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A STUDY OF WAKYU BEEF CATTLE FARMING CONDITIONS OF COMMUNITIES IN NAKORNCHAIBURIN PROVINCE GROUP.

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ABSTRACT

This research aimed to study the fundamental information on social aspects, economic aspects, farming conditions, and problems in raising cattle of Wagyu breed in community enterprises in Nakornchaiburin province group. The samples used in the study were 11 community enterprises that raised Wagyu cattle. The researchers used questionnaires to collect information. The statistics used for data analysis were frequency, percentage, mean, and standard deviation.

The research results showed that most of the farmers were male, with a percentage of 68.55%, while 31.50% of the farmers were female. The average age of the farmer was 55.89 years old. Most farmers had a primary education level (65.63%) with average family members of 4.04 people. Almost all of the farmers, 98.67%, grew rice as their main occupation, which has an average tendency of raising Wagyu cattle was at 4.09. The average income of the farmers was 111,920.12 baht/year. An average agricultural area was 10.18 rai. Most farmers raised and fattened cattle of Wagyu breed to be ready for a sale (81.92%), using the caged farming method (80.27%). All farmers (100%) encountered high food costs and cattle disease issues.

Keywords: *Beef Cattle, Wagyu, Farming Conditions, Community Enterprise, Nakhonchaiburin*

1. INTRODUCTION

Over the past five years, the overall production in the livestock sector has grown steadily in accordance with the economic expansion, especially in important economic animals such as broilers, swine, hens, beef cattle, and dairy cattle (Source: Strategy of the Department of Livestock Development 2018-2022). A statistic from the Department of Livestock Development shows that from 2014 to 2020, the number of farmers in Thailand raising beef cattle has increased from 745,408 to 909,324, an increase of 21.99 percent. Most of the farmers reside in the Northeast, 557,658 farmers, accounting for 61.33 percent of the whole farmer population. There is a population of 3,056,486 beef cattle as a result of industrial development in recent years. Farmers who used to use animal labor in their careers have turned to machinery instead, therefore raising cattle for labor has become less and less relevant, and raising cattle for sale as beef has gained more

popularity among farmers Thavorn Chimliang & Phornchai Lueangwaree (2016),

The Northeastern region has a total area of 105,533,963 rai, most of which are agricultural areas with an area of 74,502,057 rai. Most of the area is used for growing rice and field crops Land Development Department (2019), In the past five years, farmers have suffered losses due to flooding in agricultural areas, causing significant damage to rice fields and crops. Farmers then came up with a solution by turning cattle that had previously been raised for rice growing into beef cattle, by breeding and fattening them for quality beef to generate additional income. Along with an increasing demand for beef cattle, it is a suitable side job for farmers who want to earn extra income besides farming.

The beef cattle market can be divided into three types:

1) the high-end market is a market that requires good quality beef. The consumers are the high-income groups such as restaurants, hotels, restaurants that focus on soft beef that is well-marbled.

2) the middle market is a market that needs cattle around 3 - 4 months old. Most consumers in this market are supermarkets and restaurants. The majority of them do not prioritize the marble of the beef.

And 3) low-end market is a market for local beef cattle, aging cattle, and involuntarily-culled cattle. Most of the consumers are fresh markets or producers of processed food Thelengsak Ankuraseranee (2017),

Therefore, the Wagyu cattle is a suitable breed for research, because of its soft and well-marbled beef and its high demand in the market.

The researcher, therefore, was interested to study the conditions in which cattle of Wagyu breed was raised as well as the economic and social conditions of farmers who raised this specific type of cattle to find ways to develop Wagyu beef cattle breeds to be more suitable for local conditions..

2. EXPERIMENT

2.1 Experiment objectives

To study the fundamental information on social aspects, economic aspects, farming conditions, of community enterprises in Nakornchaiburin province group and to identify problems in raising cattle of Wagyu breed

2.2 Research method

This research is a study of the fundamental information on social aspects, economic aspects, farming conditions, as well as problems and obstacles in raising cattle of the Wagyu breed of community enterprises in the Nakhonchai Burin province group since July 2020.

The study population used in the research is 11 community enterprises that raise Wagyu beef cattle in the Nakhonchaiburin province group. The study used a structured questionnaire consisting of 3 parts: 1) General information on social and economic aspects of Wagyu cattle farmers in selected community enterprises 2) Wagyu beef raising conditions 3) Problems and obstacles in raising Wagyu beef cattle

3. ANALYSIS

3.1 Variable

1. Independent variable, including basic social data, economic aspects of community enterprises that raise Wagyu beef cattle in the Nakhonchai Burin group

2. Dependent variable, including conditions of raising Wagyu cattle of community enterprises in Nakornchai Burin province group, the breeding, the feeding, the housing of cattle, and disease control and prevention

3.2 Research instruments The researchers used semi-structured interviews, with open- and closed-ended questions that were examined using a triangulation method to verify the data source. For instance, time source means if time changes, will data still be the same? Location source means if location changes, will data still be the same? And person source means if the person providing information changes, will the information still be the same? Kannikar Saithep, et al (2020),

3.3 Data analysis was performed using descriptive statistic models to analyze fundamental data on social, economic, and cattle farming conditions which included frequency, percentage, mean, and standard deviation. The descriptive format was used in the analysis of textual or qualitative data.

