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Abstract

The purpose of this research was to study the costs, reward, profit and the high efficiency products, and the method of production and product management, the problem which had effected to the success of Nile Tilapia cage cultures, guide for solving problem, including the factor which has effected to decision on Nile Tilapia cage cultures in Khon Kaen. This was also to study for guiding to plan the water resources application, to study and do understand before investment, and developing Nile Tilapia cage cultures in the future as well.

The sample group consisting of 30 men were obtained from Nile Tilapia cage cultures breeders in the area of NamPhong district, PraYauen district Khon Kaen province. It was divided into 3 groups: those who has small farm of 13 men (the size is less or 4 floating baskets) and those who has medium farm of 10 men (the size is 5-8 floating baskets), and those who large farm of 7 men (the size is more or 9 floating baskets).

The result of this study showed that both the fry nursery and non-nursery of small farm had the net profits even 29,057.34 and 11,452.71 baht per floating basket per group. In the same case of the above-mentioned, there were also the net profits of medium farm even 17,141.67 and 14,537.93 baht per floating basket per group. For the large farm, it had only fry nursery which was 15,951.26 baht per floating basket per group of the net profit.

Results of an algebraic equation analysis by quadratic function method regarding Nile Tilapia production found that if we considered the first breeder group who used 2 formula of fish food indicated that fry breeds and fish food were related with the quantity of Nile Tilapia products was significant differences at 0.05 level. This both factors will be the one of production factor to gain profit. For the second breeder group who used only one formula of fish food indicated that fry breeds and fish food were no correlation with products in significant differences at 0.05 level. Therefore, we analyzed to find out the best way for gaining profit of the first group. It found that they should be use the production factor X_1 stand for 138.80 of the amount of fry breeds per square metre and another factor stood still. This would be gain profit about 6,979.42 – TFC baht per square metre. If they used factor X_2

stand for 18.953 Kilogram per square metre of the quantity of fish food in formula 1 while the another one stood still. This would be also gain profit about 5,040.10 – TFC baht per square metre.

The hypotheses test that the difference between the means of the first breeders group with 2 formula and the breeders with 1 formula would analyzed 2 groups of population variables were not equal value ($\sigma^2=\sigma^2$) and equal value. The results indicate that the 1st group has even the means of the second one with the same food which were significant at 0.05 level.

This study of the production on Nile Tilapia cage cultures management found that there was high risk in the public water resources for all farms because there was no spare pond in case of immediate water pollution. This caused to lose their Nile Tilapia. All farmers used the same floating basket in each group. Most of them did not have any plan for floating basket using.

It was also indicated that all farmers would like to sell their own products at farm. Most of the products in the medium and large farm were sold wholesale to dealer at their own farm. Their average cost was lower than small farm. Because of the products in small farm was retail to the consumer, they gained the profit which is better than sold to the dealer. For size selecting of Nile Tilapia, all farmers selected the sizable fish which has the average weight more than 0.59 kilogram per one fish because the consumer need to eat the big fish.

Major recommendations for promotion Nile Tilapia cage cultures based on the finding of this study were: (1) the government sector should support them to set up the cooperative society for Nile Tilapia breeder in order to ask for credit from the bank and do bargaining power with the trader, (2) the government sector should assist to decrease the costs of production such as giving the knowledge of blended food instead processed food which is more helpful to reduce their costs.