Cocaine production far exceeds U.S. government's calculations

by Ricardo Martín
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As any competent general can tell you, a war can be won or lost, based on the quality of the intelligence garnered about the enemy. Underestimate how much ammunition he has at his disposal, and you may be dead. The war against the international drug cartel is no different. Which is why a review of the 1985 *International Narcotics Control Strategy Report,* issued by the U.S. State Department's Bureau of International Narcotics Matters (INM), left this writer incredulous at the degree of miscalculation it reflected.

The United States has seen a dramatic rise in cocaine consumption in recent years, to the point that the drug has lost its exclusive *chic* aura and begun to spawn "abuse hotlines" in nearly every major city in the country. Further, when the price of cocaine proved prohibitive for the average high-school kid, Dope, Inc. saw to it that "crack"—smokable pellets of highly impure cocaine—was made available at $5 to $10 a hit. Government agencies are the first to say that crack is a killer drug, which can cause addiction with the first try and short-circuit the brain's electrical activity; but they also admit that they have not even begun to survey the extent of crack abuse in this country.

Traffickers are so emboldened by the size and vulnerability of the U.S. market, that they have actually begun to move the cocaine production process onto U.S. territory. Increasingly, raw coca paste is being smuggled directly into the United States for refining in illegal laboratories scattered through the southeast, southwest, and New York.

What we have begun to see is a form of irregular warfare, with the youth especially targeted for destruction. Crack is cheap, easy to buy, and easy to make. When institutions like the National Institute of Drug Abuse finally get around to their surveys on crack consumption, it may already be too late for our children.

Flawed methodology

The methodology behind the INM statistical assessment of the Ibero-American cocaine trade—and, consequently, the aid appropriations requests contained in that document—are shamefully inadequate. For example, a simple review of the INM statistical tables used as a premise for evaluation exposes several fundamental flaws. The data in **Table 1** is taken from the section on Peru, C.1/p. 117 (mt = metric tons).

TABLE 1

Coca	**1984 (est.)**	**1985 (est.)**
Hectares cultivated	60,000	56,820
Hectares eradicated	3,180	6,000
Hectares harvested	56,820	50,820
Coca leaf harvested (mt)	56,820	50,820
Loss factor (10%) (mt)	5,680	5,080
Coca leaf seized (mt)	42	42
Coca leaf consumed (mt)	16,000	16,000
Cocaine equivalent available for export (mt)	68.6	56.2

In its report, INM asserts that "each hectare yields about one metric ton of leaf (dry measure)," but offers no clarification on whether the yield is a *yearly* or *per harvest* estimate. As anyone familiar with coca cultivation knows, the large, long-lived, and extremely prolific bush yields between three and five crops *each year*. Therefore, INM's table, which establishes an equivalency between numbers of hectares of land harvested (56,820) and metric tons of leaf harvested (56,820), must mean either that 1) only a single crop per year was counted, or 2) that INM chose to present a yield of coca leaf per hectare of only 250 kilograms, one-fourth the one-ton standard. The fact that the INM report of 240 pages nowhere mentions that the coca plant has multiple crops per year, strongly suggests that the miscalculation was of the first type. In either case, the resulting figure of "cocaine equivalent available for export" is, to say the least, seriously understated.

EIR investigators seeking clarification called the National Narcotics Intelligence Consumers Commission (NNICC—a conglomeration of agency representatives responsible for

publishing unclassified government statistics), the House and Senate subcommittees on drug affairs, the White House office on drug abuse, National Institute of Drug Abuse (NIDA), Drug Enforcement Administration (DEA), and State Department Bureau of International Narcotics Matters (INM). The House subcommittee did not return our call. The State Department's INM also refused to return *EIR*'s calls, despite repeated efforts to contact Rayburn Hesse, the individual reportedly responsible for the above-cited report. The White House, NIDA, and Senate subcommittee claimed total ignorance, and deferred to the DEA.

DEA's intelligence division was very cooperative. The officer reached insisted that his institution's estimates *are* premised on a calculation of four crops of coca a year, but that the one-metric-ton yield of coca leaf per hectare was a *yearly*, not a per harvest figure. Thus, the DEA officer confirmed, government estimates are premised on a single-harvest yield of 250 kilograms per hectare. Pressed to explain such a low-yield estimate, he argued that young, non-yielding plants as well as old, dying plants had to be factored into the picture as well. He added the assumption by DEA of one plant per square meter.

