



Letter to the Editor

Are genetically modified crops compatible with sustainable agriculture?

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In reference to what was published today at Scidev (Gould, 2006): “GM crops are compatible with sustainable agriculture”, I wish to comment:

Massive use of transgenic crops poses potential ecological risks; genetically modified (GM) crops are not compatible with sustainable or organic farming or any other alternative form of production. GM agriculture compromises the capacity of farmers to manage their land by requiring increased use of herbicides and by reducing the farmers’ options of rotations, since the poisoned soil is no longer suitable for nitrogen-fixing bacteria. Moreover, transgenes move beyond their intended destination and hybridize with weed relatives, contaminating other, non-GM crops (see Marvier, 2001).

It is impossible to remove genes that have escaped into natural gene pools. These affected gene pools have their fitness and genetic diversity greatly reduced (see Steinbrecher, 1996). Saying that GM crops will not be cultivated in areas where there are sexually compatible wild relatives and that this will avoid contamination is no guarantee, because of numerous factors, including corporate pressure, lack of biosafety regulations and human errors.

There are many examples in the literature of risks to the environment, extending from creating pest-resistant weeds and new virus strains through gene flow, to toxicity of transgenic organisms to wildlife (see Rissler and Mellon, 1996; Kendall et al., 1997). There is also danger that transgenic crops will produce environmental toxins that move through food chain and end up in the soil, where they bind to colloids that retain this toxicity, affecting nutrient cycling (see Altieri, 2000).

For the above-mentioned reasons, farmers in poor countries need to maintain the low-risk agroecosystems to which they are adapted in order to ensure local food security. They need to continue producing food, preserving their local ecological system, and keeping the locally adapted agrobiodiversity intact (Altieri, 2000).

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