BIOWARFARE IN COLOMBIA?
A Controversial Fumigation Scheme

A plane sprays a trail of glyphosate over coca fields in Colombia. Glyphosate can destroy only about a quarter of the crop in a fumigated area.

MEREDITH DAVENPORT/IMPACT VISUALS

BY RICARDO VARGAS MEZA

An experimental fungus to be sprayed in Colombia might damage not just drug crops, but the biosphere and humans as well.

Between 1992 and 1998, about 660,000 gallons of the herbicide glyphosate were sprayed in Colombia to eradicate more than 46,000 acres of opium poppy fields and 101,000 acres of coca. Today, anti-drug authorities cannot say for sure how much opium poppy exists in Colombia. But the CIA reckons that about 303,000 acres of coca are cultivated, which translates into potential production for the world market of more than 500 tons of cocaine.

There are two ways to rationalize why so much herbicide spraying has wiped out so little of Colombia's illegal drug crop. For one thing, U.S. authorities argue, glyphosate is relatively harmless: It can destroy only about a quarter of the crop in a fumigated area. This reasoning in turn explains why, even though it made glyphosate the herbicide of choice in the early 1980s, the U.S. government has long pressured Colombia to continue experimenting with chemicals that can guarantee greater levels of destruction. From 1976 to today, Colombian administrations have kowtowed to this blackmail, and have experimented openly and illegally with chemicals such as Paraquat in 1978; Trichlopyr in 1985; and Tebuthiuron in 1986 and 1998.

Questions about glyphosate's impact on the environment and its relative inability to reduce the drug supply encouraged the decision to adopt biological rather than chemical methods of forced eradication. According to this plan, the Colombian Amazon in the next few years will be the center for experiments on the use and effects of Fusarium oxysporum, which is a mycoherbicide—a fungus that kills plants. Experiments will also be done with other biological agents thought capable of destroying coca leaves in the Andean-Amazon region. These plans follow from findings of studies sponsored by the U.S. Department of Agriculture, and backed by the United Nations International Drug Control Program (UNDCP) and the Colombian government. Politically, they are being justified by the so-called Plan Colombia.

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But the ecosystem of the Andean forests is already suffering from the destructive results of recent colonization, and from poppy crops. Now, the forests will be further harmed by experimental fungi. Another one is Pleospora papaveracea—which, like Fusarium, is also being applied under the auspices of the UNDCP. Pleospora is now being tested in Uzbekistan; the goal is to use it everywhere opium is produced.

Biological warfare raises complex questions about impacts on human health and the environment.

This sort of biological warfare raises complex questions about impacts on human health and the environment. The proposed fungus experiments in Colombia may have many negative effects on biodiversity and the environment.[1] These include the possibility that Fusarium may do more than simply kill coca plants. Damage may also be done, for example, to naturally occurring organisms (to ground and air-borne micro-organisms and to animals and other plants)—especially when huge quantities of non-native fungus are injected into the fragile ecology of a tropical rainforest. In addition, many species of Fusarium oxysporum cause diseases; and they contain more than 250 enzymes that can be activated or inactivated depending on the environment they are in. Humans, too, are potentially endangered—especially if they have weak immune systems, which most Amazon residents do, including those in the indigenous communities. And beyond possibly damaging living organisms and destroying biodiversity in the rainforest, the new technology will doubtless have another effect: It will simply relocate the illegal drug crops—a phenomenon continually observed during the last 25 years when chemical warfare has been used.

The focus on eradication for treating the drug problem is part of a global policy called "Supply Reduction Strategy." It assumes that forceful actions by the "source country" (crop eradication, destruction of rural raw materials laboratories, and so on) will stamp out drug production and decrease consumer exposure to illicit, health-threatening substances.

Supply reduction strategists have another rationale for why Colombia has failed to reduce illegal crop-growing areas. They note that there is no state control in the producing areas, which are essentially run by armed groups, mainly guerrillas, who block eradication efforts. This was one justification for the United States' $1.3 billion contribution to Plan Colombia. The money guarantees a significant increase in the war-making ability of the Colombian Armed Forces. It also assures that the country's military will do anti-drug work under the auspices of the United States, and with U.S. advice and training.

