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Summary of the dissertation entitled:

Selected aspects of the implementation of the agri-environmental program in the FADN region – Mazowsze and Podlasie

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Agri-environmental programs are the main agricultural policy instrument currently used in the EU to help improve the relationship between agriculture and the environment. They have been introduced across the EU to support specific farming practices that help protect and enhance the rural environment. The implementation of a such a program is important not only for environmental but also for social reasons, as it enables farmers to obtain long-term financial benefits. Therefore, it is crucial to get to know the effects of the implementation of the agri-environmental program and identify the factors determining the participation of farmers in this program.

The conducted research included the economic, environmental and social assessment of the implementation of the agri-environmental program in the Mazowsze and Podlasie FADN region. This region is characterized by natural, organizational and production conditions worse than in other regions of Poland. The subject of the analysis were 292 farms, including 146 from the research and 146 from the control sample, which in 2010-2014 kept entries in accounting books under FADN, classified according to TF8 as: field, dairy and mixed crops. For each type of farm, a research and control sample was distinguished. The research sample consisted of farms that in 2010-2014 implemented agri-environmental programs under RDP 2007-2013. The control sample included farms that did not participate in this program. A purposeful selection of objects was applied. For each farm from the research sample, the most similar farm was selected in the control sample, taking into account the type of farm and its location. In 2017, the questionnaire survey was carried out in all farms using a face to face interview method.

In order to show the differences between the analyzed farms, a set of measures and indicators characterizing an average farm was developed. Then, the production, economic and environmental indicators were calculated. As a result of the analysis, it was found that in the

Mazowsze and Podlasie region, the implementation of the agri-environmental program has a positive effect on the economic condition of the farm in the form of additional income. Income in the researched farms depended not only on the resources and their usage, but to a large extent was also determined by the relationship of prices and the size of budgetary subsidies. In 2014, the share of subsidies in agricultural income on farms implementing the agri-environmental program amounted to: in field farms - 81%, dairy farms - 55% and mixed farms - 80%. In farms not participating in the program, the share of payments was lower and amounted to 72, 37 and 61%, respectively for field, dairy and mixed farms.

The implementation of the agri-environmental program on the farm does not require capital investments and additional labor. Labor inputs in the farms participating in the program were lower than in farms non-participating.

The conducted research confirmed that implementation of the agri-environmental program has a positive effect on the environment, as it results in lower GHG emissions from the farm due to the proper crop structure and the applied agrotechnics. However, the performed research showed that the costs of GHG emission reduction are very high. In 2014, on field farms, the cost of reducing 1 Mg CO₂ eq amounted to PLN 1,302, on dairy farms- PLN 611, and on mixed - PLN 1,112. The data obtained in the study raises the question of the effectiveness of the funds spent. Therefore, when incurring these costs, one should expect higher environmental effects. The conducted research shows that implementation of the environmental program should be related to specific environmental goals. Moreover, when planning subsequent pro-environmental programs, it is necessary to perform an ex ante assessment of the costs of planned activities in relation to the expected environmental effects.

The main factor determining the implementation of the agri-environmental program on the farm was the possibility of obtaining additional funds, and another was the protection of the environment by implementing agrotechnical practices aimed at maintaining biodiversity and limiting erosion and contamination of groundwater. The conducted research shows that increasing ecological awareness is a condition for improving the state of the environment, and environmental regulations are good for the future of agriculture. It is also important that running a farm does not damage the environment and generates income.