

Feeding the World Conference

Are GM Crops fit for purpose? If not, then what?

« [Feeding the world, food security and GM. Abstract.](#)
[Systemic risk in food and farming. Abstract.](#) »

The inevitability of (trans)gene flow. Abstract.

By sheepdrove

The inevitability of (trans)gene flow – environment and health risks

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Abstract

Failure to contain transgenes can have human health, environmental and legal implications. Gene flow is the key environmental concern for sustainable coexistence of GM and non-GM crops.

The flow of transgenes to wild relatives or into new environments may cause harm to humans or other species. These harms may be different from those created by the primary GMO in its intended use. The flow of transgenes also makes both GM and non-GM farmers increasingly vulnerable to liability lawsuits from either those who hold the intellectual property rights of the transgenes or farmers whose crops mix with those certified to be GM free.

Risk assessment frameworks in most jurisdictions are case by case. Gene flow undermines this case by case approach because the movement of transgenes to different genetic backgrounds and species in an uncontrolled manner will result in the creation of new GMOs that have not benefited from an assessment.

The development of GM pharma and industrial plants introduces new complexities because these plants are not always intended to be safe. The track record of containment from the last 12 years of commercial development provides little confidence that either the biotech or the agriculture industries can keep these plants on the farm or segregate them away from the human food supply.

I will introduce options for managing transgene flow. However, as also concluded by others, there appears to be no single method and perhaps no combination of methods that can reliably keep transgenes fully contained.

Tags: [gm](#), [gene flow](#), [transgenes](#), [coexistence](#), [Jack A Heinemann](#), [University of Canterbury](#), [New Zealand](#), [genes](#), [environmental risks](#), [health risks](#), [risk management](#)

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1. [GM Food Fight breaks out in media « the natureheads blog](#) Says:
[28 November, 2008 at 12:20 pm](#)

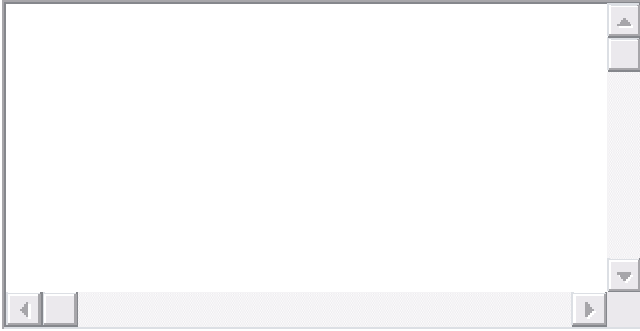
[...] Give over Pat, cross pollination is a scientific fact, not an ‘organic argument’ – and just one of several ways GM genes can be transferred into a non-target part of living systems. Read up. I’d recommend everyone to look out for the forthcoming book by Professor Jack Heinemann. The professor introduces the science behind gene flow here... [...]

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