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DESIGN OF A SPECIALIZED AGRICULTURAL SYSTEM IN BELINȚ, TIMIȘ COUNTY, ROMANIA

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Abstract: Agriculture has been ensured human food, being practiced differently, depending on the climate, environment, soil, and the requirements of crops or the need of animals for feed. In this work, we encourage the involvement of as many people as possible in this field, both for profit and a healthy life. The only way to improve our life and live healthier is agriculture, both for the producer and for the consumer. Implementation of the system is to take place in the municipality of Belinț, a city representative for the cultivation of vegetables (potato, cabbage, seedlings, etc.). [ARDELEAN V.,1979, Borcean I., 1996]
The agricultural system is a complex of economic and social elements interconnected, designed and made by man in order to obtain vegetable and/or animal products to meet the human needs. Specialized agricultural systems are characterized by the fact that their activity aims to obtain a single product, or the making of certain agricultural services. [Coste I., 1986., IANOȘ G., 1997]

The region has always been agriculturally rich (especially for gardening), due to the wind from the NW, which brings to the earth a loess rich in salts. Deep down, the soil is limestone and sandy. This work includes the implementation of a specialized agricultural system. This system deals with the cultivation of vegetables with all technological links and economic aspect. The total area cultivated is 3 ha and it is a familiar business. [OANCEA I., 2005, MUGUR B., VICTOR D., GAVRIL C., 2008]

On the 3 ha, there grow salad, radishes, spinach, onions, garlic, cucumber, dill, parsley, carrot, parsnips, peas, beans, beets, cauliflower, cabbage, potatoes, maize, strawberries, pumpkin, and melon. In addition to growing in the open field, the farmer also has 4 solaria. The land area is divided into two plots. One of the plots has a surface of 1 ha, where the 4 solariums are found, which have a length of 20m and a width of 6m. In this plot are cultivated plants that require more manual labor for both their care and planting. In the second plot of 2 ha are cultivated plants that are cared for technologically, these being sweet corn, potato, beets, strawberries, melons, pumpkin and cabbage. Most of the work and sowing will be done with a tractor and the rest of the equipment depending on the requirements of the plants we want to grow. Both sowing and care work, will be mechanized, partially mechanized or manual. The treatments will be done with special machines. In addition to this, there will future plans for small businesses. [MANEA D., IENCIU A., ȘTEF R., CĂRĂBET A., 2013]

• Introduction

Agriculture is an important for human existence, without which we could not survive. Thus, by practicing agriculture, billions of people are provided with daily food, the one that we all find in the morning for breakfast, in the afternoon for lunch and in the evening for dinner. Therefore, in the context of this work, there is a part of the agriculture, namely the one involved in the cultivation of vegetables. [MANEA D., PET I., IENCIU A., 2015]

By growing vegetables, one can also make a profit for a family of 3-4 people. Thus, by implementing a system of agriculture based on the cultivation of a mix of vegetables, which provide customers (consumers) with the necessary quantities and products in the house, the customer obtains healthy produce with a taste of superior quality compared to those in the supermarkets, the farmer being able to ensure a decent living through the cultivation and distribution of his produce. So, in addition to providing food, it also provides jobs. [MANEA D., ȘTEF R., PET I., 2016, NIȚĂ S., NIȚĂ L., MIHUȚ C., PANAITESCU L., 2014]

The work consists in a system in which the cultivation of vegetables is done on a familiar farm. All technological links, costs, profit, and plans for the future are presented.

• Material and method

For the elaboration of the present paper, the data retrieved is taken from different sources of specialty literature and public institution

• Results and discussions

The area of land used is almost all combined. It is divided into two plots. Plot 1 has 1 ha and plot 2 has 2 ha. Thus, the family that has this area will find it easy to divide the crops into soles. On plot 1, there are 4 solaria 20 m long and 6 wide totalling 480 m².

The plants grown are salad, radishes, spinach, onions, garlic, cucumber, dill, parsley, carrot, parsnip, peas, beans, beetroot, cauliflower, cabbage, potatoes, maize, strawberries, pumpkin, and melon. [NIȚĂ S.,2012, PUȘCĂ I.,2002]

Preparation of land for sowing or planting:

- In the solaria, preparation of the soil is done with a mower and it is ploughed every 2 years with a small tractor;
- The rest of the soil is ploughed every autumn, and before sowing it is disced or harrowed.

Most of the work and sowing is done with the tractor and the rest of the machinery according to the plant requirements (disc, cutters, sowers, etc.). Both sowing and maintenance work are mechanized, semi-mechanized or done by hand. Treatments are done with special machines depending on which sprinklers or atomizers are used. [HETEA Denisa, 2017., IENCIU Anisoara Aurelia, 2017.]

