

LOW COST SPAWN PACKETS PREPARATION FOR THE PRODUCTION OF OYSTER MUSHROOM (*Pleurotus ostreatus*) AND PHYSICO-CHEMICAL ANALYSIS OF THE PRODUCT MUSHROOMS

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Extended Summary

Three sets of experiments were conducted to find out low cost substrates and their effects on approximate nutrients composition of oyster mushroom.

In the first experiment the performance of different levels of cow dung as supplement with rice straw on the production of oyster mushroom and on their proximate composition was investigated. In this experiments the rice straw supplemented with 10% cow dung (T3) showed best performance in yield and yield attributes and this media produced mushroom contained by Carbohydrate (54.00%), protein (30.90%), crude fiber (24.03%), Lipid (3.34%). Among the minerals, nitrogen (5.02%), potassium (1.31%), calcium (23.50 mg/100g), magnesium (18.70 mg/100g), sulfur (0.045 mg/100g) and iron (44.20 mg/100g).

In the second experiment, the effect of different levels of cow dung as supplement with sawdust on the performance of oyster mushroom was studied. The yield and yield attributes were highest when saw dust supplemented with 10% cow dung and the fruiting body formed in this media contained by protein (31.30%), ash (8.41%) and crude fiber (24.07%), lipid (3.44%) and carbohydrate (32.85%). The minerals were nitrogen (5.01%), potassium (1.39%), calcium (22.15 mg/100g), magnesium (20.21 mg/100g), sulfur (0.043 mg/100g) and iron (43.4 mg/100g).

Similarly, in third experiment sugarcane bagasse was supplemented with wheat bran at different level as mushroom substrate. The best performance was shown by sugarcane bagasse supplemented with 30% wheat bran. The produced mushroom was subjected to approximate composition for quality. The major nutrients and minerals were obtained from the fruiting body produced in this media and those were protein (30.31%), ash (9.15%) and crud fiber (24.07%), lipid (3.90%) and carbohydrate (32.57%). The mineral contents obtained from the mushroom of wheat bran riched media were produced in nitrogen (4.85%), potassium (1.39%), calcium (22.08 mg/100g), magnesium (20.21 mg/100g), sulfur (0.042 mg/100g), iron (43.11 mg/100g). These media were also found cost effective than trial media.

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