But there is yet another way to explain the failure to reduce drug cultivation areas. In the first place, dispassionate analysts of the illegal drug industry recognize that all the weapons and force in the world will not wipe out the desire many people have for drugs. Because of this, attempts to eradicate psychoactive substances simply lead to a global reshuffling of producing sites. Turkey is an example. Until the early 1970s, that country was the top supplier of heroin to the United States. But when the Turkish supply was shut down, Mexico entered the North American heroin market—a situation that has lasted ever since, despite fumigation of Mexican poppies with Paraquat beginning in 1976.

The same thing is now happening in Colombia: "Successful" coca eradication in Amazon departments such as Guaviare have been followed by new cultivation in Putumayo, and from there, crops are starting to move to Vichada, Vaupés, and Catatumbo, among other departments. Even if "successful" eradication were actually achieved in Colombia, there are 1.6 billion acres in the rest of the biophysically hospitable Amazon. That is more than 2,000 times the 740,000 acres needed to fulfill the complete international demand for cocaine. In the entire history of the use of force against illicit crops, not one effort has succeeded in reducing the supply of natural drugs needed to fully supply the world market.

In fact, crop fluctuation is most directly tied to events far from the fields, in the international narcotrafficking capitals. For example, coca leaf cultivation in Peru and Bolivia shrank when the monopoly on cocaine production by Medellín and Cali was broken in 1993 and 1995, respectively. This caused a sharp decrease in demand for coca paste, which in turn led to a steep drop in the price of coca leaves. Prior to that, other events in Colombia, such as the assassinations of Minister of Justice Lara Bonilla in 1984 and presidential candidate Luis Carlos Galán in 1989, which caused the narcotraffickers to lay low for awhile, also led to reduced prices for the product.

But the biggest decline in coca leaf prices occurred in 1995 after the arrest of the Cali cartel's leaders, the Rodríguez Orejuela brothers. This led to a complete restructuring of the cocaine economy in the Andean region. The downfall of the big-buyer mafias in Medellín and Cali temporarily reduced the demand for raw materials in Colombia and transformed the entire narcotrafficking structure, causing the decentralization of cocaine production. In turn, these developments led to a significant drop in price for coca leaves and paste in the Andean countries. The major change from

monopoly to a more "democratized" structure was what led to decreased crop areas and to their relocation from Peru and Bolivia to Colombia. All this occurred without spraying a drop of herbicide.

Ironically, Washington's anti-drug policy makers have tried to take credit for these temporary disorders in the illegal economy, and tout as a "success" the "Air Bridge" over the Colombia-Peru border, which allowed the gunning down of any aircraft suspected of smuggling coca paste out of Peru. Another strategy falsely credited with reducing the cocaine supply is alternative development combined with militarization in Bolivia. The fallaciousness of this reasoning is clearly evident in Colombia, where despite nine years of intensive fumigation, coca and poppy fields increased threefold from 1992 to 1999.

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Even so, U.S. Drug Czar Gen. Barry McCaffrey justifies his failed strategy with more untruths. He says that since guerrillas have blocked fumigation efforts, it is more important than ever to militarize the south. McCaffrey claims that this will guarantee—despite all past experience and data to the contrary—the success of the eradication strategy. So regions under guerrilla control, such as Miraflores in Guaviare, and the middle and lower Caguán River in Caquetá, have been fumigated intensively. And not just where fields of coca and poppies are found: Herbicides have also been sprayed on grazing pastures and on legal crops, including alternative agricultural projects such as rubber and cocoa fields. Plants are not the only victims of the herbicides. Water has been sprayed, and with it, fish. So have cattle. And people—including students in schools. These fiascos in turn have stimulated relocation of the very same problems to new areas such as Putumayo, Vaupés, and Guainía.

