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Analysis Application of GMP, SSOP, GTP And The Potential For Business Development

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Abstract

Establishing crab meat canning industry which has several units production scattered in Madura region. A unit production is assigned to provide canning raw material requirements such as strip crab meat. This study aims to analyze problems of the company to know defense strategy and how to increase productivity. Further more, evaluating quality management system activities aims to improve the system and product quality to conform to the wishes of consumers. Improvement of product quality conducted an assessment of the quality management system which applied to unit production using the scoring method. This assessment aims to reduce the risk of production failure, with prevent infringement of production processes. Assessment of the production aspects including GMP, GTP and SSOP. Then to identify problems and analyze what strategies will be used can used a SWOT analysis. Analysis strategy using SWOT method aims to determine what factors can affect company productivity. Observation result of GMP overall implementation on unit process did not implemented properly. Average total percentage earned was only 50% which means GMP implementation didnt meet eligibility standarts. While the GTP application only obtained between 25% to 50%. That percentage result indicates that the implementation of the GTP did meet the standards. It is also found in the SSOP observation which indicates average percentage result was only 25% to 50%. While the results of the SWOT analysis namely the company improvement strategy which is used to improve productivity. It can be done by increasing the number of partnerships, increasing supply of raw materials and improving product quality.

Keywords: Quality Management System, Quality, SWOT

INTRODUCTION

Quality supervising activities or programs in industries is an essential thing to be concerned by the producers, along with the global marketing regarding to improve the competition. Quality supervising in industry includes the production, processing, and marketing. Quality supervising has a close relation with the production result, because only products that meets the requirements that will be accepted by the consumers. The bigger the consumers, the more complex their needs be, especially on food [2].

One of the ways on canning crab meat is spread all over Madura. The process unit works as the place for peeling the crab skin which is used for the main ingredient for canning crab meat. The product from this process unit is the main ingredient for canning. Therefore, the process should be controlled, especially on the food guarantee to make a good quality of the product.

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Applying food security system is beneficial for the consumers, one of which is for improving the trust of the safety. It shows that by applying food safety system, besides improving the consumers' trust, it can advantage the company too. The HACCP plan should be prepared for the expected improvement therefore a research on the process unit is chosen to do some study on applying the production aspects, one of which is *Good Manufacturing Practices* (GMP), *Good Transporting Practices* (GTP) and *Sanitation Standard OperatingProcedures* (SSOP) [3].

The analysis done to identify the problems happened on the company is to refine the management system or the production system, it can be done by using SWOT analysis. SWOT analysis is a note or conclusion used for identifying capabilities and abilities of a company. It can be viewed from many factors regarding the strength, weakness, opportunity, and threat. It aims at to see the possible strategy to keep or improve the productivity [1].

Quality supervising aims at reducing failure risks on an industry. Besides that, quality supervising can also be a control of an industry to make a good quality product. Quality control

system of food product which is recommended to fulfill the demand of food safety is called *Hazard Analysis Critical Control Point* (HACCP) [4].

RESEARCH METHODS

Time and location of the research

This research is done on November 2013 up to February 2014. The location of this research are on Madura.

Methods

1. Survey

This research is done on November 2013 up to February 2014. This research is held on four places. The first step to do is to do a survey on each branches of production units to do a comparison.Afterwards, a questionnaire is given to be filled to answer some questions about GMP, GTP, and SSOP aspects, and also doing documentation to know further the factory's place and how the production goes

2. Assessing TheApplication of GMP, GTP, and SSOP by Using Scoring Method

The formulation used for gaining the appropriateness percentage on applying GMP and SSOP [5]. GTP is to review the result of aspects which are in accordance with the point determined [6], they are:

$Y = (n \times 0) + (n \times 1) + (n \times 2) + (n \times 3) + (n \times 4)$

Note:
Y = total application score
n =the amount of principle aspects on check listed monitoring form
0 value= 0% deviation happened (accomplished)
1 value = 1% – 25% deviation happened (accomplished enough)
2 value = 26% – 50% deviation happened (less accomplished)
3 value= 51% – 75% deviation happened (highly less accomplished)
4 value = more than 75% deviation happened (not accomplished)

