The Application of Lean Canvas for Operations and Marketing Management

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Abstract

This research's objective was to apply the Lean Canvas business plan model from Canva Program for the operations and marketing management of *Etlingera pavieana*. The results showed the Lean Canvas from Canva Program consisted of 9 parts: 1) problem, 2) solution, 3) key metrics, 4) unique value proposition, 5) unfair advantage, 6) channels, 7) customer segments, 8) cost structure, and 9) revenue streams. After applying the Lean Canvas model to the business of the farmers of *Etlingera pavieana* plant in Chanthaburi, it was found to be easy to use, in particular for start-up entrepreneurs as the business plan model was concise and had the ability to overview a business in both cost and revenue; by defining customer pain point that can plan to solve the problems; ability to manage costs by optimizing both quantity and quality; by increasing revenue, reducing fluctuations in very high product volumes; by having more accessible databases; and lastly, new marketing opportunities. The summary concept of Lean Canvas has, therefore, proven to be appropriate to start-up entrepreneurs. This article offers a new approach for a business plan model for designing and planning operations and marketing management in any organizations by Lean Canvas from Canva Program.

1. Introduction

The *Etlingera pavieana* herb is a local plant that can be found predominantly in the eastern region of Thailand, especially in the Khao Chamao area in Rayong province, the Khao Soi Dao area in Chanthaburi Province, and in Koh Chang, Trat province (Puechkaset, 2019). It is also distributed in Cambodia, Laos and Vietnam. It is different from other types of peas in terms of appearance, smell, taste, and rhizome used in cooking. At present, there are more *Etlingera pavieana* plants and a variety of products derived from the plants for sale (Attachedi, 2007; MedThai, 2017). *Etlingera pavieana* in Thai is called *Reaw-Horm* (Tachai, Wangkarn, & Nuntawong, 2014). In Chanthaburi province, there has been a project called "Food is a medicine for the people of Chanthaburi" to encourage people to consume local herbs to promote health. In the current situation with the threat of various diseases, people are preparing a menu of herbs that are unique in Chanthaburi with properties on free radicals. The benefits of these herbs are their ability to boost immunity and detoxify the body, and they are suitable for people with high blood pressure and diabetes. In this regard, Chanthaburi has identified 11 medicinal herbs with the identity ofChanthaburi, namely *Etlingera pavieana*, Cardamom, Pepper, Cowa, *Citrus Japonica Thunb,* Malva nut, Mangosteen, Rakam, Durian, Longan and Cannabis (Thai Traditional and Alternative Medicine Division, Chanthaburi Provincial Public Health Office, 2022). The current situation has resulted in the increased competition in operations and marketing in relation tothe production of *Etlingera pavieana* . Therefore, it is necessary to study the overview of the business. The operations of *Etlingera pavieana* to cover all the elements involved in building a business that truly meets the needs of consumers using a business management tool that are easy to do in a short time.

2. Objectives

To apply the Lean Canvas business plan model from Canva for operations and marketing management of *Etlingera pavieana*.

3. Materials and methods

3.1 Research Type

This research used the operations research method to study *Etlingera pavieana* market in Chanthaburi province and to enhance the competitiveness of the farmers who grow *Etlingera pavieana* and medicinal plants for trade using operations and marketing management tools such as Lean Canvas business plan model from Canva.

3.2 Population and Sample

The population consisted of farmers who grow *Etlingera pavieana* and medicinal plants for trade in Chanthaburi province, 10 farmers (from a survey). Sampling is done through purposive sampling from farmers who were gathered into one group with the largest growing area in the province.

3.3 Research Tools

1) Lean Canvas from Canva by Maurya (2012, as cited in Link, 2016) is a tool used to analyze 9 fields as shown on Table 1.

