

## **OPERATIONAL RESEARCH – STRATEGIC TOOL IN ENVIRONMENT– AGRIBUSINESS INTERACTION**

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### **Abstract**

Although it is a science in its own right operational research is not so well known in the field of economics and agribusiness but it possesses methods and relationships that could help ensure the natural-agribusiness environmental balance. Operational research is not a strictly mathematical science; it uses mathematical techniques but has a much wider application spectrum representing a systematized approach to solving problems that uses analytical methods in the process of finding the appropriate solution. In the environment-agribusiness interaction, operational research can represent a tool that can contribute to more effective planning, generating scientifically based solutions to current problems and therefore gaining a competitive advantage in relation to similar enterprises. By means of the specific methodology (modeling, simulation, optimization through linear programming, etc.) it can determine the optimization of production flows, establish the most efficient way of determining feed in the livestock sector and realize the optimization of transport networks (e.g. the shortest path problem). The decision-making process under conditions of risk and uncertainty is one of the essential elements in the management of a company that can provide the necessary data for a viable strategic approach, providing optimal solutions to the problems encountered. The work aims to highlight the importance of operational research as a science, to provide an image of how to use specific techniques and methods, indicating the favorability of using it as a strategic tool both in agricultural business and for environmentally friendly policy.

**Key words:** operational research, linear programming, agribusiness, natural environment