

Conference Paper

Learning Process of Dairy Farmer in Achieving Dairy Farming' Succeed (Case Study in KPBS Pangalengan and KSU Tandangsari West Java)

Lilis Nurlina, Unang Yunasaf, Marina Sulistyati, and Syahirul Alim

Staff of Animal Husbandry Faculty, University of Padjadjaran, Jalan Raya Bandung - Sumedang Km 21, 45362 West Java

Abstract

Research on the learning process of dairy farmers in achieving decent scale of livestock farming has been carried out in South Bandung Dairy Farmer Cooperative (Koperasi Peternak Bandung Selatan/KPBS) Pangalengan and Multi Purpose Cooperative (Koperasi Serba Usaha/KSU) Tandangsari. The purposes of this study were to: (1) analyze the learning process of dairy farmer in order to achieve business success; and (2) analyze the success indicators in dairy farming business according to farmer's perception. This research used case study with descriptive qualitative approach with 32 dairy farmers as informants. Data were analyzed descriptively by several stages namely reduction, categorization of data and conclusions. The results showed: dairy farmers who achieve success in their business is the farmer who has made the process of learning the truth, those who have been able to do active business in changing the behaviour of himself to be able to apply aspects of breeding, feeding and management as they should so that the dairy cattle business that manages has provided benefits and feasibility. The learning process through which the dairy farmers is the result of interaction or influence the motivation to learn intrinsic owned by farmers, with reinforcement from outside through training, mentoring and enrichment of others, thus becoming sedentary behaviour or patterned to respond appropriately to problems or the challenges faced in achieving business success. Indicators of successful dairy farming according to farmers were having: productive cow more than 7 cows, decent housing (permanent buildings), four-wheel vehicles, more land for grass planting and able to finance their children to study in university.

Keywords: Learning process, dairy cow farming'success, dairy farmers.

Corresponding Author:

Lilis Nurlina
 nurlina_lilis@yahoo.co.id

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1. Introduction

The development of animal husbandry sector especially dairy farming in Indonesia is always relating to the development of human (farmer) resources. In term of agricultural development'success, the human resources development in agricultural

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sector become mandatory to be done by all party involved in it [1]. Based on that, the existence of successful farmer is very important for developing both agricultural and animal husbandry sector. Dairy cattle farming if it managed professionally is believed to provide benefits not only to farmers but also to cooperatives (KPBS/KSU) as well as government. The development of dairy cattle farming in West Java has been able to survive during the prolonged economic crisis. Nevertheless, to develop the dairy farming, farmers faced some constraints both internal aspects concerning technical problems such as small landholding size and low of farmer resource quality and the external aspects concerning government policy and institutional organizations that guarantee incentives for their production. Facing the era of free market, dairy farming requires various development strategies in order to be exist and make contribution to dairy development. Farmer must change their orientation from comparative advantage towards competitive advantage that based on the principles of efficiency-driven innovation business by establishing the resources of farmers who are educated. Farmer resource development is essentially an attempt to achieve better living standards. Currently, the presence of dairy farmers who succeed, especially who have more than 10 dairy cows still relatively limited in number. In view of learning process, the successful dairy farmers can be learned to be replicated to other farmer so that more dairy farmer getting success. Learning process in dairy farmer can be meaned as a process of continuous improvement within the individual, organization or institution in a way to maintain or improve objectively in achieving the set goals. Assessment of the learning process of dairy farmer who success in their farming indicated that they have a need of Achievement (n/Ach) better than ordinary farmers. So the successful farmers can be used as a model / figures in dairy cattle business. This study aims to 1) determine how the learning process (learning undertaken) dairy farmers in achieving business success; and (2) analyze the success indicators in dairy farming according to farmer's perception.

2. Materials and Method

The method used in this study is a case study that emphasizes the special case of the object of analysis [2]. Strategy case study is appropriate for a study relating to "how" and "why" and will be directed to a series of contemporary events, because the researchers only have very little opportunities or have no chance at all to control the event.

