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I agree with [Professor Gray](#), that the ecological community needs to explicitly address the question of how much risk is tolerable. A first step should be dividing risk into manageable sub-categories such as risk of hybridization and risk of persistence, ecological risk and economic risk.

When discussing risks it is clear that we are not always talking about the same issues. Separating risk into components will help the establishment of risk tolerance policies based on data.

Risk of hybridization is probably the best-studied area. However, the largely unpredictable nature of pollen movement makes it difficult to provide estimates of gene flow rates that are consistent, even within a single crop/weed complex. This should not be allowed to confuse the issue. What is important is that given proper conditions for hybridization (such as, overlapping flowering times and compatibility), hybridization could occur.

The theory of biologically significant levels of gene flow is clear. Depending on levels of selection, relatively moderate rates of gene flow (less than 5% per generation) can have significant effects on the genetic structure of a population. Indeed, we have routinely measured gene flow rates among crops and feral relatives in this range.

These data indicate that risk is real, and quantifiable. If gene flow can be demonstrated to occur at even the 1% level, then the risk of escape is high. High risk should require a high level of monitoring to reduce the potential for other problems. Or, to extend [Professor Gray's](#) metaphor, we have already decided to risk the "picnic," we need now to make sure we have enough umbrellas and towels in case we get wet.

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