สกสว
TSRI

Area Based Development Research Journal

Official Translation of วารสารวิจัยเพื่อการพัฒนาเชิงพื้นที่
Thailand Science Research and Innovation

Vol. 13 No. 3 May – June 2021 E-ISSN 2408-1752

Area Based Development Research Journal.2021;13(3) Article No. 256411
http://abcjournal.trf.or.th/

Preparation for Organic Rice Production Support to Farmers in Rai Khok and Nong Khanan Subdistricts, Phetchaburi Province

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Received: 18 February 2021 Received in revised form: 11 May 2021 Accepted: 12 May 2021

Abstract

Farmers in Rai Khok and Nong Khanan subdistricts, Phetchaburi province encountered problems of high rice production costs because of the use of chemical substances and chemical fertilizers. Farmers were also at risk of chemical exposure and chemical residues in the environment. Hence, they would take initiative in adjusting from current rice farming to organic rice production. This research was conducted in support of this change period by allowing 30 farmers in the community to participate in the preparation of organic rice production. The research process involves several aspects: 1) informing farmers in the community about the standard of organic agriculture and standard of good agricultural practice, 2) engaging farmers in planning and setting goals for rice cultivation, 3) transferring information of the Beauveria Bassiana proliferate technology and the vermicomposting production, 4) creating a mechanism of community participation, and 5) monitoring and evaluating the work process. The results show that using Beauveria Bassiana and vermicomposting has helped the farmers to lower their costs of about 1,800-2,000 baht/rai on chemicals and fertilizers. The rice yields are 415 and 558 kg/rai from Rai Khok subdistrict and Nong Khanan subdistrict respectively. Moreover, organophosphate residue was not found in the paddy or soil. Additionally, the risks of chemical substances and the chemical residues threatening the environment have also decreased. However, the conversion of production to organic rice will take approximately 2 years. Therefore, farmers should be given constant suggestions by the Provincial Agriculture Office to conform and be certified for organic rice standards.

Keywords: Phetchaburi province, Beauveria, Vermicompost, Organic rice, Certification of standards

Area Based Development Research Journal.2021;13(3) Article No. 256412
http://abcjournal.trf.or.th/

Utilization of Rice Straw for the Production of Hed Nangfa in Non Mak Mun Subdistrict, Sa Kaeo Province

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Received: 8 February 2021 Received in revised form: 17 May 2021 Accepted: 18 May 2021

Abstract

The elimination of rice straw by burning in the community of Non Mak Mun subdistrict, Khok Sung district, Sa Kaeo province resulted in the problem of dust and smoke in the community. This research has applied the zero-waste concept to reduce air pollution and reduce the production cost of mushroom cubes for Hed Nangfa (Pleurotus sajor-caju) by making use of agricultural waste of rice straw. Attended by a total of 34 members, the project process is divided into 2 phases. Phase 1 involves the background study, identification of target areas, comparison of rice straw and rubberwood sawdust as a material for cultivating Hed Nangfa, and analysis of the nutritional value of mushrooms. Phase 2 consists of reviewing and sharing information with the community, brainstorming, analyzing, planning, discussing, disseminating, and exchanging knowledge. The results of the operation showed that the Hed Nangfa yields from rice straw had a lower cost of production than the yield from rubberwood sawdust. Mushroom nutritive value (Percentage of dry matter) indicates that mushroom produced from rice straw has a higher percentage of moisture and fiber, but lower protein than the one produced from rubberwood sawdust. The knowledge dissemination in the community leads to community members' ability to apply their knowledge for a lucrative sideline, thus earning an extra income of 3,000 baht per month. Since community leaders also disseminate the knowledge of using rice straw for mushroom production to the youth and the elderly, the whole community has been raised awareness of environmental protection and the need to reduce agricultural waste problems in the area.

Keywords: Sa Kaeo province, Non Mak Mun subdistrict, Hed Nangfa, Rice straw, Rubber wood sawdust

Area Based Development Research Journal.2021;13(3) Article No. 256413
http://abcjournal.trf.or.th/

Energy-Saving Biomass Stove for Herb Processing of the Wat Khu Tao Moral Herbal Community Enterprise, Songkhla Province

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Received: 5 January 2021 Received in revised form: 23 May 2021 Accepted: 24 May 2021