The amount of dairy farmers as a unit of analysis (the informant) as many as 32 people, 20 farmers are members of KPBS Pangalengan and the rest (12) are member of KSU Tandangsari. The variables were observed in this study include:

1. Learning process, measured from the cyclical process of:

- a. Concrete Experience: dairy farmer (visualization of phenomena) which have adopted the innovation related to breeding, feeding and management of dairy cattle business,
 - b. Reflection on the discussion with or search information with others (extension, the chairman of the group or groups that have such influence cooperative management)
 - c. Reconceptualization (Amendment condition/clarification pattern)
 - d. Action (organizing experiments)
2. Success indicators in Dairy Farming, measured in terms of the perception of dairy farmers
Data analysis was carried out through the following phases: data reduction, categorization data, and conclusions.

3. Result and Discussion

Human learning may occur as part of education, personal development, experience or training [3, 4]. It may be goal-oriented and may be aided by motivation, so do with the dairy farmers. Learning on dairy farmer may occur consciously or unconsciously. Learning brings some changes in the way of their acting, think and/or feel about themselves, other people and the world around them [5, 6]. Such changes may be permanent or temporary depending on their own perceptions of the importance and relevance of the gained knowledge. Basically, knowledge can be acquired and skill-sets developed anywhere—learning is unavoidable and happens all the time. Learning Process in farmer involved:

1. Adoption of Innovation which is temporary
2. Reflection/Confirmation information/innovation/Decisions
3. Cognitive Changes in the new (Clarification patterns of innovation clarification)
4. Organizing experience

4. Learning Process of Successful Dairy Farmer

4.1. Adoption of Innovation

Coffield et al. [7] and Lewis [6] said that learning is an internal process that includes memory, retention, information processing, emotion and other factors based on previous experiences. The learning process can take place properly when farmers participate actively involved in there. Extension's materials are delivered to the material programmed or directly related to the farmer problems.

KSU Tandangsari already implementing a systematic pattern of application of the learning process to the members, to further improve efficiency in terms of time and cost. Every three months the group manage to obtain guidance from the cooperative to be delivered to members based on problems in their respective groups. If it cannot be done by the group, management will be performed by the cooperative extension. KPBS extension activities in regularly held every three months or when there are problem(s) that occurs in breeder. Extension materials delivered include procedures for maintaining the dairy cows, milk quality and cage systems. This indicates that the learning process on both the cooperative have taken place in a systematic and programmed. KSU Tandangsari conducts a comparative study in the form of coaching and training. The comparative study was followed by the group management and some members. Time of implementation is done once a year but can be changed in accordance with available funds, and sometimes there is a coaching program of the Department of Agriculture in the form of a comparative study to dairy farmers through cooperatives.

4.2. Reflection of Dairy Farmer To Innovation

Reflection process of farmers can see from the adoption of innovation which take from the training that conducted by the cooperative such as leadership training, training of cutting nails and cutting the horns. While training from Department of Agriculture's change agent like the preservation of green feed waste milk processing and dairy cattle business. Counselling success relies heavily on learning process. The dairy farming face to the challenges particularly for small scale dairy farmer is to be "professional", who carry out their activities have already oriented to achieve feasibility, so that businesses livestock give benefit and productivity of dairy cattle is high. This typology farmers usually cannot be separated from its need for achievement (n/Ach) and their belief to science and technology are high.

The new cognitive changes in the level of dairy farmer's competency in operating their business can be seen from the knowledge and skills according to breeding, feeding and management system. The outcomes from dairy farmer learning can be seen from the competency on zootechnic aspects and business management's aspect. It

was the same with findings from Nurlina [8] who says that dairy farmer competence can be seen from application of breeding and selection; feeding as needed for the production and basal metabolism of dairy cattle; disease control; livestock raising; caging; post-harvest handling and marketing. The competence of dairy farmer is obtained from their experience in running a business, their education level and some training which they were followed. It will be internally associated with the growth of motivation and desire of farmers to always learn or their desire to improve the capacity of human beings themselves as learners. While externally it will be associated with a push from the outside, especially from the extension officials in facilitating farmers such as to achieve the learning activities as well as possible.

