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THE COMMUNAL GROW HOUSE CONCEPT

Since the inception of Mushrooms with a Mission" (MwM) program individual farmer families were trained and provided with individual grow houses to cultivate mushrooms. In February 2013 the idea of bringing farmers together to grow mushrooms was discussed and a derelict green house at the facility was renovated to a communal grow house.



14 farmers who were willing to be part of this pilot project received on-hands training by technical staff at the facility. 8,000 ready-to-fruit Oyster mushroom blocks were hung up at the newly renovated communal grow house.



The group of 14 appointed a leader and formulated a roster for working shifts. Each farmer needed to come to the facility only once a week which was an attractive option as they could do other free lance work on the other six days and continue to do their chores

at home on the other 6 days of the week.

As the communal grow house is on the facility premises technical staff were able to monitor and document this pilot project in addition to providing advice to the farmers. "Instead of investing in a separate grow house for each family" Senior Technical Officer Huynh pointed out, "this communal grow house can engage many families at one facility, making it easier for us to provide training and to control mushroom quality. At the end of each crop season, the 14 farmers will pay back the cost of the 8,000 mushroom blocks.

At the end of March, according to MwM Manager Ngo Thien Loi, the 14 families harvested 1,035 kg of Oyster mushrooms



from the communal grow house and sold it all to the local market for about 20 million VND (US\$1,000).

The pilot project has been an enormous success and will be used as a model that will be replicated in the new areas of Dakrong and Gio Linh Districts where MwM plans to expand. The added advantage is that people integrate with each other and have a sense of community. The number of farmers to the program will also be increased rapidly.

Ty finds fulfillment at the communal grow house

Nguyen Thi Ty, a 46-year-old mother of four, woke up early this morning because today was her day to work at the Mushrooms with a Mission communal grow house. Arriving at the mushroom Center, Ty and her co-worker spent a couple of the first hours picking fresh oyster mushrooms that had matured and emerged from thousands of plastic cylindrical bags hanging from beams inside the facility. The mushrooms would be sold at the local market, to be taken home to family kitchens where they would later be cooked as part of healthy family meals.

A poor farmer from Thach Dau Village in Cam Hieu Commune, Ms. Ty had been earning roughly 10 US\$ a month from conventional farming. She had always found it hard to feed her family. Since her husband is disabled, she is the breadwinner of the family.

Now, working just one day a week at the communal grow house, Ty can earn US\$7.50 on that day. This new income has significantly eased the



daily trials and tribulations required of her in taking care of a disabled husband and three children still of school age.

According to Nguyen Ngoc Huynh, Technician at the Mushroom Center, this pilot initiative is proving its cost-efficiency and is expected to be replicated in other remaining areas still plagued with poverty.

"The technical assistance available at the Mushroom Center allows farmers to operate on their own, from taking care of their crops to harvesting and selling their products at the local market.

We love growing mushrooms because it generates a better income for us compared to growing rice, which is labor-intensive for women

"We love growing mushrooms because it generates a better income for us compared to growing rice, which is often labor-intensive for women," said Nguyen Thi Ty. "With knowledge and experience from my work at the communal grow house, I hope I will be able to cultivate mushrooms successfully at my house someday."

Ms. Ty is now an active supporter of the communal grow house concept. She has already suggested to her neighbors that they sign up when the next communal grow house is built and the program expands.

The Oyster Mushroom



Species of *Pleurotus* may be called oyster, abalone, or tree mushrooms, and are some of the most commonly cultivated edible mushrooms in the world. It is found in both tropical and temperate climates. There are variety of Oyster mushrooms. They get their name from their appearance and their flavor.

Their stems have broad gills and rise into a flat, mostly uneven top that resembles an oyster. They have a soft texture and delicate flavor that is sometimes compared with seafood.

The Oyster mushroom is one of the few members of their genera that contains vitamin C. It has high amounts of protein (up to 30% by dry weight) and equally high amounts of essential fatty acids. It has no cholesterol and has significant levels of cholesterol-reducing lovastatin. These mushrooms also contains eight amino acids and B vitamins.

These mushrooms are easy to cultivate, richly nutritious and medicinally supportive.

Oyster mushrooms are also renowned for their ability to degrade environmental toxins, particularly hydrocarbon-based contaminants.



Yellow Oyster mushrooms, also known as Golden Oyster, *Pleurotus Citripileatus*, are very closely related to the mushrooms, *Pleurotus cornucopiae*

Mushrooms with a Mission Hosts Important Visitors



US Ambassador David Shear visited Quang Tri Province to observe UXO clearance and related activities. He is seen here with mushroom farmer Dang in his grow house.



Emma Atkinson Program Officer PM/WRA of the US State Dept. talks with Dr. Ai as he explains spawn production at the MwM laboratory during her visit to Quang Tri Province.



Thomas Kodiak, Grants Officer PM/WRA of the US State Dept. is being briefed by Dr. Ai on the process of making ready-to-fruit mushroom blocks.



Jeanne Bailey Agriculture Counselor of the US Embassy in Vietnam visited the facility and some farmers. Here she is seen at a farmer's Lich Chi mushroom grow house.



