

PLANNING THE DYEING OF LOCAL CLOTH PRODUCTION CASE STUDY OF BAN CHIANG LOCAL CLOTH COMMUNITY ENTERPRISE

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ABSTRACT

This research has the objective. namely, to improve the production process of local cloth. Ban Chiang Local Cloth Community Enterprise Due to not being able to deliver the product on time. and to plan the production of the dyeing process Ban Chiang Local Cloth Community Enterprise Group according to customer schedule. By determining methods for planning production for efficiency in community enterprise groups. By asking questions. Observe the various behaviors of employees while working. Recorded information and interviewed practitioners according to the 4 M. principles in conducting the study. Analysis. And improvement. Production process. This research provides advice. Improve. And correct. Research results. 1) Add a drying rack. Quantity: 8 sets. Increases time spent in the sun. Makes it dry faster. When there are more racks, clothes drying will not be overlapped. Makes it dry faster. Production times are as follows. Before improving, measure the distance of movement of raw materials. 10 meters. and took a total of 79.5 hours. After improving the measurement of the distance of moving materials by 10 meters. and took a total of 60 minutes. The moving distance was the same. and the time spent is reduced by equal to. $79.5 - 60 = 19.5$ hours. Calculated as a percentage reduction equal to. 24.52%. 2) Planning implementation goals. Production capacity is 5000 pieces/Week. In step 4, take the finished dyed yarn and hang it in the sun to dry completely. From adding a clothes rack. Quantity: 8 sets. Spend less time drying clothes faster. Can plan Production capacity 2 Lot/Week and 1 Lot = 2500 piece. After adjusting the number of backorders in Order quarter 3 (2023) of 0 pieces. New Planning Back Order is equal to a percentage reduction of 0% with stock. items: 7700 pieces.

Keywords: Production Planning, Fabric Dyeing, Community Enterprise Group

INTRODUCTION

Guidelines for developing community enterprises. It is one way to help solve the poverty problem of the people and is a way to create a sustainable economy, society, and community. Because it encourages the community to know how to use local resources. This allows them to be firmly self-reliant in the long term. which is the Community Agricultural Enterprise Development Group. Department of Agricultural Extension. The meaning of community enterprise has been explained as follows.

Community enterprise (SMCE or small and micro community enterprise) refers to community enterprises related to the production of goods. Providing services or others Run by a group of people who have ties. They have a common way of life and come together to conduct such businesses. Whether it is a legal entity in any form or not, it is a legal entity to create income and for self-reliance of the family. communities and between communities, or in short, Entrepreneurship for creative community capital management for self-reliance. The capital of the community will include resources. Agricultural products, knowledge, wisdom, culture, traditions of the local area Onkhum, Rachjun, Wariwun & Punyajit (2021).

Community enterprise along with the Ban Chiang local cloth community enterprise committee. Ban Chiang Subdistrict. Nong Han District Udon Thani Province. Come into contact with Suan Sunandha Rajabhat University. Udon Thani Provincial Education Center. To request research support Because after the situation of the spread of the COVID-19 virus, community enterprises are unable to maintain sales and profits. There may be decreased profits and decreased capital. Community enterprises are therefore in a difficult situation. however. Suan Sunandha Rajabhat University. Udon Thani Provincial Education Center. which is in line with the master plan under the national strategy. (2018-2037) Small and medium sized enterprises. It can be considered an important mechanism for national development. in the dimension of generating income, It is an important source of employment. And it is also a mechanism for solving the country's poverty problems. In the past, although Thai small and medium enterprises have continued to grow.

From a survey of the fabric production process of the Ban Chiang Local Cloth Community Enterprise Group. Researchers found that. from the current situation Sales after the epidemic have improved with large customers. and small one's order in large quantities. Make community enterprise groups. Production cannot keep up with customer demand. Therefore, comes to help solve the complex process steps, long production times and relatively high costs in the production process. Therefore, allowing the community enterprise group to produce as much as possible. To achieve maximum benefit to community enterprises by operating production correctly. Determine effective production planning methods. Efficiency results. To respond to customer needs. The need to adapt. To survive in the market competition. Intarapak, S. (2022).

