



Economic Evaluation of Technical Practices : a Model of Wine Growing Farms

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Due to increasing importance of the concept of durability, the environmental dimension of human activities is impossible to ignore today. Because of his strong connection to nature, agriculture is concerned by this new societal need. Underlying the preservation of the environment in agriculture is the need to find new technical practices of production which permit to combine environmental and economic dimensions. Thus, the suppression of some practices such as the systematic use of chemical inputs (fertilisers, pesticides), as well as irrigation water, concentrated animal feed, energy, etc... is considered in order to develop practices more favourable to product quality and to the environment. In wine growing, the question of environmental stakes is very important considering the quantity of chemical inputs used (46% in ton of the active substances used in France on 4,3% of cultivated areas in 2003 - Eurostat, 2007). Wine growing is consequently very concerned by this problem.

However there is no accounting tool today designed to evaluate the feasibility of new technical practices. Absence of information about the impact of modifications on the grape production has been moreover identified as one of the main reasons why evolution towards environmentally friendly practices is so slow (Pailler et Corade, 2004). The idea of a model of a grape farm taking into account economic and environmental dimensions is more than ever relevant. With the goal of establishing such a model, we will examine the economic impact of having new practices in wine growing farms, and particularly the cost of these practices. Pailler and Corade (2004) recommend the creation of a new technical and economic approach in grape farms and of a management model which will evaluate the cost of farming practices. This is the aim of a research program in which EGERIE¹ (ENITA² de Bordeaux) takes part. This project is focused on reduction of pesticides used in wine growing (*ADD/Wine and environment* – managed by INRA³ and financed by ANR⁴).

The aim of this presentation is first to present the limits of existing accounting methods used in wine growing. Then, the focus will shift to a technical and economic model and a highly detailed method to analyze the production process. This model will permit us to calculate the cost of the grape production and of the technical operations. Finally, future uses of the model will be examined.

¹ EGERIE : Economie et Gestion des Espaces Ruraux, de l'Information et des Entreprises

² ENITA : Ecole Nationale d'Ingénieur des Travaux Agricoles

³ INRA : Institut Nationale de la recherche Agronomique

⁴ ANR : Agence Nationale de la Recherche