Table 1 Lean Canvas of Maurya

1 Problem	3 Solution	2 Unique Value Proposition	7 Unfair Advantage	5 Customer Segments
	6 Key Metric		4 Channels	
8 Cost Structure			9 Revenue Streams	

Sources: Bluebik, 2021; Maurya, 2012, as cited in Link, 2016; Sunnywalker, 2017

Link (Maurya, 2012, as cited in Link, 2016) used Lean principles with two modules: 1) integrating design thinking and 2) Lean start-up; entrepreneur promote experimentation customer feedback and working as an interdisciplinary team. In this research, the updated Lean Canvas was used as a guide to work with key questions and record learning in the iterative process. As a result, students who used Lean Canvas can collect credits as they work on their projects, based on two designated modules. There is the Smart Lean Canvas (or Smart-up Lean Canvas), improving the essential tool for developing innovative ideas in start-up, or in existing business from studying the Lean Canvas Model from a variety of ideas. Moreover, Bluebik (2021) used Lean Canvas with 9 elements: 1) Problem, 2) Customer Segments, 3) Unique Value Proposition, 4) Solution, 5) Unfair Advantage, 6) Revenue Streams, 7) Cost Structure, 8) Key Metric KPI, and 9) Channels. In this research, the Lean Canvas Model with 9 elements from Canva was used as a guideline for the research as shown on Table 1.

2) Canva is a program that has Lean Canvas which included;

2.1) 43 models of Lean Canvas with 16:9 presentation, or 1920 x 1080 pixels (Canva, 2022a).

2.2) 5,411 models of Lean Canvas Business Plan with 16:9 presentation, or 1920 x 1080 pixels (Canva, 2022b)

3.4 Data Collection Method

Data collection was done using an in-depth interview of 1 group of farmers of *Etlingera pavieana* and medicinal plants for commercial purposes. It consisted of 6 steps as follows: 1) started with a literature review; 2) chose the right tool; 3) conducted field trips to survey data; 4) separated and grouped data for each instrument; 5) made an appointment with the members; 6) conducted a focus group discussion and brought the information to analyze and summarize (Figure 1).

Figure 1 Data collection procedures

3.5 Data analysis

This data from interviewees and focus group discussions were analyzed using content analysis. The results were then summarized and reviewed in three sections to confirm the accuracy of the data analysis.

4. Results

4.1 *Etlingera Pavieana*

Family   ZINGIBERACEAE the same family as Cardamom, Ginger, Galangal and Bustard cardamom

Genus   Etlingera, same genus as Dala and Pud
Scientific name   *Etlingera pavieana* (Pierre ex Gagnep.) R.M. Sm.
Scientific synonym *Etlingera punicea* (Roxb.) R.M. Smith.

The *Etlingera pavieana* normally grows in the forest, its leaves are green and grows more than one foot long, brown rhizome and red flower located under the ground as shown in Figure 2.
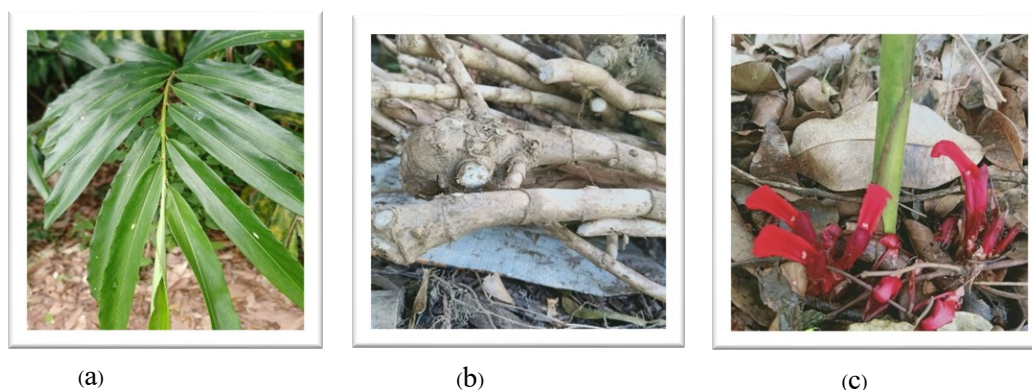

        (a)   (b)   (c)

Figure 2 Leaves (a) rhizome (b) and Flower (c)

Etlingera pavieana's name and surname:

Etlingera pavieana was first discovered in 1870 in Cambodia by the French botanist Pierre J.B.L. Pierre, who gave it the botanical name *Amomumpavieanum Pierre* ex Gagnep. L.E.T. Loesener which was later changed to *Etlingera pavieana,* from the genus Amomum to the genus Achasma, renaming it *Achasmapavieanum* (Pierre ex Gagnep.) Loes. In 1986, R. M. Smith transferred the Achasma to the genus Etlingera as it is today (Burtt & Smith, 1986).