After the innovations were implemented and were evaluated both from technical aspects (ease), economic (profit), and social (fit in), then the process of repetition in its application to internalized in breeding patterns and decision making in business. In addition, the amplifier (external support) is a price ratio of concentrate price to milk price that give benefit to farmers to drive the sustainability of dairy cattle business. The majority informant (58.33%) of KPBS' members who has experience raising more than 30 years shows that the technical breeding undertaken until now is the result of a learning process derived from extension, experience and continue to receive enrichment through training or comparative studies, until there is a cognitive change (knowledge raising) or clarifying patterns in the farm to bring action in the form of technical breeding that leads to the constancy with livestock ownership patterns between 7-26 productive cows with an average of 13 cows productive. Scale livestock ownership of at least 7 productive cows with milk production rate of 15 litres/head/day has reached the scale of a viable business.

The informant dairy farmer, KPBS members have conducted the selection of calf based on the body shape of cows and milk production, which, when compared with the opinion of Makin [8], is still to be seen from pedigree descent and animal health. In terms of feeding, all informants using elephant grass as a source of forage while to concentrate, informants provide additional concentrates in the form of cassava, pellets, pulp, powder and cake, and only 1 (8.33%), which uses premium concentrate. It is intended to maintain milk production that if you only use "Regular concentrate"(RC), milk production is not optimal. The farmer is able to detect disease affecting cattle, but still ask for help veterinarians if the livestock disease that is considered dangerous. Most informants (91.67%) is still using relatively traditional cage construction, and only one person who got help Cages Demo Farm, which received assistance from the Dutch Government. The farmers also observe hygiene during milking process.

The informants from KPBS also have noticed the business ethics by utilizing resources/factors of production are owned and comply with specific ethical norm, ie, as a member KPBS sell the entire milk production to the cooperative. Similarly,

informant dairy farmers from KSU Tandangsari have the character of an entrepreneur. It is prioritizing process that he did in completing the task, whether run efficiently or not. Task-oriented and self-breeder are analyzed from the results of the hard work and initiative. Dairy farmers are very serious in doing all the farming activities. Dairy farmer developed full spirit and unyielding to get the best results. In the dry season when grass is hard to get, farmers often go to quite far mountain to look for grass. Moreover, they have to hire a car pick up in order to bring the grass in high quantity. Dairy farmers strive to meet all the cows needed in order to stay alive and producing well. At KSU Tandangsari, a dairy farmer who categorized to be innovators has openness to innovation and seeks to observe all its business activities in order to remain efficient. He became a leader among farmers, has served in Supervisory Board and now serve as coordinator of the Cooperative Enterprises, and even he was able to influence 60 dairy farmers to achieve livestock ownership at least 7 productive cows. Openness to the renewal of other informants breeder not only farming but concerning aspects of business management, although such figures are not yet fully breeders have noticed the efficiency and productivity of livestock. According to Rogers [10], the innovator is a group of people who are brave and ready to try new things. Usually these people are those who have a dynamic lifestyle in urban areas and have a lot of friends or relations.

4.3. New Cognition Changes

Increased adoption of dairy cattle breeding technology as part of resource improvement dairy farmers can be reached by outreach activities, either in the form of training, pilot project and demonstration programs or other engineering approaches [11]. Dairy farmers who include innovators indicate that the process of learning occur when information/technology derived from the extension then through learning by doing or learning process (have more experience), they become "advanced dairy farmer figure". The farmers who have innovator character and early adopter is a companion of extension service once strategic objectives of the various programs both from cooperatives and official agencies (Department of Animal Husbandry, Department of Cooperative and Small Business), because they are more open than other farmers and did not suspicious to other party, logic thinking on their way, and have the courage to try something bold or to bear a risk. This condition is motivated by more advanced level of social life and better economic life.

