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**SPECIFIC TOOLS ENHANCING THE PERFORMANCE
 OF OTOP PRODUCERS IN THAILAND**

The purposes of this research were: 1) to investigate the current situation with province in Nonthaburi OTOP; 2) to evaluate the application of OTOP technology Nonthaburi. The sample group in this study included 91 OTOP producers selected by the purposive sampling technique. The research tools were interviews and questionnaires. Their data were analyzed in SPSS. The results revealed that: 1) the employed technology of environmental conservation and safety provided sufficient lighting and controlled vibration; 2) OTOP producers used IT in direct sales at 83.50%; 3) maintenance technology was reported at 65.90%.

Keyword: OTOP; Nonthaburi.

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**ОСОБЛИВІ ІНСТРУМЕНТИ ПІДВИЩЕННЯ ПРОДУКТИВНОСТІ
 ОРОП³-ВИРОБНИЦТВ У ТАЙЛАНДІ**

У статті зроблено огляд актуальної ситуації на ОРОП-виробництвах провінції Нонтабури, оцінено супутні впровадження. Вибірка дослідження складається з 91 ОРОП-виробника, що були відібрані за методом цільового відбору. Інструменти дослідження – інтерв'ю та опитування, дані яких проаналізовано в програмному середовищі SPSS. Результати аналізу виявили, що: 1) впроваджені екологічні технології суттєво покращили освітлення на ОРОП-виробництвах, а також контроль за вібрацією; 2) 83,5% ОРОП-виробників використовують інформаційні технології для прямих продажів; 3) технології підтримки виробництва використовуються на 65,9% опитаних виробництв.

Ключові слова: ОРОП; Нонтабури.

Табл. 4. Літ. 14.

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В статье сделан обзор текущей ситуации на ОРОП-производствах провинции Нонтабури, оценены сопутствующие внедрения. Выборка исследования состояла из 91 ОРОП-производителя, отобранного по методу преднамеренного отбора. Инструменты исследования – интервью и опрос, данные были проанализированы в программной среде SPSS. Результаты анализа выявили, что: 1) внедрённые экологические технологии существенно улучшили освещение на ОРОП-производствах, а также контроль над вибрацией; 2) 83,5% ОРОП-производителей используют информационные технологии для прямых продаж; 3) технологии поддержки производства используются на 65,9% опрошенных производств.

Ключевые слова: ОРОП; Нонтабури.

Introduction. Since 1997, there has been an economic recession in Thailand, especially after the implementation of the floating market exchange rate on July 2, 1997. The effect on Thai economy was so severe that a lot of enterprises collapsed resulting in massive unemployment. The number of the poor increased from 6.8 mln

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³ ОРОП – «один район – один продукт» – програма розвитку місцевого малого та середнього бізнесу в Тайланді.

⁴ ОРОП – «один район – один продукт» – программа развития местного малого и среднего бизнеса в Тайланде.

in 1996 to 9.9 mln in 1999. The number of unemployed rose by almost 1 mln. Moreover, income distribution has been with wider income gap getting wider (Sikaew, 2005).

The government tried to solve the economic problems by expanding local economy as it was stated in National Economic and Social Plan No. 9 (2002–2006) by providing more economic opportunities to the poor. The effect of this policy was based on the transfer to local intellectual resources and application of local production technology (Adachi, 2003).

One-Village-One-Product movement in Contemporary Asia (Wangsirikul, 2013) is based on local traditions and wisdom used for sustainable development of the countries. This can be achieved through cooperation of local communities and the government sector based on 3 pillars: 1) knowledge society – society can rely on itself if its people can keep pace with changes; 2) balance with the environment – people need to use local resources so that to keep the balance of the ecological system; 3) sufficiency economy philosophy – people should apply this philosophy to improve their living in order to survive in the highly competitive global market by using their local wisdom.

Nonthaburi is a fertile province famous for both agriculture and crafts. The community is rich in raw materials which can be appropriate for government's policy on OTOP. OTOP policy can support the independence and local strengths based on the ideas of local people. OTOP products have their own identity which find its demand both at local and overseas markets. Assessment of the application of OTOP technology in Nonthaburi is based on 3 foundations: 1) Local Yet Global; 2) Self-Reliance and Creativity; 3) Human Resource Development.

OTOP production generally does not use advances technologies and is mostly based on basic knowledge related to health, marketing, and management. Regardless of many problems that OTOP groups may face, it is important for researchers to find ways to enhance their potential of OTOP production based on local wisdom in order to be able to compete with regular commercial products. In this way, it would be possible to increase quality of products, enhance sales, income, and quality of life in the community. Lack of modern knowledge usually result in poor quality of products, unattractive packaging, short life of products, and absence of marketing plan. Therefore, this study is aimed to use the authors' findings to directly solve the problems of OTOP producers and provide them with better understanding of today's technologies in order to be able to compete with producers of similar products at both domestic and international markets.

