COTTON III. IN AFGHANISTAN
Article by **Daniel Balland**

Published: December 15, 1993
Last Updated: August 15, 2013

COTTON III. IN AFGHANISTAN

COTTON

iii. In Afghanistan

Two Iranian words, *paḵta* (< Tajik) and *pomba* (Pers. *panba* < Pahl. *pambag*), are currently used in Afghanistan to designate raw cotton. Most people use them fairly indiscriminately, but specialists tend to confine the former to unginned, or seed, cotton and the latter to ginned, or fiber, cotton (Pashto *mālūǰ/č*).

History. Archeological and literary evidence suggests that the cradle of cotton cultivation was situated on the Indian subcontinent, possibly in the Indus valley, where it had been known since Harappan times (3rd millennium b.c.e.; Allchin, p. 325). From there it spread both westward and eastward along paths and according to rhythms that have not clearly been ascertained. What does seem clear, however, is that the diffusion of this once perennial tropical plant into Inner Asia, with its cold winters, could have taken place only after the development from the original stock of an annual variety that grows in the summer, a stage that undoubtedly antedated Islam and may have first occurred in the Sinkiang (Xin-jiang) oases (Watson, pp. 34ff.). The introduction of cotton cultivation into the territory of present-day Afghanistan must have been part of this process, though the date remains unknown. The sources provide only the information that by the end of the 10th century cotton clothing was manufactured at and exported from Bost, Herat, and Kabul, where the famous *sabanīyāt* and *šarābīyāt* stuffs were produced (*Ḥodūd al-*

ʿ*ālam*, tr. Minorsky, pp. 110,104; Ṯaʿālebī, p. 135; Edrīsī, II, pp. 8, 68; Ebn Ḥawqal, p. 450). Important cotton cultivation must therefore have taken place in the vicinity of these centers.

During many centuries Afghan sources were silent on the subject of cotton manufacture, but from the early 19th century it is clear that Afghanistan was no longer exporting cotton clothing. A lively, though purely domestic cotton-weaving industry had indeed survived; moreover, small quantities of raw cotton were occasionally exported to India (Leech, p. 94) and Bukhara (Gritskevich, p. 148, where it is related that cholera was introduced into Bukhara in August 1829 by a cotton caravan from Afghanistan). Nevertheless, all the evidence suggests that cultivation of cotton was of only minor importance and occurred mainly in eastern Afghanistan (Nangrahār and the lower Kōhdāman; Griffiths, p. 984; Lord, p. 528). The picture is quite different today, owing to several stages of expansion in cotton production, first in northern and then in southern Afghanistan.

An initial change occurred in the last decades of the 19th century, when the growing demand of the Russian cotton industry provided a strong impetus for cultivation of cotton in the lowland oases of Central Asia, including those of northern Afghanistan. As early as 1303/1886 cotton was reported to have become a staple crop on the Afghan bank of the Amu Darya above Ḵamīāb, with local production being sent to the Russian agency at Kerki (Peacocke, p. 334). Exports of raw cotton from Afghanistan to Russia boomed from a mere 5 tons recorded in 1890 to 880 tons in 1901 and to 2,858 tons in 1911, reaching a peak of 4,539 tons in 1915 (Babkhodzhayev, p. 33; Gurevich 1959, p. 135; cf. Hamilton, p. 529, for cotton exports from Afghanistan to Russia through Persian Khorasan). The trend undoubtedly reflected a sharp rise in acreage devoted to cotton in northern Afghanistan, mainly around Herat and Mazār-e Šarīf (Kovalev, p. 199).

The trend was highly precarious, however: During the civil war that followed the Bolshevik Revolution the Russian market collapsed (280 tons imported from Afghanistan in 1302 Š./1923), and no alternative outlet, internal or external, was available. Around Herat cotton was then replaced by opium poppies (Markowski, pp. 98-99). Production survived better around Mazār-e Šarīf, which was clearly the major region of cotton cultivation in Afghanistan in the late 1920s. In 1309 Š./1930, however, an invasion of locusts destroyed most of the crop (*Pomba*, p. 5).

A more decisive step for the future of cotton cultivation in Afghanistan was the formation, in 1314 Š./1935, of Šerkat-e etteḥādīya-ye welāyat-e šemālī (Joint-stock company of the Northern Province), with an initial capital of 49,686,058 afghanis (ca. $4,975,000). Under the able leadership of ʿAbd-al-ʿAzīz “Londonī” (1900-40), a prominent Kabul businessman, this private company initiated in Afghanistan a regional planning policy based on combined agricultural and industrial development (Dupree, 1966, pp. 3ff.; idem, 1973, pp. 471ff.). The general aim was promotion of cotton cultivation in northern Afghanistan in order to increase export earnings, on one hand, and to lessen dependence on imports by establishment of a textile industry, on the other. The area selected was Qaṭaḡan, where the state was in the process of reclaiming, by means of corvée labor, thousands of hectares of former swampy and malarial lands around Baḡlān and Qondūz, which it was selling at a very low price (2-9 afghanis per *jarīb*). The company bought large tracts of such reclaimed lands and settled on them tenants of various origins, who were required to devote one-sixth (one-tenth after 1327 Š./1948) of their cultivated land to cotton. The company, moreover, embarked on a program of substituting long-fiber American Upland cotton (*Gossypium hirsutum*) for the local short-fiber varieties (*Gossypium herbaceum*), for example, *ḡōza-ye qōqandī* (lit. “Qōqandī [< Qōqand] cotton pod”), *kōkalla* (< Turk. *kök* green, + Pers. *kalla* cotton pod = green-pod cotton), and *sīyāh čeget* (< Turk. *čigit*, cotton seed = black-seed cotton; Doerfer, III, p. 88; *Pomba*, p. 4). Short-staple cotton was becoming less and less desirable on the world market. Actually, American varieties had been introduced into Russian Transoxania in 1869 and thence to the Afghan side of the Oxus in the 1890s, but their share in Afghan production had not exceeded an optimistic estimate of 20 percent in the late 1920s. The company endeavored to purchase local cotton seeds and to supply free some 2,500 tons of selected imported seeds during 1315-16 Š./1936-37 (*Pomba*, p. 7). Having thus secured a supply of good-quality cotton, it established a network of collecting stations equipped with cotton gins and presses imported from the U.S.S.R. (and later Great Britain). The seeds were further processed into cooking oil, margarine, and laundry and toilet soap at a central factory established at Qondūz (Ginnever). The fibers were sold on the foreign market (U.S.S.R., Germany) but also in the domestic market, which was booming after the completion of two cotton mills at Jabal al-Serāj (1316 Š./1937) and Pol-e Ḵomrī (1321 Š./1942; see below). Thanks to private initiative, cotton soon became the “white gold” of Qaṭaḡan and a major item in Afghan foreign trade (14.3 percent of export receipts in 1328 Š./1939-40, compared to 0.9 percent in 1325 Š./1936-37).