Conclusions

1. Even if the area under cultivation is not large, only 3 ha, as a result of the productions obtained, we have a monthly profit of 49,553.33 lei.
2. Expenses reached a total of 99,250 lei/year.
3. The variety of crops and the quantities obtained ensure that customers produce quality, tasty, and fresh products.
4. The customer can always visit the farm and even pick up his products.
5. Products are sold right on the farm, online, or by orders, the big ad is made through pages of products for sale.
6. As future plans, it is intended to collaborate with farmers who have livestock products for sale and with growers, so that the customer benefits from almost the entire range of produce, as well as the implementation of a vegetable processing network.

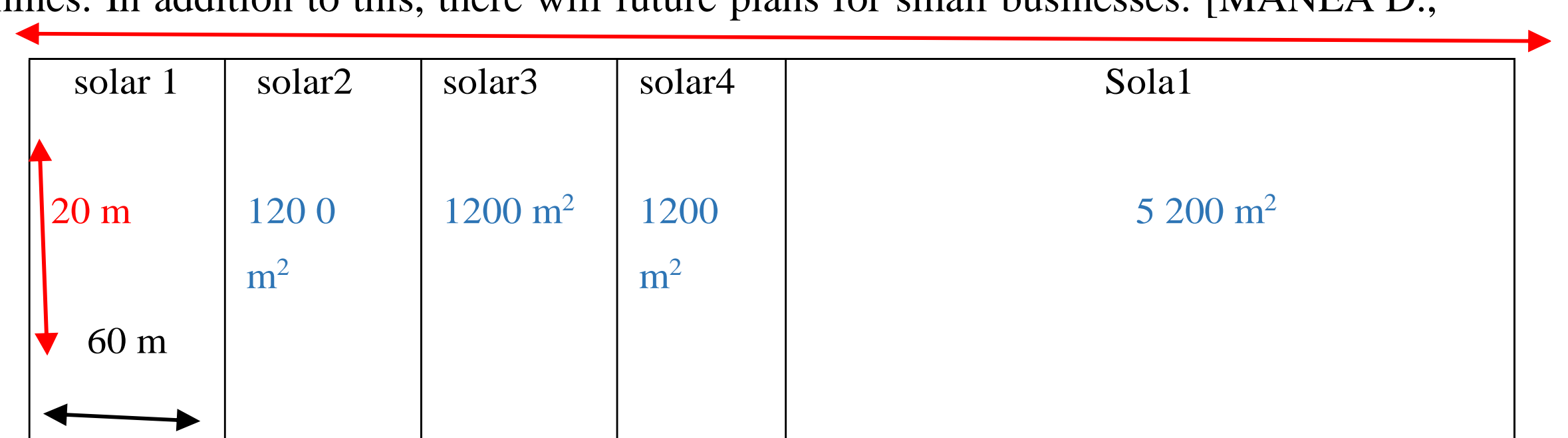


Fig 1. first plot scheme

Crop	Area (m ²)	Total lei
Salad + cucumber	1000 m ² + 200 m ²	4000
Spinach	1200 m ²	1000
Onion+ garlic +radish	600 m ² + 400 m ² + 200 m ²	3500
Dill+ parsley+ seedling	200 m ² + 200 m ² + 800 m ²	1300
Seedling + roots + onion + beans + peas	2500 m ² + 1000 m ² + 800 m ² + 460 m ² + 440 m ²	8000
Total plot		17,800