Botanical characteristics:

1) The *Etlingera pavieana* tree is a monocotyledon and a herbaceous plant with stems and rhizomes underground. The trunk is divided into 2 parts: 1) the underground stem looks like a rhizome located underground called the true trunk which looks fragile, break off the pinkish-white rhizome from the rhizome into several lobes to germinate a new tree. Underground rhizomes are pinkish in color and are fragrant; and 2) above-ground stem is the part that emerges above the soil thrust out of the underground rhizome which looks like a greenish-brown circle. The base of the tree is reddish. It consists of several layers of leaf sheaths stacked tightly together called "artificial stems" with a height of about 2-4 meters. The rhizomes and stems above the soil are scattered about 30-50 cm. apart, the clumps are not as dense as the galangal or cardamom. However, the *Etlingera pavieana* plant will not leave dead or withered plants like other herbaceous plants, which will remain green for many years.

2) *Etlingera pavieana* leaves are classified as monocots. Leaves are broken out, arranged opposite each other on the trunk above the soil and are divided into 3 parts: 1) the leaf sheath envelops the stem by wrapping in layers together with the leaf sheath of other leaves; 2) the petiole, which is short, and 3) the leaf plate that has a slender, elongated appearance which are smooth, thick, dark green and shiny. The edges of the leaves are smooth or may be slightly curved. There is a large central vein, and the vein see clearly. Leaves are about 4-7 cm. wide and 30-50 cm. long, with a short lobe of 1-1.5 cm. at the tip.

3) *Etlingera pavieana* flowers will pierce the bouquet straight out of the underground rhizome. The flowers look like a bouquet. The peduncle is short, only about 4-6 cm. long. The inflorescence consists of flowers arranged alternately along the length of the flower stalk. The flower body consists of bright red petals, about 2.5-4 cm. in size.

4) The *Etlingera pavieana* fruit is a small, inflorescence, bark similar to rambutan, about 1.5-2 cm. in size. Inside the fruit, there are many dark brown or black seeds arranged tightly and packed together (Arttajaedee, 2007; Kormanee, 2022; MedThai, 2017; Puechkaset, 2019)

4.2 Operations Management

Planting and propagating consisted of 5 methods as follows:

1) Cultivation: the farmers collected the *Amomum villosum* or "Reaw- Luk" from the forest and the farmers planted them in the mountains (Kaenla et al., 2011). Then collected seeds to make medicine. Currently, farmers switched to planting *Etlingera pavieana* or "Reaw-Horm" with 2 varieties: white rhizome and pink rhizome as shown in Figure 3 which are commonly used as spices in food such as pork noodles, beef noodles, and curry paste in Chanthaburi Province (Arttajaedee, 2007).

(a)   (b)

Figure 3 White rhizome (a) and pink rhizome (b)

2) The cultivar has a round stem, as smooth as it is spread apart dark green. The inflorescence is pierced from the underground, as shown in Figure 4
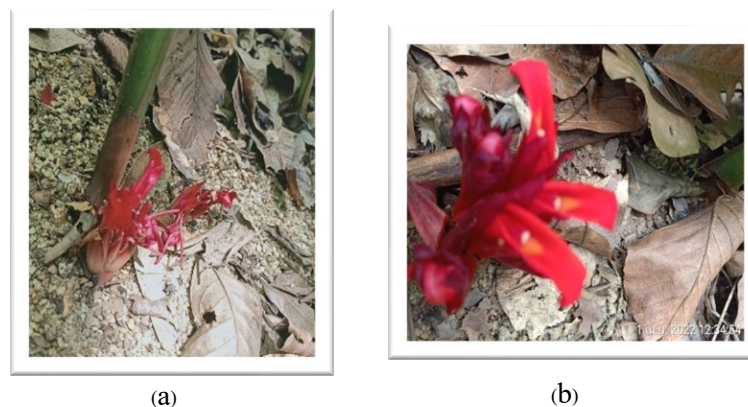

