Brazil is the world's largest producer of palm and has the biggest market consumer of this product. However, its production and industrialization of palm generates a large amount of waste that must be properly treated in order to reduce environmental problems and to contribute to the sustainable development of producing regions. Several studies about the use of lignocellulosic waste as substratum to mushroom production has shown its applicability. Concerning nutrition aspects, edible *Pleurotus* mushrooms have high protein content when compared to most of vegetables, besides of high proportion of unsaturated fatty acids, various vitamins, minerals, and low-fat amount, being an alternative to increase the nutrition levels of developing countries population with high rates of bad nutrition. The purpose of this study is to evaluate the production of *Pleurotus ostreatus*, considering the yield, biological efficiency and organic matter loss, besides analyzing the amount of macronutrients (proteins, carbohydrates, fiber, fat and ash) of the basidiomycetes, grown in solid culture. Thereby, was used solid cultivation, using waste of peach-palm (leaves) as substratum. Was obtained 38.2% of yield, 5.03% of biological efficiency and 22.5% of organic matter loss in the process. The basidiomycetes grown in this substrate presented 24.10% of protein, 34.86% of carbohydrates, 4.28% of fiber, 3.03% of fat and 6.02% of ash, in dry weight. A flour made from the drying and grinding of the basidiomycetes, with 10% humidity, may be considered a low fat high protein source according the ordinance number 27 (01/13/1998) of National Health Surveillance Agency of Brazil.