

## **THE EFFICACY OF SEVERAL ECOLOGICAL PRODUCTS APPLIED ON POTATO CULTIVARS FROM DIFERENT PRECOCITY GROUPS, UPON PRODUCTION**

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### **Abstract**

Within the experiences organized in experimental fields, there were taken into study 2 late potato cultivars and 4 semi late potato cultivars. Within the experiences there were organized 9 treatments with omologated ecological products and treatments with special foliar fertilizers with a toxic effect upon the pathogens.

At all the variants there were followed cultivars pretability; testing several new products; the effects of treatment appliance with foliar fertilizers; identification of other natural products in controlling the diseases; the study of corelations and interdependency between climatic, technological factors and also manifestation and the evolution of the diseases.

At harvest, the production obtained at each variant was registered, being established the behavior of cultivars and the influence of treatment upon production.

### **INTRODUCTION**

Regarding the simultaneous and conjugated phytopatogenic agents, the wanted success in the fight against the appearance and extension of the infectious processes, to limit them at an acceptable economical level for quantitative and qualitative production loss, it is obtained by a integrated usage of the entire available measurements combined in an efficient control system, an organic part of the culture technology.

With the help of the control methods applied, there is no need to slow down the existent tendency in the agro system, that is, the applied measurements don't have to concern only the pathogen agent, but also the other components of the agro system (plants, animals, soil and clime).

### **MATERIAL AND METHODS**

The final aim, which is also the objective of the PhD thesis is to accomplish the integrate pathogen control in potatoes crop in the context of an ecological agriculture.

Within the experiences organized in experimental fields, there were taken into study 6 potato cultivars, 2 late potato cultivars and 4 semi late potato cultivars.

Within the experiences there were tested 9 variants of treatments with ecological omologates products and tratments with special foliar fertilizers with toxic effect upon the pathogens.

At all the variantsthere was aimed the cultivar pretability; testing several new products; the effects of treatments appliance with foliar fertilisers; identification of the other

natural products in controlling the diseases; study of the correlations and interdependence between chemical, technological factors and manifestation and diseases evolution.

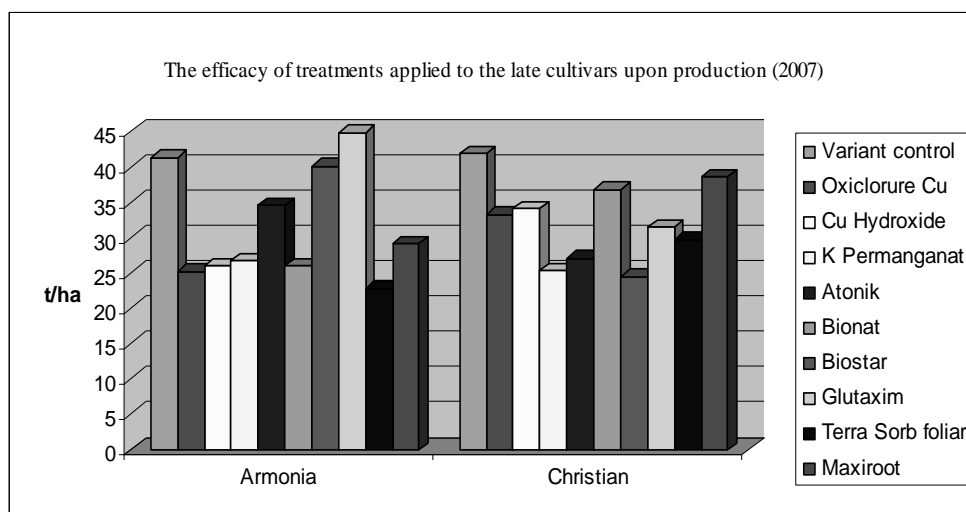
At harvest there was registered the production obtained at each variant, establishing the behavior and the influence of treatments upon production.

## RESULTS AND DISCUSSIONS

After treatments, there were obtained different results, which can be identified in the figures below.

Figure 1 represent the way late potato cultivars behave to the appliance of treatments with homologated ecological products and treatments with special foliar fertilizers with toxic effect upon pathogens, regarding the production level.

Figure 1



Armonia cultivar behave well at the variants which were treated with Gutaxim, Biostar and Atonik, there were remarked especially the results with Glutaxim.

