MODELS OF PLANNING AND OPTIMIZATION CONSTRUCTED TO SIMULATE THE BEHAVIOR OF FARMS IN ROMANIA

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Abstract

The risk is a very important variable in the simulation behavior farms. This paper aims to build programming models to simulate the behavior of agricultural farms, that must be calibrate by the culture plan of the year basis or as the average over several years by the agricultural holding. Economic rationale behind this requirement is that in this way the model adequately represents the environment in which the decision maker agricultural structure shall base its decision. The purpose is to promote the setting up of farms whose size allow the practice of a viable, sustainable agriculture, capable to apply the newest technologies and lead to profit and efficiency, to the economical and organizational consolidation. As a consequence, the resizing of the agricultural holdings, the partnership between the producers, the integration of the agricultural production, the rural development, the consumers' constant request for agricultural and food products, the decrease of the deficit of the commercial balance for the agricultural products, the increase of the population's life standard, the safety of the food, all these are goals that have to be under the continuous attention of the authorities at central and local level. Production planning is a fundamental concept that is based on the concept of production organization products, actual production, marketing and service activities and post -sales, taking into account the requirements of actual and potential consumer or user in the direction of their satisfaction with maximum efficiency. The presence of a complex production system calls for linear programming restricts need to formulate a very complex system in order to calibrate the model to observed crop plan. In several cultures the proportion of traditional optimization system was restricted by constraints "rotational" or "flexibility". This category of constraints determines the optimal solution not only for basic but they are suitable for the simulation of policies that attempt to predict the effects of changing prices, costs or access to resources on the behaviour of farmers. Model solutions, simulation under different agricultural policy are also limited by the constraints identified and formulated in the basic.

Key words: models, simulation, agricultural, holdings, efficiency,