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## Technological and financial approaches to risk management in agriculture: an integrated approach\*

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### Abstract

In the present paper, risk-management problems where farmers manage risk both through production decisions and through the use of market-based and informal risk-management mechanisms are considered. It is shown that many of these problems share a common structure, and that a unified and informative treatment of a broad spectrum of risk-management tools is possible within a cost-minimisation framework, under minimal conditions on their objective functions. Fundamental results are derived that apply regardless of the producer's preference towards risks, using only the no-arbitrage condition that agricultural producers never forego any opportunity to lower costs without lowering returns.

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