Mushroom Cultivation Report

A practical demonstration on mushroom cultivation was conducted by **Department of Biotechnology of School of Research and Technology** for **B. Tech Biotechnology students**. The session aimed to provide hands-on exposure to the standard procedures involved in mushroom farming, emphasizing the scientific principles behind each step.

Procedure Overview:

1. **Substrate Preparation:** The process began with the **sterilization of wheat straw** using a **formaldehyde solution** to eliminate potential contaminants. The straw was soaked in this solution **overnight** to ensure thorough sterilization.
2. **Drying and Bag Preparation:** After soaking, the straw was **air-dried** to achieve the optimal moisture level required for spawning. The dried substrate was then used to prepare cultivation bags by layering the **sterilized straw alternately with mushroom spawn**.
3. **Bag Sealing and Incubation:** Once the bags were filled, they were **tied securely** and **multiple small holes** were made in each bag to facilitate gas exchange. These bags were then placed in an incubation environment.
4. **Incubation Conditions:** During the incubation phase, which lasted approximately **45 days**, careful observation was maintained. By the end of the incubation period, **mushroom growth was visibly initiated**. At this stage, the environmental conditions were recorded as:
    - **Temperature:** ~40–42°C
    - **Relative Humidity:** ~44%
5. **Observations and Outcome:** The cultivation was successful, with **healthy mushroom growth observed post-incubation**. Notably, the **largest mushroom** grown during the demonstration reached an impressive **7 inches in diameter** and **weighed 65 grams**, highlighting the effectiveness of the cultivation method.

Conclusion:

The demonstration provided the students with valuable practical insight into the **systematic methodology of mushroom cultivation**, including sterilization techniques, substrate handling, and environmental control. This session effectively bridged theoretical knowledge with real-world application, fostering a deeper understanding of fungal biotechnology.

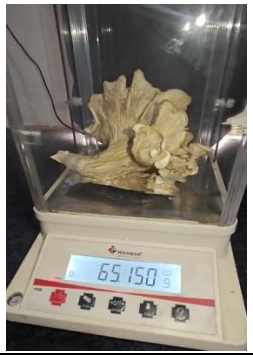
Pictures:







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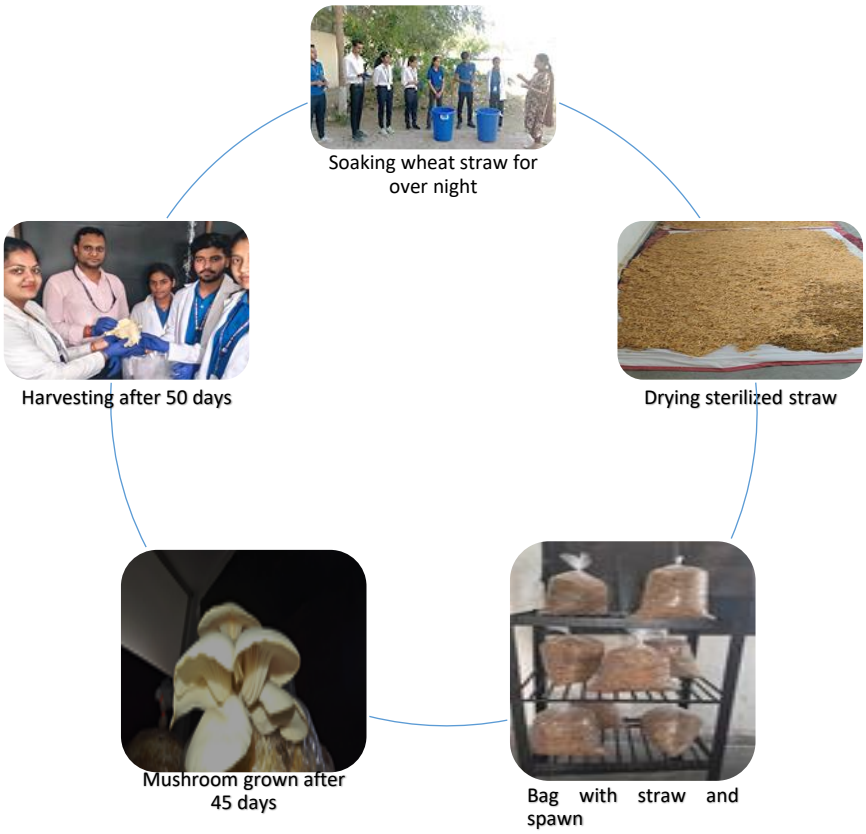
Soaking wheat straw for over night
Drying sterilized straw
Bag with straw and spawn
Mushroom grown after 45 days
Harvesting after 50 days