Several other trading companies established during the mid-1930s officially undertook to follow a similar policy in other suitable areas of Afghanistan (Ḥasan Khan, pp. 33ff.). Steps were even taken toward construction of a ginning factory in Qandahār ("Tāʾsīs"), but it never materialized, and no significant progress in cotton cultivation actually occurred outside Qaṭaḡan. The share of that province in national production thus soared from a mere 10 percent in 1314 Š./1935 to as high as 70 percent in 1317 Š./1938 and 90 percent or more in the 1940s (only crude estimates, as statistical material from those early years is often contradictory). Šerkat-e etteḥādīya-ye šemālī finally obtained a monopoly of trade in raw cotton and became known as Šerkat-e pomba (Cotton company).

Following this early boom in cotton cultivation in Qaṭaḡan, an almost continuous series of production figures is available from a variety of sources (Figure 10). It shows, on one hand, an overall trend sharply upward until the mid-1970s and, on the other, a high degree of variability in output from one year to the next. The apparent increase in production from 3,500 tons in 1314 Š./1935 and 26,700 tons in 1319 Š./1940 to 160,000 tons in 1354 Š./1975, the maximum so far (0.46 percent of the world output in that year), reflects a methodological bias, however. Statistics are actually available only for seed cotton sold to commercial ginning companies. But some was also delivered to village artisans or kept for home consumption or for seed. In Qaṭaḡan the share of the latter fell from at least 30 percent of total production in the early 1950s (Michel, p. 112) to about 10 percent in the early 1970s (Central Statistics Office, p. 63). Cotton thus became more and more a cash crop. The increase in measured production to a certain extent reflected this trend, as well as increases in acreages and yields.

Acreages increased from an estimated 37,000 ha in 1335 Š./1956 (1 percent of cultivated land in Afghanistan) to more than 100,000 ha in the mid-1970s, with a maximum of 128,000 ha in 1355-56 Š./1976-77 (3.2 percent of the total cultivated area). In the same period yields increased from 6-8 to 12-14 quintals per hectare, the maximum recorded being 15.4 q/ha in 1348 Š./1969. Progressive cotton growers produced more than 30 q/ha in Qaṭaḡan (Étienne, p. 120) and in Helmand province.

In contrast to the conditions prevailing in the 1930s, these new developments were achieved not through private initiative but entirely through strong government commitment. Since the adoption of economic planning in 1335 Š./1956 cotton has consistently received a top priority in national development policy. The state first took over all affairs related to cotton through partial nationalization of the highly profitable Šerkat-e pomba, the capital for which it raised to 200 million afghanis, with 51 percent state equity, in 1333 Š./1954 (Amīn, 1360 Š./1981, p. 188). The company was later fully nationalized, following the republican coup of 1352 Š./1973. In the meantime, in 1340 Š./1961, it had been renamed Spīnzar (Pashto: white gold), a name that it has retained (Sadīd, p. 17). The state authorities then adopted a mixed policy of coercion (forced cultivation) and persuasion (agricultural extension programs, price supports), in order to reach their production goals. They were sometimes more successful than expected (the authors of the fourth Five-Year Plan anticipated only 83,000 ha under cultivation in 1355 Š./1976; Ministry of planning, 1973, p. 315). New areas were opened to large-scale cotton cultivation. In the central Helmand valley of southern Afghanistan, for example, cotton was tested for the first time in 1334 Š./1955 and introduced in the Šamalān project area in 1336 Š./1957, in Darwēšān in 1337 Š./1958, and in Mārja in 1338 Š./1959. By the mid-1970s it had become the second major crop after wheat and the main cash crop in the whole of Helmand province; an estimated 64 percent of all landowners were then reported to be cultivating some cotton, with an average return of 15,000 afghanis a year, that is, 60 percent of all cash sales and 19 percent of their gross revenues (U.S. AID, 1978, pp. 58ff., 110; Table 20).

Although they are not as well documented, similar trends occurred in the central Harīrūd valley around Herat and in the lower Balḵāb oasis west of Mazār-e Šarīf, notably around Šōrtepa (Figure 11). As a consequence, in 1354 Š./1975 Qaṭağan was still the leading producing area, but its share in national output had declined markedly since the 1940s (Table 21).

As far as yields are concerned, the Ministry of agriculture committed itself to selecting new high-yield varieties to replace those that had been imported from the U.S.S.R. in the 1930s; the latter had rapidly become mixed with local varieties and had degenerated (Idemitsu, p. 3). The final choice was several varieties of Acala (recently Acala 1517-75), which have been widely distributed all over the country, except in Bādğīs and Herat provinces, where the early-maturing but short-staple Russian 108 F (a hybrid of the American Cook variety) has been retained (see summary in Munro, p. 9). Selected seeds are now available from the state-owned Afghan seed company, which in 1364 Š./1985 and 1365 Š./1986 delivered 6,883 tons and 5,901 tons respectively from its two propagation farms in Mārja (Helmand) and Larḵābī (Bağlān). Growing local varieties has been officially forbidden in all four of the major commercial cotton-growing regions, and they now survive only in marginal areas. Nevertheless, defective distribution and maintenance of the improved varieties, as well as poor cultivation methods (for example, scattering, rather than hand-planting rows along ridges, and inadequate weeding and fertilizing), have prevented this otherwise successful selection policy from having its full impact. Average yields have consequently remained lower than expected (17.9 q/ha were anticipated for 1355 Š./1976: Ministry of planning, 1973, p. 315).

