

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Bachelor Thesis

BUSINESS PLAN - A BEE FARM

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

BACHELOR THESIS ASSIGNMENT

Alexey Lukyanov

Business Administration

Thesis title

BUSINESS PLAN – A BEE FARM

Objectives of thesis

The main aim of the thesis is to formulate a business plan in the establishment and development of the bee farm.

Methodology

Model of business plan is based on theoretical knowledge and processed analysis (SWOT) and the selection of appropriate strategies to satisfy the needs of customers and provide added value for the owner. In thesis will be used methods of financial analysis, methods of measurement of economic efficiency of investments (Internal Rate of Return, Payback Period, and Net Present Value) and cost calculation models.

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40 – 60 pages

Keywords

Business plan, Business activities, Bee farm , Analysis, Costs, Revenue

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Declaration

I declare that I have worked on my bachelor thesis titled "BUSINESS PLAN - A BEE FARM" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 13.3.2017

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BUSINESS PLAN - VČELÍ FARMA

Souhrn

Tato bakalářské práce je zaměřena na vytvoření a zavedení podnikatelského plánu pro budoucí včelí farmu v České republice v městě Praze z podnikatelského hlediska.

V teoretické kapitole základě vědecké literatury byly definovány základní pojmy související s podnikatelem, podnikáním a právní formy podnikání v České republice.

V praktické kapitole byl zaveden analýzu trhu, SWOT analýzu a strukturu podnikatelského plánu a také všechny výpočty s pesimistické, neutrálních a optimistické varianty. Základní aspekty nadace, výroby a financování podniku byly analyzovány v práci.

Závěr bakalářské práce představuje stručnou analýzu výsledků a výsledky jejího hospodaření z podnikatelského záměru.

Klíčová slova: Podnikatelský plán, podnikatelské činnosti, Včelí farma, analýza, náklady, tržby

BUSINESS PLAN – A BEE FARM

Summary

This bachelor thesis is focused on creating and introducing the business plan for the future bee farm in the Czech republic in Prague city from the entrepreneur point of view.

In the theoretical chapter on basis of scientific literature were defined the basic concepts related to entrepreneurs, business and legal forms of business in the Czech Republic.

In the practical chapter it was introduced a market analysis, a SWOT analysis and a business plan structure and also all calculations with pessimistic, neutral and optimistic variants. The essential aspects of foundation, production and financing of the business were analyzed in the thesis.

Conclusions of the thesis presents a brief analysis of the results and the financial results for this business plan.

Keywords: Business plan, Business activities, Bee farm, Analysis, Costs, Revenue

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1 Introduction

As a theme for my work, I chose a business plan for the establishment and subsequent development of bee farm. This topic I chose mainly because I am interested in this area and honey or honey products; they have therapeutic effects, even though everything on the Czech market is more demanded than supplied, therefore you see the potential for business activities. Achieved result of this work can help entrepreneurs, who would establish the basis in this field to start a business. I do not exclude that I will also have the opportunity to update the plan in the future.

Beekeeping is one of the oldest branches of the human activity. The object is the breeding of bees. The output products are honey, wax, propolis, pollen, royal jelly and bee venom. Significant outcome of the beekeeping business is also the pollination of plants. Beekeeping in the Czech Republic devoted largely among the amateurs as a hobby. Beekeeping is also a professional discipline implemented in the bee farms. Today, beekeeping is attracting more and more people. Some people put in their gardens two or three beehives to provide their families with tasty and useful product, others get bee-seeds as a gift or inheritance and are obsessed with beekeeping for the rest of their lives, and some of them are trying to make money on honey production.

The production of honey (beekeeping) quickly pays off (in~2 years) of profitable business (~ 15-25%). Despite the waste-free production of honey, the business requires experience and specific knowledge on how to make the baits and take care of bees. Honey is a natural product containing many useful vitamins: retinol, group B, C, E, strengthens and supports the body's immunity. The main producers of honey in the Czech Republic are private farms and industrial companies. In this article, it will be considered the main aspects of the beekeeping organization as a business.

The technology of the honey obtaining is poorly subjected to unification and for the organization of the bee farm; no investment of large capital is required. Thus, this type of activity is well suited to representatives of small businesses.

According to the results of beekeeping market research, more consumers are not buying honey in retail stores, but in apiaries and markets.

2 Objectives

The main aim of the thesis is to formulate a business plan in the establishment and development of the bee farm.

The aim of the business plan is calculation of the key finance, economic and marketing characteristics for the bee-gardens creation.

3 Methodology

Model of business plan is based on theoretical knowledge and processed analysis (SWOT) and the selection of appropriate strategies to satisfy the needs of customers and provide added value for the owner. In thesis will be used methods of financial analysis, methods of measurement of economic efficiency of investments (Internal Rate of Return, Payback Period, and Net Present Value) and cost calculation models.

4 Literature Review

4.1 Company, business, entrepreneur

According to the New Civil Code, the entrepreneur is a person who independently carries out on its own account and responsibility of gainful employment a trade or similar means with the intention to do so consistently for profit, is considered to be attention to this business for entrepreneurs.

4.1.1 Company

Company is a legal entity which transforms inputs into outputs and the organized set of sources, resources, know-how, rights and of property values due to the entrepreneur operates business activities¹.

4.1.2 Business

In economic terms, the business is seen as the systematic involvement of economic resources and other activities in order to constantly improve their original value. It is a vigorous process of creating added value.

4.1.3 Entrepreneur

The term is defined as a person who carries out business activities in its own name with the gain or loss on equity. It is the person able to find and identify opportunities, provide and use the resources and means to achieve specific goals and are willing to take the risk associated with business. For entrepreneurs, it is considered to be any person who is registered in the Commercial register, regardless of any other factors².

¹ SRPOVÁ, Jitka a Václav ŘEHOŘ. *Základy podnikání: teoretické poznatky, příklady a zkušenosti českých podnikatelů*. Praha: Grada Publishing, 2010. Expert. ISBN 978-80-247-3339-5.

² WUPPERFELD, Udo. *Podnikatelský plán: pro úspěšný start*. Praha: Management Press, 2003. ISBN 80-7261-075-9.

4.1.4 Terms and Conditions

It is necessary to comply with certain basic conditions for running any forms of business. The conditions for entry into the business in compliance with the Law on Trade License are:

- The conditions for entry into the business in compliance with the Law on Trade License
- The person must be at least 18 years
- The person must be mentally normal and to be able to run the business on their own responsibility
- The person must not have a criminal record

4.2 Forms of business organization

The form of business organization describes how entrepreneurs organize their work, how they interact with each other and with other participants of business³. The basic forms of business organization (structures) are:

- Sole proprietorships
- Private Limited Company (Ltd)
- Partnerships
- Limited Partnership
- Public Limited Company (Plc)
- Sole Trader

4.2.1 Sole proprietorships

A sole proprietorship, also known as the sole trader or simply a proprietorship, is a type of business entity that is owned and run by one natural person and in which there is no legal distinction between the owner and the entrepreneur. The owner directs of all elements

³ SRPOVÁ, Jitka a Václav ŘEHOŘ. *Základy podnikání: teoretické poznatky, příklady a zkušenosti českých podnikatelů*. Praha: Grada Publishing, 2010. Expert. ISBN 978-80-247-3339-5.

and is legally responsible for the finances of business which include debts, loans, loss, and other.

4.2.2 Legal forms of businesses

The entrepreneur can do business as a natural or legal person. Legal person is eligible to choose from several legal forms of business, depending on what legal form is better suitable for the requirements of running the business.

Private Limited Company (Ltd)

Private Limited Company in the Czech Republic is the most popular form of business legal entities where deposits of individual shareholders is the share capital of the company. Shareholders are liable for the obligations in the amount of its outstanding deposits until the repayment registered in the Commercial Register.

