

# OTOP Herbal Cosmetics: Problems and Product Development Guidelines for Entrepreneurs

## เครื่องสำอางสมุนไพร OTOP: ปัญหาและแนวทางการพัฒนาผลิตภัณฑ์สำหรับผู้ประกอบการ

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### Abstract

This research examined problems and guidelines to improve the capacity of self-reliance and creativity in terms of product development for OTOP herbal cosmetics entrepreneurs. The study used the qualitative methods of in-depth and group interviews. The results revealed that the problems in herbal cosmetics development included the lack of unique herbal recipe development, the lack of specialized agency to conduct ongoing research and development, the lack of modern marketing knowledge to access the need of the target customers, and the lack of long-term supports from the government and private sectors. Regarding the guidelines of OTOP herbal product development, the entrepreneurs should differentiate their products using unique innovative or traditional recipe development, packaging should be developed with modern and practical designs, and current market demand in product development should be explored to match with consumers' demand. Moreover, the government agencies should launch a policy which continuously encouraged holistic Thai herbs research, together with the development of research and development center to transmit technological and innovative knowledge in herbs to the entrepreneurs. There should also be a project focusing on supporting the advancement of entrepreneurs in specialized herbal products.

**Keywords:** Product Development, OTOP, Herbal Cosmetics, Self-Reliance

## บทคัดย่อ

งานวิจัยนี้เป็นการศึกษาปัญหาและแนวทางการเพิ่มศักยภาพในการพัฒนาอุปกรณ์สู่มาตรฐานสากล ในการพัฒนาผลิตภัณฑ์ของผู้ประกอบการเครื่องสำอางสมุนไพร OTOP โดยใช้การศึกษาวิจัยเชิงคุณภาพ ด้วยการสัมภาษณ์เชิงลึกและการสนทนากลุ่ม ผลจากการศึกษาพบว่า ปัญหาและอุปสรรคที่สำคัญในการพัฒนาผลิตภัณฑ์ เครื่องสำอางสมุนไพร คือการขาดการพัฒนาสู่มาตรฐานสากลในผลิตภัณฑ์ที่มีเอกลักษณ์เฉพาะตัว การขาดห่วงโซ่อุปทานที่ด้านที่ทำการวิจัยและการพัฒนาอย่างต่อเนื่อง การขาดองค์ความรู้ด้านการตลาดสมัยใหม่เพื่อเข้าถึงความต้องการของกลุ่มลูกค้า เป้าหมาย และการขาดการสนับสนุนระยะยาวจากภาครัฐและภาคเอกชน สำหรับแนวทางการพัฒนาผลิตภัณฑ์สินค้าสมุนไพร OTOP ผู้ประกอบการควรสร้างสรรค์พัฒนาสู่มาตรฐานสากลของผลิตภัณฑ์ให้แตกต่างด้วยวัตถุกรรมหรือวิธีการด้วยเดิมอันเป็นเอกลักษณ์ พัฒนาบรรจุภัณฑ์ให้ทันสมัยและออกแบบที่เหมาะสมกับการใช้งานได้จริง และเรียนรู้ความต้องการของตลาดสมัยใหม่ เพื่อให้พัฒนาผลิตภัณฑ์ที่ตอบสนองความต้องการของผู้บริโภค ทั้งนี้ หน่วยงานภาครัฐควรเน้นนโยบายผลักดันงานวิจัยด้านสมุนไพร ไทยที่คร่าวงรออย่างต่อเนื่อง มีการพัฒนาศูนย์กลางในการวิจัย พัฒนา และถ่ายทอดองค์ความรู้ด้านเทคโนโลยีและวัตถุรวม กีริยาภัณฑ์สมุนไพรให้แก่ผู้ประกอบการ รวมทั้งมีโครงการที่เน้นการสนับสนุนและยกระดับผู้ประกอบการสินค้าประเภทสมุนไพร โดยเฉพาะ

