

Insurance in agroecological landscapes and social networks: An impact network analysis

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There are many opportunities for synergy between insurance programs and integrated pest management (IPM) programs to support crop risk management. An 'impact network analysis' (INA) can be used to evaluate the effects of risk management products, integrated with communication networks, decision networks, and ecological/transport networks.

Communication networks have been expanding rapidly, along with our ability to measure and predict the effects of communication. Decision networks are becoming a more commonly studied feature in agroecology, as interdisciplinary links grow with sociology and the psychology of decision making. Movement of pests through agroecological landscapes may be by human transport, vectors, wind, rain, or other means. Evaluating these linked system components provides insights into system level impacts of risk management. Scientists and policy makers can use an ex ante INA to inform research priorities, where the effects of little-known parameters can be studied across their potential range in sensitivity analyses. Ex post INA can be used to evaluate what network structures increased or decreased the realized impact of risk management tools.