Every business has strengths and weaknesses, both depending on the type of activity, and on the business structure. The advantages of the Private Limited Company (Ltd) are the following ones:

Advantages:

- The liability of shareholders is limited
- There is prohibition of competition for executive directors
- It is unnecessary to have agreement of all shareholders to make a decision

Disadvantages:

- Initial capital
- Process of administration is complicated
- The company's profit is subject to the taxation of legal persons
- Members' shares are subject to the withholding tax⁴.

⁴ SRPOVÁ, Jitka a Václav ŘEHOŘ. *Základy podnikání: teoretické poznatky, příklady a zkušenosti českých podnikatelů*. Praha: Grada Publishing, 2010. Expert. ISBN 978-80-247-3339-5.

Partnerships

According to §95 Act no. 90/2012 Coll., the partnerships is a company where at least two persons doing business under a common business name and are responsible for liabilities of the company jointly and severally liable with all assets.

Partnerships can be started exclusively for the purpose of the joint venture. It is the second most common business model. It is particularly suitable for small and medium-sized enterprises where profit is divided equally. The founding document is the partnership agreement and it can establish no less than two partners. The Company is not required to create shares capital⁵.

Limited Partnership

Limited partnership, according to §118 of the Act no. 90/2012 Coll., is which one or more partners liable for the company in the amount of their unpaid investment registered in the Companies Register (limited partners) and one or more partners its property (General partners).

Public Limited Company (Plc.)

Public Limited Company is one of the oldest legal forms of business, where basic capital forms the exact number of shares of a certain value. The stock is a security that guarantees the right of shareholders to participate in the management of the company, the right to a share of the profits and the right to participate in the liquidation value of the company. Mostly this legal form is chosen by large enterprises. The founding document is the foundation agreement or articles of association. Public Limited Company is liable for its assets and may be founded by one legal entity or several founders. The highest authority is the annual general meeting and the statutory body is the Board of Directors⁶.

Advantages:

- Liable for the obligations of shareholders
- Solid image between business partners

⁵ BERRY, Timothy. The plan-as-you-go business plan. Irvine, CA: Entrepreneur Press, c2008. ISBN 1599181908.

⁶ SRPOVÁ, Jitka a Václav ŘEHOŘ. *Základy podnikání: teoretické poznatky, příklady a zkušenosti českých podnikatelů*. Praha: Grada Publishing, 2010. Expert. ISBN 978-80-247-3339-5.

Disadvantages:

- Very high initial capital
- The need for verification by an auditor
- Mandatory preparation of financial statements
- The duty of preparing annual reports
- Process of administration is complicated.

Sole Trader

A trade means a continuing activity carried out independently by an entrepreneur, under own name and on own responsibility for profit. It can be operated by a natural or legal person. "(Act no. 455/1991 Coll., on Trades business)

A certain form of business, which is particularly suitable for beginners - entrepreneurs, due to easier starting and running operations as well as easier administration. There is no need for a large initial capital. It is, used by some who does not seek business major source of revenue⁷.

4.3 Business Plan

4.3.1 Business plan definition

The business plan is a document that contains all relevant internal and external factors relating to the establishment and development of the company. It should include a strategy and objectives of the company, identification of strengths of the business plan, market segmentation, defining target customers and competitors, future plan of development company, plan of revenues, results of operations (Net Income) and funding⁸. In practice, there are several types of business plans. Each serves a different purpose.

⁷ BERRY, Timothy. *The plan-as-you-go business plan*. Irvine, CA: Entrepreneur Press, c2008. ISBN 1599181908.

⁸ MCKEEVER, Mike P. *How to write a business plan*. Thirteenth edition. ISBN 9781413323191.

Elevator pitch

The most commonly used business plan is the elevator pitch. It is used in a situation when the entrepreneur has a good idea to create a company or plan to develop their ideas but is missed the necessary capital for that. This plan has a form called “Lift selling“ and communicated orally in a maximum of one minute.

Executive summary

It is a brief form of a business plan containing the most important things about the range of one to two A4 pages.

Brief business plan

Compared to the previous formats abbreviated this business plan is more comprehensive, detailed and includes deeper information. It informs about the business plan, team, competition analysis, product, market, and financial resources and how it is used.

Complete business plan

That type of business plan must explain more precisely what I do, what I need and what I offer and must look for answers to questions. Mostly it consists of about 20-40 pages.

4.4 Honey

Honey is a high-calorie nutritious product (see [Appendix 1](#)). In addition, it has a wide range of medicinal effects on the human body. Especially it is appreciated for the fact that as a natural substance has minimal side effects. For its use, there are few contraindications: it is diabetes, allergy and, according to some sources, infantile age. Honey - a good general tonic, it stimulates the immune system, activates metabolic processes, accelerates tissue repair, increases the amount of hemoglobin and blood cells in the blood, normalizes gastrointestinal tract⁹.

⁹ Honey Bee Guide For Advanced Beekeepers – How To Start A Bee Firm In Large Scale? [online]. 2014 [cit. 2017-02-26]. Available from: <http://www.thebeeinfo.com/the-honey-bee-how-to-start-a-bee-farm/>

4.4.1 The world honey market in 2015

In 2010-2014, in the natural honey in the world demand has been consistently high, and prices have grown by 10-11% per year. However, since January 2015, purchase prices for honey began to fall and by the end of the year they decreased by 20-40% to almost all of its varieties, including the most popular - organic.

The fall in prices for honey was also a consequence of the increase in its production in many beekeeping countries, the entry of new players into the world market and the increase in the amount of falsified honey supplied to the world market.

China remained the main exporter of honey at the lowest possible prices and a "troublemaker" in the world honey market. Export of Chinese honey increased by 11.5% and exceeded 145 thousand tons. Its main buyers were EU countries: Great Britain, Belgium, Germany and Spain¹⁰.

Czech beekeeping has a good reputation abroad and for Czech honey is interested mainly in Germany and the the Scandinavian countries, where the best selling dark honeydew honey. Czech honey has a significantly higher quality than that required by the European Code for quality honey, and it is more visible on the international markets. According to Jaroslav Martinek, Czech beekeeping has a long tradition and is at a high level. In contrast to neighboring countries in our largely thanks to to the central management of beekeeping successful both prevention and disease control. In Europe, we compete with not only price, but also quality. Also significant is the fact that in the Czech Republic do not use antibiotics in beekeeping. Their residues will not get into honey, and therefore the Czech honey quality than abroad¹¹.

¹⁰ The world of beekeeping [online]. [cit. 2017-03-07]. Available from: <http://www.apeworld.ru/>

¹¹ Spotřeba medu v ČR roste [online]. 2016 [cit. 2017-02-26]. Available from: <http://www.vcelarstvi.cz/clanky-spotreba-medu-v-cr-roste.html>

5 Parts of a business plan

5.1 Structure of the business plan

The content in the business plan often includes the following points:

- Title page
- Executive summary
- Company description
- Market analysis
- Marketing plan
- Operational plan
- Financial plan
- Timetable for implementation

5.1.1 Title page

Business plan, like any other comprehensive document, should include the identification part as a title page. This part should include:

- Trade name and registered office
- Company logo
- Name of the business plan
- The author's name, and also key individuals and founders
- Date of foundation
- Definitions of abbreviations¹².

5.1.2 Executive summary

Executive summary is a kind of abstract the whole business plan. There could be find the brief important information about the business plan and the nature of the business. So it is a miniature of the entire business plan. There describes – whom the plan is implemented, what is our specific product or service, defines a niche market, strengths, strategy, key financial data and financial resources.

¹² SRPOVÁ, Jitka, Ivana SVOBODOVÁ, Pavel SKOPAL a Tomáš ORLÍK. *Podnikatelský plán a strategie*. Praha: Grada, 2011. ISBN 978-80-247-4103-1.

5.1.3 Description of the company

In this part of the business plan can be found mater regasrding to established company:

- **Form of business**, for example The trade company, limited liability company
- **Key trade** or trades that the business will operate
- **The company vision** extended long-term strategic goals
- **Products and services**, which will implement the company market
- **Organization structure** is a document reflecting the schematic structure and hierarchy of of the enterprise divisions¹³.

