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2. State of Poppy Cultivation

POPPY CULTURE

Golden Crescent

Afghanistan forms part of the Golden Crescent area of Southwest Asia, which is estimated by the U.S. government to provide 23 percent of the heroin used in the United States. The Golden Crescent ranks only slightly behind the Golden Triangle of Southeast Asia as a source for the American heroin market. As is the case with the countries of the Golden Triangle, the borders between Iran, Pakistan, and Afghanistan are poorly policed. Furthermore, a situation verging on anarchy in Afghanistan (similar to that in sections of Burma) enables poppy cultivators and drug traders to operate with relative impunity. Both Pakistan and Iran have taken steps to suppress their drug trade, but they have only been partly successful. Like the Golden Triangle, or for that matter most other drug-producing regions, the countries of the region have a large addicted population, consuming both opium and, increasingly, heroin.

The opium economy of the Golden Crescent area must be treated as an economic unit comprising all three countries, although this report necessarily focuses on Afghanistan—as will any A.I.D. policy directed toward that country.

U.S. Government figures show that the countries of the region produced 1025 MT of refined opium in 1991, although numerous commentators insist that this figure underestimates the actual quantity.¹²

Figures for demand in the Pakistan-Afghanistan area come from the same U.S. government figures as those for supply. It is estimated that 50 MT of heroin (300 to 500 tons of raw opium) are needed to supply Pakistan's domestic heroin addicts. Afghanistan is estimated to account for 23 percent, or 154 tons, of America's total heroin imports of roughly 700 tons. Each ton of heroin requires 7 to 10 tons of opium. Two hundred tons of heroin would require a minimum of 1,400 tons of opium, which is more than the region's total production. Large amounts of opium are directly consumed in Pakistan and Afghanistan, and an undetermined amount is exported to Iran and Europe. If the demand figures are correct, the supply figures may be underestimated.

Experts on Pakistani patterns of drug use suggest that the average addict may use a much lower amount of heroin than is the norm elsewhere.¹³ In any case, the Golden Crescent is certainly a major user as well as producer of opium and heroin. But a considerable surplus clearly exists for export. Within the Golden Crescent, Afghanistan has in recent years been the major producer of raw opium, which has been shipped to Pakistan where much of it was converted into heroin in factories located in the Khyber Agency, Girdi Jungle, and perhaps elsewhere.

This geographical pattern of cultivation and processing appears to be changing as heroin factories move into Afghanistan. Further changes are to be expected if, as is indicated in a recent UNDCP report, use of narcotics in the former Soviet Union continues to increase and smuggling across the former Soviet border also increases.¹⁴

Regions within Afghanistan

Afghanistan has a number of agro-climatic regions in which poppy, the raw material for opium and its derivatives (heroin and morphine), is grown. A map showing the general pattern of Afghanistan opium poppy cultivation is provided at the end of this report. The growth of opium is concentrated in a few regions. Reservations about the data underlying this map will be discussed later in the section on data sources, as well as in Appendix A.

The Swedish Committee for Afghanistan defines three regions for the growth of poppy in the *1991 Agricultural Survey of Afghanistan*: one with small irrigated farms of less than 15 jeribs (1 jerib = 0.483 acre), including the entire east of the country and Nimroz and Herat; a second with medium-sized rainfed and irrigated farms of 15 to 30 jeribs, including Balkh in the north and Helmand and Qandahar in the south; and a third with rainfed farms mostly larger than 30 jeribs, including Badakhshan.¹⁵

U.S. estimates of land planted with poppy are shown as follows:¹⁶

<i>Year</i>	<i>Number of hectares</i>
1988	23,000
1989	17,190
1990	12,375
1991	17,790

The factors influencing the reported cultivation trends are difficult to determine. The biggest change has occurred in Helmand province and reflects changes in the policies of local commanders. Other sources, particularly UNDCP and nongovernmental organizations (NGOs), mostly funded by UNDCP, have estimates that suggest significantly higher levels. The regional supply and demand estimates indicate that somewhat higher levels are possible. But the UNDCP figures seem much higher than what could readily be absorbed.

The bulk of opium production occurs in the southwest of the country, particularly (1) northern Helmand, (2) northern Qandahar, and (3) the eastern provinces (particularly Nangarhar). Poppy cultivation seems to be increasing rapidly in these regions, for which we have the most information.