(a)   (b)

Figure 4 The cultivar (a) and flowers (b)

3) Propagation propagated by seeds and separating underground rhizomes, usually in the lower ground of the rainforest and in the mountains in general (MedThai, 2017). Propagation can be done by underground rhizome separation methods that are not too old, or too young, and that have better growth and yield faster than seed propagation. The rhizome used should be separated from the mother clump that is not less than 18 months to 2 years old. There should be 2-3 shoots attached to it.

The used shoot should be about 30-100 cm. high. A hole should be dug 5-6 cm. deep. The rhizome should be placed and buried in soil mixed with leaves. It should be planted in an area with direct sunlight. It can be planted under large trees in orchards, on an area of 1 rai, with about 350-400 rhizomes used for planting. (Kormanee, 2022). At Bann Wang Kra Phrae, farmers do not propagate due to collecting *Amomum uliginosum* Koen.ex Retz or Reaw-luk from the forest (Arttajaedee, 2007; Kaenla et al., 2011).

      4) Care: Adding chicken manure and watering will help make the rhizome fresh and fragrant. It is larger rhizome (Kormanee, 2022).

      5) Harvesting and post-harvest handling.

Analysis of the postharvest management process:

      1) Harvest;

      Etlingera pavieana will begin to gradually bloom 2-3 years after planting. Flowering will take place around mid-February to mid-April, fruits will appear from September to December. The *Etlingera pavieana* will bloom and yield only one time and then die. New shoots will continue to grow and produce more. In the case of planting to sell fresh rhizomes, Fresh *Etlingera pavieana* rhizomes are dug at 12-14 months of age (Kormanee, 2022). *Etlingera pavieana* planting starts from sapling, 0-11 months to care, 12-14 months to dug, finally 12-24 months to breeder. This can be summarized as shown in Figure 5

Figure 5 *Etlingera pavieana* planting

      2) Post-harvest management:

          2.1) Cut off the stem and root fuzz from the rhizome.

          2.2) Spray cleaning.

          2.3) Beautify.

          2.4) Soak in water for cleaning.

          2.5) Set a side to drain.

          2.6) Packing 15 kgs. /bag.

          2.7) Weighing.

          2.8) Delivery to customer.

4.3 The Application of Lean Canvas from Canva Program for Operations and Marketing Management of *Etlingera pavieana.*

Lean Canvas:

Ash Maurya, the creator of Lean Canvas, has a one-page presentation of a business plan, and it is a form that start-up use to determine their own business direction. Ash Maurya has published a book called Running Lean: Iterate from Plan A to a Plan, that works, which is a startup guide before getting started.

Lean Canvas is a form for writing a concise, comprehensive business plan. Specifically, defining the customer's pain point is the heart of Lean Canvas (Sunnywalker, 2017).

Application of Lean Canvas from Canva Program:

Lean Canvas from Canva Program is applied in the management of *Etlingera pavieana* operation and marketing management for farmers in Chanthaburi Province, by setting up a writing style of *Etlingera pavieana*'s business plan consisting of 9 parts: Problem, Solution, Key Metrics, Unique Value Proposition, Unfair Advantage, Channels, Customer Segments, Cost Structure, and Revenue Streams. Lean Canvas is concise and gives an overview of the business especially the problem determination (pain point) of the customer as shown in Figure 6

Figure 6 Lean Canvas from Canva Program for *Etlingera pavieana* operation and marketing management