OBJECTIVE

1. To improve the process of producing local cloth. Ban Chiang local cloth community enterprise. Due to not being able to deliver the product on time.
2. To plan the production of the dyeing process. Ban Chiang Local Cloth Community Enterprise Group according to customer schedule.

METHODOLOGY

Location of research operations. Location of this research. It is. Ban Chiang Local Cloth Community Enterprise. Chairman of the group. Mr. Sombat Manyahong. Residing at number 108, Village No. 1, Ban Chiang Subdistrict, Nong Han District, Udon Thani Province, 41320, operating the product business that the group currently weaves, including scarves, tailoring cloth, Mudmee sarong. 2

tako and 4 tako, loincloths, shawls and plain colored cloth for making Tai Phuan costumes. and accepting orders for general fabric orders. As for facilitating students and general entrepreneurs. It is a learning center for studying and learning about the textile process Senachan (2021).

The tool used to collect data is asking questions. Observe the various behaviors of employees. While working Recorded information and interviewed operators according to the 4 M principles and work study (Work study). This is the study of the community enterprise production process. Activities that occur in production and service operations to develop and improve them. There will be savings or reductions in costs/expenses. To create products and services (Productivity). Improved including calculation of standard time for performing work, techniques for analyzing the steps of work. To eliminate unnecessary elements from the process and find the easiest way to perform tasks, as well as improve the standards of work and plan management by using the incentive scheme.

Table 1
Order Mudmee sarong cloth quarter 2 (2023)

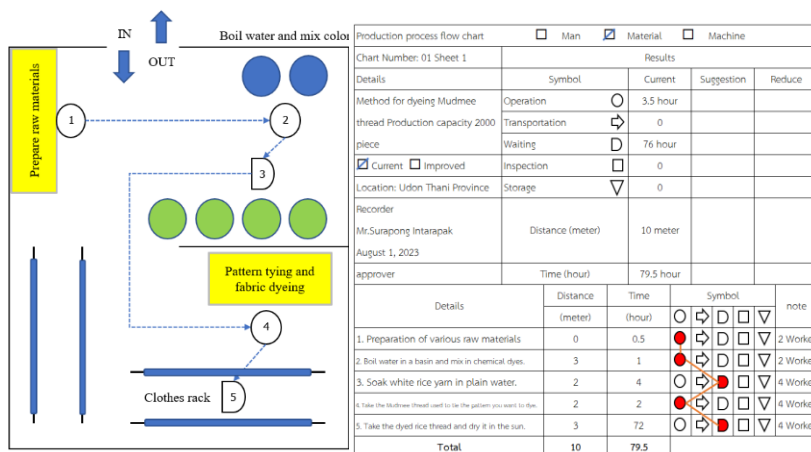
No.	Customer	Order quarter 2 (2023) (Unit: piece)												
		April				May				June				Total
		W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	
1	Thai fabric shop	3,000			4500		3000				5000			15500
2	Nong Noey Silk Shop		2500		4000	2500		1500		2500			2000	15000
3	Kraisorn Cloth Shop	1000		1500			1200		2000		2500		1000	9200
4	Shama Shops		1050			2400				2000		2500		7950
5	Deejai Shop		2000		2500		1500		2500		2500			11000
Total Order / Week		4000	5550	1500	11000	4900	5700	1500	4500	4500	10000	2500	3000	58650
Total production capacity		2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	24000
Inventory		0	0	0	0	0	0	0	0	0	0	0	0	0
Back Order		2000	3550	0	8500	2900	3700	0	2000	2500	8000	500	1000	34650

Ref: Information about the Ban Chiang local cloth community enterprise.

Researchers conducted data collection and in-depth interviews of businesses. Currently the problem arises. Sales from orders from large customers. Order a large amount, mostly Mudmee sarongs. Causing delivery to customers not to be on time as scheduled. The store that has the most problems. There are 5 shops. They are 1) Thai fabric shop, Ubon. 2) Nong Noey silk shop. 3) Kraisorn Thai fabric shop. 4) Chama shop, selling well. 5) Deejai Ruean Thai shop. Production capacity each week is 2,000 pieces. Researchers noticed that. Production capacity does not correspond to Order each week. Back Order averages 2,888 pieces as shown in Table 1.

