A Novel Strain of Recklessness

From The New York Times, *6 April 1986*

THE DAZZLING NEW TECHNIQUES OF GENETIC ENGINEERING have been safely practiced behind laboratory doors for a decade. But now that engineers are getting ready to release the first genetically altered agricultural organisms into the environment, they have stumbled badly. The problem lies not in the technology but in the deceit and recklessness of some early practitioners.

One offender is a company, Advanced Genetic Sciences of Oakland, Calif. Last November it received the first then-known Federal permit to test a genetically engineered organism outside greenhouse walls. The organism is a highly useful bacterium designed to deter frost on crops like strawberries. But the manufacturer tested outside before receiving the permit, and failed to report damage to trees noticed in the illicit tests. The Environmental Protection Agency last month withdrew the permit and fined the company $20,000.

A second offender, even more arrogant and irresponsible, is a Government agency—the Department of Agriculture's Animal and Plant Health Inspection Service. Without consulting any of the Federal agencies assessing the scientific problems of environmental release, the agency has quietly permitted a Nebraska company to test—and market—a live, genetically altered herpes virus used as a vaccine for pigs. When a private company is rebuked and fined for testing without proper review, why should the Animal and Plant Health Inspection Service be free to write its own rules?

The Service says there was no need to consult others because the vaccine was safe. That misses three points. First, there is no way to predict what will happen when a new organism enters an environment. Most novel organisms perish, but some run riot and become pests. The Inspection Service should know; its prime purpose is to prevent such pests from entering the country. Genetically engineered organisms are novel to all environments, and deciding on the rules for their release is a complex scientific issue which the Inspection Service lacks the competence to decide by itself. A recent report by the Environmental Protection Agency offers guidelines for all agencies to follow.

The Inspection Service's second error is to believe that the virus must be safe because the genetic engineering consists of removing a gene from it, not adding a new one. But the same is true of the much-debated frost-retarding bacterium. The issue is that deleting a gene to remove a visible adverse property may change an organism in other, unknown ways, since some genes have more than one effect.

The Inspection Service's worst error is one of judgment. In all probability the altered virus vaccine is entirely safe. What an

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Rifkin Against the World

From the Los Angeles Times, *17 April 1986*

AN ANIMAL DISEASE CALLED PSEUDORABIES HAS REACHED epidemic proportions among the nation's herds of swine. The disease, caused by a herpes-like virus, is almost always fatal in pigs, so the effect on the food supply is serious and growing.

In response, Biologics Corp. of Omaha has produced a vaccine called Omnivac-PRV. What's interesting about this vaccine is that it is made by genetic engineering. A piece of a gene of the virus that enables it to reproduce is snipped out, rendering the virus harmless.

Earlier pseudorabies vaccines have been created by growing the virus in chick cells for generations until, by mutation, some of it became weaker—too weak to cause the disease. This method of producing vaccine was slow, inefficient and costly, and produced too little of the desired material. Snipping out a gene achieves the same result, but is a vastly superior technique.

In January, after the new vaccine was shown to be highly effective and safe in tests in four states, the U.S. Department of Agriculture licensed Biologics to market it. Omnivac became the first live product of genetic engineering licensed for use in the environment.

The potential benefits of this vaccine and of others like it are incalculable. The potential risks have been shown to be non-existent.

Nonetheless, earlier this month the Department of Agriculture suspended Biologics' license to sell the vaccine because Jeremy Rifkin, the scourge of biotechnology, complained about procedures, environmental-impact statements and the like. None of his objections went to the merits. There is still no suggestion of harm from Omnivac.

This is the same Rifkin who has single-handedly stymied the testing of genetically altered bacteria on plants, even though the bacteria have the promise of reducing frost damage and increasing crop yields. For years Rifkin has cleverly used the courts and the regulatory process to halt one of the most significant scientific advances of our time.

Who is this Rifkin, and what are his credentials? He has a long history of opposing things, but as to credentials, he has none. Perhaps you remember Rifkin as the author of "Entropy" (Viking: 1980), which a Los Angeles Times reviewer described as "flagrant flimflam" and "logical garbage." Or perhaps you remember him as the author of "Algeny" (Viking: 1983) described in our Book Review as "a shameless potpourri of misinformation and faulty logic."

Somehow this man has emerged as the single most influential person in the country on genetic engineering. He has finally found an issue that he can ride. Unfortunately for the rest of us, it's the wrong one. Knowledgeable scientists (Rifkin is neither) were right to worry about the potential harm of genetic engineering more than

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excellent test case, therefore, as the first genetically engineered organism to be released. If the Service had secured full review from the Agriculture Department's own committee on genetic engineering, as the Department promised a House committee last November, the new technology would have gotten off to a secure and credible start.

The Foundation on Economic Trends, an unremitting watchdog of genetic engineering, deserves credit for bringing to light these two cases and what they show about the ragged Federal system for regulating the new technology. The system fails to protect the public—and its delays and inconsistencies sorely try the new industry.

E.P.A.'s new guidelines, and a bill by Representative Don Fuqua of Florida to assure uniform regulation by different agencies, should help overcome the protracted confusion in Washington about the engineering of life and the environment.

Rifkin Against the World

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a decade ago. The government was right to insist that precautions be taken. Careful tests were done and redone. Rifkin's scenario of disaster from an unleashed new organism is groundless.

Genetic engineering is an important new technology. It is time to thank Jeremy Rifkin for his interest and show him the door. The Animal and Plant Health Inspection Service of the Agriculture Department will reconsider the suspended license of Omnivac on Tuesday. The license should be reinstated without delay, and the sale and use of this new vaccine should resume. The only danger to humanity lies in continuing to listen to Rifkin.