The momentum was to be maintained under the first Seven-Year Development Plan (1335-61 Š./1976-83), according to which an area of 188,000 ha under cotton cultivation, with an average yield of 18.5 q/ha in 1361 Š./1982, was anticipated (Ministry of planning, 1976, I, p. 82). The overall goal of a total annual output of 350,000 tons of raw cotton was later downgraded, however, to a more realistic target of 215,000-230,000 tons for 1362 Š./1983 (Basic Directives, p. 12). The revolution of 1357 Š./1978 and the subsequent civil war prevented fulfillment of these optimistic projections.

Insofar as the state was responsible for most of the progress of the 1960s and 1970s, it is not surprising that the collapse of state authority and loss of control over several major producing areas in the 1980s resulted in a sharp decline in cotton cultivation and production (Figure 10). In 1365 Š./1986 cotton acreages were cut back to only about half their prewar levels (69,300 ha, or 1.8 percent of the total land under cultivation, according to official records), and since 1360 Š./1981 successive Afghan Statistical Yearbooks have regularly contained reports of yields below 9 q/ha, as low as 6.1 q/ha in 1362 Š./1983, a figure unprecedented since 1335 Š./1956. The decline has been especially serious around Herat and in Qaṭaḡan; the latter now contributes only 30 percent of national production, a trend that has allowed Helmand province to emerge as the main cotton-producing area in the country (Table 22).

Such a crisis in cotton production is not at all unprecedented in Afghanistan, except in its unusual duration. It merely underscores one consistent and fundamental feature of the Afghan cotton economy: extreme irregularity in output (Figure 10). The factors contributing to this situation are partly ecological and partly political.

Ecology. In Afghanistan cotton is primarily an irrigated summer crop. In contrast to the situation in Persia, dry-farmed cotton is a marginal crop in

Afghanistan, limited to certain low mountain slopes in the northern part of the country. Where water is available the plant requires a minimum temperature of 14° C during at least 180 successive days in order to grow and ripen successfully (Balland, pp. 37ff., 44n.). In the broadest terms this requirement is satisfied in all areas low enough so that the mean temperature of the coldest month each year is not below 0° C (Figure 11). Cotton is thus excluded from most intramontane valleys, including the Kabul basin (Table 23), but not from the lower Kōhestān valley north of Kabul, where cotton cultivation was once widespread (Lord, 1838, p. 528; Vavilov and Bukinich, p. 390; Bell, p. 273).

Cotton is usually sown in April and May and harvested between October and December, with the result that double cropping is normally not possible on cotton fields. Only in southern Afghanistan is the growing season long enough to allow cotton to be planted immediately after the winter wheat harvest; even there, however, double-cropped cotton is often damaged by early frosts in November, and the yield is less than that of single-cropped cotton (6.4 q/ha, compared to 10.6 q/ ha in 1354 Š./1975; U.S. AID, 1976, pp. 39ff.; idem, 1978, p. 97).

The only current method of harvesting is hand picking, which is very labor intensive (115 person-days per ha; Central Statistics Office, p. 84). Most of the work is done by women and children, but additional labor is frequently required, especially in Qaṭağan, where seasonal migrations of pickers from the Hindu Kush have taken place since the beginning of the cotton boom (Grötzbach, 1972a, p. 121). In the mid-1970s the wage for picking cotton in northern Qaṭağan was either 8 afghanis for 1 *sēr* (7 kg; an individual can usually pick 3-4 *sēr* a day) or one-sixteenth of the cotton picked (Barfield, p. 84). After picking, the cotton fields are opened to flocks. As pasturage is scarce at this season, the sheep greedily consume the dried leaves. Their dejecta are often the only fertilizer the field receives. Cotton stalks and roots are carefully collected, as they provide much-needed heating fuel.

The water supply is the main ecological constraint on cotton cultivation and also the most subject to annual variability. Unusual floods may temporarily destroy irrigation facilities, as in northern Qaṭağan in 1345 Š./1966 (Balland, p. 47), but, above all, severe droughts may cause crop failures, as in 1325-26 Š./1946-47 (Kamal, p. 92) and 1349-50 Š./1970-71 (Figure 10).

Price policy. Price policy has been another key factor responsible for fluctuations in cotton output over the last decades. Cotton growers are required to sell their raw cotton to ginning companies at a price that is fixed each year by the government in accordance with macroeconomic considerations that have not always been consistent with the official emphasis on cotton production (Balland, pp. 60ff.). As cotton is produced in competition with other crops, production has been regularly depressed when the prices of those other crops, particularly wheat, have increased more rapidly. The price ratio between cotton and wheat is thus a basic determinant of recorded cotton output. The higher the ratio for cotton, the greater the production; a 20 percent increase in cotton prices in 1353 Š./ 1974 had an immediate impact on the level of production (Figure 10). Conversely, when the ratio is low, below 1:5, farmers are unwilling to grow cotton or grow only enough to meet their cash requirements; in 1346 Š./1967, for example, 1 ha of cotton provided a net return of 440 afghanis and 1 ha of wheat between 1,136 and 4,726 afghanis, depending on agricultural practices (Central Statistics Office, pp. 65-66, 71-72). In order to deal with this situation, it has been customary for the state to issue regulations forcing peasants to plant cotton on a fixed minimum share of their land: In the early 1960s that minimum was 25 percent in Qaṭaḡan, except in the area of Baḡlān, where a similar system of compulsory cultivation was already in effect for sugar beets; 15 percent in the Helmand valley, except at Nād-e ʿAlī (Stevens and Tarzi, pp. 9, 19); and one-twelfth in central Bactria, around Mazār-e Šarīf. A minimum yield of between 7 and 18 q/ha, depending on soil fertility, was further required, and any shortfall was subject to a financial penalty at the rate of 2 afghanis per lacking *sēr*. None of these regulations has ever been fully enforced, however, and they have generally been relaxed as soon as the price ratio with wheat has improved. Nevertheless, they have aroused deep-rooted distrust of state intervention. It has also been suggested that an unfavorable price ratio increases unofficial sales of cotton to the small domestic hand gins at the village level (for a description, see Vavilov and Bukinich, p. 392); actual price-induced declines in production may thus have been smaller than is shown in official statistics (Grötzbach, 1972b, p. 385).

