ECONOMIC-FINANCIAL ANALYSIS IN WHEAT DEPENDING ON THE PHYTO-SANITARY TREATMENT IN THE CARPINIS AREA, TIMIŞ COUNTY, ROMANIA

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Abstract

Research was carried out in the agricultural year 2012-2013 in Carpinis, Timiş County, Romania, where agriculture and particularly cereal and technical crop cultivation predominate the other economic activities. Covering an area of 4,902 ha of A fertility agricultural lands – levigate chernozems – and benefiting from favourable climate conditions, this area is favourable to cereal cultivation. Together with cultivation technologies such as crop rotation, sowing time, balanced fertilisation, cultivation of resistant crops, chemical measures share an important place: they are the most efficient way of controlling diseases and pests thus contributing to superior amounts of high-quality yields. Results point out to yields and economic efficiency of cultivating wheat in the area.

Key words: *treatment, total expenses, production value, profit, profit rate*

INTRODUCTION

Some of the main economic efficiency indices of an agricultural firm are production activity and economic-financial activities as well as periodically monitoring the schedule. In the case of the agricultural firm we analysed, the calculus of the production costs in wheat (the main crop of the firm) is useful and it point out the structure differentiated per elements of variable and fixed expenses as well as on the production achieved with these specific costs.

RESEARCH MATERIAL AND METHOD

The biological material used in sowing was the wheat cultivar Exotic, and the treatment scheme was the one shown in the table 1.

Fertilisation was done with 84 kg/ha nitrogen and 69 kg/ha phosphorus.

RESULTS AND DISCUSSION

Harvest results in 2013 (Figure 1) point out to the fact that it was a year with difficult climate conditions; however, applying and observing the proper fertilisation and protection technologies, the yields varied between 6,650 kg/ha in the standard variant and 7,465 kg/ha in the variant V1. Yield in the treatment variant V1 was above the mean of the field (7,057 kg/ha).

Figure 2 shows the values of material expenses per ha as well as the value of the protection products depending on the treatment scheme (percentage of the total material expenses). The value of material expenses varied depending on the experimental variant

Table 1

Treatment scheme

VAR.	V 1	Std
Seed treatment	YUNTA QUATTRO	ORIUS 2WS
	1.6 l/t	1.5 kg/t
Plant density in the fall pl/m^2	545	545
Plant density in the spring pl/m^2	545	545
Disease treatment I	FALCON 460 EC	Tango Super
April 30, 2013	0.6 l/ha	0.75 l/ha
Insecticide treatment I	Biscaya	Faster 10 EC
May 11, 2013	0.2 l/ha	0.1 l/ha
Disease treatment II	PROSARO	
May 11, 2013	0.9 l/ha	
Herbicide	SEKATOR 0.15 l/ha	RIVAL SuperStar
April 30, 2013		20 g/ha

