

Preliminary studies on mushroom collection and cultivation in dry temperate zone (cold desert) -Lahaul Valley of Himachal Pradesh

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ABSTRACT

More than 35 specimens of wild and edible mushrooms were encountered from Lahaul valley for the first time belonging to species of *Lactarius*, *Laetiporus*, *Laccaria*, *Stropharia*, *Marasmius*, *Cortinarius*, *Ramaria*, *Russula* and *Strobilomyces*. During the winter months the valley receives 3-6ft snowfall and remains cut off from the rest of the world, as a result no fresh vegetables are available. Keeping in view the circumstances first successful attempts in growing button mushroom was made. The compost bags were kept in room where the tribal folk burn bukhar/ oven to keep their living rooms warm when outdoor temperature reaches below - 30°C. Compost bags weighing 4-5 kg yielded on an average 50-200 g of fruit bodies under severe cold conditions in the remote tribal mountain area.

Key words : Lahaul valley, Button mushroom cultivation, First introduction.

INTRODUCTION

Himachal Pradesh has made significant achievements in the field of Agriculture and Horticulture. Farming systems of the state are showing a prominent change with the incorporation of diversified commercial crops like mushroom and vegetables etc. The state provides congenial agro-climatic conditions as well as market advantages for mushroom cultivation. Mushroom cultivation requires no land and can be grown indoors. The venture can be taken up during the period when generally the farmers have minimum field operations.

Sincere efforts to bring mushrooms under cultivation were made in 1961 after the commissioning of a scheme, "Development of mushroom cultivation in Himachal Pradesh", at Solan by the ICAR's National Centre for Mushroom Research and Training (NCMRT). However, it was a general feeling among the researchers that Lahaul being the dry temperate zone mushroom cultivation is not easy, since to get congenial temperature and moisture conditions for its successful domestication may not be possible.

Lahaul a sub-division of Lahaul and Spiti district of Himachal Pradesh is a typical tribal tract, which remains cut off from the rest of the country for a period of about six months during winters due to heavy snowfall. The climate of this region is predominantly cool and dry throughout the year except the months of May to

September, when it receives very little showers. Moreover, the valley also experiences 3-6 ft snowfall during winters (December – March) and no agricultural crop is grown / transported during this time. Such winter period does not provide any fresh vegetables to these tribal people and they solely depend on preserved vegetables harvested and dried before the oncoming of winters (October-November).

In order to study the presence of mushroom diversity in Lahaul, various landscape element types of agricultural lands, forests, grasslands and meadows were investigated which are prevalent along the Chandra-Bhaga river complex. The survey on occurrence of wild and edible mushroom flora was conducted at various locations of the five prominent valleys of the region viz. Gondhla, Pattan, Miyar, Gahar and Todd valleys.

More 35 specimens of wild and edible mushrooms were collected from Lahaul valley for the first time belonging to species of *Lactarius*, *Laetiporus*, *Laccaria*, *Stropharia*, *Marasmius*, *Cortinarius*, *Ramaria*, *Russula* and *Strobilomyces*, in the localities of all the five valleys at Sumnam, Tandi, Triloknath, Udaipur, Jahalma, Yurmath, Chimret and Kukumseri during the year 2005-06 and again in 2006-07. This clearly indicated the suitability of this region for occurrence of mushrooms.

Perusal of literature revealed that so far no attempts have been made towards domestication and cultivation

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