

proper forum, which is not a formal debate.

I have had many productive exchanges with creationists on radio, television, or panels, where it is possible to stop my opponent and correct errors before they pile up uncontrollably. This accomplishes Erpino's goal of educating the general public in science and evolution, but a formal debate does not. The vast, vast majority of formal debates decrease public support for evolution, which discourages teachers from teaching it. I suggest that we put our egos aside and, above else, do no harm.

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Bollgard Cotton Performance

Assertions that resistance management strategies for Bollgard cotton—which expresses the natural insecticidal protein *Bacillus thuringiensis* (Bt)—are inadequate or that the product “failed” to provide cotton growers control of the bollworm (M. Mellon, Letters, 1 Nov., p. 703) are simply not correct.

The facts speak for themselves. More than 1.8 million acres of Bollgard cotton were planted by more than 5700 growers across the United States in 1996 (nearly 13% of the entire cotton crop). Approximately 60% of these growers were able to entirely eliminate insecticide spray treatments for tobacco budworms, bollworms, or pink bollworms. For those growers that did spray some of their Bollgard cotton acres because of unusually high bollworm pressure, a single spray generally controlled the insect pests. That single spray—when combined with the season-long, in-plant protection provided by the Bollgard gene—represents a significant improvement over adjoining non-Bollgard fields that may, in the past, have required four, five, or even six traditional insecticide spray treatments.

The insect resistance management plan for Bollgard cotton was initiated and implemented by Monsanto with the full support and concurrence of the U.S. Environmental Protection Agency. This plan always accounted for the bollworm and its unique characteristics.

The adoption of Bollgard cotton in 1996 saved the equivalent of the application of more than a quarter of a million gallons of formulated insecticide products, hardly a “failure” for the environment.

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Japanese Science

Concerning Hiroo Imura's editorial about Japanese science education (4 Oct., p. 15), from a Japanese student's point of view, there is a more serious problem than the number of graduate students or university facilities and budgets. Scientists at my university teach us mostly practical issues, like how to produce data and write papers. But they seem to rarely discuss philosophical matters or the social consequences of scientific activities. Science education in Japan should provide opportunities for students to learn about social responsibility and the quality of scientific research in a uniquely Japanese way. Then we could stop mimicking or pursuing the Western way of thinking and make a unique Japanese contribution to the international scientific community.

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