3. SWOT Analysis

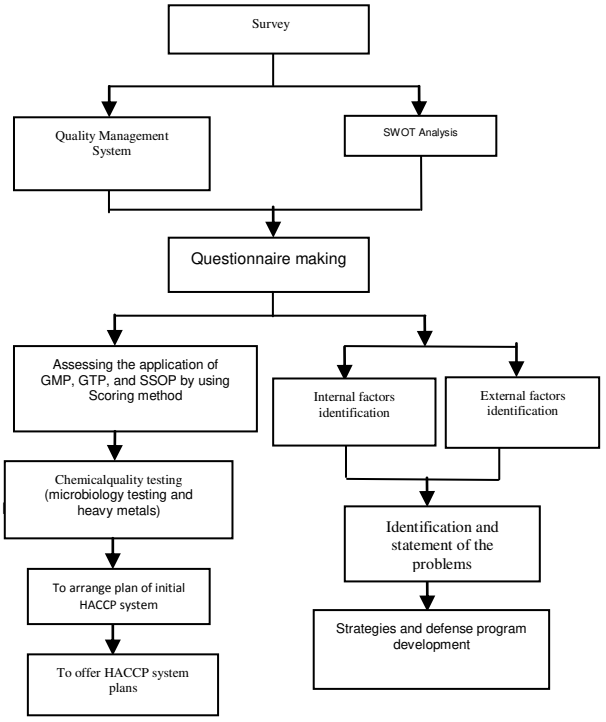
This research used qualitative approach on SWOT matrices, which displays eight boxes. Two upper boxes are internal factors and two boxes on the left are external factors. The other boxes are the strategic issues appearing as a result of the meeting point of internal factors and external factors [7].

Identifying the factors was done by filling the questionnaire by experts which are chosen from production units employees. The number of expert staffs is two persons which are chosen from two production units of crab processing

Table 1. Qualitative approach on SWOT matrices

Internal factors / External factors	Strength	Weakness
Opportunity	*Comparrative Advantage*	*Mobilization*
Threat	*Divestment/Investment*	*Damage Control*

Research procedure is done according to figure 1.



The phenomenon is gotten from the process of planning, implementing, and activities in embroidery and apparel cluster development program in the field, while documents were collected from relevant sources.

RESULT AND DISCUSSION

Good Manufacturing Practice (GMP)

A good production is one of the requirements that should be fulfilled by a company. It is because those requirements can work as the reference for developing a supportive environment for production process on a factory.The scope of GMP that should be applied on a trading unit to produce a food which is safe to be consumed is: location, building, sanitary,

production equipments, ingredients, production process, final product, laboratory, package, label, storage, and maintenance [8]. The scoring result of applying GMP can be viewed on Table 2.

Table 2. Percentage on GMP application level

No	Parameter	Application LevelScore				
		L1	L2	L3	L4	Average
1.	The environment of processing unit					
	-Location	50%	50%	50%	75%	**50%**
	-Environment	50%	50%	25%	50%	**45%**
2.	Building and physical facilities					
	-Building	50%	50%	50%	50%	**50%**
	-Floor	50%	50%	50%	50%	**50%**
	-Wall	25%	50%	50%	50%	**45%**
	-Roof	75%	75%	75%	75%	**75%**
	-Ceiling	75%	75%	75%	75%	**75%**
	-Door	75%	75%	75%	75%	**75%**
	-Windows	100%	100%	100%	100 %	**100%**
	-Lighting	75%	75%	75%	75%	**75%**
	-Ventilation dan thermostat	50%	75%	50%	75%	**60%**
	-Production room	50%	50%	50%	50%	**50%**
3.	Production tools	75%	75%	75%	75%	**75%**
4.	Facilities and sanitation					
	-Water resources	50%	50%	50%	50%	**50%**
	-Media on Water waste management	25%	25%	25%	25%	**25%**
	-Toilet	50%	50%	50%	50%	**50%**
	-Employees hygiene service	25%	25%	25%	25%	**25%**
5.	Germs control system	25%	50%	25%	50%	**40%**
6.	Employees' healthcare and hygiene					
	-Employee's healthcare	75%	75%	50%	50%	**60%**
	-Employee's hygiene	50%	50%	50%	50%	**50%**
7.	Production process					
	-Main ingredients	50%	25%	25%	25%	**30%**
	-Packaging	75%	75%	50%	50%	**60%**
	Average score	**55%**	**60%**	**50%**	**60%**	