Meanwhile, the narcotrafficking capitals remain untouched, and the industry there is still free to wheel and deal in the labor and materials they need from the drug-growing regions. Paradoxically, none of the six versions of the Plan Colombia so far delineated contains a strategy for dealing with the narcotrafficker capitals. All kinds of actions are specified against crop growers and against the guerrillas, who control only one percent ($500 million) of the international cocaine market. Yet the Plan offers no clear strategy for dealing with the money laundering practices of an illegal circuit that—counting its international trade merely in cocaine—moves $50 billion annually (of which $2.5 billion returns to Colombia). Nor does the Plan contain provisions for diminishing the power of the traffickers, or the private armies they help finance, or the middlemen who manage the traffickers' capital when they purchase raw materials in the producing zones. So while U.S. politicians, arms producers, hemispheric security strategists, herbicide manufacturers, dollar launderers, the Colombian government, the armed forces, and now the UNDCP deal with and profiteer from the war against producers in southern Colombia, drug traffickers will continue to buy a kilo of cocaine for $2,000, then retail it in Frankfurt or Amsterdam for $150,000.

Using Colombian guerrillas as scapegoats for the old cartels will, in the end, merely favor the new, anonymous narcotrafficker groups—small organizations scattered throughout Colombia. In addition, a military offensive will give a further sense of legitimacy to the guerrillas, who are now preparing to be attacked. Instead of impelling these complex issues and the guerrillas to the negotiating table, the offensive's all-encompassing character will end up destroying the peace process. In fact, the offensive currently already favors the paramilitary groups, into whose northern territories new coca producing zones are opening up because of relocation from other areas. These days, 40% of Colombia's coca is grown in the north. Nevertheless, Plan Colombia proposes a "push into the South," leaving untouched lucrative narcotrafficking circuits in other parts of the country.

Such misdirection of resources is not the worst part of this bad plan. Directing force to the weakest part of the drug circuit will severely affect the civilian farmers who depend on drug production for their survival. Eradication and military intervention will create displacement, socioeconomic disorder, human rights abuses and violations of international human rights treaties. Yet even at such an outlandishly high cost, neither the United States nor Europe will see any decrease in the drug supply. Therefore—and as a final opportunity to do something sensible—would it not be better to eradicate current anti-drug policy, and replace it, once and for all, with a strategy to truly reduce the harm done by drugs? That harm will not disappear by criminalizing users or poor producers, no matter how much force is used. ■

NOTES

Repeating Past Mistakes

1. Michael Isikoff and Gregory Vistica, "The Other Drug War: Is a $1.3 Billion Colombia Aid Package: Smart Policy, Good Business or a Costly Mistake?" *Newsweek*, April 3, 2000.
2. U.S. General Accounting Office, *Drug Control: Narcotics Threat from Colombia Continues to Grow* (Washington: GAO/NSIAD-99-136, June 1999).
3. U.S. General Accounting Office, *Military Training: U.S. Management and Oversight of Joint Combined Exchange Training*,(Washington: GAO/NSIAD-99-173, July 1999).
4. Ken Silverstein, *Private Warriors* (New York: Verso Books, 2000).

Biowarfare in Colombia?

1. See Marta Lucía Guardiola, communication to Medardo Galindo, designated defender, Colombian Government Ombudsman's Office for Collective and Environmental Rights, April 4, 2000, Bogotá. For antecedents and emergencies related to biological warfare, see, for example, Martin Jelsma, "Un hongo contra la coca," *Acción Andina Boletín Internacional* No. 9 (March 2000); Marc Wolfensberger, "L'ONU gagner la guerre de l'opium avec un champignon," *Le Temps* (Geneva, September 13, 1999); Jim Hogshire, "Biological roulette: the drug war's fungal solution?" in *Covert Action Quarterly*, Spring 1998; Paul Rogers, Simon Whitby and Malcolm Dando, "Guerrilla biológica contra los cultivos," *Revista Investigación y Ciencia*, No. 275 (August 1999).

Elusive Peace

1. Data from the Human Rights Ombudsman Office (Defensoría del Pueblo), 2000.
2. Data from the Colombian National Police.
3. See Marc Chernick, "Negotiating Peace Amid Multiple Forms of Violence: The Protracted Search for a Settlement to the Armed Conflicts in Colombia," in Cynthia Arnson, ed. *Comparative Peace Processes in Latin America* (Palo Alto: Stanford University Press, 1999).

