Environmentally Sound Resource Valuing for a More Sustainable International Trade. The Case of Argentine Maize

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ABSTRACT

This study analyzed costs and benefits for Argentina when trading maize grain. Assigning an appropriate value to traded resources involves a comprehensive assessment of all kinds of sources driving the process, in order to avoid their misappropriation and non-profitable use, while at the same time enhancing the environmental performance of the region for the long term. Increasing amounts of slowly-renewable and non-renewable resources invested in producing intensive cash crops do not necessarily contribute to further development of local enterprises nor do they include the valuable contribution by local ecosystem services. The emergy accounting method was applied to assess resource and environmental support used in production and trade of maize grain in the northern part of Argentina’s Pampas Region, in years 2009-10 and 2012-13. Exports were calculated for commercial periods 2010-11 and 2013-14. Results showed that intermediate organizations trading with importing countries through international grain traders (Emergy–to–Exchange Ratio, EER, for Argentina = 0.51) exported more environmental resources (emergy associated with exported grain) than emergy imports associated with monetary returns from traders to Argentina. This situation places the country in an unfair exchange. When trade was performed through national trade organizations, the EER = 0.91, resulted in a smaller disparity. Resource trade imbalance clearly appears when it is measured in emergy terms but not when it is accounted for in monetary units. This study provides data on which to open discussion and inform trade and production strategies that could help Argentina avoid jeopardizing its own natural resources in the long term.

Citation
