COMMUNITY DEVELOPMENT THROUGH GOAT MILK POWDER HOME INDUSTRY TO IMPROVE COMMUNITY INCOME

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ABSTRACT

This research is located in CV. Sahabat Ternak, Kemirikebo, Girikerto, Turi, Sleman, Yogyakarta, Indonesia. The purpose is aimed to find out the manufacturing process of goat milk into powder at home industry of CV. Sahabat Ternak and the benefits for community’s income there. The method that used in this research are direct observation, learning by doing process and business owner and employee interview. Based on the observation and information which is obtained, there are 4 stages in the manufacturing process of goat milk powder in CV. Sahabat Ternak. First, the goat milk which is derived from the farmer is measured both volume and density, then store into milkcan or refrigerator. Second, the milk will be on the pasteurization by heating LTLT (Low Temperature Low Time) until thickened and by adding essence. Third, the condensed milk will be on cooling process and being stirred into become the coarse powdered milk. Fourth, the coarse powdered milk will be on mild process by using dischmill machine and the milk is ready to be packed and marketed. The manufacturing process of goat milk powder in CV. Sahabat Ternak home industry has given income improvement with the double income increation and regenerate the quality of community life.

Keywords: Empowerment, Community, Processing, Milk, Goat

1. INTRODUCTION

Indonesia is the fourth largest country with a total population of 262 million fatalities per year 2017 (jateng.tribunnews.com, 2017). The number of inhabitants who has continuously escalating accompany needs to be provision jobs in order to fulfilling the primary needs, such as an animal protein needs. That could be filled with consuming milk. Milk is a supplies food that have a higher worth variety of nutrients which contained it. The one of livestock’s milk that can be consume it is milch goat. Indonesia’s goat populations are 18.410.379 per year 2017 (Kementrian Pertanian, 2017). The goats number are quite a lot, it does unevenly with the number of low consumptions. The public interested to consuming milch goat’s milk is still lower than milch cow’s milk. Becasue of myths in the lay community, like the content of goat’s protein is still lower than cow’s milk, difficult to digested human, and typically the goat’s milk is prengus (unpleasent aroma). CV. Sahabat Ternak as a home industry has proved that processing the goat’s milk into the variety of powdered milk by empowering Kemirikebo Village community. Resulting of created alignments between the job developer and provide community training to process the goat’s milk, so people
were more independent with maximizing potential they had and break away from the shackles of poverty to get a salary of processing the goat’s milk activity. This study aims to acknowledge processing the goat’s milk into the powdered milk in the home industry in CV. Sahabat Ternak and the benefit impacts to income and augment for the quality of people’s life.

2. DATA AND METHODS

This paper use qualitative descriptive study based on literature, facts and data obtained in the field. Observations, active participation and interviews are conducted. Observations were made to understand the location of the study and understand the characteristics of the Kemirikebo village. Active participation is carried out to determine the process of processing goat milk powder. In-depth interviews were conducted with the founder of CV. Sahabat Ternak and all employees in the processing milk who lives in Kemirikebo village. This village is means to empower the community through goat farms and home industry for milk milk processing. Data and information are obtained by asking a number of questions orally and face to face with the owner of the CV. Sahabat Ternak and all milk processing employees. The data used in this paper are primary data and secondary data. Primary data is obtained in three ways: observation, active participation, and interviews with owners and all employees of CV. Sahabat Ternak. Interviews were conducted to obtain information from the owners and employees regarding the process of processing goat milk powder and the community empowerment process which had an impact on improving the living standards of the community. Secondary data was obtained from various sources: books, journals, and official websites that have been identified, analyzed, clarified so that these sources can strengthen and sharpen this research.

3. RESULTS AND DISCUSSION

The Goat’s Milk

Fresh milk is one of the comestible nutrients and easily digested human because it is liquid formed. Fresh milk was obtained from good milch livestocks are cows, goats or buffalos (Zain, 2013). The goat’s milk is a white liquid and produced by ruminant’s animal from kind of Capriane goat. The Goat’s milk in Indonesia gets less attention than cow's milk, because there are myths in society like protein contents are lower than cow's milk, its difficult to digested humans and typically unpleasant aroma (prengus), as well as the community are more familiar with goat’s milk as a medicine and consume it without being process first. In fact, the goat’s milk is a good source proteins, 3.6 grams/100 grams contents, higher than 3.3 grams/gram contents of cow's milk (USDA, 2010). This is because of goat’s milk has a smaller globular fat than cow's milk which is 2 μm sized (Blakely and Blade, 1991). Amount of short chain fatty acids – more so that it is easier to digested human (Sagitarini et al., 2013).

Amongst proper process by CV. Sahabat Ternak can omitting prengus or unpleasant aroma that found in the goat's milk. Based on observations and active participations, it was found that there
were four stages in processing of goat’s milk into powdered, namely: 1. Receiving milk; 2. Pasteurizing milk; 3. Coagulation milk; 4. Pulverization milk.

