

A STUDY CONCERNING THE ECONOMIC EFFICIENCY OF CULTIVATING PIONEER MAIZE HYBRIDS IN WESTERN ROMANIA

STUDII PRIVIND EFICIENȚA ECONOMICĂ A CULTIVĂRII HIBRIZILOR DE PORUMB PIONEER ÎN VESTUL ROMÂNIEI

C. CHIOREANU, I. BORCEAN

*Agricultural and Veterinary University of the Banat, Timișoara, Romania
Corresponding author: C. Chioreanu, e-mail: cosminchioreanu@pioneer.ro*

Abstract. *The study was carried out on Pioneer maize hybrids of all precocity groups. The authors focused on the average yields in the 11 trial centres during the last 3 years. The value of the crop was between 1,500 RON/ha and 3,200 RON/ha; the profit varied between 200 RON/ha and 1,450 RON/ha, and the profit rate was between 11.5% and 82.0%.*

Rezumat: *Studiul s-a efectuat asupra unui sortiment de hibrizi de porumb Pioneer cu perioadă de vegetație diferită. Autorii prezintă rezultatele din 11 centre pe o perioadă de trei ani. Valoarea producției a fost cuprinsă între 1500 lei/ha și 3200 lei/ha, profitul a fost cuprins între 200 lei/ha și 1450 lei/ha, iar rata profitului între 11, 5 și 82%.*

Key words: *grain maize, economic efficiency*
Cuvinte cheie: *porumb, eficiență economică*

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 11 areas of the 5 counties in Western Romania (Arad, Bihor, Caras-Severin, Satu-Mare, and Timis). 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 we calculated were yield value (RON/ha), total production expenses (RON/ha), profit (RO/ha), and profit rate (%).

Valorising price was 0.30 RON/kg of grain maize.

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

RESULTS AND DISCUSSIONS

Figure 1 shows yield value. We can see that in two of the centres this value was between 1,500 and 2,000 RON/ha; in three areas it was between 2,000 and 2,500 RON/ha; in five centres it was between 2,500 and 3,000 RON/ha; and in a single trial field, located at Valea lui Mihai, the value of the yield was over 3,200 RON/ha.

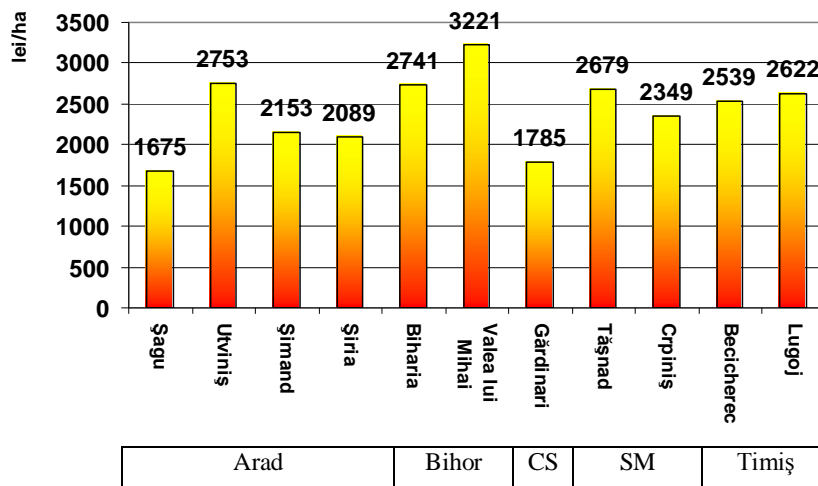


Figure 1 Crop value (RON/ha) in maize in 11 trial fields in Western Romania

The profit resulted after the subtraction of the total yield expenses varied within very broad limits below 200 RON/ha in Sagu (Arad County) and Gradinari (Caras-Severin County), and over 1,450 RON/ha in Valea lui Mihai (Figure 2).

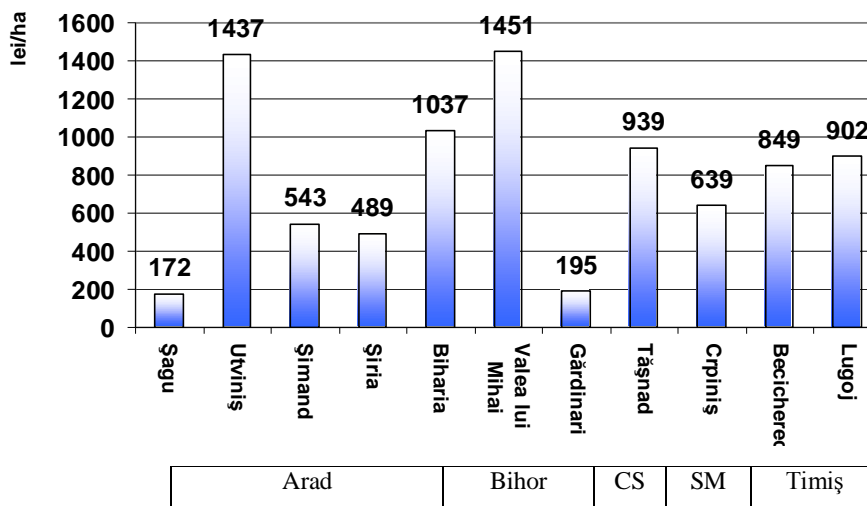


Figure 2 Profit (RON/ha) in maize in 11 trial fields in Western Romania

There was a profit of over 1,000 RON/ha: 1,037 RON/ha in Biharia (Bihor County) and 1,437 RON/ha in Utvinis (Arad County).