5.1.4 Market analysis

Market analysis is the process of systematic collection and objective analysis of the behavior of the information, needs, attitudes, motivations and other. Marketing analysis is carried out in order to find new opportunities for the company, and are aimed at the development of specific recommendations for effective marketing strategy.

For the analysis is used the following methods of analysis:

- PESTE analysis
- SWOT analysis
- PORTER'S FIVE FORCES
- Analysis of competition

5.1.4.1 PESTE analysis

PEST Analysis - a simple and useful method for the analysis of the external environment of the enterprise.

Methods of PEST analysis is often used to evaluate the key market trends in the industry, and the results of PEST analysis can be used to define the list of the threats and opportunities in the preparation of SWOT analysis of the company.¹⁴ PEST Analysis is a tool for long-term strategic planning prepared for 3-5 years ahead with yearly updates

¹³ BESANKO, David. *Economics of strategy*. 5th ed. Hoboken, NJ: John Wiley, c2010. ISBN 978-0-470-37360-6.

¹⁴ HADRABA, Jaroslav. *Marketing: produktový mix - tvorba inovaci produktu*. Plzeň: Aleš Čeněk, 2004. ISBN 80-86473-89-9.

and it may be configured as a matrix of four quadrants : Political,Economical,Socio-Cultural,Technological.

➤ **Political and legislative environment:**

It addresses impact of the Czech legal system and government business.

The government sets various rules which the entrepreneur must follow for analysis these factors:

- The legal system
- Consumer protection
- Work relationship

➤ **Economical environment:**

This describes the influence of many macro-economic factors on business. Especially the economic situation of the state affects the success of small and medium-sized enterprises. To analyse these factors in this environment :

- GDP trends
- Unemployment
- interest rates
- inflation
- average salary

➤ **Social and cultural environment:**

This describes the influence of society and culture on business. Especially since these factors indicate standards of society and its behavior. To analyse these following factors :

- desire to buy
- user status - potential for the first time and regular customer
- demographic evolution
- education level

➤ **Technological environment:**

This involves the impact of development of new technologies on the business. Especially since the new technologies help to make business faster and easier.

One significant impact is that it has in particular increased productivity, in a faster and efficient manner. There is a need to analyse these next factors:

- Increasing investments in R&D
- Support from structural funds
- Lack of innovation

➤ **Ecological environment:**

In this part should be analyzed several factors like:

- Environmental sustainability trends
- Consumer scepticism and awareness
- Globalization and international competition
- Demand for new skills to match technological developments in food and beverage industry
- Emphasis on renewable energy

5.1.4.2 SWOT analysis

SWOT- analysis is one of the most common methods of evaluating the complex internal and external factors affecting the company's development. This is analysis of the strengths and weaknesses of the organization, and an opportunities and threats from the external environment¹⁵.

Internal analysis: the strengths and weaknesses internal to the organization.

External analysis: the opportunities and threats presented by the environment external to the organization.

The first is an analysis of strengths and weaknesses (S - W analysis) dealing with the evaluation of the internal aspects. Within the internal analysis is necessary to evaluate the area of marketing, finance, technology, production and organization of the company, and in terms of both the positive and the negative effect on the company's prosperity. Strength is defined as a preference or advantage when the company such as high performance. The opposite is the weak side, which points to possible deficiencies in the company.

¹⁵ HADRABA, Jaroslav. Marketing: produktový mix - tvorba inovaci produktu. Plzeň: Aleš Čeněk, 2004. ISBN 80-86473-89-9.

Another aspect is to evaluate market opportunities and threats (O - T analysis). For this analysis, an enterprise assesses the development of external factors that are not able to influence. Opportunities are considered like attractive areas where using marketing activities, the company obtained or may obtain a competitive advantage. The possible threat of the company is unfriendly situation arising from the negative development environment or unsuitable control of the company.

Figure 1: Swot analysis matrix

	Opportunities (external, positive)	Threats (external, negative)
Strengths (internal, positive)	Strength-Opportunity strategies Which of the company's strengths can be used to maximize the opportunities you identified?	Strength-Threats strategies How can you use the company's strengths to minimize the threats you identified?
Weaknesses (internal, negative)	Weakness-Opportunity strategies What action(s) can you take to minimize the company's weaknesses using the opportunities you identified?	Weakness-Threats strategies How can you minimize the company's weaknesses to avoid the threats you identified?

(Source: The SWOT Matrix <http://the-sme-hub.weebly.com/-swot-analysis.html>)

5.1.4.3 PORTER'S FIVE FORCES

Methodology identifies five forces that determine the level of competition, and therefore the attractiveness of doing business in a particular industry¹⁶.

"The analysis of Porter's Five Forces" includes three forces 'horizontal' competition: threat of substitute products, threat of new entrants, the level of competition; and the two forces "vertical" competition: the bargaining power of suppliers and the bargaining power of consumers.

This methodology considers following points:

- **Threat of New Entrants**
- **Threat of Substitute Goods**
- **Bargaining Power of Suppliers**

¹⁶ CHERNEV, Alexander. *Strategic marketing management*. 7. ed. Chicago, Ill.: Cerebellum Pr, 2012. ISBN 9781936572151

- **Bargaining Power of Customer**
- **Industry rivalry**

1) Threat of New Entrants explores the following point: The existence of entry barriers, the need for costs product differentiation; access to distribution and others.

2) Threat of Substitute Goods explores the following items: Tendency of consumers to purchase substitute products; compare prices and qualities of substitute products and others.

3) Bargaining Power of Suppliers considering aspects like: Impact of inputs on cost and differentiation; Strength of distribution channel and others.

4) Bargaining power of Customers considering aspects like: Buyer information availability; Buyer concentration to firm concentration ratio and others.

5) Industry rivalry considers aspects like: Sustainable competitive advantage through innovation; Level of advertising expense and other.

5.1.5 Marketing plan

In this part of business plan entrepreneur decides about pricing policy. This study should describe how the target customers will access the product and how they will be motivated to come¹⁷. The main goal of marketing plan is to make profit. The business has to ensure that price of the product will be higher than total average cost. In a short-term period this study can determine price which will at least exceed purchase price.

5.1.5.1 Marketing mix

Marketing Mix - is a set of tools, parameters, manipulating that marketers are trying best to satisfy customers. The complex of marketing is understood as a set of variables in the general formula of success, constantly under the control of marketing¹⁸.

Marketing-mix usually includes activities in four components of the tactical activities:

¹⁷ FINCH, Brian. How to write a business plan. 4th edition. London: Kogan Page, 2013. ISBN 978-0-7494-6710-4.

¹⁸ CHERNEV, Alexander. *Strategic marketing management*. 7. ed. Chicago, Ill.: Cerebellum Pr, 2012. ISBN 9781936572151

1. Product (variations with product range and consumer properties: technical parameters, design, packaging, service, delivery, etc.);
2. Price (setting prices, optimal in terms of correlating the benefits of the seller and the buyer, as well as discounts on the price of the product for different cases and different groups of customers);
3. Location (selection of distribution channels, distribution companies, selection of outlets, etc.);
4. Promotion (such areas of action as the development and implementation of promotional activities, sales promotion, organization of public relations and personal sales).

5.1.6 Operational plan

Includes a description of how entrepreneur will run a business. To indicate an exact schedule of how he/she will proceed with the implementation of the plan¹⁹.

5.1.7 Financial Plan

Financial plan demonstrates the opportunity of the business plan from an economic point of view. It consists mainly of plan expenses, income plan, cash flow, net present value, internal rate of return, evaluating the effectiveness of investment and financing plan.

In the case of start-up companies is needed funds to start businesses, funds for purchasing of fixed assets, purchasing of a short-term assets and resources for business start-ups²⁰.

There are the following types of sources of property coverage:

Own sources

It is their own sources of financing assets of the enterprise. These include registered capital, reserve fund, profit.