The most recent increases in raw-cotton prices occurred in 1359 Š./1980 (20 percent), 1362 Š./1983 (60 percent), and 1367 Š./1988 (100 percent). As they nevertheless proved insufficient to restore cotton cultivation to its previous level, the Afghan authorities have lately introduced new incentives, for example, distribution of primary goods (sugar, edible oil, soap, etc.) at subsidized prices to all cotton growers and delivery of a ton of fertilizer for each ton of cotton produced (*Pelān-e enkešāf*, p. 25). On the other hand, it has been reported that several guerrilla commanders were ordering farmers to grow wheat instead of cotton. Cotton cultivation thus became one of the stakes in the struggle for power in Afghanistan, underscoring the prime importance of the crop for the national economy, both as a source of industrial activity and as a major item in foreign trade. Any decrease in output actually weakens the state by lessening its revenues.

Uses of cotton. Cotton has become the basis for a variety of manufactures that together constitute the most important single branch of the small Afghan industrial sector. In 1357 Š./1978-79 45.8 percent of national industrial manpower was employed in cotton-related industries, which generated 41.6 percent of the gross national industrial income and paid 53.9 percent of all industrial wages. Industrial diversification, combined with recent declines in output of raw cotton, have, however, resulted in a relative decline of this branch over the past two decades (Table 24). The Afghan cotton industries may be conveniently divided into two main groups, totally distinct both geographically and financially: ginning and seed-processing industries, on one hand, and textile industries, on the other.

The ginning (*ḥallājī*) and seed-processing industries expanded steadily until the late 1970s, in order to handle the increasing output of raw cotton. The Gerešk ginnery (Helmand province) was the last factory opened (November 1978), as the planned Bālā Morḡāb ginnery in Bādḡīs was never built. All factories in this group belong to one of four state-controlled regional companies, each enjoying a monopsony position in one major cotton-growing area of the country, where it operates a chain of integrated plants: ginneries, oil-crushing mills, oil refineries, and soap factories (Figure 11). In contrast to the recently equipped Herat and Helmand regions, where such industrial facilities are concentrated in only one or two localities, in the older cotton-growing areas of northern Afghanistan there are rather extensive networks of small industrial centers, each concentrated on a different stage in the processing of raw cotton. It must be noted, however, that for central Bactria around Mazār-e Šarīf the best available information is from the early 1970s, a period during which four private ginning companies were in fierce competition in the area, which resulted in overequipment; as those firms were merged in a single state company in 1353 Š./1974 several industrial units have been closed down, but no clear picture of the present situation is available (Nathan, p. 3.104).

All these factories are in operation only a few months of the year, during and after the harvest, and their installed capacity is far higher than their actual output (12,905 tons of edible oil in 1356 Š./1977-98). The largest operator is the Spīnzar company (seven ginneries; four oil mills, including that in Qondūz, the largest in the country; and one oil refinery and soap factory, also in Qondūz, all equipped or re-equipped with modern English machinery in 1350 Š./1971). Production reached 6,803 tons of edible oil in 1356 Š./1977-78, only one-eighth of installed capacity (53,000 tons), and 415 tons of soap in 1352 Š./1973-74. The Mazār-e Šarīf oil mill, opened in January 1962 and newly rebuilt in June 1982, produced 2,820 tons in 1356 Š./1977-78. The Laškargāh oil mill, which has functioned since 1346 Š./1967, produced 2,800 tons in 1356 Š./1977-78, whereas the Herat oil mill, opened in 1348 Š./1969, produced only 482 tons (Amīn, 1360 Š./1981, pp. 208ff.).

Cottonseed hulls (*pōstak*; 3,800 tons produced in 1356 Š./1977-78) and pressed cotton seed (*konjāra*; 6,000 tons) are by-products of the ginning and oil-refining processes and are traditionally used to feed cattle (Aitchison, p. 92). Local owners of flocks now appreciate them so much that cotton companies sell them at a very low price. In Qaṭaḡan they are used to feed castrated sheep fattened in stalls during the winter and as emergency fodder during snowstorms, when they are trucked or transported on camelback to the pasturing ewe flocks. This practice has become common only since the 1970s, when an increase in sheep prices rendered it very profitable. It suggests a growing economic integration between market-oriented pastoralists and cotton industrialists (Barfield, pp. 84-85, 128-29, 141ff.). *Pōstak* is also used as cheap heating fuel.

Whereas the ginning and seed-processing factories are located close to cotton-growing areas, the industrial spinning and weaving of cotton are carried out near the main centers of consumption. Cotton-textile manufacture, the most important manufacturing industry in Afghanistan, is dominated by five state-operated factories; see Table 25 for their situation in 1355-56 Š./1976-77. Owing to the cotton boom of the mid-1970s, two other cotton mills were under construction at that date, in Herat and Qandahār respectively; they have since gone into production. The planned construction of two additional mills at Čārīkār and Ṭālaqān was postponed. Moreover, since 1357 Š./1978 production in all existing factories has suffered dramatically from the lack of spare parts for machinery and shortages of raw materials, electric power, and labor (for growing employment of women, see Table 24). At the Balḵ cotton mill, for example, no more than 551 workers were employed in late 1361 Š./early 1983 and at the Bagrāmī mill only 1,770 in 1367 Š./1988, in both instances about half the prewar levels of employment. Having reached a peak of 76.8 million m in 1356 Š./1977-78, the production of cotton cloth had consequently declined to 43.3 million m two years later and to only 23 million m in 1361 Š./1982-83, representing a setback to levels reached more than twenty years earlier. The industry is, however, reported to have recovered to some degree since then; 58.1 million m were produced in 1365 Š./1986-87 (Figure 12), and there was a plan to upgrade the Bagrāmī mill with Soviet machinery by 1370 Š./1991.

