Indian J. mycol. Res. 16 (2), 317-319 (1978)

CULTIVATION OF *AGARICUS BISPORUS* IN WEST BENGAL

In India, the cultivation of 'temperate white button' mushroom, *Agaricus bisporus* (Lange) Sing. is commercially confined to hill aress like Solan (H. P.), Bhimtal (U. P.), Kashmir Valley and Otcamond (Tamil Nadu). During winter months it is also been cultivated in Patiala (Punjab), Delhi and West Bengal. The main reason for this very confined cultivation of *A. bisporus* in India is its requirement of low temperature for cropping. As such this mushroom can be grown only in hill areas at an altitude of 2000 metre and above throughout the year with provision of artificial heating arrangement during winter months. But in plains of India this mushroom can only be cultivated during the winter months when the temperature is low i. e., November to Fabruary. In order to popularise the mushroom cultivation amomg the farmers of West Bengal, the cultivation of *A. bisporus* was done and the result obtained was presented here.

The culture of *A. bisporus* was obtained from I. A. R. I. New Delhi. The spawn was prepared in glass bottles having jowar grains as substrates and following the method of Kumar *et. al.* (1975). The modified MRC-F-2 compost (wheat straw was replaced by paddy straw) was prepared in open air following the method of Shandilya and Hayes (1978). The compost was chemically sterilized by treating with 4 percent formaldehyde solution for 24 hrs and then it was kept in open place till the smell of formaldehyde disappeared. The wooden trays (90 cmx60cmx15cm) were filled with compost compactly upto a depth of 10cm. Spawning was done by double layers broadcasting method (Shandilya *et. al.*, 1974). Then the trays were covered with newspaper (presoaked in 0.1 percent Dithane Z-78 Solution) and stalked in staircase manner in a room keeping enough space between the walls and the trays. Water was sprayed daily to keep the newspaper moist and the newspaper was changed on every fifth day to prevent any saprophytic fungal growth. After eighteen to twenty days of

spawning when the compost was impregnated completely with the mycelial growth, the compost was covered upto a height of 2.5 cm with sterilized casing soil (pH 7.5 treated with 1 percent formaldehyde solution for 15 hrs). The necessary arrangement for proper aeration was made and watering was done as and when required. The entire experiment was conducted in Syamnagar Mushroom Farm (P.S. Kultoli, South 24 Parganas, Sunderbans) and the results obtained are presented here.

Table 1. *Date (mean) showing the yield of* Agaricus bisporus *in winter months of 1977-'78*

Months	Average temperature (°C)	Relative Humidity (%)	Yield/Sq.m. (Kg)
November	20	64.2	3.162
December	18	53.8	4.368
January	17	65.0	4.162
Fabruary	23	66.0	1.812

The data in Table 1 indicate that *A. bisporus* can be cultivated easily in rural areas during the winter months without the highly developed techniques. Though it is quite evident that the present yield data in very low in comparison to yield data of the highly developed technique one. However, if the farmers are adequately traihed in the mushroom cultivation and demand for mushrooms are created then the farmers can have a secondary source of income out of this mushroom cultivation throughout the year i. e. 'white button mushroom' or 'dhingri' in winter months (i. e. November to February) and paddy straw mushroom during rest of the year (i, e. March to October).

The author is thankful to Prof. A. K. Sharma, Sir Rashbehari Ghosh Professor and Head of the Department of Botany, Calcutta University, for his interest.

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