¹⁹ BESANKO, David. *Economics of strategy*. 5th ed. Hoboken, NJ: John Wiley, c2010. ISBN 978-0-470-37360-6.

²⁰ VEBER, Jaromír. *Management: základy, moderní manažerské přístupy, výkonnost a prosperita*. 2., aktualiz. vyd. Praha: Management Press, 2009. ISBN 978-80-7261-200-0.

Foreign sources

Foreign sources also belong to the company's capital, that portion of its assets, which the company had to borrow. For example: long term bank loans, short-term bank loans, short term accommodations, leasing and others.

5.1.7.1 Cashflow

Cash flow is simply income or expenses of funds. The Calculation of Cash flow for the specified period looks like the difference between income and expenses for that period. In practice, the cash flow is an important value because it is the basis for assessing the economic efficiency of investment and it has a large influence in the selection and evaluation of investment projects²¹.

Formula 1: Discounted cash flow

$$DCF = \frac{CF_1}{(1+i)^1} + \frac{CF_1}{(1+i)^2} + \dots + \frac{CF^n}{n}$$

Where:

- CF – Cash flow
- i – Discount rate

(J. VEBER, 2009)

5.1.7.2 Revenue

Revenue is the sum of cash, which the enterprise receives from all activities (production of goods or services) for a certain period.

In most cases the revenue is divided into:

Operating revenue – which is obtained from the operational and economic activity for example sales of goods or services.

Financial revenue – its origin from financial investments, securities, deposits, etc.

Revenue together with costs make financial result²².

²¹ VEBER, Jaromir. Management: zaklady, moderní manažerské přístupy, výkonnost a prosperita. 2., aktualiz. vyd. Praha: Management Press, 2009. ISBN 978-80-7261-200-0.

²² WUPPERFELD, Udo. Podnikatelský plán: pro úspěšný start. Praha: Management Press, 2003. ISBN 80-7261-075-9.

5.1.7.3 Costs

Costs basically mean using and wearing out assets of the enterprise.

There are two types of costs:

- **Variable costs** is a corporate expense, which changes depending on the production value.
- **Fixed costs** is a cost that does not change with an increase or decrease in the amount of goods or services produced or sold.

5.1.7.4 Net Present Value (NPV)

Net Present Value is one of the best and most appropriate used financial criteria. The method of net present value (NPV) is used for the evaluation of projects in budgeting of capital investments²³. The formula to calculate Net Present Value is:

Formula 2: Net present value

$$NPV = -IN + \sum_{i=1}^N \frac{CF_i}{(1 + WACC)^i}$$

Where:

- n – project life
- t – year
- WACC - weight average cost of capital
- NPV- net present value

(U.WUPPERFELD, 2003)

5.1.7.5 Internal rate of return (IRR)

Internal Rate of Return is defines the required minimum return on capital investments that must achieve in order not to be unprofitable. The formula to calculate Internal rate of return is:

²³ WUPPERFELD, Udo. *Podnikatelský plán: pro úspěšný start*. Praha: Management Press, 2003. ISBN 80-7261-075-9.

Formula 3: Internal rate of return

$$-IN + \sum_{i=1}^n \frac{CF_i}{(1 + IRR)^i} = 0$$

Where:

- IRR - internal rate of return
- n - project lifetime
- CF_i - cash flow for each year

(U. WUPPERFELD, 2003)

5.1.7.6 Payback period (PB)

Payback period is period (years) at which cash income from investments will be equalized initial capital expense on investment²⁴.

The formula to calculate payback period is shown below :

Formula 4: Payback period

$$\textit{Payback Period} = \frac{\textit{Initial Investment}}{\textit{Cash Inflow per Period}}$$

(J. VEBER, 2009)

²⁴ VEBER, Jaromir. Management: zaklady, moderní manažerské přístupy, výkonnost a prosperita. 2., aktualiz. vyd. Praha: Management Press, 2009. ISBN 978-80-7261-200-0.

6 The business plan for the establishment of Bee Farm

6.1 Characteristic of company

Name of company: Beekeeping Lukyanov

Address: Uzbecka 1463/1 Praha 10

Subject of enterprise: Production and sale of honey

Legal form: Sole proprietorships

Owner: Lukyanov Alexey

Phone number: +420773666101

Email: Lacostov92@gmail.com

Date of foundation: 10.1.2019

6.2 Executive summary

The business plan was created for the purpose of the establishment and further development of the **Beekeeping Lukyanov**. The company will focus primarily on the production and subsequent sale of honey. Activities venture will be located primarily in the Central Bohemian Region. Mainly around Prague is a demand for honey is very high but the quality and the ability to purchase or manufacture is relatively low. The business plan is detailed company analysis in business, there is also mentioned a list of strengths and weaknesses using SWOT analysis as well all calculations with an optimistic and pessimistic variants. Considering to many years of experience and family, utilization contacts and know-how, is the quality and unique taste of honey. And given the excess of demand over supply is entering the market and the creation of the viable projects is real. The company's reputation is on the first stage of its marketing activities to attract customers, who are regular visitors and to further expand the company's reputation.

6.3 Description of the company

The enterprise is engaged beekeeping and selling bee products. A bee farm will be situated in the suburban area in Prague. Which will be built on private land. The products will be sold in the Central Bohemian Region.

The main goal of the business is the realization of profits resulting from the production and subsequent sale of honey and other bee products. Each year, the farm can expand buying of other hives. The short-term goal will purchase 80 beehives in the first year of business and maintain high honey production. The long-term goal is to have 120 to 150 hives in 5 years.

Customers are mostly adults from Prague. Most often clients aged 25 to 60 years.

6.3.1 The product portfolio

The main selling products are honey. Will sell a total of four kinds of honey in 3 variants of content. The most common sales volume is 1 kg (1000 g). Because of demand from companies and small businesses to souvenir for their clients, it also introduced a variant of the 250 grams of honey. The table indicates the type and quantity of honey sold. Honey is in a glass jar with the name of company. The following **Table 1** demonstrated product portfolio.

Table 1:Product portfolio

Type	Quantity
Floral	250 g / jar
	500 g / jar
	1 kg (1000 g) / jar
Paste	500 g / jar
	1 kg (1000 g) / jar
Buckwheat	500 g / jar
	1 kg (1000 g) / jar
Wild	250 g / jar
	500 g / jar
	1 kg (1000 g) / jar

(Source: own creation)

6.4 Market Analysis

In this part will be analysis market in Czech Republic using the next methods: PEST Analysis, PORTER'S FIVE FORCES, Competition analysis, SWOT analysis.

6.4.1 PEST Analysis

PEST analysis is the analysis of the external environment of the company which the company can not influence them.

- **Political and legal environment.**

The internal political situation of the Czech Republic is stable enough that attracts many of the economic entities in the country. In addition, the whole political system is under the influence of and strict control of the European system. In the Czech Republic no public body does not work completely autonomously. The political system is based on the principle counterbalances so that all actions of the authorities are closely influenced by other institutions and individuals that have a large impact on the actual happening, elect, protest and do not leave alone any dark business.

The main factors that affected in 2014 the economic situation in the Czech Republic, became a stable political situation in the country, the increase in demand for Czech

products on foreign markets, as well as the negative consequences of the sanctions policy of the EU towards Russia.

According to Civil Code, Beekeeping can naturally operate beyond the beekeeping hobby, as a business. Law no. 89/2012 Coll., Civil Code defines entrepreneur as the "Who independently carries out on its own account and responsibility gainful activity trade or similar manner with the intention to do so consistently in order to profit" So if beekeeping operation serving or contributes significantly to the livelihood, covered by the regulation of business.

Business in beekeeping can be implemented as a self-employed person, either as so-called. "Agricultural entrepreneur" according to § 2e Act no. 252/1997 Coll. for agriculture or as a sole trader under Act 455/1991 Coll., on business, 'the Trade Act. Beekeeping itself falls within the sphere of agriculture and thus not according to § 3 para. 3 of the Trade Act trades, and in this case is governed by that Law on Agriculture²⁵.

