

A STUDY CONCERNING THE ECONOMIC EFFICIENCY OF CULTIVATING PIONEER MAIZE HYBRIDS IN BIHOR COUNTY

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Abstract

The study was carried out on Pioneer maize hybrids of all precocity groups. The paper is focused on the average yields in the 5 trial centres during the last year. The value of the crop was between 5,100 RON/ha and 8,200 RON/ha; the profit varied between 2,100 RON/ha and 5,200 RON/ha, and the profit rate was between 70% and 174.3%.

Key words: grain maize, economic efficiency

INTRODUCTION

High fluctuation of the prices in the valorising of the crops as well as of the prices of the inputs (fertilisers, pesticides, and fuel) result in calculus whose importance is only orientating. We present results from 5 areas of the Bihor county located in the north-western part of Romania. Experimental hybrids are characterised by their high-yielding capacity, by a plant architecture that allow the cultivation at large distance, resistance to breaking, resistance to fallow, diseases, and other pests.

MATERIAL AND METHOD

Economic indices calculated were yield value (RON/ha), total production expenses (RON/ha), profit (RON/ha), and profit rate (%).

Valorising price was 1.00 RON/kg of grain maize.

In order to calculate production expenses, was also taken into account the same technology for all the trial fields.

RESULTS AND DISCUSSIONS

Figure 1 shows yield value. It can be seen that in one of the centres this value was below 5,200 RON/ha, in the Marghita area, which was the most affected of the five by drought and lack of soil moisture; in three areas it was between 6,700 and 7,300 RON/ha; and in a single trial field, located at Valea lui Mihai, the value of the yield was over 8,200 RON/ha.

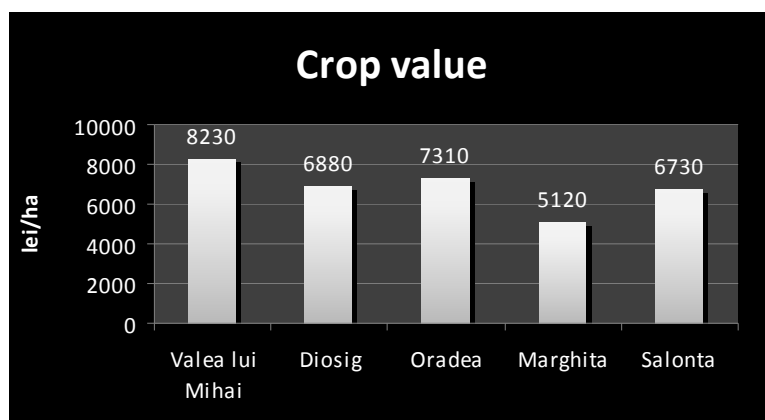


Figure 1 Crop value (RON/ha) in maize in 5 trial fields in Bihor County

The profit resulted after the subtraction of the total yield expenses varied within very broad limits below 2,200 RON/ha in Marghita (in the eastern part of the county) and over 5,200 RON/ha in Valea lui Mihai (Figure 2).