The three oldest, as well as the two largest, cotton mills in Afghanistan belong to the Afghan textile company (Də Afḡān nasājī šerkat), which produces about 55-60 percent of all national output of cotton fabrics and, in the 1970s, maintained sales agencies all over the country, at least one in each province. The company was founded in 1312 Š./1933 by Bānk-e mellī as a joint-stock company (*šerkat-e sahāmī*) with a capital of 51 million afghanis. The state later took control. In 1366 Š./1987 the reported capital of the company amounted to 1,427.5 million afghanis, 74.9 percent of which belonged to various state organizations (more than 50 percent to the national bank), 6.8 percent to private companies, and 18.3 percent to 4,097 private shareholders, who individually owned shares worth from 200 to 10 million afghanis ("Afghan Textile," p. 11). Since 1357 Š./1978 the company has rehabilitated the previously obsolete Goḏargāh cotton mill, on the outskirts of southern Kabul (Table 25).

The development of a national textile industry has resulted in a decline in traditional cotton-weaving handicrafts (for a regional example, see Grötzbach 1972a, p. 249). The latter are, however, far from negligible: In a survey conducted in 1353 Š./1974-75 in eleven provinces, including all the major cotton-growing provinces and the most heavily populated ones, more than 5,000 workshops producing hand-woven cotton material were enumerated, with a total employment of more than 10,000 weavers (Table 26). Unlike carpet weaving, cotton weaving is an overwhelmingly male activity (83 percent of the workers are men), and the proportion is higher in southern than in northern Afghanistan. Cotton weaving is now largely market oriented, and a significant part of it is actually in the hands of urban-based traders who operate small workshops or supply home weavers with all necessary materials and pay for their work (Jebens, pp. 276-77, 292-93; for short descriptions of domestic looms in use in various regions of Afghanistan, see Centlivres, p. 119; Dupaigne, p. 55). *Karbās* (plain cotton cloth < Skt. *karpāsa*– "cotton") is the standard product, still woven by hand in many marginal cotton-growing areas where no industrial ginnery is available (e.g., in Nangrahār) or where low yield and poor quality of the cotton crop render transportation to the nearest ginning factory uneconomical (e.g., Herat, Turkestan; Jebens, p. 117). A few decades ago the main market for *karbās* was reported to be Jabal al-Serāj, but the finest *karbās* was said to be woven in Ḡōrīān, west of Herat (Ḥasan Khan, p. 28). Two other products are more concentrated geographically: *alāča*, a polychrome-striped cotton cloth woven in northern Afghanistan and used for making *čapan*s (long-sleeved robes, the main market for which is Mazār-e Šarīf), and *saṭranjī*, a flat-woven cotton carpet of simple design, very similar to the Indian dhurrie. The main center of *saṭranjī* weaving is Estālef, a large Tajik village north of Kabul that supplied all Afghan *bāzār*s in the 1970s. *Saṭranjī*s are also woven in all the major prisons of the country (Parsons, p, 116), though such workshops seem not to have been included in the 1353 Š./1974 survey.

A special type of migratory cotton weaving has also developed in some remote valleys of the Hindu Kush in response to overpopulation (Grötzbach, 1972a, p. 124). More common all over the country is the mobile cotton carder (*naddāf*), whose function is periodically to fluff up the cotton stuffing of quilts, mattresses, and cushions (*tōšak*), standard furnishings in every Afghan home (Wright, 1982).

The decline in cotton handweaving began well before a national textile industry was established, in the early 19th century, when imported cotton cloth became increasingly available. At that time Afghanistan was the arena for fierce competition among several foreign producers. From the Punjab came the cheapest chintz (see Âčǰt), from Russia the costliest but most durable cotton cloth, and from England the cloth most highly prized “for its external beauty and inimitable dazzling pattern” (Furdoonjee, p. 152). The marketers of these various types of cloth drove the Persian *qadak* out of the Afghan market, where it was not mentioned after the second decade of the 19th century (Elphinstone, p. 295). In the course of time Anglo-Indian cotton cloth gradually displaced the Russian product. In the late 1830s the four main *bāzār*s of Qaṭaḡan (Qondūz, Ḵolm, Ṭālaqān, and Ḥażrat-e Emām Ṣāḥeb) were reported to import annually four times more cotton goods from India or England than from Russia (Lord, 1839, p. 127), and the imbalance was much higher still in southern Afghanistan (Furdoonjee, p. 152). In 1302/1884-85 most of the clothing worn in Herat was made from English fabric, with only two cheap and coarse kinds of cotton cloth being imported from Russia (Takki Khan, p. 5).

Table 27 and Figure 12 show how such imports of cotton cloth have steadily declined during the second half of the 20th century, following the development of a national textile industry. According to official statistics, and disregarding the unrecorded cloth imports smuggled into Afghanistan by caravans crossing the Pakistani border, they fill less than 10 percent of the national demand for cotton cloth and account for less than 1 percent of the total value of Afghan imports, compared to 41 percent in 1320 Š./1951-52 (Humlum, p. 354). In contrast to the situation prevailing during the 19th century, the U.S.S.R. was the single largest supplier, followed by Pakistan, India, and Japan respectively, though the market for Indian and Japanese cloth collapsed after 1357 Š./1978 (Table 28). The imported cloth, for example, *čīt* and *sām* (calico), is on the whole of better quality and more attractive design than the cloth woven in Afghanistan. It is accordingly more expensive and sold mainly to the urban upper classes. The market is in the hands of the *bazzāz*, a merchant who specializes in imported cloth, as distinct from the more common *karbās forūš*, who sells only locally made cloth (see, e.g., Charpentier, pp. 150-51).

Many *bazzāz*es are Sikhs or Hindus whose ancestors came to Afghanistan from Sind or the Punjab generations ago and who are now Afghan citizens (Wiebe, pp. 75-76).

For decades the value of imports of cotton cloth has remained well below that of exports of ginned cotton. The level of exports obviously fluctuates with the size of the crop. The general trend in volume was thus upward until the late 1970s, followed by a downward trend, but the decline in the relative share of ginned cotton in total Afghan exports shows a remarkably stable trend (Table 27). A maximum was reached in 1356 Š./1977-78, when 34,159 tons were exported, representing 16.9 percent of total exports for that year. The minimum was established in 1361 Š./1982-83, when 6,088 tons were exported, 1.3 percent of total exports. The main importers of Afghan cotton were European socialist countries (Czechoslovakia and, more recently, Bulgaria) and the former U.S.S.R., which, except in a few years, has been the single largest external outlet for Afghan cotton in the 20th century (Table 29). Before 1359 Š./1980 West Germany and Great Britain also imported significant quantities of Afghan cotton, though rather irregularly. No locally woven cotton cloth is exported from Afghanistan.

