Ike Sharpless
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Prof. Rappaport
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The Dilemma of Pesticide Exports

The question of pesticide use across developed and less developed country boundaries raises a host of complex ethical issues. Is it morally preferable to allow extensive DDT application in sub-Saharan Africa to manage the malaria epidemic or to maintain its banned status to prevent birth defects? Is pesticide application an inevitable byproduct of a rapidly growing world, such that restricting its use would be restricting access to affordable food? How should US-based pesticide companies decide whether or not to export herbicides, insecticides, or fungicides that are banned in the United States but might provide a net gain in specific developing country (whether due to the compound's lower half-life in tropical climes, the different cost-benefit analysis that holds in different national scenarios, or to another unexpected factor)?

Although the answers to the above questions are far from easy to determine, the behavior of large U.S.-based pesticide producers unfortunately indicates less of a nuanced business ethic as described by Thomas Donaldson and more of an international regulatory race to the bottom.

Domestically, pesticide use is controlled by FIFRA and the FFDCA. FIFRA requires EPA registration of pesticides to verify its safe and efficacious use without causing unreasonable risk to humans or the environment, and the FDA enforces the FFDCA requirements that pesticide residue in foods be below certain acceptable levels

(which differ for different substances). The international scene presents a very different scenario: of the 144 countries surveyed in an FAO study, 81 countries had no control procedures in place or gave no information.

In this regulatory atmosphere, the U.S. pesticide industry has strong incentives to export product that is disallowed from domestic markets but acceptable in certain foreign markets, especially given the R&D costs involved. As the case indicates, only one of 12,000-30,000 chemicals scanned comes to market, for an average of $20 million R&D cost per pesticide developed (R&D budgets were 8% of sales in 1981). In light of this data, Velsicol's export of between $10-18 million worth of Phosvel (leptophos) between 1971-1976 to developing countries—along with its exportation since 1984 of heptachlor, chlordane, and endrin, all canceled or restricted in the U.S.—becomes understandable, although not acceptable from a public health perspective.

In another case, American Vanguard Corporation (Amvac) doesn't even bother to obfuscate. As it states in its 1979 10-K report, "notwithstanding all the publicity and notoriety surrounding DBCP it was [our] opinion that a vacuum existed in the marketplace that [we] could temporarily occupy."

The last specific company mentioned in the case, Dow Chemical, produces compounds containing Dioxin, a substance so toxic it's unacceptably carcinogenic in the parts per quintillion. Again, all of the pesticides containing Dioxin were illegal in the U.S., and again, Dow was exporting them to foreign countries (Columbia is mentioned as the location of dioxin-caused birth defects).

In each case, the companies respond to a domestic regulatory barrier with an attempt to unload product on export markets. Velsicol tried to sell Phosvel in developing

countries after the 1976 Bayport incident (although many countries banned its import), Amvac did the same with DBCP after the Occidental plant incident in 1977, and Dow did the same with 2,4-D and 2,4, 5-T.

Some common threads run throughout their arguments: 1) espouse a higher level of responsibility for domestic versus foreign regulation, 2) discredit toxicity data with contrarian studies, 3) appeal to shareholder's pocketbooks by warning of impending bankruptcy if export markets are closed, and 4) appealing to the difficulty of making comprehensive cost-benefit assessments (see Jack Early's statement representing the industry as head of NACA).

Each of the above arguments has a grain of merit, but it seems that in each case the kernel of truth is being used to obfuscate rather than clarify the business ethics at hand.

1) There is a serious ethical problem with going with the domestic regulatory flow, whatever it may be. As the case points out with various scenarios, and as the proposed Bamako Ban to the Basel Convention is trying in part to address, the global North-South inequality presents a situation with vastly different amounts of resources available for regulatory oversight and toxicological research.

2) It is one thing to demand solid science as the basis for action, but Dow's behavior in particular struck me as disingenuous: they point to an accidental exposure incident 30 years prior to demonstrate the safety of Dioxin without addressing the importance of chronic and repeated low-dose exposure in the toxicity profile of a carcinogen.

3) This argument is the strongest from a free-market perspective, especially given the long and capital-intensive process of getting a pesticide through the regulatory hoops. However, the industry's appeal to arguments 1, 2, and 4 demonstrate—*pace* Milton Friedman—that this is not the only argument in play, and that the financial bottom line needs to be balanced against corporate image and the real-world effects of its export actions.

4) In my view, this is both the strongest argument for pesticide export and the most abused and misrepresented by its advocates. The appeal to differing socioeconomic standards to justify a birth defect here and a early-onset cancer there may actually be valid if the scenario is fighting Malaria in Africa (a case where the costs of the status quo are devastating to local health and, as a result, to the local economy), but this position seems to be used too often to defend irresponsible business practices in export markets which have horrendous health and environmental consequences.

What, then, is to be done? Unfortunately, the business model and the normative model don't necessarily go hand in hand. From a business perspective, the massive R&D inputs per pesticide demand a market. Normatively, however, vendors of dangerous products have a responsibility to ensure that their products are used safely and responsibly, and that their products are themselves reasonably safe given the total costs and benefits (or costs and costs…) associated with their use.

A fair amount of progress has been made in this domain in the intervening quarter century, but if were in 1983 (e.g., without regulatory hindsight), I would recommend the following actions to bring the companies' economic motives in line with their social and ethical obligations in order to avoid further regulatory and public friction: 1) using something like Responsible Care as a template, foster NACA coordination with international regulatory agencies (WHO, FAO, etc.), with specific oversight power vested in a chosen agency, 2) develop a thorough Regional Implementation Plan (RIP) for each importing country within the framework of the NACA-WHO procedures, penalizing those who fail to comply, and 3) develop a solid and loophole-minimizing system of exceptions to the above RIPS allowing for the necessary cost-benefit differentials to be factored in when dealing with vastly different socioeconomic baselines. Finally, those companies not on board with the NACA-WHO plan should (4) develop solid company codes as described by Donaldson to best streamline responsible behavior and to mitigate harm.