The Czech Republic is ranked among the bee farm animals. From this perspective, the bees, generally binding regulations. Beekeeping as a discipline are the responsibility of the Ministry of Agriculture.

- **Economical and social environment**

Between the macroeconomic indicators that a greater or lesser extent influenced by external environment of the company, include gross domestic product (GDP), inflation, interest rates, unemployment, and wage developments.

Gross Domestic Product (GDP). The Czech Republic is among the industrialized countries of Central and Eastern Europe. According to the International Monetary Fund, the Czech industry produces about 0.35% of the world gross product, taking in terms of GDP 52th place among the countries of the world. In 2014, the country's economy out of two years of recession, when there was a decline of GDP. Last year, the growth of this key indicator was 2.0%, which primarily contributed to the increase in investment in the economy, both from local companies and foreign investors²⁶.

²⁵ Czechlegislation [online]. 2014 [cit. 2017-02-26]. Available from: <http://www.czechlegislation.com/en/91-2012-sb>

²⁶ Overview of the economy of the Czech Republic [online]. 2015 [cit. 2017-03-07]. Available from: <https://www.rustrade.cz/economy>

The Czech Republic is a relatively small open economy, the development and the growth of which is completely independent of the increase in exports. Czech Republic belongs to the countries with the largest share of exports of goods and services in GDP. In 1995, the figure was 51%, 63% already in 2000, reached 79% in 2010 and today has more than 82%.

Inflation. During the period from 2004 to 2015, inflation (consumer prices) in the Czech Republic decreased by 2.48%, the average was 2.18%. The average annual change in value of inflation (consumer prices) in the Czech Republic for this period amounted to -0.207%. The maximum inflation rate (consumer prices) was observed in the Czech Republic in 2008: 3.42%, the maximum drop - in 2009: -5.31%. The maximum value of inflation (consumer prices) was reached in the Czech Republic in 2008: 6.35%, minimum observed in 2014: 0.3.%²⁷.

Unemployment. According to the Czech Statistical Office, the unemployment rate in the Czech Republic was in the 4th quarter of 2016 of 3.6%, which is the lowest figure in the history of independent Czech Republic since 1993. The record is the level of employees, which amounted to 72.9% (5.187 million. People).

At the present time it is difficult to find a job that brings you money and pleasure at the same time. The main interesting markets are filled now; that's way they do not have much vacant jobs. Honey production it can be like a job and at same time be like a hobby, which will bring good income.

- **Technological environment**

Today the market environment is filled up with a big amount of information and computer technology. All this can be called information economy. Technologies have a fast rate of development, which are promoting to increase the internet opportunities. There are so many people who are searching for the new opportunities on the internet, which in this turn means that you should have a quality website.

- **Social and cultural environment:**

It is good to mention that the Czech Republic is among the leading nations in the world that can boast rich cultural, natural and historical potential necessary for tourism development. Across the Czech Republic is a big amount of cultural and historical

²⁷ Overview of the economy of the Czech Republic [online]. 2015 [cit. 2017-03-07]. Available from: <https://www.rustrade.cz/economy>

monuments, including 34 registered on the UNESCO. Also, country has a heavy network of interconnected tourist trails and roads.

Between the ten nations most frequently visiting the Czech Republic belongs to the Austrians, whose number increased 17.3%, 11.8% of Spanish and Italians 1.3%. However, it was also recorded high loss of tourists from Russia, by 23.1% and the UK by 13.5%.

In the Czech Republic, especially in Prague, there are a lot of varied educational institutions including schools, universities and etc. Some schools are offering free education. Many foreigners find this attractive to live, to study and to work in the Czech Republic. There are many Czech and foreign students who would like to show their worth in gained experience of work. In recent years, many foreign students choose the Czech University of Life Sciences in Prague.

An important factor in the social environment, the number and age structure of the population. The population of the Czech Republic this year is 10 506 813, of which a considerable part consists of foreign immigrants.

The growing population has for the Beekeeping Lukyanov positive impact in terms of increasing clients.

- **Ecological environment**

The environment protection and ecology are actual subjects for discussion only in the Czech Republic but all over the world countries. Ecology of households and enterprise is the most mindfull point of this topic. The expenses which come with the environment protection constantly getting higher and higher and their problems are decided around the world.

Now the Czech Republic is a really clean country in which its citizens are very seriously taking care of their city and trying to keep their city neat and tidy. There are garbage containers for different types of waste, in which the Czechs are meticulously sorting their garbage, putting a plastic bottle separately, glass separately, and paper separately. A proper practice is being done in schools. If there are problems with the electricity outputting, the Czechs are trying to switch to the other types of fuels, such as solar panels, stoves, flushing briquettes of wood sawdust.

Prague is the capital of the Czech Republic, and remarkably big city, which is, of course, from an environmental point of view, more is more dirty than, for example, South Bohemia. However, compared with Moscow, Prague is environmently a more clean city. Even in the traffic jams in the streets the car windows can be wound down, come to Prague, come out of the subway, you won't feel how throat is compressing by carbon monoxide. And besides, according to statistics, Prague is one of the greenest cities in Europe, on its territory there are even meadows and arable land, not to mention the parks and the forests.

The Czech Republic is taking a part in a numerous international environmental treaties and agreements. The government implementing reforms in order to increase the use of renewable energy sources and reduce a greenhouse gas emission.

6.4.2 PORTER'S FIVE FORCES

There is a methodology for analysis the industry and developing business strategy.

Threat of substitutes

Replacement products for honey in everyday life is sugar, jam, syrups,artificial honey, chocolate. It all depends on individual taste. As a threat to the honey, which people often use simple sweets (for example chocolate). Now is the tendency of a healthy lifestyle, which means that people are switching to natural foods.Based on the news on the use of honey in the Czech Republic, the honey is often found fake and low quality, and this may lead to the rejection of honey buyer to other products substitutes. To avoid this problem, you must obtain a purer quality honey for the people and keep the level of quality in the long run to get a good product reputation. Speaking about advantages in newspapers, on television and the need for honey in our lives, because many people forget about this product.

To sum up, the threat of substitute goods is moderate.

Bargaining power of suppliers

Honey production does not require high-tech expertise, but it is a very labour intensive process. Consequently, the price of honey depends largely on labour costs in the country of origin and the productivity of the beekeepers.

Honey producers, packers and marketers negotiate with buyers for sales and with suppliers for equipment and input purchases. Honey buyers and industry suppliers have bargaining power that can affect honey industry profits.

Main threats for producers by suppliers:

- 1) Negotiating honey prices down or delaying payments
- 2) Having packers or producers maintain honey inventories at their own expense .
- 3) Increasing the quality standards for honey without increasing prices (demanding implementation of food safety systems like HACCP that may be costly to implement or specifying reductions in permissible maximum residue levels).
- 4) Increasing the price of input suppliers

Suppliers for bee farms are a key factor in the production chain and is often regarded as one of the main advantages of the company. Sugar will be supplied from the commodity market. If a company wants to position its products as a high quality, should pay attention to building strong long-term relationships with their suppliers.

To sum up, bargaining power of suppliers is moderate.

Bargaining power of customers

Business talks about rapidly changes with the advent of computer and internet shops. Traditionally, contracts for industrial honey are possibly held through negotiations between buyers and suppliers which are lasting for a month or for a longer period of time. Today, they may decide within a 40 minutes period.

Honey products market is characterized by a narrow range of products. On this basis we can say that it would be difficult to stand out from other competitors. It is possible to create a product specifically for people with diabetes. There is also the possibility of product differentiation by using additives and flavorings. This fact suggests the further help for the companies invest in advertising to build brand loyalty, and reduce the market power of customers. In conclusion, the market power of buyers has moderate strength.

Threat of new entrants

For the new entrepreneurs it would not be so difficult to start a business engaging receiving patent or copyright is a standard procedure.

