

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

Department of Economics



BACHELOR THESIS SUMMARY

**ECONOMIC ANALYSIS OF SMALL
DAIRY FARM IN SUMAVA**

**EKONOMICKÁ ANALÝZA MALÉ
MLÉČNÉ FARMY NA ŠUMAVĚ**

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Abstract

This bachelor thesis looks at the economics analysis of a small dairy farm in Šumava (the Bohemian Forrest) in the Czech Republic. In order to be most economically efficient at producing milk, one must have Holstein cows, the best milk producers in the world. With global milk production, global milk consumption (including global milk consumption per capita) steadily increasing, it is no wonder that the future of dairy farming looks positive. Along with the global population increasing and agricultural area decreasing, potential profitability is favorable. Even with European Union milk quotas coming to an end, they should not affect milk sales in Šumava because milk is an inelastic commodity and cannot be directly replaced. Total revenue of the farm for the year 2014 is 2,037,744 CZK. Total cost is 1,568,248 CZK, which leaves a profit of 469,496 CZK for 2014. Costs can be minimized by changing feed supplements suppliers, stopping the unnecessary idling of tractors, and by pre-cooling milk with tap water. Revenue can be maximized by increasing milk revenue and providing cows with artificial light in order to produce more milk, therefore maximizing profit.

Keywords: milk, small dairy farm, cost minimization, revenue maximization, profit maximization

1. Introduction

Milk is what makes the world go round, more specifically: cow's milk. Genuine cow milk must be produced the old-fashioned way, through the mammary glands of female cattle only after they have given birth to their first calf. On a small dairy farm in the Bohemian Forrest, milk is harnessed through blood, sweat, and tears. Also incorporated are several millions of Czech Crowns worth of machinery, structures, and farmland. Lastly, the whole farming operation would not be possible without the seemingly endless hours and never ending financial investments that the owners put in to the business.

In any privately held company, but especially on a dairy farm of such small magnitude, the owner can either make it or break it. There is a fine line between having a profit of 100,000 CZK; and having a loss of 100,000 CZK. All it takes is a few mistakes and this almost quarter million Czech Crown profit difference quickly becomes a reality.

Although it may seem obvious, it is important to mention and remember that this business deals with livestock on a day-to-day basis. This means dealing with *living, breathing* animals that are incapable of communicating what they need or what is wrong with them. This is where the invaluable knowledge of the farmer comes in to play, and is often the deciding factor in how successful the farm is. This thesis was formulated in order to do a full in-depth economic analysis to determine all costs and revenue in order to gain a better understanding of the farm's profit, and how to maximize it. This will not be a simple feat, given that the owner has been continuously attempting and fine-tuning the same task for over 20 years. This is much more than just merely summarizing the business and simply saying that it should use less fuel to reduce costs, or that it should produce more milk to increase revenue. This is making substantial discoveries and paving the road to be not only a more successful business, but to become a more profitable business at that.

2. Thesis Objectives and Methodology

2.1. Objectives

The objective of this thesis is to do a complete economical breakdown of a small, privately owned and operated dairy farm in the Bohemian Forrest in the Czech Republic. Looking at milk as an inelastic commodity and considering the growing population, the future business outlook will be evaluated in order to assess potential profitability in the forthcoming years. Also crucial to take into account and understand are the milk quota regulations in the European Union. It is essential to analyze the top producers in the European Union that are being limited by these quotas, and predict what will happen to the milk industry within the Czech Republic after the quotas are lifted. Nonetheless, the ultimate goal is to examine how to cut farming costs and maximize milk production and milk quality, in order maximize profits as much as possible.

2.2. Methodology

The methodology of this thesis consists of calculating and examining all costs and all revenue in order to gain understanding of which costs and revenue are responsible for affecting final profit. After it is determined which specific costs and revenue have the highest share of total costs and total revenue, it will become obvious which costs should be concentrated on to attempt to cut them down, and oppositely; which sources of revenue can possibly be increased. This will be executed by identifying which farming practices can be reduced, replaced by a less expensive alternative, or even discarded all together if they are uneconomical. Potential cost reduction and profit expansion will be carried out by conducting experiments and creating alternate cost and revenue scenarios. Finally; profit per hectare, per cow, and per liter of milk will be calculated as to examine *how* and *why* profit changes when one or more of these variables also changes.

5. Conclusion

In conclusion, a small dairy farm in Sumava is a profitable, successful, growing young farm, fully capable of sustaining itself given current and past conditions. With a total revenue of 2,077,744 CZK and total cost of 1,568,248 CZK, it left a total profit of 469,496 CZK for the year 2014.

With actions such as changing feed supplements suppliers, stopping the unnecessary idling of tractors, and by pre-cooling milk with tap water; the farm is able to cut expenses. With innovations such as increasing milk revenue and providing cows with artificial light in order to produce more milk, the farm can maximize revenue, and therefore profit as well.

With global milk production, global milk consumption, and global population all increasing, the future outlook of dairy farming looks positive. Although it is unknown what exact threat if any, the end of the European Union's milk quotas will present, there will always be a demand for milk, as it is an inelastic commodity.

Milk will always be a one of a kind, irreplaceable beverage and necessity that is consumed all over the world. Even if and when there is an alternative, it will never be a direct replacement.

6. References

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