Figure 1

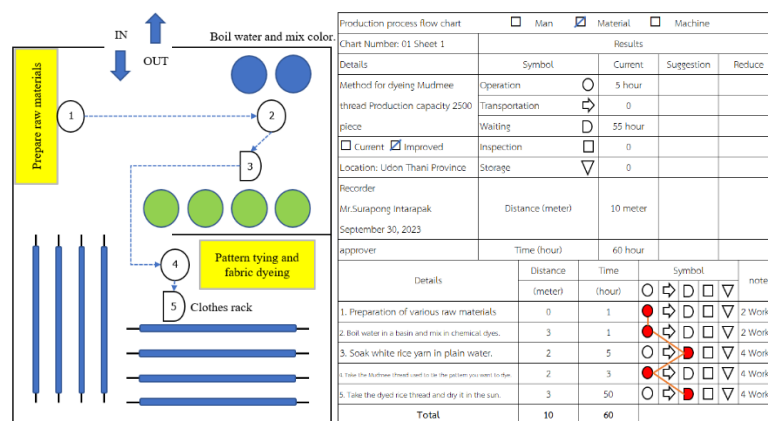
Diagram of the process of dyeing Mudmee fabric. and analyze work



From Figure 1. Researchers analyze the process of dyeing Mudmee fabric. Found that the process of dyeing Mudmee fabric. 1) Preparing 5 kilograms of blue raw materials, 2000 pieces of cloth. Takes 30 minutes. 2) Boiling water in a basin, takes 1 hour. Mix chemical dyes according to the ratio specified for each type. Stir the chemical dye to dissolve in the boiling water. 3) Take the white yarn that has been tied with straw and soak it in plain water for 4 hours. 4) Take the yarn that has been tied with the pattern you want to dye in each color and put it in a basin mixed with chemical dyes. Time: 2 hours. Then take the rice noodles and wash them with cold water and hang them to dry. 4) Put the dyed rice threads in the sun to dry completely. It takes 72 hours to dye Mudmee fabric. Quantity 2000 pieces/time. Total time is 79.5 hours. (3 days 7.5 hours). Or 4 days. Average production is 500 pieces per day. It shows that the production capacity is 2000 pieces/week.

Figure 2

Diagram of the Mudmee dyeing process and analyze work After improvement



Improving and planning the Mudmee fabric dyeing production process. It was found that from the study data before the improvement (shown as picture 1). This is information on dyeing Mudmee fabric. Quantity 2000 pieces/time/Week. Resulting in an average Back Order of 2,888 pieces. The researcher's question was how to be able to dye more than 4888 pieces of Mudmee fabric. (Production capacity 2000 pieces + Back Order 2888 pieces). Therefore, the production capacity was set to be 5000 pieces/Week. Back. Come see the process of dyeing Mudmee fabric. Step 4) Put the dyed rice threads in the sun to dry

completely. Takes 72 hours. Takes a long time to dry in the sun. This is caused by the method of drying clothes piled thickly, causing them to dry slowly. And must find a way to make it dry faster. Increase the frequency of dyeing Mudmee fabric. A summary of the corrections is as follows. (The improvement plan is shown in Figure 2).

1. Add clothes rack 8 set.
2. Production capacity 1 Lot/Week change 2 Lot/Week.
3. Lot = 2500 pieces.

From Figure 2. Researchers give advice to community enterprise groups. Add clothes rack 8 set. Production capacity 1 Lot/Week change 2 Lot/Week. Lot = 2500 pieces. Reduce obstacles in product production and product delivery. From improving the production planning researchers. Order quarter 3 (2023) Production capacity each week is 2,000 pieces. Researchers have noticed that. Production capacity is not consistent with orders each week. Back Order averages 0 pieces, with accumulated stock of 7700 pieces, as shown in Table 2.

