

Comparative execution efficiency of growers in Thailand's baby corn supply chain by data envelopment analysis

A. Rattanachai, V. Srilaong, S. Kanlayanarat, T. Wasusri, K. Tanprasert

Acta Horticulturae 989: 231-234. 2013.

Abstract

Baby corn (*Zea mays* Linn.) is an important commercial and export crop in Thailand which is the world's largest exporting country. Supply chain management (SCM) is an integrative approach for dealing with the planning and control of materials and information from suppliers to end customers. Data Envelopment Analysis (DEA) is a non-parametric multiple input-output efficiency technique that measures the relative capability of decision making units or DMUs using a linear programming model. DEA can be used to assess the competence of a number of producers by comparing each producer with only the best DMU in the group. This study was conducted to compare the execution efficiency of growers in the baby corn supply chains based on farm size and GAP compliance following the DEA technique. The relative efficiency of the 97 growers in two provinces of Thailand was determined based on the inputs (production costs) and outputs (income). Only 9 growers obtained the highest relative efficiency of 1.0. Four of these growers had large planting area and all were both GAP-certified and engaged in contract farming.