

## **Pilot farms of IPA project in Serbia: Soil fertility levels and measures for improvement**

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### **Summary**

Investigations were carried out in the framework of the IPA project Agriculture Contribution towards Clean Environment and Healthy Food on three pilot farms located in Srem, the border region of Serbia. Regarding production system, one farm is specialized for crop production, second one for field crop, vegetable, fruit and livestock production, and the third crop and livestock production. The aim of the study was assessment of current status of soil fertility and fertilizer application on the basis of soil samples and information collected from the farms, and recommendation of economic, technological and ecological measures for optimization and improvement of food production on these farms. Results of soil fertility on the tested farms show that all parameters have large variations not only between the farms but also between the plots on the same farm. Economic optimization measures are based on the rational application of organic and mineral fertilizers, which are calculated for each plot by model for optimization of fertilization based on Soil fertility control and fertilizer recommendation system. Technological measures include improvement of soil quality and technology of food production. Measures for protection of agro-ecosystems resulting from compliance within optimization of economic and technological measures on the farm and education of the farmers about the importance of environmental protection in the production of safe food.

**Key words:** soil fertility, economic, technological and environmental measures