The average score gained from each production unit is 50% which means that applying GMP aspects done in a production unit still needs some improvement. Especially on the hygiene facilities for the employers and pest control system which only gains 25%, it means that GMP application is very low in each production unit.However, for some aspects are applied well, for example on the ceiling which scores 75% (fulfilling enough). On the windows, a high score is gained for 100% which means fulfilling the requirement.

***Good Transporting Practice* (GTP)**

The result of observing GTP application on crab meats peeling unit found that there are some weaknesses in some GTP aspects studied. The score of applying GTP can be seen on table 3. Some GTP aspects have a suitability percentage which is below the standard, except the verification aspect which has been done by the responsible person for the whole transporting activities. Therefore it makes the decision-making faster and easier on doing the transportation activities when in danger.

Table3. Percentage of GTP Application Level

No.	Parameter	Application LevelScore				
		L1	L2	L3	L4	Average
1.	Design and construction of transporta-tion unit equipments	50%	50%	50%	50%	**50%**
2.	Cleaning and maintaining the equipments of transportati on unit	25%	25%	25%	25%	**25%**
3.	Hygiene and healthcare of the employees	25%	25%	25%	25%	**25%**
4.	Operational procedure	50%	50%	50%	50%	**50%**
	Average score	**40%**	**40%**	**40%**	**40%**	

The average score of GTP gained of each unit production is 50%, which means it does not meet the standard.From the result, it can be known that the application of GTP in each unit still needs many improvements.. It can be seen by the average total of cleaning aspect and equipment maintenance of transportation and employers hygiene which only scores 25%, it means that it is very low in accomplishing.This score shows that there should be a concern in each aspect in production unit to immediately doing an improvement.

***Sanitation Standart Operasional Prosedure* (SSOP)**

Observing SSOP onyoghurt product-ion unit of cooperation is based on the eight key aspects according to UU No.7 [9], which are water safety, cleanliness of the surfaces contacting food, sanitation in processing room, protection on the labels and the ingredients used, health control on the employers, and preventing germs.

The observation result of SSOP on crab peeling unit is that there are some weaknesses still found in some SSOP aspects studied. On Table 5.6,

it can be seen that the appropriateness of SSOP application towards some aspects of SSOP which has been determined by UU No.7 [9]. The company should refine and fulfill some minus points on every aspects of SSOP. To supervise the employers strictly and to provide a complete sanitation facility is necessary to be done.

Table4. Percentage of SSOP Implementation Level

No.	Parameter	Application LevelScore				
		L1	L2	L3	L4	Average
1	Safety of water	25%	25%	25%	25%	**25%**
2.	Surface cleanliness that is contacted with comestibles	50%	50%	50%	50%	**50%**
3.	Prevention of cross-contamination	50%	50%	50%	50%	**50%**
4.	Facility of sanitation	75%	75%	50%	50%	**60%**
5.	Comestible's protection from material contamination	75%	75%	50%	50%	**60%**
6.	Labelling, utilizing of toxins and aprropriate storage	100%	100%	100%	100%	**100%**
7.	Control of employee's health	<25%	<25%	<25%	<25%	**<25%**
8.	Prevention of pest	25%	50%	50%	50%	**45%**
	Average Score	**50%**	**50%**	**50%**	**50%**	