Southwestern Afghanistan has a region of poppy cultivation that includes the districts of Musa Qala, Naw Zad, and Nad Ali in Helmand; Khakrez, Arghandab, and Arghistan in Qandahar; Mizan in Zabul; and Deh Rawud and Tirinkot in Uruzgan. In this region, small-scale poppy cultivation to obtain opium for domestic and medicinal use has occurred for more than a century. But only during the last decade or so has poppy been cultivated in these areas on a large-scale and commercial basis. Much of the cultivation is reported to be under the Akhunzadas of Musa Qala, who reportedly cut production severely in 1990—probably in connection with negotiations with American authorities—but production quickly recovered in 1991 after the assassination of the leading member of the clan. All reports for 1992 indicate that poppy cultivation in the region is significantly higher than in 1991. The Helmand estimates vary from 3000 ha. in poppy to several times that figure. The Swedish Committee for Afghanistan reported in 1991 that roughly 37 percent of farmers surveyed in Helmand province sold opium in an average amount of 4 "seers" (roughly 28 kg) and for a price of Afs. 439,143 a seer (about US\$800 a seer, or US\$3,200 for 4 seers, using an exchange rate of US\$1 = Afs. 550). The Swedish

Committee for Afghanistan's samples for Qandahar and Uruzgan are too small to be significant but show roughly comparable production and price levels to those in Helmand.

Among the eastern provinces (Konar, Nangarhar, Paktia, Parwan, Bamyan, Laghman, and Badakhshan), the province of Nangarhar is by far the largest producer of poppy, followed by Badakhshan. In Badakhshan, poppy cultivation has been banned in the Yaftal, Teshkan, and Shewa areas by the commanders who are in control, but it is grown elsewhere in the province. Nangarhar is the major center for poppy in Afghanistan, accounting for from 10,000 ha. to several times that amount, according to various estimates. Some districts are reported by the UNDCP to have more than 80 percent of their cropped land in poppy. An April 1992 UNDCP mission reported that 85 percent of the land in Achin, 80 percent in Ghani Khel, 65 percent in Rodat, and 60 percent in Deh Bala were planted in poppy.¹⁷ The Swedish Committee for Afghanistan reports that 366 of the 661 farmers surveyed in Nangarhar, 55 percent of the total, sold some opium, with an average of 2 seers (roughly 14 kg) each, at an average price of Afs. 164,846 a seer (or roughly US\$300/kg at US\$1 = Afs. 550). It is unclear how this reconciles with another estimate by the Swedish Committee for Afghanistan that 79 percent grew poppy on an average of 2.4 jeribs, and with an average yield of 1 seer a jerib. (Perhaps some who grew poppy did not process it themselves.) UNDCP reported 4,000 ha. under poppy cultivation in Badakhshan in 1989 and that the figure was declining; other observers reported a much lower estimate.

Konar grew poppy before the war and for some time during the war, but Maulvi Jamilur Rahman, the leading local authority, banned poppy growing in this province and none is grown now. In fact Jamilur Rahman compensated those who had already spent money on land preparation and planting when he imposed his ban in the 1980s.

Laghman has never grown much opium; no commercial-scale production takes place in the plains of Laghman. In the northern tip of Laghman, in the districts of Alishing and Alingar (near the border with Badakhshan), some poppy is now cultivated, but the amount is small, as indicated in Tables 2-1 and 2-2.

Paktia is another eastern province where considerable amounts of poppy were grown before the war. According to some reports, no significant production takes place now, although other sources report several hundred hectares. According to one source, the district of Sayyid Karam is the only one in Paktia producing drugs, specifically, hashish. Poppy cultivation in Paktia has declined because intense fighting during the early stages of the war in this province prevented farmers from planting poppy. Subsequently, a high percentage of the population fled to Pakistan. Furthermore, Commander Haqqani was active in this province during the war, and his almost permanent presence influenced people not to resume planting.

Some growth is reported in Bamyan and Uruzgan provinces near the center of the country and in the far west around Herat. However, it should be recognized that information about poppy cultivation in these areas is sketchy. They probably are not currently major growing areas at present, or at least are not as important as Helmand and Nangarhar. Parwan has no significant production.

Tables 2-1 and 2-2 show the relative intensity of poppy cultivation in various districts of major growing provinces.

Data Sources

Most current data from Afghanistan are uncertain—population figures, crop yields, the identity of the individuals in power—and especially narcotics-related data. Individuals involved in narcotics-related activities have special incentives to conceal their activities. Nonetheless, the data we

Table 2-1. Intensity of Poppy Cultivation

Province and Districts	Intensity
Nangarhar	
Shinwar	XXX
Durbabz	XXX
Bati Kot	X+
Rodat	XXX
Chaparhar	XX+
Mohman Dara	XX
Lalpur	X
Kama	—
Goshta	XX
Surkh Rod	XXX
Behsud	—
Hisarak	XX
Kuz Konar	XX
Dara-e-Nur	XX
Khogiani	XXX
Pachir Wa Agam	XXX
Sherzad	XXX
Laghman	
Mehtarlam	—
Qarghayi	—
Dawlat Shah	—
Alingar	X
Alishing	X
Paktia	
Gardez	—
Speyra	—
Khost	—
Manduzai	—
Sabari	—
Trazzi	—
Dara-e Darang	—

