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THE FIRST WORD

A SPRING THAW IN THE FIELDS

Politically, perhaps, *debacle* is a poor word to use for this season's great breaking up of barriers against genetic experimentation. (It is perplexing that the word for spring's exultant shout in its victory over winter should ever have been applied to catastrophe.) Yet biotechnology has been dammed up through a two-year-long winter of discontent—frozen in part by the caution of cool professional heads and in part by chilling procedural lawsuits.

Perhaps now, though, we face the prospect of a new experimental growing season and a glorious summer. The Cabinet Council Working Group on Biotechnology's proposed framework of law fills the regulatory vacuum in which operated opponents with nebulous arguments. The courts have removed at least some of the obstacles erected by Judge John Sirica's May 1984 order temporarily barring environmental experiments. The Environmental Protection Agency has shown by two recent decisions—requiring experimental use permits for Monsanto's proposed experiments with a pesticidal recombinant *Pseudomonas fluorescens* and for Advanced Genetic Sciences' frost-prevention experiments—that it is not fundamentally opposed to environmental testing. Nor is EPA as vulnerable as the National Institutes of Health to dilatory court challenges under the National Environmental Policy Act, the weapon-of-choice for those seeking a handy delaying tactic independent of a project's actual merits or dangers.

This is a season that deserves careful observation as well as glad hearts. Safety issues will not be—should not be—laid to rest so soon. Indeed, we may expect redoubled debate:

Every incident connected with the breaking up of the rivers and ponds and the settling of the weather is particularly interesting to those of us who live in a climate of so great extremes. When the warmer days come, they who dwell near the river hear the ice crack at night with a startling whoop as loud as artillery, as if its icy fetters were rent from end to end, and within a few days see it rapidly going out.
(Walden, "Spring.")

New freedom must not produce a flood of experimental organisms "full alchemiz'd and free of space." Rather, biotechnologists must pay for their new-won liberty with redoubled vigilance.

The EPA is taking very constructive steps. We support its thirty-fold increase of an admittedly minuscule budget for research in biotechnological pollution abatement and, even more important, for solid ecological research to support environmental risk-assessments that are something more than second-guesswork.

The EPA's program, though, is just one effort focusing on a few environmental questions. Other issues are beyond EPA's charter and resources. What of artificially created crop species, whatever "artificially created crop species" may mean in contrast to the species created through hundreds of human generations of interference with various grasses? A paper by three Calgene scientists in this month's *Bio/Technology* addresses these questions. The paper is meant, in part, to spark discussion at a special meeting of the American Society for Microbiology. The meeting—in Philadelphia, June 10-13—will consider the scientific aspects of environmental release, much as earlier meetings at the Brookings Institution and the National Academy of Sciences took up political, economic, and regulatory issues. Legislators, regulators, and researchers all seem to have high hopes for the ASM conference. Ideally, the convocation should produce broad scientific policies as thoughtful and constructive as those that followed the Asilomar Conference ten years ago. The Philadelphia Conference will be a true success if it provides not detailed answers to specific questions, but a clear method of inquiry and a sound sense of the questions that need addressing first.

Biotechnology should no longer stand frozen by professional and public fear of what *could* happen. Rather, researchers and regulators must begin amassing the knowledge that will let them see well in advance what *will* happen—to give us as a political society the tools we need to weigh risk against benefit without shooting craps with our future.

—Douglas McCormick