Table 5. Matrices on SWOT QualitativeAnalysis

Internal factors / External factors	Strength	Weakness
	>Does not need a certain skill and a high technic > The human resources potentials are in a big amount >A good relationship between the owner and consumers	>Seasonal availability of the ingredients >The employers are low educated > Lacking of transportation facilities which meet the standard of fishermen.
Opportunity	**S-O strategy**	**W-O strategy**
>A big chance on export markets >It improves consumers' needs >Being an initiator of breeding crab meats	>Expanding the partnership >Attempting to create a new job by adding more production unit >Expanding network between crab meats supplier	> Improving fishermen productivity >Improving employees' skills in terms of processing >Continuing the production
Threat	**S-T strategy**	**W-T strategy**
>More new competitors >Export products are improving their qualities >Buyers has a power to choose the selected company	>Expanding the market network >Improving customers' service >Improving product quality	>Developing crab meat breeding >Using catching technic by training and counseling >Fulfilling fishermen's needs regarding the on-boat transportation for the crabs.

The average percentage on applying SSOP aspects which is 50% in each production units means less accomplishing. It shows that applying SSOP aspects in each production units still needs an improvement. With the score gained, it can also be known that the employers are not paying much concern on the production unit. Some aspects to be improved are those whose score below 75%. On the aspects of water safety, the score is 25% and employers health control scores <25%. By these scoring, it is expected that the production unit can improve the awareness of the employers regarding the sanitation, therefore the weaknesses on the production process should be refined to keep up the safety and the product quality.

SWOT Analysis

To know the strength and the weaknesses and efforts to improve a company, a SWOT analysis is done in a qualitative approach. The analysis of SWOT qualitative matrices can be seen on table 5

Strategies on Developing the Company

Based on the internal factors analysis and external factor, there found some strategies can be used for improving the company. The strategies are explained as follows:

1. Strength-Opportunity Strategy

   Developmental strategies can be found by expanding the partnership. Partnership can mean a customer or those who are related with the production process, for example fishers who provide crab meats as the main ingredient.The company should expand the customers to make a wider market in a global context.
2. Weakness-OpportunityStrategy

   Fishermen's productivity becomes one of the most important parts regarding fulfilling the need of crab meat as a main ingredient. However, by the equipments used, it is still unable to produce a maximum main ingredient. Therefore, a training of crab-catching equipments and techniques to collect crabs should be done for fishermen.
3. Strength-Threat Strategy

   As the numbers of similar industries are increasing, a company should think about a new strategy to keep on surviving. This effort can be done by expanding to a new market network or more number of customers. By having more customers, it is expected that a company will compete well with a similar industry, whether a new one or an older one. Besides that, improving the service quality and main ingredients need to be done.
4. StrategiKelemahan-Ancaman (*Weakness-Treath Strategy*)

   A market demand towards crab meat product is not yet fulfilled maximally. It is due to the limited main ingredients gained to make crab meats product. It is a seasonal product,

therefore it makes an obstacle for the company. As an effort to supply basic ingredients, fishermen are trying to breed meat by themselves in the pond.

By using SWOT analysis, the strategies gained as a solution for the problems happened on the production unit can be collected on the program table. This table works to make the production unit focused towards the things to do on improving the productivity on producing crab meat. The program table can be seen on Table 5.11.

Table 6. AlternativePrograms

No.	Programs	Aims	Activities (strategy initiatives)
1.	Preparing a full stock of crab meats as basic ingredients by using storage system	To fulfill market demands	To give a right treatment to the crab meat, and to store it when needed, therefore where the crabs are out of season, they are still on stock.
2.	Improving employers' skill	Improvingt he working skills	To give a training on the employers about processing technic and an appropriate sanitary which are in accordance with the standards
3.	Standardized material handling for fishermen	To keep up the good quality of the main ingredient	providing Styrofoam box for fishermen to load the crab meats

CONCLUSION

From the percentage gained, it can be known that this production unit has fulfilled and is appropriate as a company for processing food.Strategy that is in accordance with the condition of production unit today is by increasing productivity of production.Things are not in accordance with the production process should be concerned to keep the good quality of the main ingredients and the product. Therefore the company should refine the production system which has been defined. Advice for production units that make improvement in various aspects related to sanitation and hygiene in order to meet the specified industry standard.

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