4. RESULTS AND DISCUSSION

4.1 Basic social and economic information: Most of the farmers were male, with 68.55 percent, while 31.50 percent were female. The average age of farmers was 55.89 years, which can be detailed as follows: age range 38 - 44 years (12.33%), age range 45 - 51 years (24.38%), age range 52 - 58 years (21.10%), age range 59 - 65 years. (24.66%) and age range 66 - 72 years (17.53%). Most Farmers (65.63%) had primary education, while 9.38% had lower secondary; 9.38% had high school / vocational education, and 15.63 percent had higher than high school / vocational certificate. Farmers had an average family size of 4.04, which can be detailed as follows, 1 - 3 family size (39.45%), family size 4 - 5 (32.88%), and family size of more than 5 persons (27.67%). The main occupations of

farmers were farming (98.67%), followed by civil servants (2.81%) and trading (2.37%). Farmers had an average of 4.09 years of occupation in Wagyu beef cattle, which can be detailed as follows, 1 to 3-year experience (39.73%), 3 to 5-year experience (30.68%), and more than 5 years of experience (29.59%). Farmers have an average income of 111,920.12 baht / year, which can be detailed as follows, income ranges less than 50,000 baht / year (12.60 percent), income range 50,000 - 100,000 baht / year (27.40 percent), income range greater than 100,000 - 150,000 baht / year (35.34%) and income range greater than 150,000 baht / year (24.66%). Most farmers have an average agricultural land area of 10.18 rai: with those who had less than 5 rai (26.03%), those who possessed land in the range of 6-10 rai (29.32%) range, 11-15 rai (22.19%) range and those who have more than 15 rai of land (22.47%).

4.2 The condition of raising cattle of Wagyu breed

The purpose of raising: The majority of farmers raised Wagyu beef cattle for fattening purposes (81.92%), while 18.08% raised the cattle for the production of offspring.

Farm management : Most of the farmers used the caged farming method (80.27%) and only just under twenty percent used the free-roaming (19.72%) methods. An average of 182.5 farms had a logging system. 312 farms kept records of their farming process (85.48 percent), while 53 farms (14.52 percent) did not. Most farmers planted grass for their use, with an average of 100% and an average area of 4.62 rai/farm. The feeding included serving only straw (dry grass, fiber diet) (15.07%) and serving straw/fiber diet along with protein diet (84.93%). All farms reserved food for the dry season (100%).

Goal : Most farmers intended to raise more Wagyu beef cattle in the future (98.90%), while one percent of all farmers were uncertain (1.10%) and none would not want to continue raising the cattle (0%).

Volume : Most of the farmers raised an average of 10.31 Wagyu cattle consisting of an average of 7.85 cows/farm, an average of 0.46 calves/farm, an average of 1.99 young male calves/farm.

Breeding, disease, and sanitation : The majority of the farmers used artificial insemination (89.86%) and only 7.40% used natural breeding (bulls). Most of the farmers used expert-performed artificial insemination (96.71%), while 3.29% did it themselves. Most of the farmers had their cattle vaccinated against hoof-and-mouth disease 3 times/year/farm, as well as, against Hemorrhagic Septicemia (swelling neck disease in local term) 3 times/year/farm. Most of the farmers vaccinated their cattle themselves (80.36%), while the small only used an expert-performed vaccination (19.64%). The mean of in-farm disease examination was 2 times/year/farm and the mean of deworming was 3 times/year/farm.

4.3 Problems related to raising cattle of Wagyu breed

Raising Wagyu beef cattle are a breed that has a soft texture and a lot of fat mixed in the beef. However, to raise cattle to meet the required fat content according to the market demand requires high feeding costs because

of the large amount of high-quality food required. Therefore, it is a problem for farmers who have to bear this cost until the day they sell cattle.

Breeding, Disease, and Sanitation Most farmers have to hire an expert in livestock for artificial insemination. Besides, the high-quality bull semen often comes with a high price. The prevention of the infection of the hoof-mouth disease is difficult because farmers often let their beef cattle roam public pastures, causing the infection to spread even after vaccination.

4.4 Environment and Potential (SWOT Analysis)

Strength - Wagyu beef cattle gain high demand in the market, because it has a soft texture and a lot of fat, thus meeting consumers' criteria. It is also similar in quality to imported beef, but available at a lower price, making Wagyu beef cattle a strong competitor against other alternatives in the market.

Weaknesses - Wagyu beef cattle, during the postpartum to weaning period, are smaller than Brahman or Angus cattle of the same age. Thus, the trading of calves in the market is less attractive to those who want to raise cattle to be big enough for sale as soon as possible.

Opportunities - Most Wagyu cattle have a market that accepts the pre-sale agreement, thus providing a more promising market opportunity than other cattle breeds.

Threats - The spread of various diseases in cattle in Thailand is the main threat to farmers. Even after having vaccinated against the disease, such as hoof and foot disease, and Hemorrhagic Septicemia (swelling neck disease in local term), thus causing consumers to worry about the quality of the beef.

5. CONCLUSIONS

Wagyu cattle farmers in the Nakornchaiburin province group had an average age of 55.89 years, were mostly male, and had primary education. Their family size was an average of 4.04 people with an average income of 111,920.12 baht/year. The majority of cattle was raised cattle the caged farming method. Farmers mainly focused on breeding and fattening to a certain weight and then selling. Farmers have an in-farm logging system of farm management in terms of feeding, breeds, costs, and medicine or vaccination. Regarding animal sanitation and vaccination, professionals were employed to do tasks. Moreover, the farmers had to bear high food costs to achieve the meat quality required by the market. There was also a problem with the spread of hoof-mouth disease that was becoming more and more common among farms in the region.

SUGGESTIONS FOR FURTHER RESEARCH

This research can be used to continue finding solutions to problems such as high production cost and epidemic in cattle etc.

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PHOTOS AND INFORMATION



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