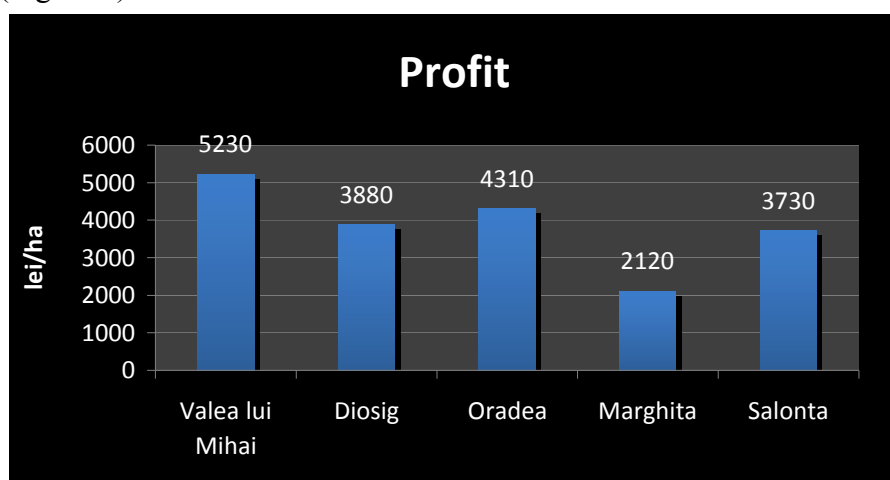


Figure 2 Profit (RON/ha) in maize in 5 trial fields in Bihor County

There was a profit of over 4,300 RON/ha: 4,310 RON/ha in Oradea and 5,230 RON/ha in Valea lui Mihai.

Profits larger than 3,700 RON/ha were in the following territories: Salonta (3,730 RON/ha) and Diosig (3,880 RON/ha)

The production cost in RON per ton is shown in Figure 3.

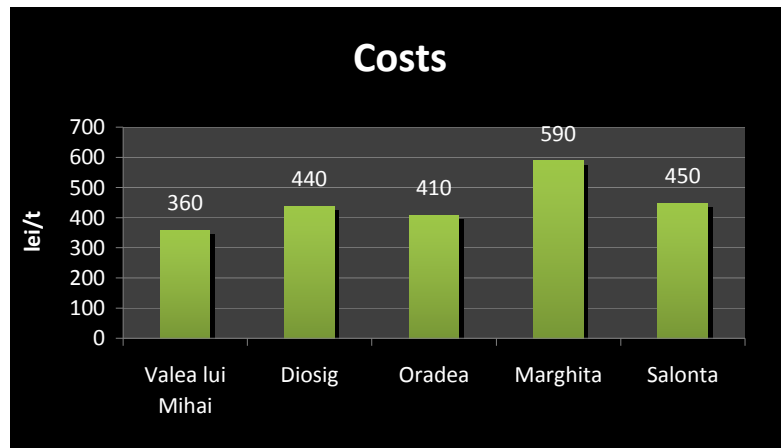


Figure 3 Total expenses (RON/t) depending on hybrid and on cultivation area

We can see that the highest cost was in Marghita, a field located in the Eriului Plains area (590 RON/t)

Production costs of over 440 RON/t were also in Salonta (450 RON/t) and Diosig (440 RON/t).

The lowest cost were in Oradea (410 RON/t) and Valea lui Mihai (3600 RON/t).

The synthetic index we analysed is profit rate, presented for the 11 trial centres (Figure 4).

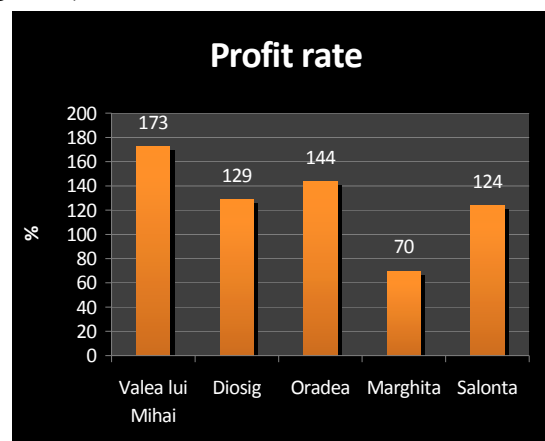


Figure 4 Profit rate (%) depending on hybrid and on cultivation area

The highest profit rate (173%) was in Valea lui Mihai. Rank second the comparative crops in Oradea (144%).

The value of the profit rate varied between 120 and 130% in the fields in Salonta (124%) and Diosig (129%).

The lowest profit rate was in the areas where average yield of the field was low, i.e. in Marghita (70%)

CONCLUSIONS

Economic efficiency indices pointed out the lack of correlation between the low price of valorising production and the high production expenses because of the high price of the fertilisers, pesticides, and fuel.

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