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## Introduction

Large and foundation business are considered the major mechanism in economic force which generate national income, provide job opportunities, and serve as the mechanism to solve poverty problems. According to the 2nd strategy in the national strategic plan which focus on the inclusive growth from creating opportunity and income in the community economy, enterprises, and SMSs, the OTOP project is still the main policy of the government in creating employment and income for the grassroots community. According to the concept of Self-Reliance Creativity which is one of processes in the OTOP concept (National OTOP Committee, 2019) which deemed that development process must begin with self-reliance. Community must develop their strength internally rather than relying on the government agency, and also emphasize the development and promotion of community business for self-reliance and a better quality of life. In this project, local wisdom and resources are taken and modified for production, and each community product is made better until it brings commercial profits, leading to the creation of jobs, incomes, and strength within the community. (Tuamsuk, Phabu, & Vongprasert, 2013)

On the other hand, Thai herbs are increasingly developed as the important raw material for many industrial sectors, such as processed agriculture, Thai herbal medicines, and various herbal products. There is also the development of process to add value of herbs by responding to the demand and create diversity of uses. Currently the consumption of herbs and natural products become the global trend, that herbs are developed into food products, cosmetics, or health products. This diversity of application could generate immense income. Nevertheless, although the Thai herbal cosmetics is the trend which increasingly attract attention, but entrepreneurs in the community level still face problems in the production of herbal cosmetics in many ways, in order to ensure the continuous development of herbal cosmetics from community and the international standard of products.

Therefore, the researcher is interested in exploring the problem and approach in product development of OTOP entrepreneur in herbal cosmetic in order to connect the support and development into the new products, with both social and economic values for the community and the country, leading to the economic strengthening in community business and foundation business in all levels.

## Research Objectives

To explore the problems in product development and suggest the guideline for entrepreneurs of non-food herbal products, or herbal cosmetics.

## Literature Review

The competitive environment of business requires company to be dynamic in their development of product and process, which could be counted as the important market competitive edge. Business should be able to access the market swiftly and efficiently through the product development which match the demand and expectation of customers and create the important competency.

Product development is an important process for business enterprise regarding of their sizes. Community enterprise must also develop their products to suit the demand of consumers. Meanwhile the entrepreneurs must develop their capacities in learning their own products and markets. Institute for the Research and Promotion of Arts and Culture, Phetchaburi Rajabhat University (2017) provided the analysis of community product development in multiple forms. 1) In terms of material, entrepreneurs could reduce their production cost by using locally available material and finding cheap raw material resources with good quality. 2) In terms of production, research and analysis of customers prior to the production and development of manufacturing process according to the standard, sanitary principles, and the desired form of products. 3) In terms of marketing and aftersales service, entrepreneurs should survey their customers demand and create target customers, regular customers, new market in the events organized by government or networks, introduction of new products for their customers, and entering product contests.

Vazirzanjani and Hooshmand (2016) conducted the research in the Competitive Advantage Based on New Product Development and found that product development is the major activity and the important factor leading to the improvement and innovation of products. It is the basis of survival and competency of the entrepreneurs. Product development process aim to improve the existing products or invent the new products. There are many factors which contribute to the success of product development, such as innovation, marketing, finance, and planning. And the final output of product development is the new product, the increasing value of existing product, or even the new competitive edge. Therefore, product development is highly necessary for entrepreneurs in surviving and increasing competency.

The study by Pojjanasin (2019) about the product development of One Tumbon One Product (OTOP) under the policy of Thailand 4.0, Phetchaburi, found that the factors of OTOP product development included 1) product development process, which ensure that the operation follows the objectives in terms of an innovation, or the application of the existing manufacturing process into a new innovation. 2) Technology and scientific knowledge could be applied and combined in product development. Some instant technology could be used in sales promotion, manufacturing process, or solving product problem. 3) Creativity, or the ability to think diversely in the new perspectives, and the invention of new and unique products which could serve the needs of customers. And 4), government supports could promote, enhance, direct, and ensure the improvement through the full and continuous budget.

Moreover, the survey of research and development and innovative activities in Thailand's industrial sector during 2018, by the National Science Technology and Innovation Policy Office (Thailand STI), also noted the overall situation of problem and ratio of entrepreneurs who face various problems during their research development, especially the lack of human resource, lack of technological information, and high budget requirement, which are the major problems in research and development for the entrepreneurs.

