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## Nutritional and cultivational aspects of *Flammulina velutipes* (Curt. Fr.) Sing. under Punjab conditions

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*Flammulina velutipes* was maintained on Potato-Dextrose Agar (PDA) slants and used for physiological, nutritional and cultivational studies. The culture showed white to cream coloured mycelium on seven different agar media with fine and strand hyphae on Wheat extract, PDA and Malt extract medium while thin and silky character was seen on Czapeck's and Richard's medium. Among the synthetic media, Richard's medium showed best growth. *F. velutipes* yielded maximum biomass on Wheat extract medium at pH 6.5 when incubated at 25°C for 20 days. Nutritional studies using Richard's medium showed that glucose and mannitol were the preferred C-sources while ammonium nitrate and glutamic acid were the preferred N-sources. Among the macro-elements, calcium supplementation improved biomass yield while molybdenum was most effective among the trace elements tested. For cultivation, different substrates were used including wheat straw, paddy straw, cotton waste, corncobs, sawdust and moong bean waste. Maximum yield was obtained on wheat straw supplemented with 15% wheat bran (BE 14.28%). Minimum number of days for completion of spawn run was of 19 days in case of cotton waste, corncobs, moong bean waste. Pinheads were observed in paddy straw and corncobs but no mature fruit bodies developed. Nutritional analysis showed that the fruit bodies were rich in proteins containing 27.57% crude protein out of which 81.65% was digestible, however soluble fraction of protein-4.5%, crude fat-4.25%, fibre-9.35% and ash-9.25% on dry weight basis was found. The dried powder of this mushroom contained 0.031 mg/100g  $\beta$ -carotene and 2.26mg/100g vitamin E.

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