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AGRI-ENVIRONMENTAL FOOTPRINT INDEX OF FAMILY FARMS USING FADN DATA: METHODOLOGY AND APPLICATION

Abstract:

The aim of the study was to develop agri-environmental footprint index of family farms using FADN data. The final set of indicators for agri-environmental assessment of the farms was derived from extensive literature review on farms' environmental and sustainability studies. The min–max method was applied to transform values of indicators expressed in variety dimensions for their need to be put on a common basis, namely in interval from 0 to 1. The Principal Components Analysis and equal weighting was applied to estimate weights for the indicators. Lithuanian FADN of family farms data of the year 2017 were used. The results are provided for seven farm groups according to farm's economic size class and nine farm groups related to farm's specialization. The thresholds values of farms' agri-environmental footprint index intervals were estimated based on descriptive statistics. The Index structure is flexible, and can respond to diverse local policy needs. The findings of assessment indicates very good level of Lithuanian family farms as 74% and 70% of the sample farms were defined by medium level of agri-environmental footprint index, using Principal Components Analysis and equal weighting, respectively.

Keywords:

agri-environmental footprint index, indicators, family farms, FADN

JEL Classification: O13