Table 1 Problem and ratio of entrepreneurs who face various problem in R & D

Types of problem	1st	2nd	3rd
	Lack of human resources with suitable skills	Lack of information in technology or new research	Innovative cost is too high
% Entrepreneurs who face the same problems	44%	30%	28%

Source: National Science Technology and Innovation Policy Office. (2018)

The concept of Self-Reliance Creativity is one of the three principles of OTOP project development, which is an important mechanism implemented by many governments in order to solve economic problem. As the community enterprise should be counted as their own business which the community operates and focuses on their own participation. (Pitipanya, 1999) This policy therefore emphasis the assembly of human resources rather than capital. In terms of community enterprise process, apart from financial benefit, the development of human capital in community is a learning process or an important instrument in social and economic development.

Hence, Hiramatsu (2008) stated that the operation under the OVOP must involve independent thinking by the villagers and the community. Any operation in manufacturing of product or providing service must originate from the creation of community members. Furthermore, the community enterprise will learn the process of creative development and will be motivated to develop product according to the community's potential, culture, and the market demand. It will lead to the support and promotion of self-reliance community enterprise as well as the legacy of community culture, and the strong, sustainable socio-economic system of the nation. (Chanatippakorn & Poomthong, 2003)

The study of Claymone and Jaiborisudh (2019) about An Analysis of One Tambon One Product (OTOP) Project: Problems, Obstacles, Achievements provided the analysis of Self-Reliance Creativity, that a number of OTOP entrepreneurs still rely on the loan from government, which reflect that the OTOP entrepreneur, from both the community level and SMEs level, could not yet rely on themselves. The study deemed that the Thai OTOP project has the characteristic in which communities rely heavily on the government in many dimensions. It also focuses on the quantity of product manufacturing, while there were the attempts to develop creative thinking as well as research and development in OTOP project. However, it was found that the creativity and R&D aspects of the OTOP were not developed as much as expected. Therefore, the creative thinking in OTOP could be summary in terms of strengths, which the entrepreneurs could develop their creativity from online media. In terms of the weakness, there was the lack of creativity as well as research and development. Regarding the opportunities, there are the strategy of Thailand 4.0 and the support from scholars as well as designer. While the threats consist of product imitation and the similarities between resources and raw materials.

## Research Methodology

In terms of the methodology, this study used the qualitative approach with the in-depth interview, and focus group. Afterwards the connection between data and related concepts would be analyzed and concluded in the descriptive analysis. The researcher used the purposive sampling in selecting 18 persons in the sample group for the in-depth interview which includes the specialists in entrepreneur development, three government officers in the agencies related to OTOP project promotion and OTOP herbal cosmetic entrepreneurs from various regions of Thailand, such as the northern, the southern, the eastern, the western, and the north-eastern. There were three participants from each region. And data was also collected from a focus group with 12 participants including specialists in entrepreneur development, representative entrepreneurs in herbal cosmetics from the middle region, and the local gurus in the related matters. The researcher conducted the in-depth interview and focus group during November 2018 to August 2019, by generating the question framework for the interview and focus group with the priority on exploring the current problems of OTOP herbal cosmetics product development. The researcher also seeks the suggestions from the interview with representative of government agencies, specialists in entrepreneur development and scholars, etc.

## Research Results

### Problems of OTOP herbal cosmetics product development

The interesting problem in herbal cosmetics development for the entrepreneurs is that the development of herbal cosmetics could be conducted in various ways. According to the focus group information, most OTOP entrepreneurs would produce herbal products which they deem as the promising sales in the market. When they expect that turmeric could be sold well, the market would be full of turmeric products. Or when Lakoocha or Monkey jack (Lepisanthes Rubiginosa) is popular, the market is full of Lakoocha product as well. Thus, there is no variety of the form of herbal cosmetics products. And according to the focus group with entrepreneurs, the important problem is still the increasing production cost in product development.