Table 2
Order Mudmee sarong cloth quarter 3 (2023)

No.	Customer	Order quarter 3 (2023) (Unit: piece)												Total
		July				August				September				
		W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	
1	Thai fabric shop	2500			1500		3000				3000			10000
2	Nong Noey Silk Shop		2500		2000	2500		1500		2000			1000	11500
3	Kraisorn Cloth Shop			1500			1200		2500		2000		2000	9200
4	Shama Shops	1000	1000			2400		2500		2000		2500		11400
5	Deejai Shop		2000		1500		1500		2500		2000		500	10000
Total Order / Week		3500	5550	1500	5000	4900	4000	5000	4000	7000	10000	2500	3500	52100
Total production capacity		5000	4300	1800	5000	5000	5000	5000	5000	5000	5000	2500	3500	52100
Inventory		1500	300	600	600	700	0	1000	1000	2000	0	0	0	7700
Back Order		0	0	0	0	0	0	0	0	0	0	0	0	

RESULTS

Results from operations according to objectives Comparison of the improvement results is as follows.

1) To improve the process of producing local cloth. Ban Chiang local cloth community enterprise. due to not being able to deliver the product on time after the improvement by working on adding a clothesline. Quantity: 8 sets. Increases time spent in the sun. Makes it dry faster. When there are more racks, clothes are not overlapped, making them dry faster. Therefore, from examining the actual work effectiveness. Results from Order quarter 3 (2023). It was found that after adjustment from the distance in various activities, raw materials move in the production process. Input-Output. When comparing the results of the improvements. Measured by distance and production time are as follows. Before the improvement, the distance of movement of raw materials was measured at 10 meters. and it

took a total of 79.5 hours. After the improvement, the distance of movement of materials was measured at 10 meters. and it took a total of 60 minutes. The distance of movement was the same. and the time spent decreased equal to $79.5 - 60 = 19.5$ hours. The percentage reduction was equal to 24.52%.

2) To plan the production of the dyeing process. Ban Chiang Local Fabric Community Enterprise Group. According to the customer schedule due to not being able to deliver the product on time after the improvement. Production planning implementation goals. Production capacity is 5000 pieces/Week. In step 4, take the finished dyed yarn and hang it in the sun to dry completely. From adding a clothes rack. Quantity: 8 sets. Spend less time drying clothes faster. Can plan. Production capacity 2 Lot/Week and 1 Lot = 2500 piece. Therefore. From checking the actual work efficiency, the results from Order quarter 3 (2023) found that after planning the production process of the fabric dyeing process, Output when comparing the results of New Planning by measuring From Back Order before adjusting the number of outstanding products in Order quarter 2 (2023) of 34,650 pieces and after adjusting the number of outstanding products in Order quarter 3 (2023) of 0 pieces. New Planning Back Order is equivalent to a percentage reduction of 0. % has accumulated stock of 7700 pieces.

CONCLUSION AND FUTURE WORK

Activities that are carried out together. There is variety. Connect. Support each other. Resulting in reducing risks in operations. Respond to the needs of creating satisfaction and happiness for members. Make members have confidence in the institution. and build members' confidence in continuing to work with the group. This will lead to the stability and strength of the group. In this regard. Will the group's income or profits increase every year? It's not important. There may not be much profit coming into the group. But members get profits. and will continue to create economic stability for members, Intarapak, S., Sanbudda, P., & Kumklong, N. (2023).

There should be research to extract knowledge in social engineering. Able to think and analyze systematically. It is logical and integrated in a cross-disciplinary way. Mix science with knowledge of using tools. Techniques and methods. Processes and steps for developing people in local communities. Have the ability to communicate and coordinate with groups of people. Members of the social partnership network can be friendly. and are skilled in creating social innovations to solve community problems. Society and Thailand, Kumklong, N., Seanbudda, P., & Muenjitnoy, A., (2022)

There should be participatory action research. To eliminate losses. (7 Waste) is one key to the Lean Manufacturing system. It is a system for eliminating losses and continuously improving quality in the production process. To increase the efficiency of the activity or work performed. The disadvantage of having 7 Waste. is that it takes a long time to produce. The product is of low quality. and high costs, Seanbudda, P., Muenjitnoy, A., & Kwanmuang, S., (2022)

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