**Milk Powdering Process**

**A. Receiving Milk**

The fresh goat’s milk obtained by CV. Sahabat Ternak which came from CV. Sahabat Ternak’s farms, nearby breeders, and suppliers. The milk was received in the morning around 06.00 am – 09.00 am. The milk could be received liquid or frozen milk formed. Liquid milk will keep it inside milkcan while frozen milk will keep it inside the freezer. Things to do when receiving milk is to calculating amount of milk with measure cup and density using lactodensimeter. In general, the goat’s milk densities received by CV. Sahabat Ternak ranged from 1.025 to 1.026. The density value is lower than the standard which is 1,028 (SNI, 1998; TAS, 2008). This can give an affect on fat and ingredients contained in milk (Legowo et al., 2009)

**B. Pasteurization Milk**

The milk in freezer and milkcan is pasteurized by heating on the stove using fuel gas. Pasteurization with Low Temperature Long Time (LTLT) (minimum 63°C for 30 minutes). The purpose of this pasteurization is to take pathogenic bacteria through pasteurization; to keep quality products without lose or noticeable decrease in flavor, shape, physical contents and nutrient and selectively control the growth of organism that produce products, material or substances undesired (Shearer et.al, 1992).

**C. Coagulation Milk**

After pasteurization, the goat’s milk warmed back until 99.4°C – 100.5°C for 40 minutes until the liquid milk into thick form. Coagulation of goat’s milk with stirring way continually. After thick, the milk added with sugar and taste essences. One liter the goat’s milk mixed with 400 gram white sugar, but this addition can adjusted with custom-made. There are six taste essences are chocolate, ginger, sugar palm, coffee, strawberry, and vanilla. After giving of sugar and essences, then enter the refrigeration process with dwelled in room temperature. The refrigeration purpose to milk that has been coagulated were change into dry and stirred into big size powdered milk.

**D. Pulverization Milk**

Powdered milk be mashed and reduced the size through pulverization. The powdered milk use dischmill machine. The filter that have 60-80 measurement (0,5mm) (Muchtadi and Tien, 1997). In one hour of machine that used by CV. Sahabat Ternak could obtained or pulverize 30 kilogram of powdered milk. The powdered milk that had already finished would pass the packing process and ready to marketed for consumers.

Goat milk powder in CV. Sahabat Ternak could be said to be good. Because the whole process applying HACCP (Hazard Analysis Critical Control Point) and ISO 9001:2008. Moreover, all products that manufactured and marketed by CV. Sahabat Ternak have received halal certification from MUI (Majelis Ulama Indonesia) and BPOM (Badan Pengawas Obat dan Makanan), which
means that there are no chemicals or drugs contained in the processing of goat milk powder. So CV. Sahabat Ternak products are safe for consumption.

**Community Empowerment**

Kemirikebo Village located in ±7 kilometer from the peak of Merapi Mountain and in the highness ±1000 meter above the sea level. This geographical location make Kemirikebo Village potential in agriculture and farming because have a cold climate and loose soil. Generally gentlemen who have profession as a breeders, whereas ladies only keep in the house or mixed the zalacca farmed tree. This condition benefited to Mr. Amanta as CV. Sahabat Ternak owner who want to develop ladies in Kemirikebo Village to be more productive and have more benefit income to improving life through home industry of powdered goat’s milk process. The ladies who has developed as many as 10 people.

The empowerment intention have two points. First, release the shackles of poverty and backwardness. Second, stronger the bond of society in economic structure and power. Community empowerment is an effort to make the community self-sufficient through the realization of their potential abilities (Sumodiningrat, 1999). The community always involves two interrelated groups, namely the community as an empowered party and who care as an empowering party.

The empowerment carried out by Mr. Amanta as the owner of CV. Sahabat Ternak and who have empowered people, include giving knowledges about the goat’s milk, processing the goat’s milk into powdered milk, packaging and marketing. This development is carried out in stages through the process of learning by doing so the ladies understand all stages of the process of processing goat milk powdered. Until it reaches adoption stage and could be practiced directly in the milk processing works at CV. Sahabat Ternak. This empowerment in addition providing knowledge to the ladies also provide benefits in increasing income. Salaries earned by the ladies start from Rp 1.100.000 per month from Monday to Friday with 9 working hours everyday. With improving income, it feels help and there is improvement quality of life because it can fulfilling the needs for a better life and purchasing power.

**6. CONCLUSION**

The processing of goat milk powdered in Girikerto Village by Mr. Amanta as the owner of CV. Sahabat Ternak together with the community succeeded in increasing the milk stigma in the common people to be better. With the production of goat powdered milk with a variety of delicious and nutrient’s flavors are be loving by various ages. The community empowerment occurs through the provision of knowledge about the processing of powdered goat’s milk so that there are an improvement knowledges and informations, the ability of softskills. This has a positive impacts on economic improvement, namely increasing people's purchase power so that the quality of life of the community is more better.

**7. REFERENCES**


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