Tabel 1. Plants grown on plot 1

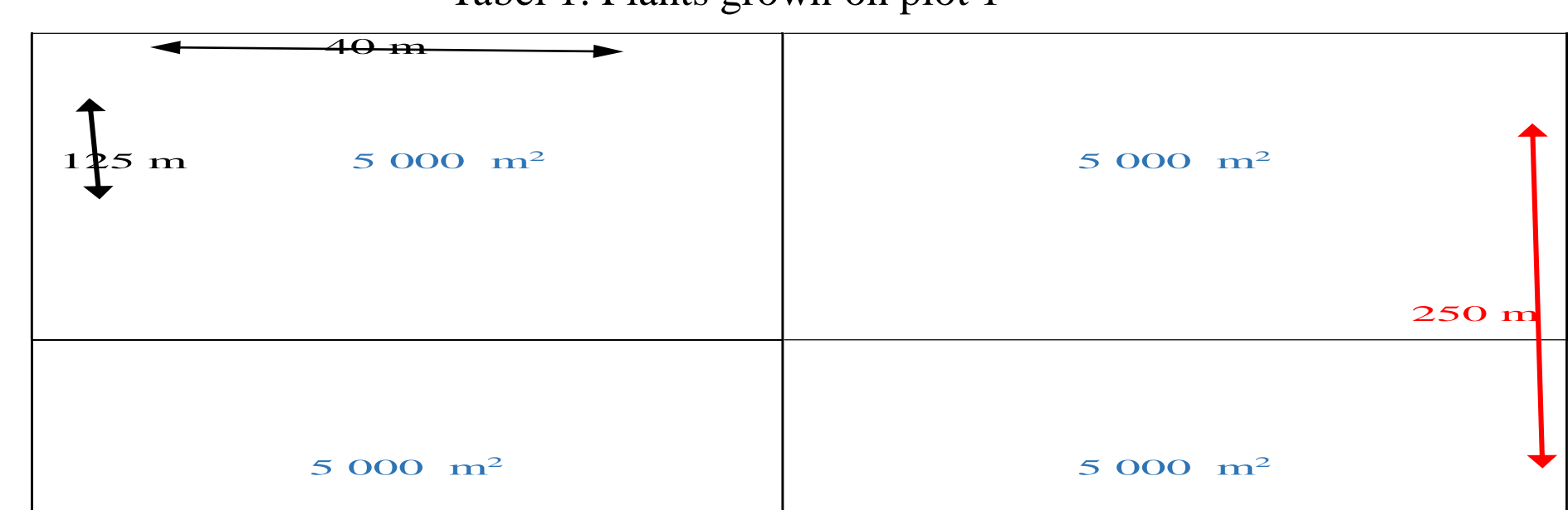


Fig 2. Second plot scheme

Crop	Area (m ²)	Total lei
Melon + pumpkin + cabbage + cauliflower	2000 m ² + 2000 m ² + 500 m ² + 50 m ²	1500
Strawberry (20.000 stolons)	5000 m ²	90000
Maize	5000 m ²	3500
Potato + beets	4000 m ² + 1000 m ²	2500
Total plot		97,500

Tabel 2. Crops on plot 2

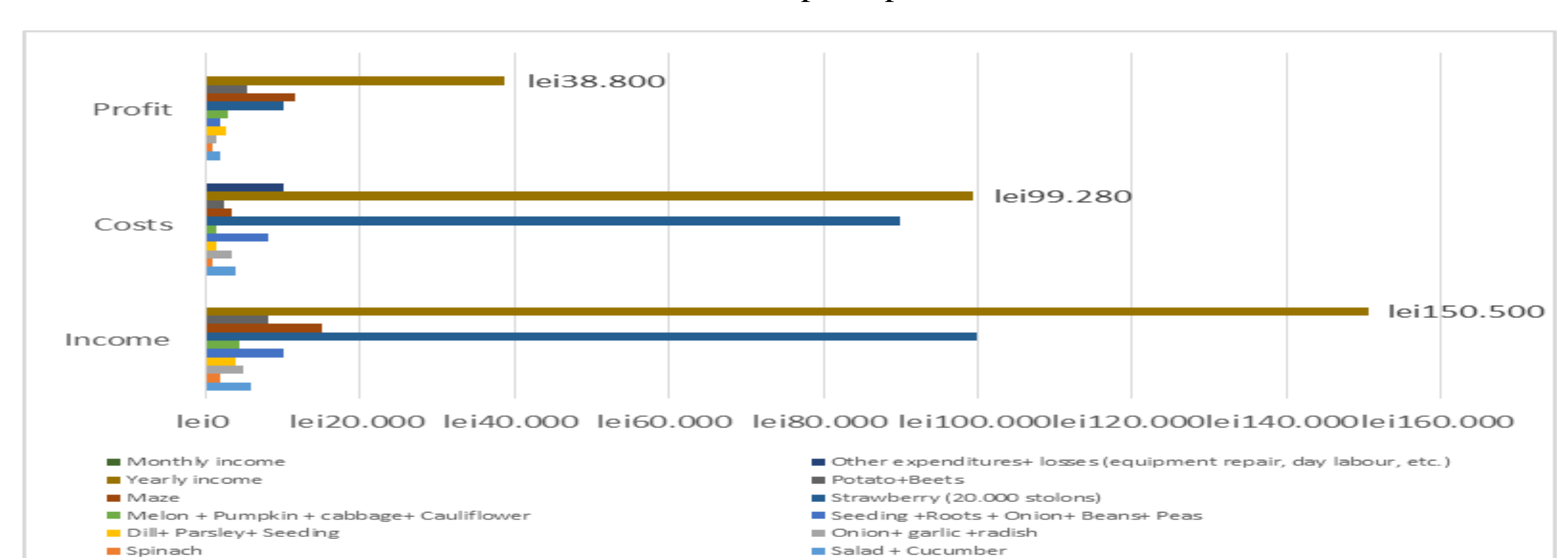


Fig 2. Revenues, expenses and profit of both parcels