1) Problem (Problem: P); Create products from customers' problems, consisting of 3 main problems, namely, market, price, and middlemen as shown in Figure 7
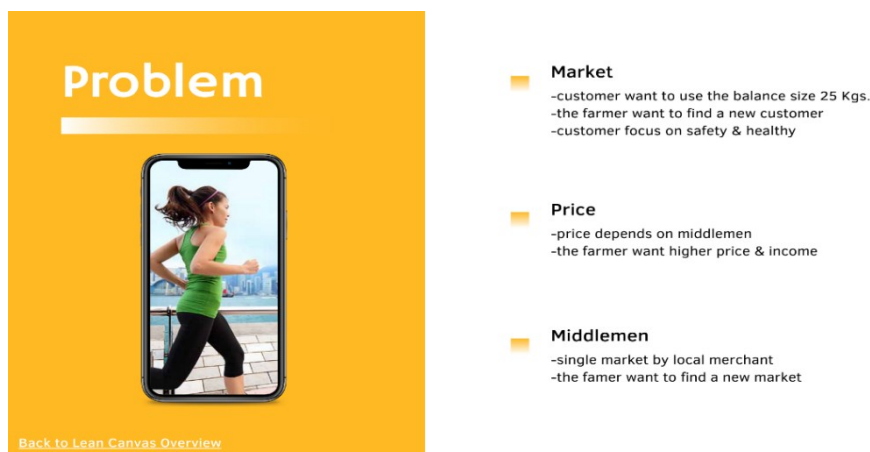

Figure 7 Lean Canvas: Problem

1.1) Market, customers need 25 kgs. scales. Customers focus on health and safety, while farmers want to find new customers with certainty in selling

1.2) Price, the price depends on the middleman. Farmers want higher prices and earn more.

1.3) Middlemen, monopoly by local collectors. Farmers looking for new customers.

2) Target customers (Customer Segment: CS); Identify customer target groups, (not only age, gender, age, but also behaviors, preferences, interests) included existing market (local merchants and white liquor factory), and new market (manufacturers of curry paste) as shown in Figure 8

Figure 8 Lean Canvas: Customer Segment

2.1) Existing market, including local merchants (pre-order behavior, paid next week, buy twice days/each) and white liquor factory (pre-order behavior, pay for products in cash (buy once a year)

2.2) New market; manufacturers of curry paste (having a buying behavior at the local market paying for products in cash (purchase once week) and healthy market (have buying behavior at the local market/minimart/convenience store, paying in cash, buying once a week.)

3) Unique Value Proposition (Unique Value Proposition: UVP) shows how to make a product stand out, through the creation of brand name, packaging, and bundle product as shown in Figure 9

Figure 9 Lean Canvas: Unique Value Proposition

        3.1) Entering a new market for people interested in politeness and safety (Entry to a new market safety & healthy groups)

        a) Build a brand name "Kor Boon", "Product of Chanthaburi".

        b) The packaging was changed from a clear plastic bag containing 15 kgs. without a label to a plastic bag, size 5 x 7 inches, sealed with a label of "Kor boon" brand, giving information about *Etlingera pavieana* and its properties, explaining in detail that it is a product that is safe from harmful substances and chemicals.

        c) Bundle product combines many herbs together into a curry set, or chili paste set.

        3.2) Concept of product level (High-Level Concept):

        a) Maximum capacity 1 ton per day (Maximum Capacity 1 ton/a day)

        b) Health and safety products

        4) Solving problems for customers (Solution: S); in the first field, Problem (P) is the heart. The next important thing is this channel, by identifying products that can solve problems for customers (customer pain point). Improvement of the balance, market penetration strategy, and market development strategy product as shown in Figure 10

Figure 10 Lean Canvas: Solution

        4.1) Weighing scales (balance) supply size 25 kgs. according to the customer's request.

4.2) Market penetration strategy to increase sales from current customers, namely the local merchant market, and the distilled spirits market with an emphasis on products that are safe from chemicals, natural production (organic product).

4.3) Market development strategy. Find a new market beyond the existing market by focusing on niche market, focusing on finding merchant market. Local collectors of other provinces and abroad. Find a market that focuses on health and safety. Finally, changed to smaller packaging for a new market.