Additionally, the problem of packaging development was found. The problem of packaging development for OTOP entrepreneurs is that the packaging is not unique or does not offer much choices for the consumers. Meanwhile, consumers prioritize the clear and complete communication of essential product information. The material of packaging and packing method should suit the use of product, while creating unique memorization of product and its identity (Dupandung, 2018). According to the information gathered from OTOP entrepreneurs in herbal cosmetics, it was also found that most entrepreneurs developed their packaging to be more interesting and beautiful. At first, most entrepreneurs would use the general packaging which they could order readily. But when their experience increased from seeing the same types of product, together with the support from government agencies, the entrepreneurs would seek for the better packaging development. However, some entrepreneurs deemed that external packaging development might not fulfill the requirement of the entrepreneurs. For example, some entrepreneurs from Phetchaburi Province stated that they did not want to participate in the packaging design project by the government agencies or external organization, because at the end of the project they must order the special packaging designed by the organization from the factory which require minimum order at the large amount. Therefore, the cost might not worth the investment. And if the packaging is changed too often, customers might not be able to recognize the product.

In addition, the in-depth interview revealed that many entrepreneurs still have the problem of lacking the knowledge in modern marketing and the adjustment of thinking process which can serve the market demand while maintaining the local culture. Nevertheless, the study of product development by entrepreneur found that most of them previously focus on the perspective of supply, or the perspective of manufacturer. Therefore, they lack the study in the demand of customer's market which could be the factor to support the product development. Therefore, the products from their process do not match the contemporary trend, even if the quality of products are fine. The trend is especially important in beauty products which requires the significant analysis process of the target group's popular trend.

Meanwhile, the in-depth interview with the deputy director of Department of Community Development, revealed the lack of specialized agency in research and development of Thai herbal products, even though there is so much potential in local raw material. He deemed that each community has their own unique resource and raw material, especially the Thai herbs. But Thailand lack product development and integration between processing and marketing. On the contrary, the case in Japan's OVOP is successful as there is the specialized agency who conduct the research and development for OVOP product. Therefore, Thailand could not utilize the high potential of raw material, as it lacks the research which must help solving problems in product development for entrepreneurs.

Meanwhile, the scholars in pharmacology noted that most researches in Thai herbs are scattered, as the researchers work separately without the system of integration. Especially, there is no central government agency which promote and support the value addition for Thai herbs directly and actively. After the finalization, the researches in herbs by most Thai scholars are not usually extended into product development with new innovation which could increase the commercial potential and the economic value for Thailand. (Sethchuay, 2019)

### **Direction for OTOP herbal cosmetics product development**

Product development is the development, improvement, or adjustment of products to suit the need of consumers. The form of development could be the product from research and development process, or the packaging development, which could be beneficial for the business (Haruthaithasan, 2007). The manufacturing of herbal cosmetics and products require the careful consideration of product benefit. The same herbs can be manufactured into the same product, such as shampoo, soap, or shower cream, but each entrepreneur must come up with their own unique herbal recipe and constant product development and improvement. Entrepreneurs should not copy the form or characteristics of other product. However, OTOP entrepreneurs in herbal cosmetics should seek to create uniqueness and start to develop their products to differentiate from other entrepreneurs through raw material, recipe, or different application in usage. Only then could the product be unique and interesting. And herbal products come in many forms such as the development of product from locally available raw material, by observing and exploring the possible benefit from the existing resources. Or it could be the development of recipe from local wisdom together with current scientific knowledge. For example, Kaffir Lime for shampoo, and tamarind for skin scrub could be developed into the unique products with the modern knowledge which extend the product storage period without using preservative. Instead, the manufacturing process which allows as few air as possible to enter the system, and the selection of raw material which could last long, could become the innovative product development. Herbal cosmetics could be made into powdered for the convenient transportation. Nanotechnology could be applied together with packaging innovation, etc. On the other hand, the manufacturing cost might also increase.

According to the opinion of OTOP entrepreneurs in herbal cosmetics, the traditional manufacturing process which is complex and required specific or hand-made process could be counted as the strength of the entrepreneurs, as it could not be imitated easily. However, the entrepreneur must understand its strength before it could use the strength in the product.

