**B-67: Artificial production of naturally occurring *Lentinus giganteus* (Uru paha), a Sri Lankan edible mushroom**

Srimathie Udugama, K Wickramaratna
(*Horticultural Crop Research & Development Institute (HORDI), Gannoruwa, Peradeniya*)

*Lentinus giganteus* (Uru Paha) mushroom has been treated as a special food since ancient times as mentioned in Buddhist liberature.

This mushroom is endemic to Sri Lanka and it is scientifically classified in "Decades of fungi" by Berk 1847. When fully grown, the fruit body is typically infundibuliform measuring up to 35 cm in diameter and 28 cm in height. This is one of the biggest edible mushrooms found in the world. It can be found on the ground among grass arising from buried wood 20 cm or more below surface. Even though this species in unique in many ways, no effort has been made so far to grow it artificially. Technology has been developed to cultivate this mushroom artificially on a compost medium in July/August 1991 at HORDI Pathology Division.

The following are the main stages involved in growing of *Lentinus giganteus:*

(1) Preparation of pure culture
(2) Spawn production
(3) Mushroom cultivation
(4) Harvesting and preservation.

In making pure culture and for spawn production, the available techniques, can be used. The substrate usually consists of a mixture of Saw dust, Rice Bran, Lime, Soya Flour and other minerals and vitamin supplements.

Saw dust from a mixture of wood species is usually preferred. Jak wood is preferred. The formula for the compost is as follows and the amount given is sufficient for one compost bag.

| | |
|---|---|
| Saw dust | 1000 g. |
| Rice bran | 100 g. |
| Dolomite | 20 g. |
| Soya | 0.05 g. |
| Magnesium sulphate | 0.02 g. |

To make the compost, the above dry ingredients were mixed thoroughly by hand. Water was added to the mixture so that the final moisture content of the substrate was between 55-65% depending on the capacity of the saw dust to absorb water. The mixture was then packed into polypropylene bags of size 13 x 30 cm. After the bags have been filled (1 kg wet wt.) with nutrient supplemented moist substrate, the neck of the bag is fitted with a plastic collar and plugged with cotton wool. When this filling is over, disinfection was done by steaming, for 3 h. The following day mushroom seed inoculation was done and the bags were kept in the dark for incubation for 2 mouths. When the mycelium appeared to be fully grown, the months of the bags were opened and the bags kept in a cropping room for flowering.

Nutritional analysis of fruiting bodies of this mushroom was done at PGRC. Gannoruwa.

**Nutrient value of different edible mushrooms (dry weight basis)**

| *Variety of Mushroom* | *Protein* % | *Moisture* % | *Fat* % |
|---|---|---|---|
| *L. giganteus* | 37.8 | 95 | 1.4 |
| *L. edodes* | 17.5 | 90 | 1.4 |
| *A. bisporus* | 26 | 89.5 | 1.8 |
| *V. volvaceae* | 30 | 88.9 | 5.8 |
| *P. ostreasus* | 10.5 | 73.7 | 1.6 |

Protein content of Uru paha was superior to the other edible mushrooms grown artificially. Therefore it is useful to promote this mushroom because of its food value not only for its delicacy and flavour.