Table 2-1. Intensity of Poppy Cultivation

Province and Districts	Intensity
Tani	—
Gorbaz	—
Nadir Shah Kot	—
Mush Khel	—
Jaji	—
Hassan Khel	—
Jani Khel	—
Jadran	—
Shamal	—
Sayyid Karam	—
Chamkani	—
Dand Wa Patan	—
Lajmangal	—
Zurmat	—
Wolma	—
Jaji Maidan	—
Badakhshan	
Jurm (especially the following villages):	XX
Khash	XXX
Peshkan	XX
Jabab	XX
Ferghanunj	X
Yaftal	—
Teshkan	—
Shewa	—
Qandahar	
Khakrez	XX
Arghandab	X
Maruf	X
Arghistan	X

Table 2-1. Intensity of Poppy Cultivation

Province and Districts	Intensity
Helmand	
Musa Qala	XXX
Naw Zad	XXX
Sanguin	XX
Baghran	XXX
Uruzgan	
Tirinkot	XXX
Deh Rawud	XX
Zabul	
Mizan	X

Note: Level of poppy cultivation: X = light, XX = medium, XXX = heavy. Dashes indicate no significant level of poppy cultivation.

Table 2-2. Opium Production in Afghanistan

Province	1989		1990		1991	
	Number of hectares	Number of metric tons	Number of hectares	Number of metric tons	Number of hectares	Number of metric tons
Helmand	3500	110	200	—	3600	120
Nangarhar	9800	330	10400	360	11700	400
Paktia	1000	—	500	—	800	—
Uruzgan	2200	100	600	—	400	—
Bamyan	300	—	100	—	500	—
Konar	500	—	300	—	—	—
Badakhshan	4000	200	ND	ND	ND	ND

Notes: ND = no data. Dashes indicate production lower than 100 MT.

have are likely the best available. Data in Table 2-2 are gathered from various sources and are based on methodologies not defined. Probably some are interpretations of satellite imagery and estimates of average yield.

The most accurate figures come from ground-truthed satellite imagery. UNDCP is currently interpreting satellite imagery and has completed ground truthing for the Nangarhar and Helmand areas. A new set of relatively accurate figures is expected from the UNDCP effort by the end of 1991. For now, we must rely on various estimates. The current UNDCP estimates appear to be higher than those from other sources, but are based on careful observations by their field staff.

Other figures used in this report, besides those for poppy acreage, are taken from a variety of sources. Data from a survey conducted by NACP in refugee camps are particularly questionable and often differ widely from those from other sources. When such differences were noted, as for prices of opium, we used the more common figures. Prices used were from recently released figures from UNDCP that corresponded roughly to figures elicited from selected interviews and related to those in the last publicly available figures from *Intelligence Trends*, released by the Drug Enforcement Administration (DEA) in 1990. When no other figures were available, NACP figures were occasionally used. Other figures emerged from interviews with reputable sources in Pakistan. Appendix A contains a discussion of the different available published data sources and their coverage.

The data on heroin processing are even less reliable than those on opium cultivation. We have largely avoided naming names and giving precise locations—both because it would expose our informants and because we are in no position to treat what is essentially hearsay as hard evidence. However, the locations of a number of laboratories in Pakistan, and even some in Afghanistan, are widely reported. Reliable sources report more than 100 in Pakistan alone.

The information on which this report is based includes interviews with refugees in the camps of Malgagee near Muslim Bagh; Sorkhab near Pishin; Mohammad Khel in Quetta; and the Girdi Jungle, Aamri, Posti, Chagai, and Zorchah areas of Chagai district—all located in Balochistan close to the Pakistan border with Afghanistan. Interviews were conducted in Peshawar with refugees involved in running cross-border programs in all of the affected provinces as well as in the Khyber Agency. Interviews were also held with officials of Government of Pakistan and those of international organizations concerned with narcotics control and prevention programs in Quetta and Peshawar. Agricultural data gathered inside Afghanistan by the Swedish Committee for Afghanistan and A.I.D. and UN-funded programs were also used to prepare this report. Appendix B contains a bibliography of works consulted. Appendix C contains a partial list of individuals who were interviewed or cooperated with our research.

CULTIVATION PRACTICES

Land Preparation

Poppies grow best in moderately textured, light clay soils, but they can be grown under a variety of climatic and soil conditions. In Afghanistan as well as in Northwest Frontier Province (NWFP), poppy has been successfully grown on marginal and poor lands. In general, however, it is grown on good-quality irrigated land.

Land preparation for poppy cultivation in the main growing areas starts immediately after the spring crop is harvested, sometime between August and October depending on factors such as temperature, precipitation, and altitude. In Uruzgan and Zabul land preparation must be completed by the end of October, so that the poppy crop can be sown in November. In Nangarhar, sowing normally occurs in late November to early December, and land preparation continues until sowing time.