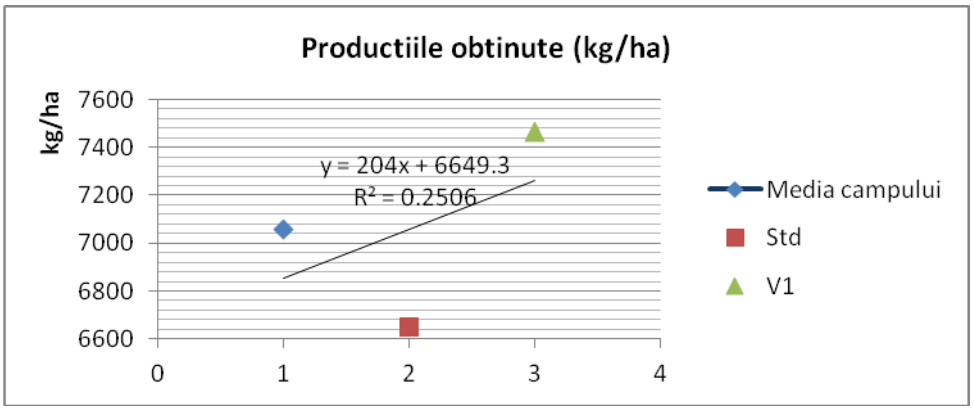

Figure 1. Wheat yield in 2013 in Carpiniş, Timiş County, Romania

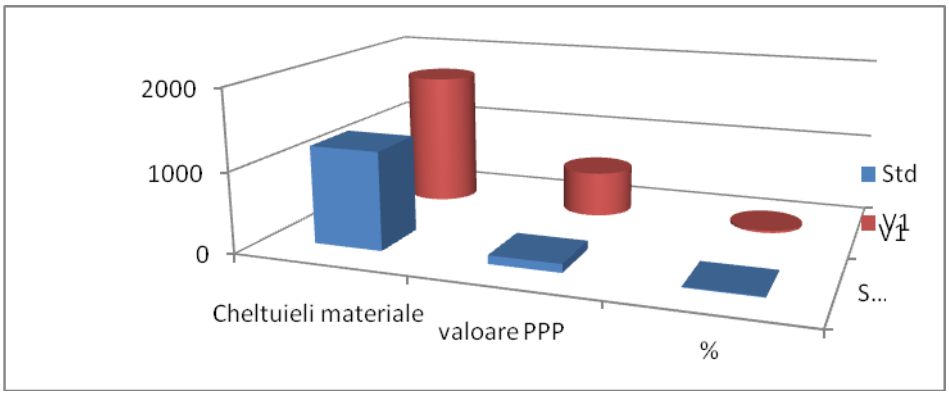

Figure 2. Value of plat protection products of total material expenses

between 1217.28 RON/ha (standard) and 1682.76 RON/ha (V1), and the value of plant protection products varied between 106.78 RON/ha (standard), i.e. 11.38%, and 567.76 RON/ha (V1), i.e. 29.6% of their total value. Other expenses were represented by mechanic works (500 RON/ha), labour costs (21.3 RON/ha) and crop insurance (3% of the total expenses).

The unit cost for the production of a kilo of wheat varied between 0.18 lei/kg in the standard variant and 0.24 lei/kg in the variant V1. The market price was estimated at 0.7 lei/kg.

Figure 3 shows results concerning the value of production depending on the treatment value ranging between 4,655 RON/ha (in the standard variant) and 5,225 RON/ha (in the variant V1).

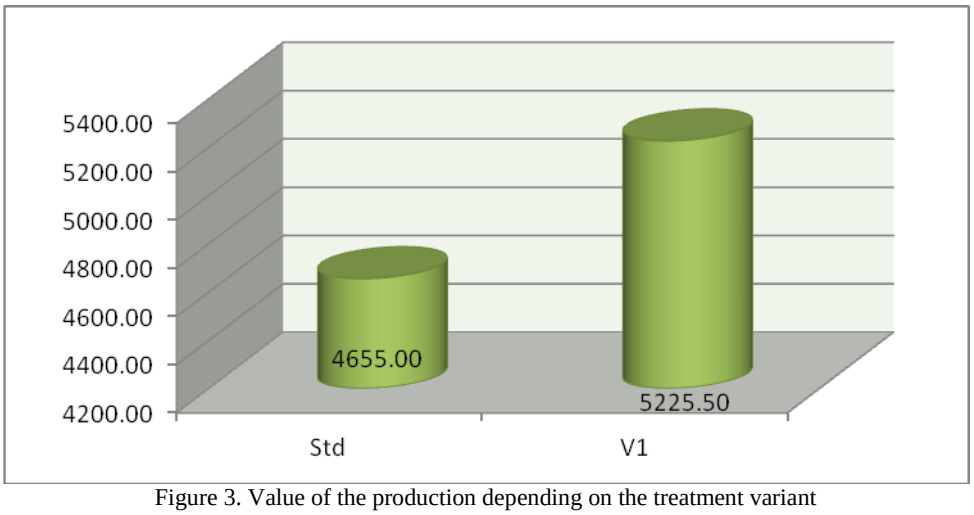

Figure 3. Value of the production depending on the treatment variant

Depending on the treatment variant, the profit varied between 2,998.4 RON/ha in the standard variant and 3,070.99 RON/ha in the variant V1.