5) Channels to communicate with customers (Channels: CH) by 3 channels; direct marketing, social media and advertising, and branding partnerships as shown in Figure 11
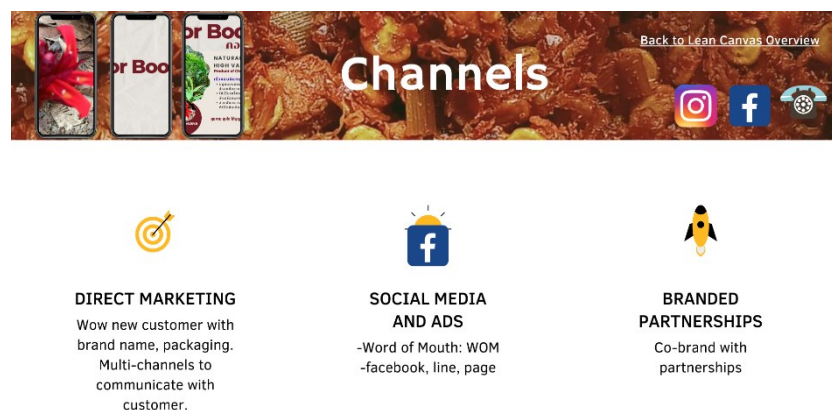

Figure 11 Lean Canvas: Channels

5.1) Direct marketing; Make customers in new markets feel special about the brand, packaging, communicate with customers through a variety of channels.

5.2) Use social media and advertising: Word of Mouth (WOM), facebook, line, and page.

5.3) Branding partnerships share a brand with a partner who is a member of the scented and commercial herb growers' group (Co-brand).

6) Revenue (Revenue Streams: RS) included subscription, product sales per month, and product advertising cost per month as shown in Figure 12
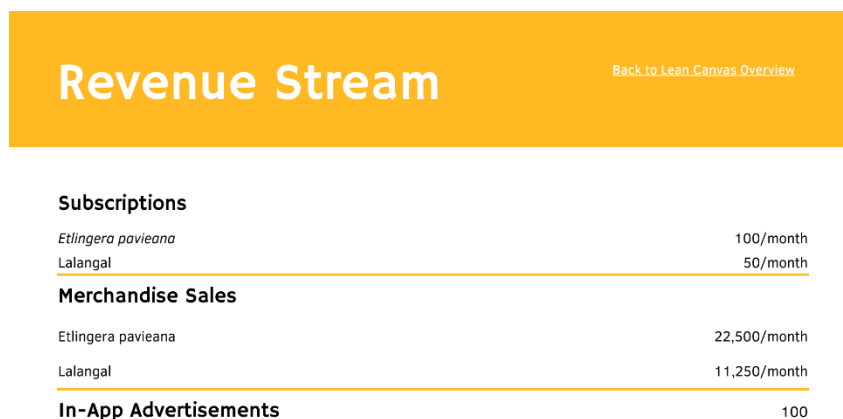

Figure 12 Lean Canvas: Revenue

6.1) Subscription
      Etlingera pavieana   100 Baht per month
      Lalangal   50 Baht per month
6.2) Product sales per month (1,125 pcs.)
      Etlingera pavieana   22,500 Baht per month
      Lalangal   11,250 Baht per month
6.3) Product advertising cost per month   100 Baht per month
Total monthly income increased from new market 34,000 Baht per month
Cost, calculate the numbers in this box together, other compatible with Revenue

7) Streams (RS) that were arranged side by side (Cost Structure: CS) included Fix Cost (FC), and Variable Cost (VC) as shown in Figure 13

Figure 13 Lean Canvas: Cost Structure

7.1) Fixed Cost (Fix Cost)   5,314.11 Baht per month or 4.72 Baht per pcs.
7.2) Variable Cost   5,911.94 Baht per month or 5.26 Baht per pcs.
Total Cost   11,226.05 Baht per month or 9.98 Baht per pcs.

8) What attracts customers? (Key Metrics: KM) included certain market, higher price, higher income, and healthy & safety products as shown in Figure 14

Figure 14 Lean Canvas: Key Metrics

8.1) Existing market assures customers that there is a fixed market by using Partnership Strategy. New market uses niche market. Choose health and safety market for the consumer market, and a market of chili paste vendors.