Honey product is a unique one ; this business is not for everyone and not everyone can cope with it. This is not a simple matter at the early stage, and it would be difficult without any experience and hints of the senior beekeeper entrepreneurs. The market of honey production is a friendly one, the majority communicate with each other, share tips and problems, because for some of them it is just a hobby. The competition here is obligatory necessary because it is investment for the further development of competition between beekeepers.

To sum up, threat of new entrants is moderate.

Industry rivalry

Recent years, can meet a lot of beekeepers at farmers' markets, offering for sale and tasting of their products. It means that product is useful in the market. A major role is played here advertising , since this is one of the main ways of honey for sale.

To sum up, level of competition is moderate.

6.4.3 Competition analysis

In this business sector is not strongly expressed competition. Most of beekeepers know and help each other, so it is more about teamwork for regular getting customers. However, as the competition can be considered supermarkets such as Tesco, Kaufland, Billa etc. However, there is observed very low quality and expensive honey. Around our farm there are several small farms.

The first step is analyzing the following companies that specialize in the production and sale of honey in Prague.

Competitors:

1. Beekeeping Stolovi

- Description – Production and offering Bee products for sale in Prague. Beekeepers since 2009 with bees Vigor in modern simple non-insulated hives of Langstroth .
- Risk of - the same line of business with a operating history from 2009. Offering bee products like paste honey (whipped) floral honey (classic liquid), honeydew honey (forest), crude propolis, mead, wax, comb honey. Good location near parks. Good Web-pages.
- Weaknesses - weak point is the price of honey. For example price of floral honey is 170 CZK/ 950 g jar.

2. Beekeeping Veverka

- Description - Production and offering Bee products for sale in Prague. Beekeepers since 2014.
- Risk of - a similar line of business with a short story. Offering bee products : Floral honey, Paste honey. Medium location. Good Price.
- Weaknesses - A narrow range of products. Only two types of honey. Reputation is doubtful.

6.5 Promotional plan

The company will try to be seen on the market and will apply next promotion instruments such as organizing different activities and events for tasting honey at farmers market, creating web-site for visitors where is possible to see the price list of products and get information about the company. Then for support of the sale of the product will be using the gift certificates and coupons.

6.6 Price strategy

Prices, which were found at the level of competition this product. Quality and processing is the biggest advantage of the company. Here is in the **Table 2** a Price list (compiled on the basis of price competition):

Table 2: Price strategy

Floral honey 1 kg / jar	116 CZK
Floral honey 500 g / jar	64 CZK
Paste honey 1 kg / jar	116 CZK
Buckwheat honey 1 kg/ jar	136 CZK
Wild honey 1 kg / jar	136 CZK
Wild honey 500 g / jar	75 CZK

(Source: own creation)

6.7 Sales Strategy

Bee Farm is a small and specific organization which engages in direct selling. In terms of sales and distribution channels will play a major role advertising banner at the point of sale and personal recommendations to friends and relatives. Honey will be sold directly from the farm to the factory.

E-commerce is an integral part of the marketing plan. It will serve primarily as a complementary service. They will sell all kinds of variations and honey. Later we will focus on the sale of complementary product range and manufacturing of custom hives.

E - Shop will be created to order from shoptet.cz. The price of the e - shop, including service is 600 CZK / month. The Web site will serve to bring new customers. The website will contain general information about beekeeping, bees, and honey benefit and there will be a link to our e-commerce. The Web site will create a company www.estranky.cz. The price of the complete site is 16 000 CZK incl. VAT.

6.8 Financial plan

Financing assumes the entrepreneurs' capital alt. family loan, and doesn't assume the use of foreign resources.

In this section of the business plan will be complete costing and be listed and planned revenue, including three variants. Optimistic, pessimistic or neutral. The calculation will be performed for the first to fifth year of business.

Hives

An absolute basis is the purchase of hives. Hives are not made, but because of time savings is going to get from a reputable beekeepers engaged in the production of bee hives.

We will buy extension walled hives on frame rate of 39 * 24th Hive is All-wooden, wall thickness is 25 mm. Square ground plan of 45.6 * 45.6 cm nozzle fits into 11 frames.

Sugar

The most important raw material for the production of honey is a sugar crystal. Its purchase will be realized approximately three times per year because of the ease of storage. The purchase will be carried out according to the rules in the wholesale current prices.

The necessary amount will vary depending on the time and production. The estimated amount is approximately 20 kg of sugar per beehive.

Supplies and accessories

Accessories and supplies for the implementation of the remaining farms will be purchased in beekeeping store Provčely.cz s.r.o. in Prague. Obviously, demand can be purchased elsewhere. We buy:

- Beekeeper's suit
- Honey extraction device
- Glove
- Feeder
- Stainless steel colander
- Container
- Sulfur wicks
- Brushes and brooms
- Stovepipe

Total price: **35 000 CZK** including VAT.

6.8.1 Founding budget

In the first year of business is considered with 80 hives. Prices include VAT. In the first year of business costs will be high due to the acquisition of hives and colonies.

In subsequent years, the cost will decrease by about 70%. In the second and next year will be the highest costs for feed bees. Therefore crystal sugar. Listed in the **Table 3** is a complete calculation of all costs in the first year, quantity, unit price and the final price.

Table 3: The founding budget

Subject	Price for 1 piece	Quantity	Total cost
Hives	1800 CZK	80	144 000 CZK
Bees	1550 CZK	80	124 000 CZK
Sugar	21 CZK	2 000 kg	42 000 CZK
Frames for hives	13 CZK	3 000	39 000 CZK
Between walls	160 CZK	80	12 800 CZK
Accessories and Supplies	-	1 kit	35 000 CZK
Glass	8 CZK	3200	22 400 CZK
Marketing	-	1 year	23 000 CZK
Reserve			40 000 CZK
Registration payment			1 000 CZK
TOTAL			483 200 CZK

(Source: own creation)

Total costs in the first business year will be 483 200 CZK.

Costs in future years

In subsequent years, business costs are significantly reduced. Crisis is the first year when you will need to buy hives, equipment and food. In subsequent years, the cost of the food for the colony and minor repair costs in the form of hives, or the cost of further enlargement of the plan. The calculation is performed for a neutral option business. The calculation is performed even with a 10% margin in the case of sudden expenses or sudden death of bee colonies. The approximate costs for 2 years with 90 hives (repairs, food, death of bees) is equal to 26 200 CZK.

The **Table 4** shows the calculation of costs in future years of business. Costs, of course, depends on the quantity produced honey:

Table 4: Operating costs in future years of business in CZK (costs)

	Sugar	Interim costs (repairs, food, death of bees)	Glass	Reserve 10%	Total costs in a given year
2 year -90 hives	47 250	26 200	25 200	9 865	108 515
3 year- 115 hives	60 375	33 477	32 200	12 605	138 657
4 year -130 hives	68 250	37 843	36 400	14 249	156 742
5 year - 150 hives	78 750	43 665	42 000	16 441	180 856

(Source: own creation)

6.8.2 Estimated revenue

In the first year of business operation can start from 80 hives. In the **Table 5** calculation is reported in three variations. Optimistic, pessimistic or neutral.

Table 5: Estimated sales in the first year of business in CZK

	Pessimistic		Neutral		Optimistic	
	1 hive	80 hives	1 hive	80 hives	1 hive	80 hives
Honey production in kg	25	2000	40	3200	50	4000
Estimated revenue (CZK)	2750	220 000	4400	352 000	5500	440 000

(Source: own creation)

In the case of neutral value of the estimated revenue for the first year of business is 352 000 CZK.

Estimated revenue in future years

In the **Table 6** shows the projected revenues in future years the business. Again, three options are shown for each business year.