Working from the DEA's figures, the following picture emerged:

1 hectare = 10,000 square meters
1 plant per square meter = 10,000 plants
10,000 plants = 250 kilograms of coca leaf
1 plant = 25 grams of coca leaf

Were the average coca plant to yield no more than 25 grams of leaf per harvest, the Peruvian peasant—hardly ignorant in such matters—would quickly abandon the coca bush for a more productive crop. As on-the-ground experience in Peru has taught me, the mature coca plant is in fact capable of producing anywhere from 5 to 15 kilograms of coca leaf per harvest. Brazilian varieties, called *epadu*, grow as tall as 10 feet and can yield considerably more leaves (albeit with lower alcaloid content). However, in the spirit of compromise, I have chosen to take a mere one kilogram of leaf yield per plant as my measurement. Further, given the dispersed and erratic nature of most coca planting (frequently grown under the protective cover of other crops), I will take the more common standard of one plant per two square meters. With these variations, the following very different picture emerges:

1 hectare = 10,000 square meters
1 plant per two square meters = 5,000 plants
1 plant = 1 kilogram of coca leaf
5,000 plants = 5,000 kilograms of coca leaf
5,000 kilograms of coca leaf = five metric tons
1 hectare = five metric tons of coca leaf

Thus, taking the most minimal yield within still realistic parameters, one comes up with five metric tons of coca leaf produced *per hectare per harvest*, considerably more than the one-ton measurement I used in my own calculations.

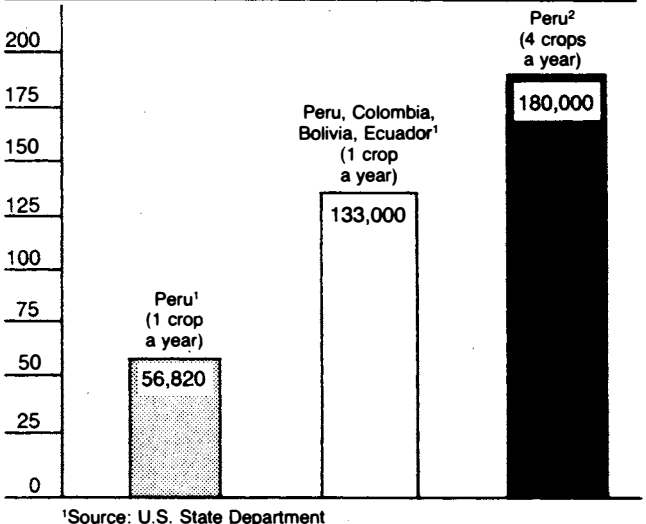
Or, we can look at it another way. According to NNICC

From coca leaf to 'crack'*

Product	Money flows
1 hectare of coca plants	
1 metric ton of coca leaf	$100 (paid to peasant grower)
4 kilograms of coca paste	$4,000 (paid to coca paste laboratory)
2 kilograms of cocaine (90% purity)	$10,000 (paid to cocaine refining laboratory)
2 kilograms of cocaine (90% purity)	$70,000/Miami (to smuggler) $90,000/other U.S. (to smuggler)
5 kilograms of cocaine (35% purity)	$500,000 (paid to wholesale distributor)
15 kilograms of cocaine (12% "street" purity)	$1,500,000 (paid to retail dealers)
15,000 crack rocks ($5 each 5-8% purity)	$3,750,000 (to crack pushers)

**Dollar amounts represent quantity of money taken out of the real economy per transaction. Of course, not all cocaine is converted into "crack"—we mean only to represent the amount of money potentially involved in the cocaine trade. Dollar estimates are based on DEA and police sources.*

FIGURE 1
Annual coca production
(thousands of hectares)



¹Source: U.S. State Department
²Source: Peruvian Civil Guard

figures, the average Peruvian or Bolivian coca grower is paid by traffickers $100 for every ton of coca leaf harvested. If that ton, accepting DEA claims for the moment, represents four harvests a year, then the average grower is receiving $25 for every hectare of coca he harvests. And yet, according to government estimates in nearby Bolivia (where conditions of yield, number of harvests, alcaloid content of the leaf, etc., may vary somewhat), a coca grower could gross as much as $10,000 per hectare a year. Clearly, the coca grower is producing more than one ton of leaf per hectare to be earning such a sum.

Thus either the INM report—which serves to inform Congress on anti-drug aid appropriations requirements—is using wildly fallacious yield estimates, or its calculations are premised on but one harvest a year, DEA's disclaimers notwithstanding. The implications of this are staggering, as the graphs show. In preparing these figures, I reduced the two possible INM miscalculations noted above to one simplified formulation—"one crop per year." If, as DEA says, multiple crops were taken into account, the yield per hectare used for INM's calculations (one-fourth of my own estimate), still represents the equivalent of one crop per year.