8.2) Set a higher price by creating value with organic products and adding value with large rhizomes, beautiful colors, safe ingredients and identified as *Etlingera pavieana*, Chanthaburi Province, which as a famous production source of the country (Identity product of origin), helps achieve a higher income.

8.3) Healthy & Safety products, organic products, clean, good quality, are unique products produced by people who specialize in the operation of *Etlingera pavieana*, Chanthaburi Province.

Advantages that make us superior to competitors (Unfair Advantage: UA) included highest market share, competitive advantage, and organic products as shown in Figure 15

Figure 15 Lean Canvas: Unfair Advantage

1) Farmers who grow *Etlingera pavieana* and herbs for trade. It is a large producer group with the highest market share of the *Etlingera pavieana* in Chanthaburi (Highest Market Share) with a large garden and a network for planting with lower cost.

2) Farmers who grow *Etlingera pavieana* and herbs for trade. Competitive advantage on location; the soil conditions grown are suitable for the growth of *Etlingera pavieana*, near the river where the leaves are piled together as a good fertilizer suitable for growing plants, and agriculture has more than 10 years of experience in growing *Etlingera pavieana*.

3) Organic products do not use chemicals to kill pests, but use chicken manure and organic fertilizers. The water used in the garden comes from a safe source. Harvesting by manual labor that is meticulous, considering the size, age of the rhizomes suitable for harvesting to make *Etlingera pavieana* have good medicinal properties. (Atthaisong, Karoonyasiri, Bangpradonk, & Chutiman, 2022)

Finally, it was found that the Canva Program is an easy to use, summary concept of lean canvas and appropriate for start-up entrepreneurs.

5. Discussion

5.1 Etlingera pavieana

The *Etlingera pavieana* herbs is a local plant that can be found in Trat and Chanthaburi provinces. It is different from other types of peas in terms of appearance, smell, taste and parts used in cooking. At present, there are more plants grown for selling and they can also be processed into a variety of different

products (Attachedi, 2007; MedThai, 2017; Puechkaset, 2019; Tachai et al., 2014). The *Etlingera pavieana* or Reaw-Horm is well known as the "Product of Chanthaburi". (Attachedi, 2007; Thai Traditional and Alternative Medicine Division, Chanthaburi Provincial Public Health Office, 2022). The appropriate time for digging the fresh rhizomes is 12-14 months (Attachedi, 2007; Kormanee, 2022).

5.2 The Application of Lean Canvas from Canva Program for Operations and Marketing Management of Etlingera pavieana

The Lean Canvas business plan model from Canva Program is concise by being able to get a broader view of business, especially defining customer problems able to manage costs optimizing both quantity and quality, increasing revenue, reducing workflow time, reducing very high product quantity fluctuations and having a more accessible database, and the results of the research are used for planning and implementing the actual resulting in an increase in income. Canva Program is therefore easy to use. Lean Canvas is a summary concept and appropriate for start-up entrepreneurs, as proven by Maurya (2012, as cited in Link, 2016) Sunnywalker (2017) and Bluebik (2021). Furthermore, we offered Lean Canvas as new approach for business plan model, research by Suntornnont and Neampradit (2019) Jitkue (2019) Krimjai (2022) Thaweedet, Bunmana, Numsamlee, Puangchine, and Teekasap (2021) Kungwansupaphan, Srimala, Jara, and Panomsert (2021) showed that Business Model Canvas (BMC) approach for business plan model.

6. Conclusion

The application of the Lean Canvas business plan model from Canva program which included the 9 parts: problem, solution, key metrics, unique value proposition, unfair advantage, channels, customer segments, cost structure, and revenue streams was found to be useful for the operations and marketing management of *Etlingera pavieana* planting business of the farmers in the province of Chanthaburi. It has been proven to be easy to use and an appropriate business plan model particularly to start-up entrepreneurs due to its ability to overview the future of a business.

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