Abstract

The moral herbal community enterprise, Wat Khu Tao, in Songkhla province, processes herbs for use in Bang Klam hospital and community. The former use of traditional stoves and gas cooking stoves resulted in high cost of fuel and production costs. This research, therefore, enhances the quality of the herbal production process of community enterprise by using the technology of energy saving-stove. Processes are as follows: 1) Study of the theory and technology of energy-saving biomass stove, 2) Design and development of energy-saving stove prototype, 3) Development of energy-saving stove technology, and 4) Analysis of thermal efficiency of the energy-saving prototype. The community participated in material preparation and functional testing. The result of the operation shows that the extraction and simmering of herbs took only 40 minutes per time. The production potential of Na Hom Fung Chao balm has increased to 5,400 bottles per month, generating an income of approximately 45,000 baht per month for the community enterprises. Additionally, the creation of a systematic herbal processing network increased to 30 community enterprise members. The application of energy-saving stove technology is also for boiling healthy herbal drinks, which leads to the establishment of a health learning network. In conclusion, the project has successfully promoted energy saving in herb processing, reducing environmental pollution from burning biomass, and passing on the local wisdom to the next generation.

Keywords: Songkhla province, Bang Klam community, TLUD biomass stove, Herbs processing, Wat Khu Tao moral herbal community enterprise

Area Based Development Research Journal.2021;13(3) Article No. 256414
http://abcjournal.trf.or.th/

Community Entrepreneurship Development in Mae Sa - Kog Ma UNESCO Biosphere Reserve, Chiang Mai Province

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Received: 28 January 2021 Received in revised form: 22 May 2021 Accepted: 23 May 2021

Abstract

Mae Sa - Kog Ma biosphere reserve in Chiang Mai province has recently attracted tourism entrepreneurs and the area has served extended tourism operational activities. Meanwhile, the activity designs of entrepreneurs are seen to lack linkage to biosphere reserve value and local people's way of life. This paper aims to explore and design the technical tour activities based on community participation and to develop community entrepreneurs in the Mae Sa - Kog Ma biosphere reserve. Participatory Action Research (PAR) as an operational tool is used for the following operations: 1) development of technical tour activities; 2) community entrepreneurship development; and 3) Mae Sa – Kog Ma biosphere reserve conservation and development with the integrated concepts of sustainable development, community entrepreneurship, appreciate influence control (AIC), and technical tour activities development. The operation results are seen in three aspects, which are, 1) six community entrepreneurship prototypes, 2) ten operational strategies of technical tour activities, and 3) nineteen technical tour activities. Additionally, the economic benefits in three months were an increase in the entrepreneur's revenue of 103,430 baht, a generated income from local employment of 12,000 baht, and a generate turnover income to the community from trading seasonal native plants of 8,090 baht. As the community entrepreneurs go through the learning process, they can organize technical tour activities. Next, they can transfer knowledge and share the experiences with other entrepreneurs to develop business alliances and collaborative networks with related organizations. Ultimately, the study can contribute to driving the Mae Sa - Kog Ma biosphere reserve as a sustainable technical tour destination.

Keywords: Chiang Mai province, Mae Sa - Kog Ma biosphere reserve, Community entrepreneurs, Tourism entrepreneurs, Appreciate influence control

Area Based Development Research Journal.2021;13(3) Article No. 256415
http://abcjournal.trf.or.th/

Value Enhancement of Karen Community Products in Tha Nueu Subdistrict, Chiang Mai Province

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Received: 5 March 2021 Received in revised form: 31 May 2021 Accepted: 1 June 2021

Abstract

The Karen community in Tha Nua subdistrict, Mae On district, Chiang Mai province focused to establish a cultural tourism community. However, the problems found earlier in the community were limited product choices, lower selling prices than labor costs, and the need for a trading middleman. This research aims to study product value enhancement through participatory action research. The process involves the design thinking process consisting of five steps: 1) Developing background knowledge 2) Defining problems 3) Ideating products 4) Prototyping 5) Testing products by organizing simulated travel and product purchase in the community. After the process, the study reveals six new products, developed from the plan to enhance product value. These six products include Karen embroidered upper-body clothes, scarfs with colorful tassels, cushions, placemats, tablecloths, and keyrings. The community income has increased by 20%. In designing a new product design concept, the identity of Karen shirts is taken into consideration. Furthermore, the study results suggest the necessity of skill training activities, such as sewing, embroidering, and cost and price calculation, which were successfully implemented. Next, the community has been recognized as a working center based on Triple Helix Concept: education, private, and government sectors. For example, the community opens an online sales channel of the community products. Additionally, the community products are supported by their inter-connection with the community-based tourism trails and homestay which help promote the purchase of souvenirs. Finally, the sales revenue has been dispersed throughout the community and promotes the strength of the country's economy.

Keywords: Chiang Mai province, Tha Nueu subdistrict, Karen community, Value enhancement, Product design