AMERICAN EXPERIENCE

TRANSCRIPT

AMERICAN EXPERIENCE: Rachel Carson

Pesticide Early Warnings

Slate: Rachel Carson's book, *Silent Spring*, was published in 1964 but, years earlier, Carson began to suspect that pesticides posed a risk to the environment.

Narrator: In 1957, in the USDA's all-out war against the fire ant some twenty million acres in the South were doused with pesticides —killing not only ants, but blackbirds and meadowlarks, armadillos and opposums. The sprayed areas, as one Alabama agricultural official reported, "reeked with the odor of decaying wildlife."

LYTLE: The hunting-fishing community was outraged. County agricultural agents dropped their support for the project and it, it really was a black eye for the Department of Agriculture, but it was a warning for Carson.

NARRATOR: What concerned Carson was not merely that synthetic pesticides had unintended consequences, but that substances about which so little was known were now practically ubiquitous. Widely employed by government agencies to protect health and agriculture, as well as American interests abroad, synthetic pesticides also were sold directly to consumers–-who, by 1957, could choose from an array of some 6000 different products.

KINKELA: You had examples of people digesting spoonfuls of DDT just to prove how safe it was. At the same time, birds are dying en masse, fish are dying. I think Rachel understood that something radically transformative was happening, this sense that scientists have been asking the wrong question. Scientists have been thinking about this question of acute toxicity rather than what are the long-term impacts of this chemical world that we're creating.

NARRATOR: Rachel Carson had long known that scientists were divided on the issue of synthetic pesticides—and that conclusions about their safety depended on who was asked.

ORESKES: You have scientists who are working closely with the Department of Agriculture and with the chemical industry and are part of a mindset or worldview that says, I've got a pest, I've got a boll weevil or a gypsy moth and I want to kill that pest, and I wanna kill effectively, without killing the person who is applying it to the crops. So almost all the attention is either on the killing of the pest or the non-killing of the farmer. But on the other hand you have wildlife biologists who are not linked to any particular industry, they're out in nature, they're thinking about the interrelations between fish, birds, pollinators, plants, chemicals and the environment, and so they see there's evidence of problems.

NARRATOR: For Carson, it began with research—a gathering of bits of information, excavated from technical reports and obscure scientific journals. What soon became clear was that pesticides such as DDT accumulated in the organisms exposed to them, and grew ever more concentrated as they moved up the food chain. According to one study, earthworms were still so toxic a full year after exposure to DDT that they poisoned the robins that fed upon them. Another demonstrated that when birds were fed a miniscule amount of DDT daily, both their fertility and the survival rate of their young dramatically declined. Most troubling of all was the evidence that insect populations very quickly developed resistance to synthetic pesticides.

ORESKES: If you dump large amounts of pesticides in a field you will kill many of the insects you intend to kill but there'll be some fragment that survive because for whatever reason they happen to be more resistant. That sub-population lives on, they breed, they pass on to their offspring whatever that resistance is that they have and pretty soon you have a pesticide resistant population. Carson understood that ultimately this strategy was gonna fail, and the farmer would be in the position of either needing a different pesticide or using more, and more, and more. And so then you have a kind of arms race of pesticide use. You use more pesticides, insects become more resistant, more resistance, more pesticides, more resistance, and now you're trapped in an escalating cycle and it's a damaging cycle because meanwhile you're also killing fish, and birds, and other things that you like and that you want.

NARRATOR: In isolation, each study Carson read was little more than an anecdote. Taken together, they offered compelling evidence that synthetic pesticides had potentially grave disadvantages, none of which were yet fully understood.

LYTLE: She was not against the wise use of pesticides. She saw the need for that. But what she was against was the indiscriminate spreading of poisons that had untold and unanticipated consequences for all living things, human beings included.