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Dynamics of Social Engagement Illustrated by Area Based Development Research Journal

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Abstract

Area Based Research and Development Journal, commissioned by TSSR, has been published bi-monthly in its 9th-11th year. From October 2016 to December 2019, 115 articles out of 243 submissions has been accepted for publication. These contributions reflect the diversity of area-based collaborative research and social engagement, demonstrating the linkage between university and local community. Classified by the affiliation of corresponding authors, 65 establishments include university, private institution, college and hospital. Furthermore, the articles published in the journal exhibit a variety in academic disciplines and regions. In terms of geographical diversity, the highest number of works (36) were carried out in the south of Thailand followed by the northern (28), central (23) and northeastern (19) regions. In terms of disciplines, the published papers are classified into 1) Agriculture and product developments (36 articles), 2) Tourism and creative economy (23 articles), 3) Community health (15 articles), 4) Research management (8 articles), 5) Culture and local wisdom (8 articles), 6) Education (7 articles), 7) Social mechanism and community management (7 articles), 8) Rural technology and inventions (6 articles), 9) Participatory in natural resource and environmental management (5 articles). For the research management, the articles are lessons and best practices written by executives, research administrators and reviewers. Such works are not often available as journal articles, giving rise to the uniqueness of Area Based Research and Development Journal. Currently, the journal is processed on the ThaiJo2 platform and indexed in tier 1 of Thai-Journal Citation Index (TCI). Publications of area-based collaborative research and social engagement in the journal can lead to the promotion of academic position, in both traditional and socially engaged scholarship tracks.

Keywords: Social engagement, Area-based collaborative research, Journal, Thai-Journal Citation Index



The Occupational Development of Beef Farming in Pattani Province with the Use of Local Resources and Biotechnology Application for Fermented Animal Feed Production

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Abstract

The current study focuses on building community enterprise for farmers that promotes side jobs in integrated-farming carried out in Pattani province (Tunglipasango Co-operative Ltd.). The community of farming integrates oil palm and rubber plantation with beef cattle raising. The study aims to develop a successful beef farming system by using local resources and biotechnology application for fermented feed production for cattle. This project was supported by Research Knowledge Management Project of 2016 by the National Research Council of Thailand (NRCT) and ran during 2016-2017. The biotechnology application in fermented animal feed production reveals the following formula. Of the 100 units of yeast water, the mixture of agricultural by-products available in the southern region such as fresh soybean meal accounts for 25 units, coconut meal of 25 units, sago meal of 49 units, and salt for 1 unit, (measured by weight). An alternative formula is also given to farmers. A total of 34 farmers participates in the study. A follow-up evaluation conducted 6 months after training as way for technology transfer and building community enterprise indicates that the participants have gained a better income. As high as 88.24% of the farmers has generated major income as a result of the transferred knowledge while 11.76% has increased the part-time income. Most of the farmers' income (58.8%) has increased by 5,001-6,000 baht per month. In addition, the use of knowledge also helps reduce family expenses, as reported by 41.2% of the farmers reduces the expense by 4,001-5,000 baht per month. Clearly, 35.29% of the farmers gain knowledge and use it to improve the quality of farm management. About 11.76% of the farmer participating in workshop still go to speak and continue to disseminate knowledge. The committee of the cooperative has organized activities to promote cattle raising for members. These results reflect a success in technology transfer for building community enterprise in an area in the deep south of Thailand, where most people perceive as critical and unrest, to the sustainability of the agricultural system.

Keywords: Pattani province, Fermented feed, Integrated agriculture, Beef farming, Sago meal



Knowledge of Biological Science from Laboratories of Modification on PD.7 Fermentation Techniques for Removal of Mealy Bug, the Cause of Pineapple Wilt

