priority. That can mean sampling a few species and using models to project damage to others instead of doing comprehensive field studies, says Roger Helms of the U.S. Fish and Wildlife Service (FWS), who adds that moving quickly to restoration is a worthy goal.

The new law made its debut with a small oil spill off the Rhode Island coast in January 1996. The postaccident research, Peterson says, amounted to "a few collections of dead things that washed up on the shore and a few other odd data sets." This approach is sure to miss chronic or subtle effects seen in the long-term Valdez studies, he says, calling it "a godawful disgrace." Doug Helton of the National Oceanic and Atmospheric Administration's Damage Assessment and Restoration Program demurs, arguing that the harm done by oil "doesn't all have to be shown with original research."

Council-funded scientists, meanwhile, are looking forward to a trickle of funding to keep portions of projects going. Last month, the trustees decided to use $115 million left over from the restoration fund to endow a long-term research and monitoring program starting in 2003 that will have a budget of up to $10 million a year. To give the program the credibility that has at times eluded earlier efforts, the trustees plan to ask the National Research Council to vet its design.

Early plans are to "take the pulse of the northern gulf" and to fund research on key species like sea lions and harbor seals, says Molly McCammon, the council's executive director. That, along with the solid work already funded, says council chief scientist Robert Spies, will "truly leave something behind of lasting value." **–JOCELYN KAISER**

GENE ENGINEERING

EPA, Critics Soften Stance On Pesticidal Plants

Four years after airing a controversial plan to regulate "plant-pesticides," battle-weary opponents are finding common ground

For 6 years John Sanford, inventor of the gene gun, led a handful of researchers on a mission to endow roses, petunias, and other ornamental flowers with genes that help plants resist mildew. Last year Sanford threw in the towel, selling his Waterloo, New York, firm—not because the research was sputtering, but because he feared a new rule from the Environmental Protection Agency (EPA) would put him out of business.

EPA intends to require companies to submit data showing that plants equipped with new or foreign genes coding for pesticides or other resistance traits are safe for humans and the environment. The agency also wants the seeds to carry a label saying they make their own antipest substance. "It's our legal mandate and obligation to regulate these substances," says Janet Andersen, director of EPA's Biopesticide and Pollution Prevention Division. But many scientists and politicians are pressing EPA to narrow the rule. "This new regulation has large implications for the U.S. biotech sector," Representative Thomas Ewing (R–IL), chair of the House Subcommittee on Risk Management, Research, and Specialty Crops, said at a 24 March hearing on Capitol Hill.

The gap between the feuding sides appears to be closing, however. At the hearing, EPA officials said they plan to make changes—for example, expanding a list of modifications exempt from regulation—before issuing a final rule this year. "We're very close to getting these things clarified," says R. James Cook, a plant scientist at Washington State University in Pullman and a spokesperson for 11 societies* that have banded together to fight the rule. EPA's relaxed stance, however, may raise the hackles of some groups that want to see even more stringent regulation.

Citing its authority over pesticides, EPA aired a proposed rule in November 1994 that it said would ensure the safety of plants altered to express pest-resistant traits or protective substances. The rule cast a broad net, covering everything from the genes for making *Bacillus thuringiensis* (*Bt*) toxins, bacterial proteins that kill most insects, to genes that would tell plant cells to self-destruct upon attack. Among the exemptions are traditionally bred plants and gene transfers within a species.

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>
> —Arthur Kelman

The rule has drawn fire from all quarters. Because it includes so many exemptions, the proposal is "far too weak," says Margaret Mellon of the Union of Concerned Scientists in Cambridge, Massachusetts. But she and others support the philosophy of the rule, which would protect against hazards that may arise if, say, a potent horseradish protein conferring disease resistance were spliced into vegetables eaten in greater portions.

Other critics, however, have assailed the rule's scientific basis. The main shot came from a consortium assembled by the Institute of Food Technologists in January 1996. The consortium issued a report that year calling the rule "scientifically indefensible" because, it argued, the EPA was essentially proposing to regulate the process—gene engineering—rather than the product. It has since suggested that EPA regulate only plants modified to express substances found to be toxic to other species. "Nobody's suggesting that if you insert a highly toxic substance into a plant that this shouldn't be regulated. That's risky," says plant pathologist Arthur Kelman of North Carolina State University in Raleigh.

He and others claim a broad rule could jeopardize confidence in the safety of the food supply. "The label 'pesticide' has the connotation of danger; it means 'kill.' That doesn't do much to lower the anxiety in the public," Kelman says. Walking a fine line, the Biotechnology Industry Organization backs oversight of what it, along with the societies, prefers to see labeled "plant-expressed protectants." Such regulation is "critical for public acceptance" of new products, says spokesperson Joseph Panetta.

EPA announced at the hearing that it is considering revisions that should help mollify critics. For instance, says James Aidala, EPA's associate assistant administrator, the agency is willing to adopt the term plant-expressed protectants. EPA also plans to broaden its exemptions, including a wider range of plants given viral proteins that—like vaccines—immunize them against viruses. "The rule is mainly about what doesn't need regulation," Aidala says.

Environmental groups say they are disappointed by EPA's narrowed focus. But Cook and his allies are optimistic. "If the EPA had started where they are today," he says, "we would probably not have issued the report in the first place." **–MICHAEL HAGMANN**

* American Institute of Biological Sciences, American Phytopathological Society, American Society for Horticultural Science, American Society for Microbiology, American Society of Agronomy, American Society of Plant Physiologists, Crop Science Society of America, Entomological Society of America, Institute of Food Technologists, Society of Nematologists, Weed Science Society of America