# Endogenous prices in mathematical programming models for agricultural policy analysis

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**Abstract**

This paper proposes a price endogenous model based upon positive mathematical programming methodology for policy and market evaluations. The model is developed preserving the competitive character of farm decisions and considering the aggregate supply response on market prices. The method of aggregation allows one to use the tool for policy evaluation at the sectoral or regional level using individual farm data. The process of simulation adopts the positive mathematical programming calibration property for evaluating farm behaviour dynamics and the estimation of the inverse demand and supply functions for generating endogenous prices relayed on the aggregated individual supply decisions.

**Key words**: endogenous prices, positive mathematical programming, policy analysis

**JEL**: C61, Q11