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rvp@atmosfera.unam.mx
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Salmones, Dulce; Waliszewski, Krzysztof N.; Guzmán, Gastón
Use of some agro-industrial lignocellulose by-products for edible mushroom volvariella volvacea cultivation
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Universidad Nacional Autónoma de México
Distrito Federal, México

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Abstract

The mycelial growth of two Mexican strains of Volvariella volvacea (Bull.: Fr.) Sing., in 13 agroindustrial wastes is reported. The following substrates were used: banana leaves, bracts of pineapple crowii, coconut fibre, wffee bran, coffee pulp, corn cob, corn stover, orange peel, rice bran, rice straw, sisal bagasse, sugarcane bagasse and wheat straw. Mycelial growth, mycelial thickness and pinhead fomations were the parameters evaluated. Fruiting bodies were obtained only from one strain growing in bracts of pineapple crown, coffee pulp, rice straw and sisal bagasse. Pnmordia were developed behveen 13 and 15 days. The highest biological efficiency was achieved on rice straw, 33.8%, while the results obtained for coffee pulp, sisal bagasse and bracts of pineapple crown were 1 5, 7.8 aiid 6.2%, respectively. Cliemical aiialyses of tlie substrates registered CM ratios of 33: 1 to 80:l. The results demonstrate the possible use of rice straw and wffee pulp for mushrooom cultivatioii in Mexico, which would provide a source of protein nch food as well as encouroge the biological conversion processess of agro-industrial wastes

Keywords

agroindustrial wastes, edible fungi, Volvariella volvacea