For other informants are not a class of innovators and early adopters, or position in a group just as members, to see the process of livestock ownership starting with 1 or 2 heads into possession over 7 cows productive within a minimum of 13 years

and a maximum of 35 years, indicating that the process of learning can master the natural/existing resources as well as control of its future.

The influence of the form of the transformation of information, especially from farmers in KSU Tandangsari figures or results of counselling and training Demo-Farm in KPBS bit much to provide knowledge (cognition) is new to other dairy farmers. New knowledge is transmitted by figures dairy farmer in KSU Tandangsari especially in the case of replacement stock to achieve business efficiency, while for farmers in KPBS, training demo-farm provide new knowledge in the form of construction of the cage modern system, which further facilitate the management caging that have noticed environmental sanitation.

4.4. Organizing Experience

The Factors that underlie to be successful including motivation, while the initiative is the basic capital in improving the individual's own motivation. Motivation is a driving force for people to contribute optimally in supporting the success of the organization in which he is ruled by members of the organization's success as well as personal goals [12]. Most farmers chose dairy cattle business because of the comparative advantage of the dairy cattle business venture than sheep or cattle or agricultural businesses in the countryside. It can be seen from the daily income from milk and annual revenues of calves (acting as savings). The motivation of farmers in achieving business success lies in his desire to meet the needs optimally.

The process of achieving business scale from small to large, requires farmers to have a mentally strong business, like not easy to complain, continue to motivate him to continue to increase the scale of livestock ownership, production and quality of milk and grasslands, not fatalist (not easy to feel like a failure after death livestock). KSU Tandangsari dairy farmer who has about 30 cows, how to increase the population in addition to applying for credit to cooperatives or cooperative partnership with banks, also obtained from the partnership is (for results calf).

At principle, dairy farmer must try to control farm business through efforts to reduce production costs, increase the price of milk and increase milk production. In addition, some farmers attempt to diversify its business, like fattening bulls, utilize farm waste, and increase the ownership of lactating cows that farm business into a core business. Dairy farm business can succeed is the availability of capital, market stability, the right size in operation as extensive farm, the number of cows, the number of workers, the amount of milk produced [13]. Besides that, it should be noted also suitability of soil, water and land use, cattle used to be high yielding, good control over expenses, the accuracy of the feeding, the efficient use of labor, and the application of management carefully.

Creativity can be built by the farmers themselves or influence from outside. KPBS informant can manage their experience, so it becomes a guideline/specific pattern in achieving business success, namely: (1) not sell the female calf (especially from parents of high milk production); (2) maintain the quality of the feed so that the milk production and quality can be maintained and even improved; (3) take into account the cost of production and business efficiency; (4) has a good side business-related businesses such as dairy cattle buying and selling cattle, additional concentrate business (tofu) or stalls; (5) learning from other dairy farmers who are considered successful; (5) to treat the cows well as needed, due to good maintenance, increased livestock productivity; (6) success will be achieved if the farmer has discipline.

4.5. Business Success

Business success is the achievement of the targets of farmer hard work. Dairy farmers can be said to be successful in running their business while its competence increases, run the business ethics that does not harm others and to improve productivity in the livestock business. Competence occurs due to the accumulation of knowledge and experience in the field, so as to generate innovation in accordance with the demands of the times [14]. Dairy farmers will have achievement motivation as a form of morale and desire to succeed. The dairy farmers who have high morale can be seen from self discipline in their business and tenacity in the face of problems. They have some indicators of dairy cattle business success and how to achieve it. Indicator of business success according to dairy farmer perception were good competence on zootechnic, business ethics and productivity improvement, raising assets and can send their children to high school degree as can as possible to gain better living than their parents. Most informants (41.67%) have been able to send their children to a high degree.

The productivity of each farmer varies according to capacity and the individual interest. The productivity of dairy farmers can be seen from the addition of the cattle population or scale of the current ownership, milk production per head, and the quality of the milk is achieved by a cow. Milk quality can be seen from the price of milk received by each farmer where the majority of informants in KPBS (40%) and 66.7% in KSU Tandangsari has lactating cows 10-20 tail. Dairy farmers who fall into this category indicate that he already felt successful. Meanwhile, some informants in KPBS (10.00%) and at KSU 8% have over 20 head of cattle.