Table 6: Estimated sales in CZK in future years of business (returns)

Business year - the number of hives	Pessimistic	Neutral	Optimistic
2 year - 90 hives	247 500	396 000	495 000
3 year - 115 hives	316 250	506 000	632 500
4 year - 130 hives	357 500	572 000	715 000
5 Year - 150 hives	412 500	660 000	825 000

(Source: own creation)

6.8.3 Cash Flow

Cash flow is more simply revenue or expenditure of funds. Cash flows for the specified period, the difference between revenues and expenses for that period. In practice, the cash flow is an important term because it is the basis for assessing the economic efficiency of investment. This ability has a large influence in the selection and evaluation of investment projects. The **Table 10** is given the estimated cash flow in the first 5 years of business, the pessimistic, neutral and optimistic variant.

Instruction to calculate the Cash Flow

1) To calculate the costs and revenues refer to the **Table 6**(Returns) and the **Table 4**(Costs).

2) For the first year, refer to the **Table 5**.

In the first year we do not have any expenses, revenues only.

3) In the zero year we do not have any income, only expenses -483,200.

The first calculation will be made for the pessimistic variant.

Table 7: Cash flow for the Pessimistic variant

Business year	Costs	Returns	Cash Flows
0 (Investment)	483 200	0	- 483 200
1	0	220 000	220 000
2	108515	247500	138 985
3	138 657	316 250	177 593
4	156 742	357 500	200 758
5	180 856	412 500	231 644

(Source: own creation)

The result of the calculation for cash flow (pessimist variant) is satisfactory. Cash flow is increasing after the first year of operation.

The second calculation will be made for the Neutral variant (Cash flow):

Table 8: Cash flow for the Neutral variant

Business year	Costs	Returns	Cash Flows
0 (Investment)	483 200	0	- 483 200
1	0	352 000	352 000
2	108515	396 000	287 485
3	138 657	506 000	367 343
4	156 742	572 000	415 258
5	180 856	660 000	479 144

(Source: own creation)

The result of the calculation for cash flow (Neutral variant) is good. This result is one of the main.

The third calculation will be made for the Optimistic variant (Cash flow):

Table 9 : Cash flow for the Optimistic variant

Business year	Costs	Returns	Cash Flows
0 (Investment)	483 200	0	- 483 200
1	0	440 000	440 000
2	108 515	495000	386 485
3	138 657	632 500	493 343
4	156 742	715 000	558 258
5	180 856	825 000	644 144

(Source: own creation)

The result of the calculation for cash flow (Optimistic variant) is attractive. The cash flow keeps growth.

The last calculating will be made for the Final variant (Cash flow):

Table 10: Cash flow for the Final variant

Business year - the number of hives	Pessimistic	Neutral	Optimistic
0 (Investment)	- 483 200	- 483 200	- 483 200
1 year – 80 hives	220 000	352 000	440 000
2 year - 90 hives	138 985	287 485	386 485
3 year - 115 hives	177 593	367 343	493 343
4 year - 130 hives	200 758	415 258	558 258
5 Year - 150 hives	231 644	479 144	644 144

(Source: own creation)

The result of the calculation for cash flow (Final variant) is inspiring and can be used to work for the following calculations.

6.8.4 Economic efficiency investments

To determine that the project is viable, it should be based on the numeric values identify specific indicators of economic efficiency, especially internal interest rate, payback period and net present value. The indicators will be calculated for the lifetime of the investment period of five years.

6.8.4.1 Net Present Value (NPV)

Net present value is the total financial value representative of the current (The discounted) value of all cash flows associated with the investment project. Net present value can be used as a criterion to assess the profitability of investment projects.

Table No.11 shows the calculation of net present value for the first five years of business and for the three variants, pessimistic, neutral and optimistic. The discount rate chosen is 10%. Calculation NPV according to **Formula 2** ; to calculate the Discount cash flow, use **Formula 1**.

Table 11: The Net present value and The Internal rate of return

(Discount rate $i = 10\%$)

Years of business	Discounted Cash Flow- pessimistic variant	Discounted Cash Flow - neutral variant	Discounted Cash Flow - optimistic variant
0	- 483 200	- 483 200	- 483 200
1	200 000	320 000	400 000
2	114 863	237 590	319 409
3	133 428	275 990	370 655
4	137 129	283 646	381 323
5	143 842	297 531	399 990
NPV	246 062	931 557	1 388 177
IRR	16%	52%	72%

(Source: own creation)

According to the calculation in the **Table 11** in the case that neutral variants of Net present value at a level 931 557 CZK, which is considered a good result.

6.8.4.2 Internal Rate of Return (IRR)

The economic efficiency of the investment is evaluated internal interest rate . This quantity can be calculated using the relevant function in Microsoft Excel. The calculated value is compared with alternative investment opportunities. I require a rate of return in terms of risk and required capital in the amount of 15-20%. The discount rate chosen is 10%. Calculation IRR according to the **Formula 3**.

According to the calculation in the **Table 11** in the case of neutral variants of internal rate of return at a level of 52%, which is considered a very good result.

After getting the results internal rate of return, go to viewing the financial market table for assessing the situation.

In the **Table 12** below is a comparison with alternative and various investment opportunities that can be realized in the financial market.

Table 12: Investment opportunities. Financial market:

Type of investment	Yield	Advantages	Disadvantages
Bank accounts	0 – 0.3%	- Easy foundation - transparency - Very liquid - Many companies - Almost no risk	- Almost no appreciation
Savings accounts	0.4 – 1.63%	- Easy foundation - liquidity - Almost no risk	- Low valuations
Term deposits	0.6 - 3%	- Low risk - organized	- Long notice period - Often will not cover inflation
Building savings	2-3.5%	- State contribution - Low risk	- For early cancellation, no state contribution - Can only be used for the purchase or renovate real estate - Very difficult when notice
Bond funds	2.4 - 5%	- Relatively low risk - Income above the	- Relatively complex

		<ul style="list-style-type: none"> level of inflation - Large selection of funds - Large selection of investment companies - Clarity of charges - liquidity 	
Stock funds	4 - 8%	<ul style="list-style-type: none"> - Preferred in the the long run - Good evaluation - transparent - Transparent fees - Many investment companies - Very much funds - High liquidity - Possible use of investment instruments, at its sole discretion 	<ul style="list-style-type: none"> - For experienced investors - High risk - Importance of education and information in the field - Minimum investment horizon of 5 - 10 years
Forex funds	30 - 70%	<ul style="list-style-type: none"> - A very high appreciation - Very liquid - Huge Market - Important persons can influence the development 	<ul style="list-style-type: none"> - high risk - little investment opportunities
Hedge funds	10 - 20%	<ul style="list-style-type: none"> - High yield - Almost not subject to regulation 	<ul style="list-style-type: none"> - For very experienced investors - Large fees - Many strategies
Commodity funds	to 4%	<ul style="list-style-type: none"> - Income above the surface of inflation 	<ul style="list-style-type: none"> - High fees - a few funds - Relative risk
Investment life insurance	0 - 4%	<ul style="list-style-type: none"> - Tax deductible 	<ul style="list-style-type: none"> - Huge fees - Double Charges - nontransparent - Pressure of financial advisors - When the contract tax deductible, can be selected fin. Means to policyholder in 60 years

			- In case of death of the policyholder, the contract is automatically terminated
Pension insurance	0.4 – 1.5%	- Tax deductible - State contribution	- Dependent on the government - Low valuations - For early cancellation is not a state contribution

(Source: CBRE http://www.cbre.cz/cz_en/services/investment)

6.8.4.3 Payback period (PP)

The time at which the investment returns, of course, interested in every investor. Here is the calculation for return on investment. The calculation is made on the basis of discounted cash flow. For the calculation determining a discount rate of 10%, which is indicated, for example, the return for equity funds.

Here we can see the the calculation average time for pessimistic, neutral and optimistic variants. Calculating PP according to the **Formula 4:**

The first step is calculation for the pessimistic variant:

Table 13: The Payback period for the Pessimistic variant in CZK

Years of business	Cash Flow
0	- 483 200
1	220 000
2	138 985
3	177 593
4	200 758
5	231 644

(Source: own creation)

$PP = 483\,200 \text{ (initial investment)} / 193\,796 \text{ (average cash flow for 1-5 years)} = 2.493 \text{ years}$

According to the calculation for the Pessimistic variant cover business income initial investment, during the 2.493 years.

