

## Regulation of genetically engineered crops calls for ‘risk-based approach’

**The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.**

. . .GE crops have been the most scrutinized foods in human history, despite a lack of scientific justification for such a burden. . . . removing unnecessary regulatory obstacles should be a high priority.

In this article, we describe a risk-based approach, building on that outlined originally by the National Research Council . . . and then later in the ‘Stanford Model’ for risk assessment.

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We work through . . . examples. . . . All of these assessments are for North America, where . . . sunflower are natives.

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### **Herbicide-tolerant sunflower or rice:**

- *Object of protection:* diversity of wild sunflowers or rice.
- *Likelihood of hazard:* high, based on amount of known gene flow.
- *Amount of harm:* marginal—herbicide tolerance does not provide a selective advantage outside of agriculture.
- *Risk:* low.

Note that the worst-case scenario in herbicide-tolerant sunflower or rice would be that the farmer would be unable to use the herbicide any longer; thus, this is an herbicide market-protection (efficacy) issue rather than an environmental concern. . . .

### **Insect-resistant (*Bt*) sunflower:**

- *Object of protection:* wild sunflowers (and perhaps some endangered pollinator, should such an insect exist).
- *Likelihood of hazard:* high—cultivated and wild sunflower . . . hybridize easily. . . . insect resistance could increase the competitiveness or weediness of wild sunflower.
- *Amount of harm:* unknown.
- *Risk:* unknown.

In this case, risk assessment for *Bt* sunflower cannot be completed until certain knowledge gaps are addressed. . . .

. . . [M]ost GE sunflowers would be Category 2 (low risk) if proposed for planting in the vicinity of wild populations. However, the *Bt* sunflower described above could be placed in a higher risk group. . . unless either additional studies show that the insertion of a *Bt* gene does not confer a selective advantage . . . or effective confinement. . . mechanisms become available to mitigate the risk.

**The full article is behind a paywall. Read it here: [A risk-based approach to the regulation of genetically engineered organisms](#) and supporting material here: [Box 1: Four case studies](#)**