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Solar Oyster Mushroom Crackers Made in Myanmar

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Abstract

In Myanmar's agricultural sector is facing an unprecedented humanitarian and economic crisis. Across the country due to the military junta repression, farmers have been forcibly displaced by armed conflict and military attacks, large areas of farmland have been abandoned due to insecurity and violence, farmers no longer have proper access to agricultural inputs and resources, severe labor shortages have emerged as a result of the military conscription law, crops and farmland have been destroyed by climate-related disasters and ongoing instability. As a result, countless farming families can no longer continue agricultural production, while food security and livelihoods are deteriorating at an alarming rate. The Agriculture and Farmers Federation of Myanmar (AFFM) is helping farmers to organize and to overcome these huge problems. Local production of mushroom is realized by AFFM in Karen State (Myanmar liberated area) through the organization of mushroom production. AFFM supports rural and urban development, with a primary focus on organic agriculture production and livelihoods of small-scale farmers, particularly women. AFFM represents the needs and rights of its members through: a) strengthening and expanding the AFFM network; b) engaging in policy processes; and c) facilitating services for farmers supporting increased green agriculture production and realization of farmers' and farm workers' rights. Oyster mushrooms are locally cultivated by smallholder farmers with low production costs, using a short growing cycle (30 – 45 days). AFFM is in charge for production and packaging of mushroom products. In 2025, the Federation decided to enlarge and diversify mushroom products, introducing a novel interesting, dried product: the mushroom crackers. After harvesting and washing, the mushrooms have been dried using a direct solar-powered system built in 2024/2025, through a project jointly organized by ITALIA-BIRMANIA.INSIEME association, AFFM with the technical support of CREA (Research Council for Agriculture and Economics, Rome, Italy) experts. The cycle lasts approximately 48 hours. The basic recipe for making crackers is given below: 1 kg mushroom, 1 onion, 100 g chicken powder, 1 teaspoon fish source, 1 teaspoon black paper, 1 teaspoon salt, 1 L water, 1 kg Cassava flour. After mixing and blending all ingredients and blended, the mixture is streamed for 2-3 minutes and placed in special containers to obtain the desired shape of the final product. The washers are then introduced into the solar dryers for 6-8 hours, until constant weight and complete dehydration is reached. The result is a crunchy, nutritious and sustainable product (oyster cracker) that is released sold on the local market, meeting the tastes of tourists and locals and can also be consumed as street food and an interesting snack. Another potential use of the product is its distribution in schools to promote proper nutrition among young people.

Keywords: solar drier, sustainable technology, novel food, peasants empowerment

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