Regarding the packaging development, according to the focus group, it was found that some OTOP entrepreneurs designed the packaging themselves and send the design for manufacturer, without focusing on the beauty nor uniqueness but rather emphasis the simplicity and cost reduction, which in turns result in the affordable price of product while maintaining the product quality. This strategy of packaging design attracts returning customers. And entrepreneurs deemed that the generic style of packaging results in the better product recognition by customers. Nevertheless, entrepreneurs should not overlook the packaging development as it could affect the recognition by the customer. The proposal is that the completely different packaging development could be used to enter the new market and reach the new target group, which could be more effective in terms of development.

Hence, regarding the product development, the OTOP entrepreneur in herbal cosmetics should focus on matching the trend of consumers. According to the focus group, it was found that the small entrepreneurs' product development mostly emphasis the experiment in production and testing by themselves, rather the innovative product development which requires higher budget. For example, the entrepreneurs in Ratchaburi and Udon Thani similarly stated that product development is usually limited to the knowledge of recipe by the manufacturer, who would bring the sample products for testing by their acquaintance and customers, then used the feedback to develop product. But in fact, the scientific data should be used to support the product development in order to ensure product credibility.

The government and related agencies should have the project to promote continuous product development in entrepreneurs, which could be in the form of matching between scientific research and development of herbs. Government should also give continuous support the holistic researches in Thai herbs, from the process of Thai herbal raw material production until product creation, marketing, and actual sales. Many Thai herbs, especially the herbs in Thai wisdom, have high potential for product development. Therefore, the government should actively and concretely support the systematic research and experiment of health benefits of each herb. These researches should be disseminating medically and commercially. And there should be the promotion of herbal product development to add value for herbal raw material, as well as variety of product development to serve the need of consumers.

Although some OTOP entrepreneurs in herbal cosmetics deemed that the human resources and capacity for product development are out of reach, and most manufacturers are villagers or community enterprises throughout the country, they wish the government to provide specific project to support the herbal cosmetics product by OTOP entrepreneurs. Entrepreneur from Udon Thani stated that they want the specific suggestion whether the herbal products should be adjusted or improved, and the concrete suggestion on the developmental channel which is practical and does not pose the financial burden for the small entrepreneurs or community entrepreneurs. Other scholars interviewed in this research also agreed that OTOP herbal cosmetic products lack the support in research and development. And the integration with entrepreneurs lack the clarity in the responsible agency

Nevertheless, the important concept of OTOP project is the Self-Reliance Creativity. Therefore, the herbal cosmetic entrepreneurs should focus on seeking collaboration by themselves, and push their own product development through the network development among the entrepreneurs instead of waiting for the development from related government agencies. The case of Mae Mokk herbal groups in Lampang province shows an example of the group of entrepreneurs with consultant from local agencies in product development, which initiated by local people. They later consulted the local public health agencies, as in the case of Lampang cooperative. These agencies participated in the monthly meeting with the entrepreneurs' group. And currently the group is developing new products of soap and shampoo from the recipe supported by the district agricultural officer, and the initial raw material in soap making which can be mixed with the herbs of the entrepreneurs. Therefore, it is obvious that the local entrepreneurs might not have to be savvy in knowledge, but they could receive support from local agencies in many ways such as consultancy and training in manufacturing new products as well as the support in experimenting and development of new product. The same approach could be the mechanism to support the entrepreneurs in herbal cosmetics for further product development.