Methodology. This research has been using both qualitative and quantitative methods, namely, questionnaires and interviews to collect the data needed.

1. Population and sampling group. The area of this study covered 6 districts, 52 sub-districts in Nonthaburi province. There are currently 176 OTOP products certified with 1–5 star awards in the province which can be divided into 6 types: 1) food; 2) beverage; 3) clothing; 4) accessories; 5) souvenirs and handicraft; 6) herbs. Population division by districts: Muang – 56, Banggruay – 23, Bangyai – 20, Bangbuathong – 35, Sianoi – 12, Pakkred – 30. Total – 176.

District sampling was applied in: Muang – 24, Banggruay – 13, Bangyai – 7, Bangbuathong – 19, Sianoi – 8, Pakkred – 20. Total population of the sampling group – 91.

2. Research tools. Questionnaires for this study consisted of 3 main parts:

1) maintenance technologies: this part included the questions on maintenance planning and training using machine tools;

2) information technologies: the questions in this part covered product exhibition, advertising and media;

3) environmental technologies: the questions in this part concerned the respondents knowledge on the physics, chemicals, biology and ergonomics as applied in OTOP production.

Results.

1. Maintenance technologies. Table 1 shows there is no maintenance time table at 65.90% of OTOP product venues followed by equipment maintenance record at 61.50% while the least concerned aspect was no budgeting on maintenance – at 51.60% of the studied venues.

Table 1. Maintenance technologies, authors'

Aspects	%	Rank
No maintenance timetable	65.90	1
Equipment maintenance record	61.50	2
Equipment check before and after operations	57.10	3
Handbook on equipment operation and maintenance	52.70	4
No budgeting for maintenance	51.60	5

2. Information technologies. Table 2 reveals that the most popular aspect was "direct sales method" used at 83.50% of followed by "Product exhibition arrangement within a year" at 72.50%. The least OTOP productions used item was "no exhibition" – at 41.89% of the answers.

Table 2. Information technologies, authors'

Aspects	%	Rank
No maintenance timetable	65.90	1
Equipment maintenance record	61.50	2
Equipment check before and after operations	57.10	3
Handbook on equipment operation and maintenance	52.70	4
No budgeting for maintenance	51.60	5

3. Environmental technologies and work safety. Table 3 reports that there is sufficient lighting at workplaces and no effects from vibration at 92.30% of all OTOP products venues in the province. This is followed by no water pollution in production at 86.80%. The least used two aspects are suitable temperature at work and hazardous area control at 46.20%.

Conclusion. Thus we come to the conclusion that Nonthaburi OTOP producers report the best results when it comes to production technologies (Table 4).

Results discussion. According to our results, production technology aspect, namely, environmental technology – sufficient lighting and no vibration effect are the most popular topics which is in line with the of research by (Dastjerdi et al., 2013). Production venues inspection is important in this context terms of mistakes prevention and promoting production standards further (Mekhum, 2013). These producers

use local raw materials which can be used to the highest benefit under low costs and damaging no effect on the environment (Thammarak, 2015).

Table 3. Environmental technologies and work safety, authors'

Aspects	%	Rank
Sufficient lighting at workplaces	92.30	1
Vibration does not affect work processes	92.30	1
No water pollution from production	86.80	2
No noise pollution	76.90	3
No disturbing smell during work	76.90	3
No dust and chemical problems	72.50	4
No problems with operation space	56	5
Fire prevention planning	52.70	6
Suitable temperature regime	46.20	7
Hazardous area control	46.20	7

Table 4. The summary on 3 aspects considered in the survey, authors'

Aspects	%	Rank
1. Maintenance		3
1.1 No maintenance timetable (the most used)	65.90	
1.2. No maintenance budget (the least used)	51.60	
2. IT		2
2.1. Direct sales (the most used)	83.50	
2.2. No exhibition (the least used)	41.80	
3. Environmental technologies and safety		1
3.1. Sufficient lighting and no vibration effect (the most used)	92.3	
3.2. Suitable temperature and hazardous area control (the least used)	46.20	

The research by (Tassanawalai, 2004) revealed that third-party helps in resource production planning increases the availability of raw materials reserve. It can be concluded that OTOP producers in Nonthaburi employ technologies without affecting the environment by using local raw materials or leftover materials in their production. High skills and precision operation result in higher standard of their products causing more customer confidence and product satisfaction. This is in line with (Kwonwirad et al., 2011) reporting that product quality development results in higher customer confidence and increased sales volume. Marketing management, customer, technology, financial management, and HR management could predict SMEs success, while development of additional occupations would increase incomes of families and community overall leading to stronger and more sustainable community life (Girdwichai, 2014).

New market channel often come from exporting product soon after they got some sat of awards by the Department of Commerce, Nonthaburi province (2008). We can state that government needs to find places for OTOP products to display and their promotion in terms of exporting should be focused on high potential and high quality of Thai OTOP products. There should be also trainings and experience exchange among the communities of manufacturers at the provincial level (Lasomboon et al., 2012).

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