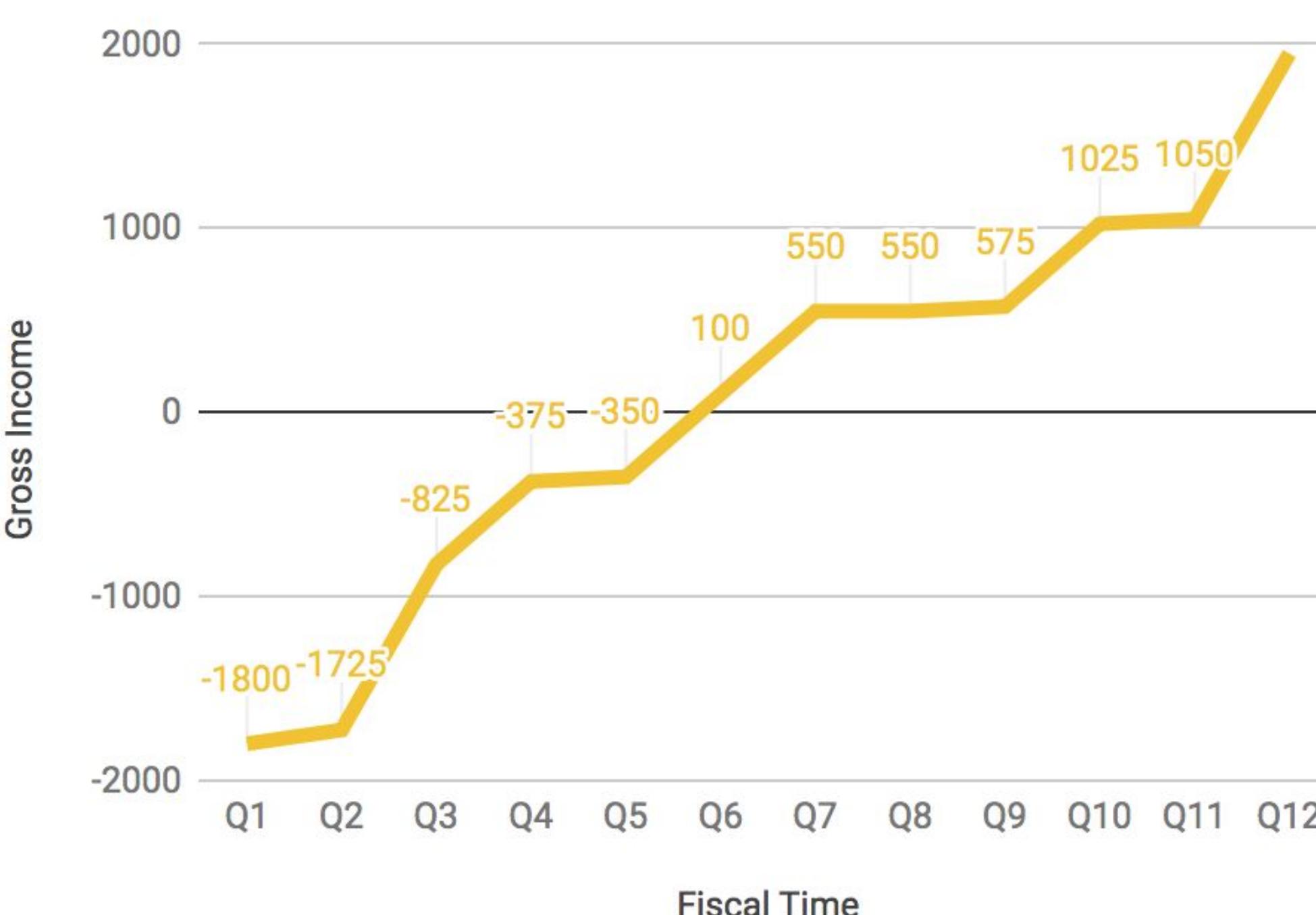


Inputs per cycle:

- ❖ Rice straw or other substrate material
- ❖ Spawn
- ❖ Firewood
- ❖ Grow bags
- ❖ Water

Business Models

Gross Income vs. Fiscal Time For Thera Metrey



Thera Metrey has two revenue streams: the sale of MPSs and the sale of spawn. The net profit margin \$350 per house and \$5 per jar of spawn. Conservative projections estimate that Thera Metrey will break even after the fifth quarter.

Customers will invest \$800 upfront in the production system's construction. They can expect to pay \$110 for inputs per cycle. Each cycle produces an estimated 130 kilos of mushrooms. With a market price of mushrooms of \$3 per kilo, they can expect to break even and profit after 3 cycles.

Net Profits for Farmer vs. Cycle

