

Emerging controversial technologies: an application to agricultural biotechnology

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Abstract

Agricultural biotechnology is subject to intense R&D and innovative activities where some applications represent much debated societal topics. The core of the controversy originates from the fact that the field opens opportunities to “enhance” the potential of crops but at the same time incorporates uncertainties related to long term effects on the human health, and the environment. Yet, the debate remains general and does not consider which applications are undergoing significant “controversial” scientific activities. Indeed, not all agricultural biotechnologies fall into the debate. Therefore, a technology scanning exercise of the current developments in agriculture biotechnologies would provide a clearer picture of which applications are growing and what part of this growth concerns “controversial” activities. An empirical test is conducted for a representative set of agricultural biotechnologies. Based on scientific literature data, this paper proposes to identify and measure those dynamics using the Sharpe ratios and results mapped in a two dimensional framework (growth vs. controversial growth). To establish the link between the two dimensions, the use of adequate –and expert reviewed- keyword strategies are used. The method proposed in this paper appears as adequate to support the scanning process from policy makers, and provides insightful information on which are the most “controversial” technologies to be targeted and debated.

Conference Theme

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