Ambassador Wu, Director General, Dept. of NGO International Affairs, Taiwan MoFA together with a 8 member delegation during their visit to Quang Tri and MwM. Two mushroom experts were also in the delegation.



Deputy Ambassador of the Embassy of Japan in Vietnam Mr, Hideo Suzuki together with nine members of the Hanoi press visited the MwM project on a familiarization visit. He is seen here at the communal grow house.

Research & Development

The MWM R&D staff went to Da Lat City in the south to select white, purple and golden oyster mushrooms- *Pleurotus Ostreatus* which were later replicated in levels 1, 2 and 3 for experimental cultivation in different areas in Quang Tri Province as well as at the Communal Grow House. The testing results have been encouraging: one plastic cylinder bag on average produces 500 gram of mushrooms. Fresh oyster mushroom sold directly to the local market from the Mushroom Center is attracting local consumers.

In order to cultivate Shiitake mushrooms, or *Lentinula edodes*, a cold water variant, MWM staff sought variety from Sa Pa and Da Lat for reproduction. The work was conducted on an environment consisting of many different ingredients such as rice and com powder mixed with sawdust. Experiments were conducted on 170 logs of timber and 1,000 blocks of rubber tree sawdust to monitor and assess the growth of Shiitake mushrooms. Presently the mushroom spawn is growing well given the weather conditions in Quang Tri Province.

However, as Shiitake it is a cold-weather mushroom, it is important to keep the temperature between 18 to 25 degrees Celsius and a humidity of 80-90% for the mushroom ear to take its shape.

“ We concentrate on controlling temperature inside the grow house by using water to cool the surrounding environment and the roof of the grow house” said Dr. Ai, Technical Manager. “We also focus our studies on the growth and development of Shiitake mushrooms”.

For Wood ear mushrooms or *Auricularia auricular*, MWM’s studies focused on replication of its spawn on different environments. After 20-25 days after inoculation, the entire mushroom blocks turn white. The variety is being cultivated at the mushroom centre and will be continuously monitored.



Dr. Ai in his laboratory examining the cultured spawn.

MwM Expands its reach to Dakrong District



MwM visited Dakrong District and met with the Chairman Mr. Nam and other officials of the People’s Committee to discuss the expansion of the MwM project. In addition to having the highest UXO contamination, Dakrong is classified as one of the poorest districts with 48% of the population living under the poverty line. Ethnic minorities account for 80% of the population with little access to higher education.

Following the meeting with officials and the ethnic minority community in their homes, potential mushroom farmers and a representative of the Farmer’s Union visited the Mushroom facility in Cam Lo to understand and discuss the communal grow house model which they were keen to implement in their community. It was agreed that a small communal



Farmers from Dakrong District are briefed by technical officer Huynh on mushroom cultivation at the communal grow house at the facility

grow house on their land (see pic) where the farmers will participate in a collective effort to cultivate mushrooms. This will be preceded by a formal training by technical staff of MwM.

MAKE A DONATION!

We appreciate the ongoing financial support of concerned organizations and individuals like you. Your contributions enable us to bring more marginalized families into the program.

Donate Now!

Technical Support From Taiwan

During the visit of the Taiwanese delegation in Quang Tri, the two mushroom experts, Professor Chen Chi-Chen and Mr. Chen Chiang Chien provided valuable information and guidance on the different aspects of mushroom cultivation to MWM staff. The experts provided intensive training and up to date knowledge on growing various species of mushrooms on different substrates. The training was focused on processes of disease prevention and treatment methods in producing spawn blocks and growing mushrooms and new methods in cultivating high value mushrooms such as

Linh Chi, Turkey tail and Shiitake.

In addition they provided direct guidelines for the floor plan of the equipment building as well as the communal grow house at the facility. During their visits to farmer families they provided practical advice and solutions against block contamination.

Experts also introduced new technologies and models in growing mushroom in Taiwan and other countries which have similar conditions as Quang Tri.

As Taiwan is known for high quality

Shiitake mushrooms, Taiwanese experts instructed MWM technical staff on methodology in growing this cold-weather mushroom.



Prof Chen explains to Dr. Ai and Mr. Chen looks on.



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About NAMUS

NAMUS is the official trademark of the brand of mushrooms grown by UXO survivors in Quang Tri Province, part of Mushrooms-with-a-Mission (MWM), a program jointly implemented by Project RENEW and New York-based Humpty Dumpty Institute (HDI). RENEW has worked for 10 years to clean up bombs and mines in Quang Tri Province, reducing accidents and injuries and improving the lives of victim families. HDI is a non-profit humanitarian organization which has conducted post-war poverty-reduction and mine action programs in Angola, Armenia, Eritrea, Lebanon, Mozambique, Sri Lanka, Laos, and now Vietnam.

MWM supports victim families and poor communities in ERW-affected areas in Quang Tri Province by creating jobs for people with physical disabilities, helping them achieve stable incomes and contributing to socio-economic improvements in the communities where they live.

MWM ensures that growers will be able to earn a good income from their mushroom products. Profits from the program will go back to support Project RENEW's humanitarian activities including ERW cleanup and removal programs, and to expand opportunities for more victim families to join the program.

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