7.01 Follow the Fungi: From Farm to Fork

Join mushroom growers as they cultivate fungi for your dinner table.

Use the following video to track the progress of a mushroom from farm to fork:

<https://www.youtube.com/watch?v=O7My6SvUOeo&feature=youtu.be> or go to [www.wakefieldffa.com](http://www.wakefieldffa.com) and click on the Farm to Fork Curriculum tab and find a link to the Phillips Mushroom Video.

Suggestion: have students watch this individually so that they can examine the video and the material at their own pace. This is a STEM content heavy video with several concepts quickly discussed.

1. Where does the mushroom cultivation cycle begin?
2. What are the three most common mushrooms?
3. What material is recycled to create the substrate (growing media) for the mushrooms?
4. Why does the compost rise to a temperature of over 180F?
5. Carbohydrates + Carbon + Nitrogen 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for the mushrooms
6. What does the high temperature ensure will be removed from the compost?
7. After 7 days of aeration the compost moves to a Phase II facility. What does the aeration do for the compost and how does this occur?
8. What occurs in the Phase II tunnels?
9. How long does this process take?
10. What temperature is the compost in the Phase II tunnels?
11. As the compost is prepared for delivery to the mushroom farm what two things are mixed into the substrate?
12. What is a compost cake?
13. What material must be introduced in high concentrations to the mushroom growing environment?
14. The white threadlike fungus colonizes when the atmosphere changes within the mushroom farm. How do growers ensure the change in the atmosphere to begin the growth of the white fungus within the compost cake?
15. What is one mechanism employed to control the humidity surrounding the fungi while keeping CO2 levels high?
16. A peat moss mixture blankets the mycelium of the compost cake. What is the purpose of adding peat moss?
17. After nearly \_\_\_\_\_ days, the mycelium completely inhabits the peat moss and is ready to begin fruiting.
18. Mushroom spawn becomes mushroom with three environmental changes:
19. How many flushes of mushrooms can growers achieve from this substrate?
20. What temperature is held for 24 hours to kill pathogens in the growing rooms?
21. How is this high temperature in the growing rooms achieved?
22. Once the room is filled, how long does the white or brown mushroom cultivation take?
23. What substrate is used to grow oyster mushrooms at Phillips Farms?
24. How does sterilization occur in oyster mushroom cultivation?
25. What type of container are oyster mushrooms grown in?
26. How is oyster mushroom recycled?
27. What are three other mushroom varieties grown on the same mushroom substrate. What is this substrate?
28. What equipment is used to mix the substrate?
29. What does Jim Angelucci compare the mushroom bagging room to in terms of cleanliness?
30. What type of bags are used for growing shiitake mushrooms?
31. Why are shiitake mushroom logs hydrated?
32. How are shiitake mushroom logs hydrated?
33. Which is the fastest growing exotic mushroom grown at Phillips Mushroom Farms?
34. What helps to cool the mushroom’s internal temperature?
35. How long does it take from harvest until shipping at Phillips Mushroom Farms?

**Extension Assignment**

Visit some online resources and determine the lifecycle of a mushroom. Draw and label all of the parts of the life cycle below.

Create a flow chart that follows the fungi from farm to fork (your table)

Students create their own flow charts using graphics and words.