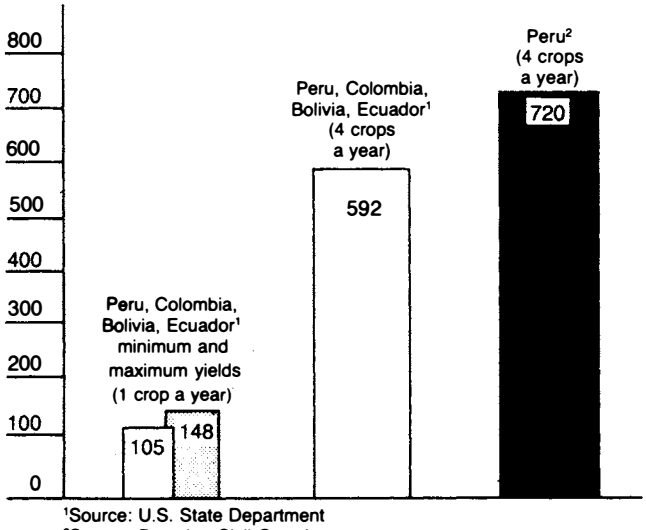
Figure 1 is a simple representation of the extent of Peruvian coca cultivation, in hectares, comparing estimates of the State Department's INM and that of Umopar, the DEA-trained anti-drug police unit in Peru's Civil Guard. Additionally, both figures are compared to the INM statistic for all four major coca-producing countries. Queried as to the widely varying figures on Peru, the DEA officer suggested that Umopar, which conducts both surveillance and anti-drug raids in that country, was exaggerating the extent of coca cultivation to win increased foreign anti-drug aid.

Figure 2 starts to get interesting. Here I compare the INM's minimum and maximum figures of coca leaf tonnage for all four producer countries, to that same figure adjusted for four crops a year. The third bar, using the Umopar estimates of hectares under cultivation in Peru, represents what that number of hectares could *potentially* yield in metric tons of coca leaf.

The remaining graphs are simple conversions—using NNICC's published estimates—of the figures from Figure 2 into **Figure 3**, cocaine available for export to the United States (minus seizures, domestic consumption, and exports to Europe and elsewhere); **Figure 4**, cocaine which can potentially reach U.S. dealers (cut to 35% purity); and **Figure 5**, the amount of money this quantity of cocaine potentially represents, at both wholesale (90%) and retail (35%) purities.

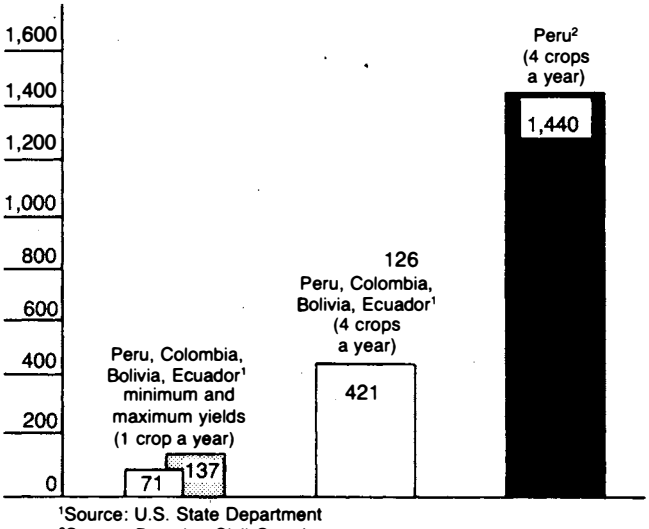
According to INM figures represented in Figure 3, all four coca-producing countries produced a maximum of 421 tons of cocaine for export to the United States in 1985. And yet, according to U.S. Ambassador to Bolivia Edward Rowell, cited in an Aug. 5, 1986 UPI wire, the joint U.S.-Bolivian "Operation Blast Furnace" military deployment against cocaine installations in that country smashed the operations of seven major refining laboratories in northeastern Bolivia—representing "a total weekly cocaine production capacity of 5 to 5½ tons." That represents a yearly capacity of 260 metric tons—from only seven laboratories in one country!

FIGURE 2
Annual coca leaf yield
(thousands of metric tons)



¹Source: U.S. State Department
²Source: Peruvian Civil Guard

FIGURE 3
Cocaine exported to United States ("wholesale")
(metric tons—90% purity)



¹Source: U.S. State Department
²Source: Peruvian Civil Guard

The Chapare region of Bolivia is believed to hide as many as 200 such laboratories.

These figures are by no means intended to represent an accurate picture of the current reality. If Peru was in fact able to get $411 billion worth of cocaine into the economically depressed United States, there would not be enough personal income available to purchase it all. However, what should be frighteningly clear from these graphs, is that the United States is being flooded by cocaine and its derivatives to an extent simply not considered in current U.S. government calculations.