BIBLIOGRAPHY

"Afghan Textile. Half-a-Century Expansion," *Afghanistan To-Day* 9, 1987, p. 11.

J. E. T. Aitchison, *Notes on the Products of Western Afghanistan and of North-Eastern Persia*, Edinburgh, 1890.

M. Ali, *Commercial Afghanistan*, Delhi, 1946.

G. Allanson, *The Place of Cotton and Beet Sugar in the Afghan Economy*, Kabul, 1967 (roneo).

F. R. Allchin, "Early Cultivated Plants in India and Pakistan," in P. J. Ucko and G. W. Dimbleby, eds., *The Domestication and Exploitation of Plants and Animals*, London, 1969, pp. 323-29; repr. in G. L. Possehl, ed., *Ancient Cities of the Indus*, New Delhi, 1979, pp. 249-52.

Ḥ. Amīn, *Naẓar-ī ba tejārat-e ḵārejī-e Afḡānestān*, Joḡrāfīā 9/2, Kabul, 1350 Š./1971.

Idem, *Naẓar-ī ba joḡrāfīā-ye zerāʿatī-e Afḡānestān*, Kabul, 1352 Š./1974.

Idem, *Joḡrāfīā-ye ṣanʿatī-e Afḡānestān*, Kabul, 1360 Š./1981.

M. A. Babakhodzhayev, "Russo-Afghan Trade Relations in the 80s and 90s of the 19th Century," *Afghanistan* (Kabul) 22/1, 1969, pp. 32-41.

D. Balland, "Le coton en Afghanistan," *Revue géographique de l'est* 13/12, 1973, pp. 17-75.

T. J. Barfield, *The Central Asian Arabs of Afghanistan. Pastoral Nomadism in Transition*, Austin, Tex., 1981.

Basic Directives and Indicative Figures of the Five Year Economic and Social Development Plan of the Democratic Republic of Afghanistan during the Years 1358-1362 (1979-84), Kabul, 1358 Š./1979.

M. J. Bell, ed., *An American Engineer in Afghanistan*, Minneapolis, Minn., 1948.

D. P. Carter, *H.V.A. Cotton Production Data*, n.p. [Laškargāh], n.d. [1966]

(roneo).

P. Centlivres, *Un bazar d'Asie centrale. Forme et organisation du bazar de Tāshqurghān (Afghanistan)*, Wiesbaden, 1972.

Central Statistics Office, *Afghan Agriculture in Figures*, Kabul, 1978.

C.-J. Charpentier, *Bazaar-e Tashqurghan. Ethnographical Studies in an Afghan Traditional Bazaar*, Studia Ethnographica Upsaliensia 36, Uppsala, 1972.

Ḡ. Dastagīr, "Pīšrafthā-ye omūr-e eqteṣādī dar welayāt-e šemālī 2. Ḥāṣelāt-e pomba," *Majalla-ye eqteṣād* (Kabul) 208, 1318 Š./1939, pp. 742-48, 762-70.

B. Dupaigne, "Aperçus sur quelques techniques afghanes," *Objets et mondes* 8/1, 1968, pp. 41-84.

L. Dupree, *Kabul Gets a Supermarket. The Birth and Growth of an Afghan Enterprise*, American Universities Field Staff Reports, South Asian Series 10/2, Hanover, N.H., 1966.

Idem, *Afghanistan*, Princeton, N.J., 1973.

M. Elphinstone, *An Account of the Kingdom of Caubul and Its Dependencies in Persia, Tartary, and India*, London, 1815; repr. Graz, 1969. G. Étienne, *L'Afghanistan ou les aléas de la coopération*, Paris, 1972.

Food and Agricultural Organisation, *1948-1985 World Crop and Livestock Statistics*, F.A.O. Processed Statistics Series 1, Rome, 1987.

M. J. Fry, *The Afghan Economy*, Social, Economic and Political Studies of the Middle East 15, Leiden, 1974.

N. Furdoonjee, "Description of Articles, Mostly Russian, Found in the Bazar of Cabool, and Brought to It by Way of Bokhara," in A. Burnes et al., *Reports and Papers, Political, Geographical, and Commercial, Submitted to Government*, Calcutta, 1839/3, pp. 147-54.

O. R. Ginnever, "Cotton in Afghanistan," *Geographical Journal* 104/5-6, 1944, pp. 212-13.

(W.) Griffiths (*recte* Griffith), "Extracts from a Report on Subjects Connected with Affghanistan," *JASB* 10, 1841, pp. 797-815, 977-1007.

V. P. Gritskevich, “Iz ranneĭ istorii bor’by s kholeroĭ v Rossii (20-30-e gody XIX v.),” *Zhurnal mikrobiologii, èpidemiologii i immunobiologii* 3, 1974, pp. 148-51.

E. Grötzbach, *Kulturgeographischer Wandel in Nordost-Afghanistan seit dem 19. Jahrhundert*, Afghanische Studien 4, Meisenheim am Glan, Germany, 1972a.

Idem, “Staatliche Agrarpolitik and Bodennutzungsgefüge in Nordost-Afghanistan,” *Tagungsbericht und wissenschaftliche Abhandlungen der Deutscher Geographentag Erlangen-Nürnberg 1971*, Wiesbaden, 1972b, pp. 380-89.

N. M. Gurevich, *Vneshnyaya torgovlyaAfganistana do vtoroĭ mirovoĭ voĭny*, Moscow, 1959.

Idem, *Vneshnyaya torgovlya Afganistana v noveĭshee vremya*, Moscow, 1981.

A. Hamilton, *Afghanistan*, London, 1906.

M. Y. K. Harīfī, “Mansūjāt-e dastī dar Qandahār,” *Eqteṣād* (Kabul) 246, 1321 Š./1942, pp. 327-28.

Ḥasan Khan, “Pomba dar Afḡānestān,” *Majalla-ye eqteṣād* (Kabul) 217, 1319 Š./1940, pp. 23-35.