## Discussion

The process of product development involves many activities. Entrepreneurs should consider applying these processes in providing new products to the market in the interesting way, and focus on the continuous product development. The new products should pass the rigorous process of manufacturing design and market analysis to ensure their success (Kahn, Barczak, Nicholas, Ledwith & Perks, 2012). The result of this study revealed that the product development of OTOP herbal cosmetic still lack variety in terms of product development form and the knowledge in market-led product development. The finding is consistent to the previous studies, such as the study of problem in marketing potential development of OTOP group in Nonthaburi, case study of non-food herbal group (Khanthichote & Rodyim, 2015). Their analysis revealed that the OTOP entrepreneurs lack the knowledge and understanding in product development, packaging, and branding, as well as marketing. Thus, entrepreneurs should learn the better development of product, which they might start with searching for a unique formula for manufacturing or unique raw materials. Therefore, the development of OTOP herbal products must seek to learn, and improve for the better product, as in the study of Siriyong (2012), in the research of form and strategy in SMEs business administration to increase competency in a sustainable way. This study followed 4 SMEs which passed in the final round of "SME Tee Taek" TV show and their competition of the top SME of the year in 2011. The results revealed that the strategy which contribute to the competitive advantage in the sustainable way is the emphasis of uniqueness in product and service development. Regarding this matter, the researcher team's synthesis revealed that the herbal products could be differentiated and become unique through the development of raw material, ingredients, and creation of recipe.

Nevertheless, the packaging development is important for herbal cosmetics as the beautiful packaging means more opportunity for sale, as it could convince the customers to buy because of satisfaction too. Benjadol (2006) similarly deemed that the physical form of packaging is important as it is the external form which could be perceived visually and become attractive at the point of sales. It also requests the consumers to pick up the product for further consideration of details on packaging. And the feeling from touching the packaging emerges from suitable proportion of form, which is suitable for the products and usage. And according to the analysis of research data regarding the problems of packaging, most entrepreneurs face the problem of design and creation of unique packaging for herbal cosmetics. Although they received

supports from the government agencies in packaging design, the support does not serve their need as it generates higher cost. Therefore, OTOP entrepreneurs in herbal cosmetics should consider the function, popularity trend, and the need of users for the packaging development. Likewise, the research of Lertpraiwan (2011) studied the packaging development of herbal cosmetics for exporting and found the interesting analyses that the customers in Italy, Europe, and New York pay attention to the natural ingredients and the environmentally friendly packaging or designed with the concern of reusability. Moreover, this research suggested that the packaging design of Thai products must be done for the sake of storage, product usage, and communication of quality in the clear way, especially when the product must be exported. Manufacturers should focus on quality while creating the Thai identity, by presenting the sources, benefit, and Thai wisdom on the packaging. Product credibility could be ensured by the standard of packing as well.

Additionally, modern marketing knowledge and business adjustment are also important problem for OTOP entrepreneurs in herbal cosmetics, as product development and marketing require the understanding of the consumers and target group's need. This study found that OTOP entrepreneurs lack the creativity in product development to suit the market as well as the ability to create distribution channel, especially in the online market. In the same direction, Electronic Transactions Development Agency (2019) provided the analysis of factors which contribute to the growth of Thai e-commerce and found that e-commerce in all industries are growing continuously every year because the manufactures start to increase the distribution channel through e-commerce. As the channel becomes more popular continuously, it could generate more income for business while expanding the customer base nationally and internationally. In addition, there are the variety of online distribution channels, which allow entrepreneurs to access their customer conveniently and precisely.

Regarding the lack of continuous research and development activity, although Thai herbs have high potential to be developed in many products, but if the research and development by the specific research center or agency is still unclear, the potential could not be realized. But in the case of OVOP process in Japan, it was obvious that the government prioritize research and development and established many research center to support the OVOP, such as the agricultural technology center, citrus experimental farm, experimental cattle breeding center, manufacturing technology development center, and research center which provide consultancy in mushroom farming, etc. (Nishizawa & Kabir, 2005). There are few activities in research and development of product towards commercialization. This research also found that OTOP entrepreneurs in herbal cosmetics mostly received short-term support from government and private sector. Then entrepreneurs must also seek the agency to assist their research and development on their own.

