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“INTEGRATING CLEANER PRODUCTION INTO SUSTAINABILITY STRATEGIES”

Increasing the Sustainability of Pasta Production Through a Life Cycle Assessment Approach

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Abstract

Durum wheat cultivation is responsible for most of the environmental impacts of pasta production. Due to this reason, Barilla put forth a specific project aimed to increase widespread use of cereal sustainable cropping systems. Analysis were based on a holistic approach, taking into consideration economic, agronomic, food safety and environmental indicators. The first part of the project was focused on identifying potential improvements in the most diffused cropping systems for the cultivation of Durum wheat in Italy, while maintaining high levels of quality and food safety standards. It has been demonstrated that the well-known low input agronomic practices are environmentally friendly and also often economically advantageous. Implementation of dicotyledons into a cereal-only rotation allows a reduction of environmental impacts (greenhouse gas emissions could be reduced up to 36%), a reduction of DON risk and an increase in net income for farmers (up to 31%). In the second part of the project Barilla gave about 15 farmers a decision support system (DSS) called granoduro.netTM to see if this instrument could help them in reducing production costs and environmental impacts. Results show that the only adoption of the DSS contribute in reducing carbon footprint (-10%), and costs for pesticides and fertilizers (-10%).

Keywords: Life cycle assessment; LCA; Food; Pasta; Durum wheat.