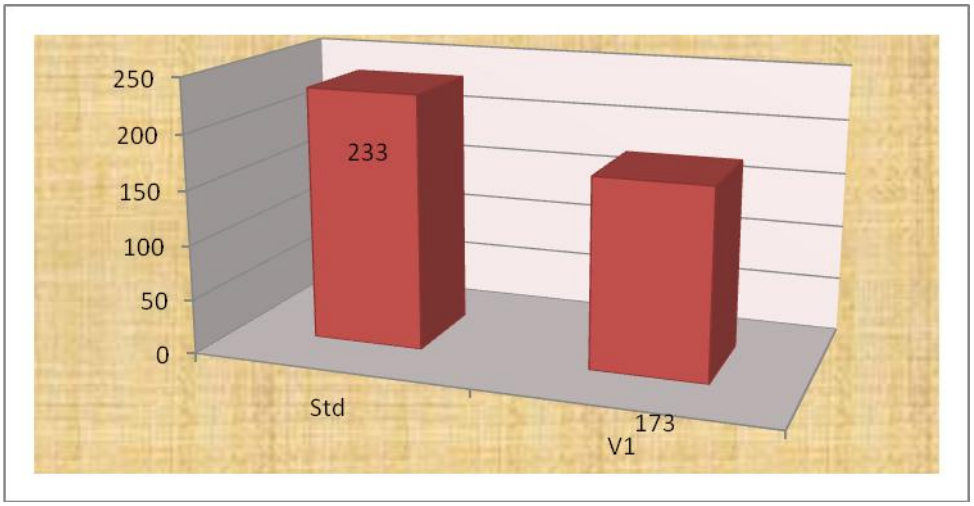

Figure 4. Net profit depending on the treatment variant

Profit rate also recorded the highest values in the standard variant (233%) and 173% in the variant V1.

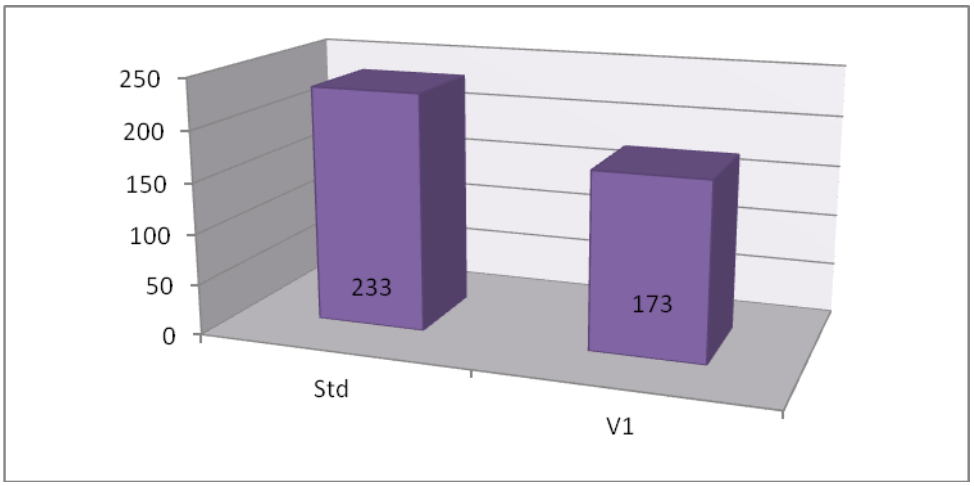

Figure. 5. Net profit rate (%) depending on the treatment variant

CONCLUSIONS

Financial analysis is an indispensable tool for managers: it is also used to better know economic phenomena and processes. It allows the characterisation of economic phenomena overall and in detail, of their volume and structure, of the causal relationships and of the factors generating them, of the law of their formation and evolution, of the ways of increasing the efficiency of the entire activity of a firm.

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