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Abstract

The current study aims to extend and promote the body of science knowledge that benefits an area-based development by using a synthesized model from research process. The proposed case study is the processing development of a new fermentation technique of the PD.7 that produces multi-enzyme, used for removal of Mealy bug which is the cause of pineapple wilt. The obtained model can be described in several steps. The first step is to engage the farmer in the scientific experiment with the missions to observe, investigate and take note of the results by themselves. The farmers reveal the experiment results that the use of soybean meal as a raw material for fermentation can induce the microbes to create at least 3 types of enzymes; glycoside hydrolase, protease and lipase. The produced enzyme succeeds in removing the mealy bug at a “very good” level. Farmers have accepted the new bio-extract fermented formula, with as much as 75% of the farmers deciding to use it after having learned its potential. The second step is to promote the outcome to other farmers. This involves dialoguing and publishing the results in a wider community. The last step deals with knowledge management and technology transfer project. The key techniques for success in raising farmers’ awareness include: 1) the transfer of newly-acquired knowledge from laboratory, 2) the availability of raw materials at a later stage for farmer’s demonstrations afterwards, and 3) the opportunity for knowledge sharing by visiting nearby farms. These techniques help empower the farmers to act and build upon their own activities.

Keywords: Pineapple wilt, Mealy bug, PD.7, Produced enzyme, Technology transfer



By-Product Synergy from Nipa Palm Frond Processing Waste Ban Laem Community, Trang Province

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Abstract

Most people in Palian river basin of Ban Laem community, Kantrang district, Trang province have utilized the local resources of Nipa palm to produce cigarette paper and earned side income. The palm peeling process leaves the waste of the Nipa palm frond and shaft, resulting in disposal problems. Thus, the purpose of this study is to increase the value of the left-behind material from Nipa palm frond by making two new products, namely plant pots and fancy charcoal deodorizer. The research process involves both laboratory work and participatory action research by the community. The steps are as follows: 1) Analysis, synthesis of community data 2) Products development from by-product Nipa palm frond 3) Transferring knowledge and technology to the community. 4) Ban Laem community cluster, and 5) Marketing promotion. The results indicate Ban Laem community's initial problems of Nipa palm frond waste, especially on visual environment of the communities' landscapes. The study exploits the Nipa palm frond by-product as material for plant pot production. The experiment has determined the three materials as by-product of Nipa palm frond: soil : pastry glue, at the ratio of 4.0 : 1.0 : 4.0, which is the best optimal mixing ratio for molding. For the production of fancy charcoal deodorizer Nipa palm frond, the experiment sets the ratio of activated charcoal : pastry glue as 0.9:10, which is the best optimal value for molding step, smooth surface, durability, and appropriate humidity, corresponding to standard mark on the community product, licensed for charcoal odour absorber (SCP No. 180/2546). The knowledge and technology transfer to Ban Laem community results in community clustering and founding an enterprise called Palian Community Enterprise Group. The members collaborate to promote the products and extend distribution channels in various forms, such as co-organizing exhibitions with public and private sectors, and publicizing on fan page Facebook channel to raise public interest. The project helps increase the community's revenues and improve the quality of life.

Keywords: Trang province, Palian river basin, Nipa palm frond, Plant pots, Fancy charcoal deodorizer

Production Quality Development of Nipa Palm Bowl of Palian River Basin Community, Trang Province



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Abstract

The objective of this research is to upgrade the quality of Nipa palm bowl production of Palian river basin by using solar dryer technology. The study is performed with the participation of community in every step e.g. preparation of materials for testing, solar dryer testing and defect studies to improve technology efficiency. The Nipa palm bowl production capacity has been found to increase while the production time reduced from 1day to only 3 hours. The technology was employed by the community enterprise group, "Ban Na Yod Tong basketry". The efficiency in Nipa palm bowl production increases from 1,300 to 17,000 pieces per month, or 12 times higher. The income of approximately 157,000 Baht per month has been generated to the group, making a total of 1,570,000 Baht in the period of 10 months. The researcher and the leader of the community have collaboratively established a network for Nipa palm bowl production in Palian river basin in which community members from different areas collectively produce Nipa palm bowls and sell to the group. Recently, the group has expanded and it comprises 20 members, from only 5 during the formation stage. The follow-up 8 months after completing the research project reveals that the community has formally adopted the technology. The group's Nipa palm bowls sales count for 27,600 pieces per month, that is an increase of 26,300 pieces per month, which is 20 times higher than the prior production process. By using the technology, the group can generate an income of 2,104,000 Baht. At present, the group has 80 members. The total income of the Palian river basin community from using this technology calculated from July 2017-December 2018 is 3.77 million Baht. This can help the community reduce the waste from Nipa palm of 12 tons per year.

Keywords: Trang province, Palian river basin community, Nipa palm bowl, Solar dryer technology