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Comment on Weaver: *Ex post* evidence on adoption of transgenic crops: US soybeans

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In this interesting paper the author aims at analysing the adoption of transgenic soybeans in areas in the US. He concludes that transgenic crops can be expected to be adopted in existing cultural areas if incentives are appropriate and that potential exists for transgenic crops to be adopted in new areas where they offer advantages over alternative crops in aspects such as weed control and other management practices.

After an overview of the current status of GM crops, the author continues with describing the private and public effects of transgenic crops. The public effects include the potentially important short- and long-term environmental benefits, such as the introduction of pesticides that would reduce environmental risk. The private benefits refer to increased yields and reduction of costs. In addition to that the author states that the uncertainty of private costs and benefits of GM crops is extensive.

“It is especially important to note that transgenic crops constitute an innovation for which the level and uncertainty of private and public effects results in consumer response”.

Further, the degree of irreversibility connected with the investments in this new technology is high. The high uncertainty connected with the irreversibility of the adoption decision leads to a high risk for producers.

An important conclusion of the paper is that in the US transgenics is not a *universally* dominant new technology. It is likely that this conclusion is also true for the EU. According to the author the adoption of transgenics means:

“...a complex set of changes in the overall production technology, rather than a single augmentation of a particular input”.

This accentuates the importance of local circumstances and characteristics of the producers in the adoption and diffusion of the new technology.

In the quantitative part of the paper the author describes four types of factors affecting adoption: farm characteristics (farm size, field characteristics), experience and knowledge of the technology, market conditions (price risk, profitability, cost and yield effects) and environmental implications (e.g. decreased use of pesticides). In the regression analysis only two variables have a significant coefficient: increased yield and the past use of herbicide-tolerant seed. All other factors are more or less irrelevant.

As the author rightly concludes, this means that in their adoption decision of new technologies such as GM crops the producers remain focused on private net benefits.

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Public consequences (such as gene flow and other environmental consequences) are considered important only when they lead to lower costs (e.g. the decreased use of pesticides). This stresses the public responsibility for the public costs and benefits of transgenics. It seems that the public awareness of these risks is developed more extensively in the EU than in the US.