K. H. Hendrikson, *Afghanistan’s Foreign Trade 1336-1348 and Perspective Development during the Fourth Five-Year Plan 1351-1355*, Kabul, 1972 (roneo).

J. Humlum, *La géographie de l’Afghanistan*, Copenhagen, 1959.

K. Idemitsu, *My Opinions and Future Programmes of the Cotton Cultivation in Afghanistan*, n.p. [Kabul?], 1937 (roneo).

A. Jebens, *Wirtschafts- und sozialgeographische Untersuchung über das Heimgewerbe in Nordafghanistan unter besonderer Berücksichtigung der Mittelstadt Sar-e-Pul*, Tübinger Geographische Studien 87, Tübingen, 1983.

A. H. Kamal, *Das Agrarland Afghanistan und seine Zukunft*, Ph.D. diss., Zürich, 1954.

E. P. Kovalev, “O khlopkovoĭ promyshlennosti Afganistana,” in P. A. Rittikh, ed., *Sbornik sredneaziatskogo otdela* I, St. Petersburg, 1907, pp. 198-210.

L. Landrivon, *Normalisation et promotion de la production cotonnière en Afghanistan*, Kabul, 1969 (roneo).

R. Leech, “Report on the Trade between Shikarpoor and Herat,” in A. Burnes et al., *Reports and Papers, Political, Geographical, and Commercial, Submitted to Government*, Calcutta, 1839/3, pp. 93-97.

P. B. Lord, “Some Account of a Visit to the Plain of Koh-i-Daman, the Mining District of Ghorband, and the Pass of Hindu Kush,” *JASB* 7, 1838, pp. 521-37.

Idem, “Prospects of Trade with Turkistan,” in A. Burnes et al., *Reports and Papers, Political, Geographical, and Commercial, Submitted to Government*, Calcutta, 1839/3, pp. 122-32.

B. Markowski, *Die materielle Kultur des Kabulgebietes*, Veröffentlichungen der Geographischen Institut der Albertus-Universtät zu Königsberg im Preussen, N.F., Reihe Ethnographie 2, Leipzig, 1932.

A. A. Michel, *The Kabul, Kunduz and Helmand Valleys and the National Economy of Afghanistan*, Ph.D. diss., Columbia University, New York, 1959.

Ministry of planning, *Draft Fourth Five-Year Plan 1351-1355*, Kabul, 1973 (roneo).

Idem, *First Seven-Year Economic and Social Development Plan 1355-1361*, 2 vols., Kabul, 1355 Š./1976.

J. M. Munro, *Cotton in Afghanistan*, London, 1967 (roneo).

R. R. Nathan Associates, *Sectorial Planning Study of Agriculture*, n.p. [Kabul], 1971 (roneo).

R. D. Parsons, *The Carpets of Afghanistan*, Woodbridge, England, 1983.

Capt. Peacocke, *Diary from September 1884 to October 1886*, Afghan Boundary Commission, Records of Intelligence Party 3, Simla, 1887.

Pelān-e enkešāf-e eqteṣādī wa ejtemāʿī-e sāl-e 1367, Kabul, 1367 Š./1988.

“Pīšrafthā-ye zerāʿatī dar čand sāl-e aḵīr,” *Majalla-ye eqteṣād* 235, 1320 Š./1941, pp. 616-18.

Pomba dar Afḡānestān, Kabul, n.d. [ca. 1334 Š./1955].

E. Rhein and A. G. Ghaussy, *Die wirtschaftliche Entwicklung Afghanistans 1830--1955*, Opladen, 1966.

P. M. Saddīqī, *Āfāt-e mohemm-e zerāʿatī dar Afḡānestān wa ṭoroq-e mobāraza bā ānhā*, Kabul, 1360 Š./1981 (the best synthesis on cotton pests in Afghanistan; see esp. pp. 90-109).

ʿA.-R. Sadīd, "Pomba dar Afḡānestān," *Joḡrāfīā* (Kabul) 2/1, 1343 Š./1964, pp. 1-22.

I. M. Stevens and K. Tarzi, *Economics of Agricultural Production in Helmand Valley*, Denver, Colo., 1965.

Ṯaʿālebī, *Laṭāʾef al-maʿāref*, tr. C. E. Bosworth as *The Laṭāʾif al-maʿārif*, Edinburgh, 1968.

Mirza Mohammad Takki Khan, *Report on the City and Province of Herat*, 1887, India Office Records, London.

"Tāʾsīs-e fābrīkāt-e ḥallājī-e pomba dar Qandahār," *Majalla-ye eqteṣād* 202, 1318 Š./1939, pp. 461-66.

M. Ullad, "Economic Insect Pests and Phytophagous Mites Associated with Crop Cotton in Afghanistan," *Central Asia* (Peshawar), 17, 1985, pp. 189-204.

U.S. AID, *Helmand River Basin Soil and Water Survey Study Report*, n.p., 1976 (roneo).

Idem, *1975 Farm Economic Survey of the Helmand Valley*, Kabul, n.d. [1978] (roneo).

N. I. Vavilov and D. D. Bukinich, *Zemledel'cheskiĭ Afganistan*, Leningrad, 1929.

A. W. Watson, *Agricultural Innovation in the Early Islamic World*, Cambridge, 1983.

D. Wiebe, "Zur sozioökonomischen Raumwirksamkeit von Minoritäten. Die Hindus in Afghanistan," *Die Erde* 113/1, 1982, pp. 69-84.

P. Wright, "The Naddaf," *Afghanistan Journal* 9/1, 1982, pp. 21-23.

T. Wright, *Report on the Production and Ginning of Cotton in Afghanistan*, Kabul, 1961 (roneo).

R. Leech, “Report on the Trade between Shikarpoor and Herat,” in A. Burnes et al., Reports and Papers, Political, Geographical, and Commercial, Submit ted to Government, Calcutta, 1839/3, pp. 93-97.

P. B. Lord, “Some Account of a Visit to the Plain of Koh-i-Daman, the Mining District of Ghorband, and the Pass of Hindu Kush,” JASB 7, 1838, pp. 521-37.