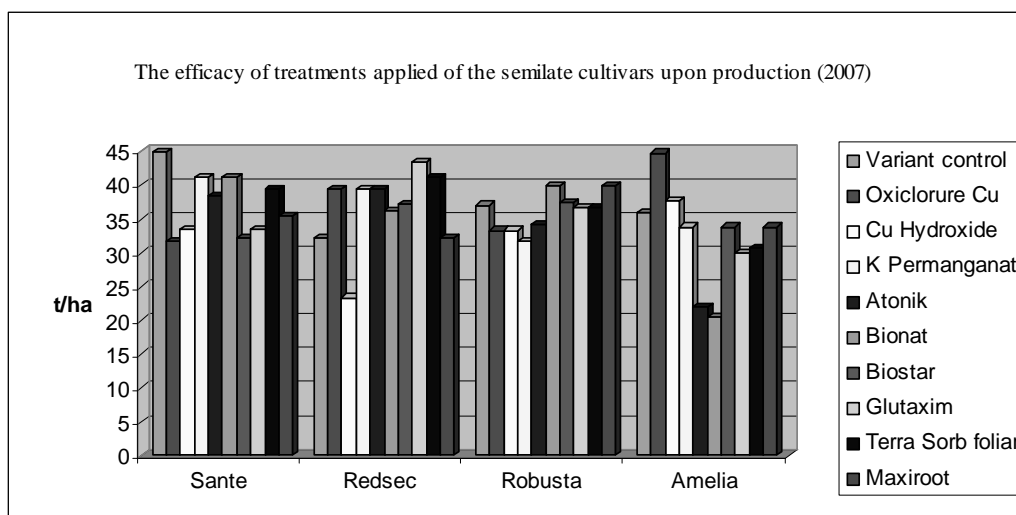
Poor results were obtained at variants upon which there were applied treatments with Bionat, Cu Oxidore and Terra Sorb Foliar. Compared to the control variant, the production obtained at the variant treated with Glutaxim, was higher with 10%.

Christian cultivar, responded favourable to the treatments applied, especially, the variants treated with Bionat and Maxiroot. The worst results were obtained at the variants treated with K Permanganat and Biostar. Compared to the control variant, the variant with the closest production was the one treated with Maxiroot.

Comparing the two cultivars, they behaved differently to the appliance of the same products in identical quantities as it can be seen in the figure 1, especially to the appliance of Glutaxim, Biostar and Maxiroot products.

In figure 2 there are presented the productions obtained by appliance the treatments to the semi late cultivars.

Figure 2



Among the four cultivars taken into study, Sante cultivar answered less favorable to the applied treatments, compared to the control variant. The variants at which the treatment was applied with K Permanganat Bionat and Terra Sorb Foliar were the closest to the production obtained at the control variant.

Compared to Sante cultivar, Redsec cultivar answered to the treatment applied. It is remarked especially the variant treated with Glutaxim, at which, the production obtained was with 35% higher than the production obtained at the control variant. The variant treated with Terra Sorb Foliar obtained a production with 27% higher than the control variant, while the variants treated with K Permanganat and Atonik, achieved productions with 22% bigger than in the case of control variant. The poorest value obtained compared to the control variant, was obtained by the variant treated with Cu Hidroxide, at which, the production was with 25% poorer than the production obtained at the control variant.

Robusta cultivar answered favourably to the effect of treatment appliance, on the variants treated with Bionat and Maxiroot, at which the productions obtained were with 10% higher than in the case of the control variant.

Alike results with the ones obtained by the control variant, were registered at the variants treated with Biostar, Glutaxim, TerraSorb Foliar and Cu Oxidore products. The variant with the poorest result was the one treated with K Permanganat; its production was about 15% poorer than the production obtained at the control variant.

Regarding the production obtained Amelia cultivar; it was observed the high efficacy of the treatments applied with Cu Oxidore. At the variant treated with this product, the production was with 25% higher than the one obtained at the control variant.

Good results were obtained also by the appliance of treatments with Cu Hidroxide, their value being with 5% higher than in the case of the control variant. Very poor results were obtained in the case of the variants treated with Atonik and Bionat products. The productions obtained at these variants were with 37%, respectively with 43% poorer than the productions obtained in the case of the control variant.

## CONCLUSIONS

In conclusion, at the appliance of the ecological products with toxic effects upon the pathogen agents, Atonik, Bionat and Terra Sorb Foliar, Sante and Redsec cultivar answered the most favorable way.

Robusa ultivar, answered favourably at the appliance of the treatments with Bionat, Biostar and Maxiroot products, while Amelia cultivar answered favorable, obtaining high production, at the appliance of the treatments with Cu Oxiclорure and Cu Hidroxide products.

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