The Paramilitary Connection

1. M-19 was established after Rojas Pinillas' failure to win the presidency in 1970 as a result of a rigged election. The M-19 surrendered its arms and accepted reincorporation into civilian life in 1990, forming a short-lived political party. Today the group has virtually ceased to exist as a political movement.
2. FARC document presented to the Pastrana government in 1999; in author's possession.
3. See William Ramirez Tobon, *Los Inciertos Confines de Una Crisis*, (Bogotá: Planeta, 1997).
4. For a more in-depth study of the development of the National Security Doctrine see Francisco Leal Buitrago, *El Oficio de La Guerra: La Seguridad Nacional en Colombia* (Bogotá: Tercer Mundo Editores-IEPRI, 1994).
5. In a televised interview Carlos Castaño conceded that 70% of his group's financing comes from narcotraffickers; he also claimed to have a force of 11,000 men, which most experts believe is an inflated figure.
6. The paramilitary groups of Castaño and his allies operate cocaine processing plants thoughout the Middle Magdalena, according to Juvencel Duque, Director, Programa de Desarrollo y Paz del Magdalena Medio, in a talk he presented at George Washington University in Washington, D.C., May 3, 2000.
7. See Mauricio Romero, of the Programa de Desarrollo y Paz del Magdalena Medio, who in his unpublished study of the Magdalena Medio noted four variables crucial for the formation of a political base for paramilitaries in several municipalities: the existence of military and police stations, a well formed political elite, and a differentiated class structure punctuated by guerrilla demands for protection money from the more affluent classes.
8. Maria Victoria Uribe Alarcón, *Limpiar la Tierra: Guerra y Poder entre Esmeralderos* (Bogotá: CINEP, 1992).
9. Alejandro Reyes, "Compras de tierras por narcotraficantes," in *Drogas Ilícitas en Colombia: Su Impacto Económico, Político y Social* (Bogotá: PNUD-DNE, Ariel Ciencia Política, 1997).
10. Author's interviews with an informant from the armed forces active in the region, and with informants from Barrancabermeja and Bucaramanga.
11. See Nazih Richani, "The Political Economy of Violence: The War System in Colombia," in *Journal of Interamerican Studies and World Affairs*, Vol. 39, No.2 (Summer 1997); and Richani, "The Political Economy of Colombia's Protracted Conflict: The Crisis of the War System," in *Journal of Conflict Studies* (forthcoming, Fall 2001).
12. Dario Betancourt and Martha Garcia, *Contrabandistas, Marimberos, y Mafiosos* (Bogotá: Tercer Mundo, 1994). Estimates of the amount of narcotrafficker money are largely speculative and vary greatly. Carlos Medina Gallego, in *Autodefensas, Paramilitares, y Narcotráfico en Colombia: Origen, Desarrollo y Consolidación: El Caso Puerto Boyacá* (Bogotá: Editorial Documentos Periodísticos, 1990), using a referrence in *Semana*, cited $5.5 billion invested in land in Córdoba, Sucre, Antioquia, Meta, and the Magdalena Medio. These areas also witnessed an increase in paramilitary violence perpetrated against the local peasants. Incora, the Colombian government's institute for land redistribution, reported in 1994 that about 7.5 million acres were purchased by narcotraffickers. But García and Betancourt reported 32.5 million acres.
13. For more on economic privileges obtained by the military during the civil war, see Richani, "The Political Economy of Violence: The War System in Colombia."

Women's Delegation to El Salvador

An all-women's delegation to meet women leaders and to commemorate the 20th anniversary of the martyrdom of the four North American churchwomen in El Salvador.

November 30 to December 8, 2000

The delegation will be led by CRISPAZ, Christians for Peace in El Salvador. Fees are $75/day which includes housing, food, translation, transportation in country, a one-year subscription to SALVANET, a resource booket, and staff leadership in El Salvador. Airfare is not included.

Spiritual reflections are part of the experience with respect for all faith traditions.

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