The second step is calculation for the neutral variant:

Table 14: The Payback period for the Neutral variant in CZK

Years of business	Cash Flow
0	- 483 200
1	352 000
2	287 485
3	367 343
4	415 258
5	479 144

(Source: own creation)

$PP = 483\,200$ (initial investment) / $380\,246$ (average cash flow for 1-5 years) = 1.27 years

According to the calculation for the Neutral variant cover business income initial investment, during the 1.27 years.

The last step is calculating for Optimistic variant:

Table 15: The Payback period for the Optimistic variant in CZK

Years of business	Cash Flow
0	- 483 200
1	440 000
2	386 485
3	493 343
4	558 258
5	644 144

(Source: own creation)

$PP = 483\,200$ (initial investment) / $504\,446$ (average cash flow for 1-5 years) = 0.957 years

According to the calculating for the Optimistic variant cover business income initial investment, during the 0.957 years.

6.8.5 Timetable for implementation

Opening and establishment of farms are planned for January 2019. The aim of this winter will be with the formalities and prepare the hives for the summer produce maximum honey, which will be continually sold. As each project and establishing bee farm it is to be fitted into the time frame and consider all the circumstances and considerations that affect a successful start. Individual activities together with the necessary time fund the actual implementation of the business plan are shown in the following schedule **Table 16**

Table 16: Timetable for implementation

Order	Activity	Period	Number of days
1	Establishment of business entity registration for payment of social insurance, registration at tax office for the payment of income tax of individuals registering for health insurance payment.	5. 1. 2018	1
2	Procurement , manufacturing and assembly of frames and hives.	6.1 - 31.3	84
3	Launch marketing communications, web design, e-shop processing.	from 15.1	
4	Purchase of bee colonies, moving, writing, preparation for launch.	April	30
5	Completion hives, casting hives.	1.5 - 14.4	14
6	Inspection, checking the of bee colonies	15.5 - 14.6	30
7	Beginning honey extraction.	15.6 - 25.6	10
8	Start selling of honey.	from 16.6	
9	Second the dialing.	1.8 - 15.8	14
10	Third the dialing.	21.8 - 25.8	4
11	Feeding and preparation for winterizing.	26.8 - 20.9	25
12	Treatment, feeding.	1.11 - 30.11	30

(Source: own creation)

6.9 SWOT analysis

Swot analysis of the company Beekeeping Lukyanov

Strengths

1. Reasonably priced
2. Well established with retailers
3. Natural products
4. Uniqueness in the quality
5. Individual approach to the client
6. Good location
7. Marketing strategy

Opportunities

1. To run sales of honey on the web-sites
2. Increasing demand for high-quality honey
3. The study of literature and market research of this business
4. Possibility to expand of products
5. Subsidy policy of state

Weaknesses

1. Little chance the bees will produce a honey crop the first year.
2. Upgrading equipment and accessories
3. No experience in this field of business.
4. Seasonal business

Threats

1. China production
2. Natural disaster
3. Rise in price of raw materials
4. Bee deaths (Illness)

6.9.1 SWOT analysis strategies

According to SWOT analysis results, it is possible to build a development strategy. The Figure 2 demonstrates it:

Figure 2: Swot analysis strategies

SWOT	Opportunities (external, positive)	Threats (external, negative)
Strengths (internal, positive)	S-O strategies (maxi-maxi) 1) To get certificate of honey quality 2) Participation in presentations on Czech farmers' markets	S-T strategies (mini-maxi) 1) To visit Czech Beekeepers before starting a project and get information. Offer to cooperation with other beekeepers 2) To offer high-quality honey to people in a good price, unlike overpriced and poor-quality honey of competitors.
Weaknesses (internal, negative)	W-O strategies (maxi-mini) 1) Attending courses of beekeeping 2) Signing the contract on favorable terms with supplier of the equipment.	W-T strategies (mini-mini) 1) To get some experience in this sector of business before starting own project and minimize risks. 2) The use of reserve finances for the repayment of all the risks

(Source: own creation)

7 Discussion

Work performed competitive analysis, PEST analysis, SWOT analysis and assessment of the external and internal environment. Based on the analysis and to identify strengths and weaknesses were identified opportunities and threats that could in the future affect the Beekeeper Lukyanov. The company should particularly focus on the satisfaction of its customers because if the customer is satisfied with the offered products, not use the products of the competition and will spread the good name of the company.

The analysis showed that without the experience in this business, it will be difficult to make a profit in the first years. It is necessary to turn to the senior beekeepers for advice and guidance, which has extensive experience in this business. Then in this case it is possible to minimize your work risks and get a good profit in the first years. The passage of beekeeping courses will also be only beneficial for the development of the company. According to Mirobid Ismoilov, beekeeping - a difficult, troublesome, but profitable business. I would recommend to get into this business especially for young families engaged in beekeeping. It pays for all expenses, it is gradually becoming a source of income. You just have to love this business and to serve it with all my heart, and then the result will be good. It is necessary to study the psychology of beekeeping, read books about it and practice it in a real life. (**econews.uz, 2013**).

It is reported that one of the main threats for the honey production is chinese honey, which is inferior in quality, but its main plus is the price; it creates problems for the local beekeepers. Over the past few years, chinese honey consumes almost half of the world market, which once again proves its competitiveness. (**agronews.org, 2016**) According to Nikolay Slobodyanik, a beekeeper, he considers that this is all the fault of honey wholesale buyers. Because of them, the prices have dropped. (**agronews.org, 2016**). Possibly, the choice of cheap chinese honey promotes by the economic crisis, so now it is difficult to take a high-quality product at a high price.

8 Conclusion

The objective of this bachelors thesis was a defenition of business plan in the sector of foundation and development of a certain bee farm. In theoretical part were defined basic terms regarding to entrepreneur , business and legal forms in the Czech Republic.

Practical part is dedicated to the analysis of market, SWOT analysis and the structure of business plan. There was studied also essential aspects as establishing, operating and financing of enterprise.

As results will be considered a certain bee farm, where first investments are expected about 483 200 CZK based on calculation for 80 bee hives in the first year of business.

Financing is supposed by taking own savings of the entrepreneur , taking out alternatively a loan from members of family. The foreign sources are not supposed to be taken at all.

The revenue plan presented in three versions based on type of expectations : pesemistic, optimistic and neutral. Payback period of investment depends on the version and ranges from 1 to 3 years. The Net Present Value of investment in case of the pesemistic version is 246 062 CZK , for the optimistic version was calculated like 1 388 177 CZK and finally 931 557 CZK for the neutral expectations. The internal rate of return is 16% in case of pesemistic version, 52% percent calculated for neutral version and optimistic version achieved 72%. All three calculated value could be considered as very good result in comparing with alternative opportunities.

The main risk of this project could be expected in the disability of selling whole capacity of produced honey. However there is an option to sell with margin leftover honey to retail companies. The extension of number bee hives would be also a good decision for improving results in the enterprise.

One of the main roles in this business is marketing, for example, the creation of a site on which will be information about the company and its products, the company's participation in various farm exhibitions to presents their products and analysis of competitors.

Based on the analysis of efficiency investment is possible to state that the project is realizable one and can be successful on the market due to attractive product and actual trend in customer's demand.

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10 Appendix

Appendix 1: Honey in everyday life



Source: *Honey in everyday life* [online]. [cit. 2017-03-07]. Available from:

<http://www.poleznenko.ru/celebnaya-sila-meda.html>

Appendix 2: European bee farm



Source : *European apiary* [online]. [cit. 2017-03-07]. Available from:

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Appendix 3: Beekeeper



Source : *Beekeeper* [online]. [cit. 2017-03-10]. Available from :

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