Regarding the government support, the local government agencies had the project to develop the OTOP entrepreneurs' competency through training, manufacturing support, and training of marketing and online distribution channel for the entrepreneurs. Nevertheless, the government agencies should plan the project which support the entrepreneur specifically in the herbal cluster. This recommendation also conforms to the proposal of Vesdapunt and Santipolvut (2012), in the implementation of planning and project which should consider the group of OTOP entrepreneur, by ordering the priority of project and specific development project for each product group. Nevertheless, even the research shows that entrepreneurs still depend on the help from related agencies in many ways. But the synthesis by the research team revealed that the awareness of product development in herbal cosmetic products should originate from the OTOP entrepreneurs themselves instead of waiting for the external agency's help. This revelation is consistent to the concept of Self-Reliance Creativity, which the process of development must originate from self-reliance and internal strength of community rather than the reliance on the government agencies. The strength could be added to the product through the product development process and marketing network collaboration, together with the modern technology, by the entrepreneurs themselves.

## Conclusion

In the study of OTOP herbal cosmetics: problems and product development guideline for entrepreneurs, the researcher found the important problems in product development, such as unique herbal recipe, packaging, the lack of modern marketing knowledge to access the need of target customer, lack of consultant from local agencies, and lack of specific agency in research and development who provide support in specific product development.

Therefore, the researcher deemed that the guideline for product development should include the training of product manufacturing with technology or new innovation in their products, or the development of new recipe. The technology or innovation might not always be required for product manufacturing, as the traditional process which is complex and hand-crafted could also be the strength of entrepreneurs in herbal products. However, such process must be presented or communicated to the consumers, and the products must be certified in its safety in order to gain trust from consumers. Furthermore, packaging development of OTOP herbal cosmetics should aim for the suitable function or new innovation which allows greater convenience. Packaging itself should reflect the wisdom of Thai herbs. These developments could result in the wider market for Thai herbal cosmetics. And the entrepreneurs should also conduct market survey for their new products or in the improvement of existing product, by studying the consumer trends in herbal cosmetics, online marketing channel, and e-commerce, in order to expand their distribution channel with no additional transportation or broker fee.

In terms of government agencies, both the central and local agencies should promote and support the entrepreneurs to develop their products through training in manufacturing process, packaging development for each type of product, and the creation of e-commerce platform which is easy to use for the small entrepreneurs and community entrepreneurs. Government agencies should also provide consultant for entrepreneurs in seeking other marketing channel.

The central government agency should continuously promote the policy to encourage holistic research in Thai herbs, the development of research center, the training of technological and innovative knowledge about herbs, and the integration of agencies to raise the standard of Thai herbal entrepreneurs in the specific field.

## Policy Recommendations

Policy recommendation in product development strategy is divided in short-term and long-term plans.

### Plan 1: Short term product development.

- In the short-term, the government should act as the integrator for the related government and private sectors in research and development of herbs, such as Department of Agriculture, National Science and Technology Development Agency (NSTDA), universities, and academic institutions. It should introduce or connect the entrepreneurs to bring the herbal recipes or products for the testing, research, and development of products in terms of quality, specification, benefit, and packaging development.

- There should be development of online distribution channel for community entrepreneurs which is convenient and easy to use. There could be the coordination with private business in the development of products and distribution channel. But the government agencies should act as the connector to ensure coordination to benefit the community enterprises.

### Plan 2: Long-term product development

- Government should establish a center which directly responsible to the research and development of OTOP herbal cosmetics product development, and the R&D of OTOP products in specific cluster holistically.

- Government should promote the policy in networking and alliance among the OTOP entrepreneurs in herbal cosmetics, so the network could be the important instrument for the assistance and contact about product development in the herb cluster, such as herb raw material sources, product development, and the assistance in marketing and exporting, etc.

## Suggestions for further study

- There should be the study of export market demand of OTOP herbal cosmetics and the study of problems in the marketing of Thai herbal cosmetics, in order to raise the standard of OTOP herbal cosmetics towards the exporting level.

- There should be the study of collaboration guideline by the OTOP herbal cosmetic entrepreneurs, including the network collaboration in raw material sourcing and online distribution channel among the OTOP herbal cosmetic products.

- There should be the study of factor of success in the operation of OTOP herbal cosmetic entrepreneurs, such as manufacturing resources management, internal organization process, and marketing management, etc., in order to be the model of administration study for the entrepreneurs.

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