Idem, “Prospects of Trade with Turkistan,” in A. Burnes et al., Reports and Papers, Political, Geographical, and Commercial, Submitted to Govern ment, Calcutta, 1839/3, pp. 122-32.

B. Markowski, Die materielle Kultur des Kabulgebietes, Ver öffentlichungen der Geographischen Institut der Albertus-Universtät zu Königsberg im Preussen, N.F., Reihe Ethnographie 2, Leipzig, 1932.

A. A. Michel, The Kabul, Kunduz and Helmand Valleys and the National Economy of Afghanistan, Ph.D. diss., Co lumbia University, New York, 1959.

Ministry of planning, Draft Fourth Five-Year Plan 1351-1355, Kabul, 1973 (roneo).

Idem, First Seven-Year Eco nomic and Social Development Plan 1355-1361, 2 vols., Kabul, 1355 Š./1976.

J. M. Munro, Cotton in Afghanistan, London, 1967 (roneo).

R. R. Nathan Associates, Sectorial Planning Study of Agriculture, n.p. [Kabul], 1971 (roneo).

R. D. Parsons, The Carpets of Afghanistan, Woodbridge, England, 1983.

Capt. Peacocke, Diary from September 1884 to Oc tober 1886, Afghan Boundary Commission, Records of Intelligence Party 3, Simla, 1887.

Pelān-e enkešāf- e eqteṣādī wa ejtemāʿī-e sāl-e 1367, Kabul, 1367 Š./1988.

“Pīšrafthā-ye zerāʿatī dar čand sāl-e aḵīr,” Majalla-ye eqteṣād 235, 1320 Š./1941, pp. 616-18.

Pomba dar Afḡānestān, Kabul, n.d. [ca. 1334 Š./1955].

E. Rhein and A. G. Ghaussy, Die wirtschaftliche Entwicklung Afghanistans 1830- 1955, Opladen, 1966.

P. M. Saddīqī, Āfāt-e mohemm -e zerāʿatī dar Afḡānestān wa ṭoroq-e mobāraza bā ānhā, Kabul, 1360 Š./1981 (the best synthesis on cotton pests in Afghanistan; see esp. pp. 90-109).

ʿA.-R. Sadīd, "Pomba dar Afḡānestān," Joḡrāfīā (Kabul) 2/1, 1343 Š./1964, pp. 1-22.

I. M. Stevens and K. Tarzi, Economics of Agricultural Production in Helmand Valley, Denver, Colo., 1965.

Ṯaʿālebī, Laṭāʾef al-maʿāref, tr. C. E. Bosworth as The Laṭāʾif al-maʿārif, Edinburgh, 1968.

Mirza Mohammad Takki Khan, Report on the City and Province of Herat, 1887, India Office Records, London.

"Tāʾsīs- e fābrīkāt-e ḥallājī-e pomba dar Qandahār," Majalla- ye eqteṣād 202, 1318 Š./1939, pp. 461-66.

M. Ullad, "Economic Insect Pests and Phytophagous Mites Associated with Crop Cotton in Afghanistan," Cen tral Asia (Peshawar), 17, 1985, pp. 189-204.

U.S. AID, Helmand River Basin Soil and Water Survey Study Report, n.p., 1976 (roneo).

Idem, 1975 Farm Economic Survey of the Helmand Valley, Kabul, n.d. [1978] (roneo).

N. I. Vavilov and D. D. Bukinich, Zemledel'cheskiĭ Afganistan, Leningrad, 1929.

A. W. Watson, Agricultural Innovation in the Early Islamic World, Cambridge, 1983.

D. Wiebe, "Zur sozioökonomischen Raumwirksamkeit von Minori täten. Die Hindus in Afghanistan," Die Erde 113/1, 1982, pp. 69-84.

P. Wright, "The Naddaf," Afghanistan Journal 9/1, 1982, pp. 21-23.

T. Wright, Report on the Production and Ginning of Cotton in Afghani stan, Kabul, 1961 (roneo).

(Daniel Balland)

Table 19. Average Annual Persian Production, Area, and Exports of Cotton, 1267-1365 Š./1888-1986

Figure 10. Cotton Production in Afghanistan, 1314-62 Š./1935-83. Sources: Production for 1314-17 Š./1935-38, 1319-29 Š./1940-50 Amīn, 1352 Š./1974, pp. 129 -30; for 1318 Š./1939 “Pīšrafthā,” p. 617; for 1330-32 Š./1951-53 Food and Agricultural Organization, pp. 376, 688 (for 1333-40 Š./1954-61 the F.A.O. produced somewhat inflated figures, which have not been relied on here); for 1333-39 Š./1954-60 Wright, p. 1; for 1340-44 Š./1961-65 Allanson, p. A.5.1; for 1345-56 Š./1966- 77 Central Statistics Office, pp. 38-41; for 1357-62 Š./1978-83 Afghan Statistical Yearbooks. Cotton: wheat price ratio (calculated from second-grade cotton prices) for 1339-44 Š./1960-65 Landrivon; for 1345-56 Š./1966-77 C.S.O., pp. 60-62.

Figure 11. Map of Cotton Production and Processing Areas in Afghanistan.

Table 20. Progress of Cotton Production in Helmand Province

Table 21. Cotton Output by Region, 1354 Š./1975

Table 22. Cotton Output by Region and Province from 1354 Š./1975 to 1365 Š./1986

Table 23. Number of Successive Days with Mean Temperature 14° C or above, 1353-62 Š./1974-83

Figure 12. The Evolution of Production and Importation of Cotton Cloth in Afghanistan, 1330-61 Š./1951-83.

Table 24. Employment in the Afghan Cotton-Processing Industries

Table 25. The Cotton-Textile Industry in Afghanistan

Table 26. Cotton-Weaving Handicraft in Some Afghan Provinces, 1353 Š./1974-75

Table 27. The Place of Cotton in Afghan Foreign Trade

Table 28. Afghan Imports of Cotton Cloth by Country of Origin (in percentages of import value)

Table 29. Afghan Exports of Ginned Cotton by Country of Destination (in percentages of export value)