Most informants (50%) have high levels of milk production between 10 to 14 litres. Dairy farmers like this has to be said both in the amount of milk production. Further, the other informants (41.67%) have high levels of milk production above 14 litres. Breeders like this have been relatively successful in raising dairy cattle when viewed

TABLE 1: The Population of Productive Dairy Cow of KPBS and KSU Tandangsari Informants Dairy Farmer.

Population (tail)	Amount			
	Person		(%)	
	KPBS	KSU Tandangsari	KPBS	KSU Tandangsari
7 – 9	10	9	50,00	75,00
10 – 12	4	1	20,00	8,33
> 12	6	2	30,00	16,67
Total	20	12	100,00	100,00

from milk production. However, there are also informants (8.33%) were only produce an average of less than 10 litres per cow per day.

Business success of dairy farmers in achieving a viable business scale, related to an improvements continuously in order to work more effectively and efficiently. Such as feeding the animals continue to be observed by farmers in terms of the amount of feed that is most optimal for the production of milk produced. Feed is the most attention for every dairy farmer especially concentrates, because without the use of concentrate, milk production is very noticeable decline.

4.6. Openness To Updates

All informants using additional feed concentrates for cattle was maintained. Most informants (83.33%) using 3 kinds of mixed concentrate are Regular Concentrate (RC), pellets, cassava or RC, tofu, and a powder cake. Another informant (16.67%) only uses two kinds of mixed concentrate is RC and cassava.

Most informants (83.33%) did not dare take credit cows of cooperative collaboration with bank, because they are not sure it can pay the loan. They just wait to the birth of the calf from a cow that was maintained. Only a small portion of informants (16.67%) are willing to take credit cows.

4.7. Belief in Science and Technology

The evidence that they have adopted the innovation and trust the science, it appears from the advantages compared to other dairy farmers, both from the cattle population, land tenure, milk production and ultimately the level of income they earn is more than enough. In addition to economic indicators, the social aspect they have advantages in terms of gain the trust of the cooperative either as a group administrator, coordinator of district level farmers, Board of Supervisors.

This is in line with Yunasaf et.al. [15], which found that there are some dairy farmers who have a tendency to need of achievement is better than other farmers. In addition

to cattle ownership levels are already above average. The results of Winaryanto, et al. [16] showed that dairy farmers are quite advanced or professional and an oriented motive is better achievement than most other dairy farmer. Furthermore, if viewed from a social phenomenon, then the farmer will have a distinctive social characteristics, namely as individuals classified as part of modern society, which more tolerant to change, and is more cosmopolitan. Practically dairy farmers leading professionals among others, will be characterized by: (1) the level of ownership cow dairy an average of 10 head or more, (2) knowledge in the techniques of raising sufficient, and (3) have a view of the economical over the dairy cattle business. Informants dairy farmers who believe in science and technology, not only implementing breeding with better technical, but it is already implementing business management (economic aspects of dairy cattle business).

5. Conclusion

Dairy farmers who achieve success in their business is the farmer who has made the process of learning the truth, those who have been able to do active business in changing the behavior of himself to be able to apply aspects of breeding, feeding and management as they should so that the dairy cattle business that manages has provided benefits and feasibility.

The learning process through which the dairy farmers is the result of interaction or influence the motivation to learn owned by farmers, with reinforcement from outside through training, mentoring and enrichment of others, thus becoming sedentary behaviour or patterned to respond appropriately to problems or the challenges faced in achieving business success.

In order to encourage the emergence of dairy farmers who belong forward or successful in his efforts, the necessary efforts so that dairy farmers have motivation to learn better through the development of learning interaction means so as to make the process of learning in order to achieve business success. Indicators of successful dairy farming according to farmers were having: productive cow more than 7 cows, decent housing (permanent buildings), four-wheel vehicles, more land for grass planting and able to finance their children to study in university.

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