Technology for a war on drugs

What is also clear is that the anti-drug war, if it is to be waged successfully, requires the best technology at its disposal. No better detection technology currently exists than remote Multi-Spectral Scanning (MSS), which can be used mounted on Learjets covering an area of 9,000 square miles a day, or by satellite through the NASA-founded Landsat program.

Using a method of spectral analysis of various forms of light waves reflected by ground vegetation, MSS can not only identify specific crops and individual fields, measure the size of the plots and the amount of the crop being grown, but even the health and maturity (yield potential) of the crop. The whole process takes about 72 hours. MSS is especially important for detecting coca crops, since the coca bush is frequently planted under cover of other crops, making visual aerial detection nearly impossible. However, since every crop has a unique "spectral signature," coca cannot hide from MSS.

Used with the Learjet, MSS is ultimately expected to be refined to an analysis turn-around time of 24 hours, with a resolution as small as 2.5 meters in diameter. Coupled with Landsat or a comparable remote sensing technology, MSS can give us a global mapping of illegal drug cultivation, with eradication efforts maximized as a result.

The cost of creating a worldwide network of combined Landsat "timesharing" and local MSS systems five years ago was estimated at $500 million, a small price to pay in view of the hundreds of billions the drug trade is leeching from the world economy. However, beginning with the Carter administration and continued under the "free enterprise" fanaticism of the Reagan administration, Landsat was handed over to the private sector for commercial exploitation. The result: prices for scanning results tripled.

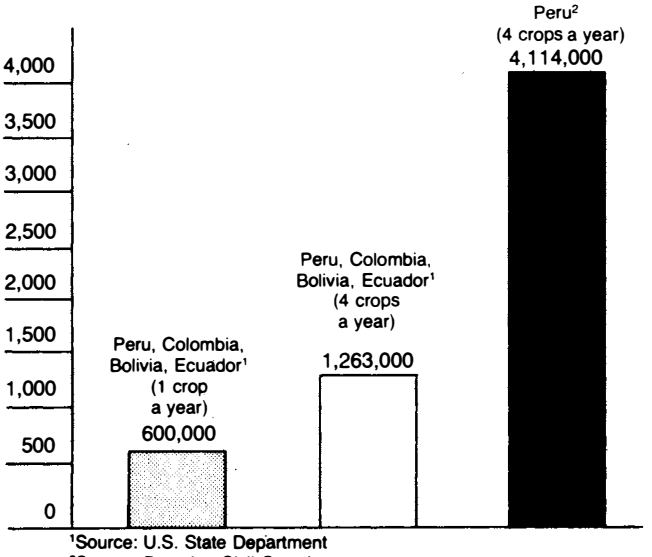
Certainly a country like Bolivia or Peru, which could hardly afford to pay $2,000 for a single Landsat scan photo, is entirely shut off from the technology with prices of $6,000 a photo. Even U.S. government departments like Commerce and Agriculture, especially under the regime of the Gramm-Rudman budget-cutting amendment, are unable to afford data from the Landsat technology.

One hopeful indication of a regional capability to be developed is the report from Rio de Janeiro in August of a symposium on remote sensing sponsored by the Brazilians and attended by representatives from a number of other Ibero-American countries.

FIGURE 4

Cocaine exported to United States ("retail")

(thousands of kilograms—35% purity)

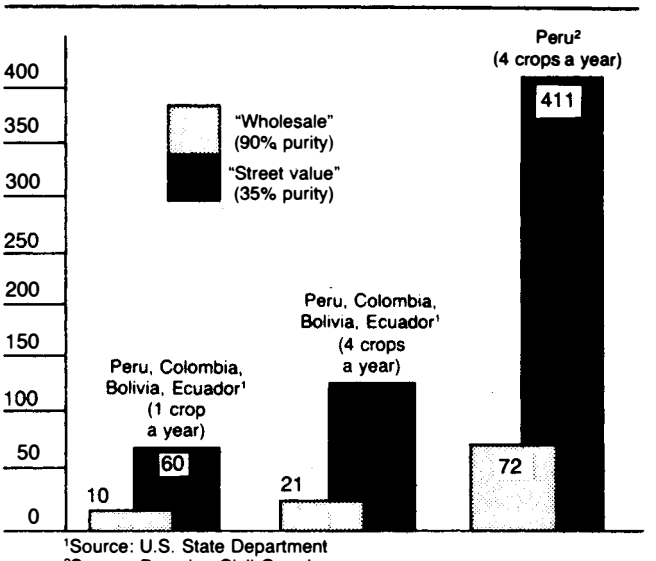


¹Source: U.S. State Department
²Source: Peruvian Civil Guard

FIGURE 5

Value of cocaine exports to United States

(billions of dollars)



¹Source: U.S. State Department
²Source: Peruvian Civil Guard