Profits larger than 500 RON/ha were in the following territories: Tasnad (939 RON/ha), Lugoj (902 RON/ha), Becicherecul Mare (849 RON/ha), Carpinis (639 RON/ha), and Simand (543 RON/ha).

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

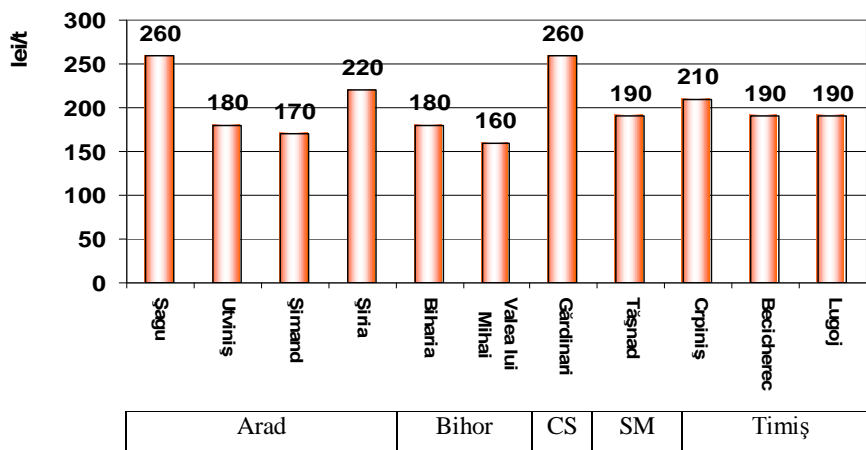


Figure 3 Total expenses (RON/t) depending on hybrid and on cultivation area

We can see that the highest cost was in Gradinari, a field located in the Doclin Hill area, and in the High Plain of Vinga, in Sagu (260 RON/t).

Production costs of over 200 RON/t were also in Siria (220 RON/t) and Carpinis (210 RON/t).

In two areas, the cost was 190 RON/t (Lugoj and Tasnad). The lowest cost was in Valea lui Mihai (160 RON/t), Simand (170 RON/t), and Utvinis (180 RON/t).

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

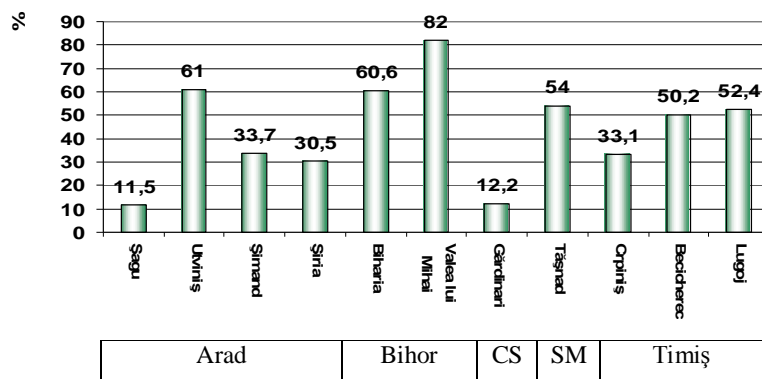


Figure 4 Profit rate (%) depending on hybrid and on cultivation area

The highest profit rate (82%) was in Valea lui Mihai. Rank second the comparative crops in Utvinis (61%) and Biharia (60.6%).

Profit rate was also above 50% in Tasnad (54%), Lugoj (52%), and Becicherecul Mare (50.2%).

The value of the profit rate varied between 30 and 40% in the fields in Siria (30.5%), Carpinis (33.1%), and Simand (33.7%).

The lowest profit rate was in the areas where average yield of the field was low, i.e. in Sagu (11.5%), and Gradinari (12.2%).

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.

LITERATURE

1. CHIOREANU COSMIN, 2007, *Studiu privind elaboarea structurii hibrizilor de porumb pentru principalele zone pedoclimatice din vestul țării*, TEZĂ DE DOCTORAT, USAMVB, TIMIȘOARA
2. x x x *Catalogul Pioneer*, 2003
3. x x x *Catalogul Pioneer*, 2004
4. x x x *Catalogul Pioneer*, 2005
5. x x x *Catalogul Pioneer*, 2006
6. x x x *Anuarul Statistic al României* , 2000-2006