

# **Afghanistan RAMP Rebuilding Agricultural Markets in Afghanistan**

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## **Cotton Production Assessment**

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## REPORT ON COTTON PRODUCTION IN AFGHANISTAN

### A- Brief Background;

Cotton is one of the most important industrial and commercial crops in Afghanistan after fresh and dried fruits. Since it is a very important crop in Afghanistan, therefore it is called White Gold as well. Spinzar Corporation which is located in Kunduz provinces means white gold when translated in English. Based on the info 10 percent of earnings obtain from cotton export to the other countries.

Cotton is producing/growing in the most North, west and small amount in eastern provinces such as;

- **Northern Provinces:**

- |             |                          |
|-------------|--------------------------|
| 1. Baghlan  | 5. Mazaresharif          |
| 2. Kunduz   | 6. Jawzjan               |
| 3. Takhar   | 7. Faryab/Mimana         |
| 4. Samangan | 8. Kapisa (small amount) |

- **Western Provinces;**

- |            |                           |
|------------|---------------------------|
| 1. Helmand | 4. Badghis (small amount) |
| 2. Herat   | 5. Farah (small amount)   |
| 3. Gor     |                           |

- **Eastern Provinces;**

1. Jalalabad

Before 24 years war cotton was growing in very large scale the mentioned provinces. FAO and Government was supporting and providing to the farmers improved seeds, fertilizer, chemicals and technical assistance. Even at that time due to the low price of cotton, cotton growers always were suffering from the low price of cotton in the local markets, therefore former Government was paying subsidized prices to the farmers in order to encourage them to cultivate more cotton in the mentioned regions. During 4 years continues severe drought farmers could not grow cotton in large scale in the mentioned provinces and suffered a lot from the lack/shortage of water and unavailability of improved seeds, fertilizer and technical advises. On the other hand during 24 years war many farmers left their agricultural land and immigrated or became IDPs, which caused low production of cotton in the country. By the settlement of the new Government many farmers and cotton growers have been returned from the abroad to their origins but they are presently in worst economic condition and their lands are abandoned, they need urgent financial support (credit) and some technical assistance. Based on the information cotton growers increased the

cultivation of cotton in the mentioned regions since last year, but still the cotton prices in the local markets is too low compare to the production cost.

## B- Variety of the Cotton Grown in Afghanistan;

According to the Research and Seed Multiplication Departments of Ministry of Agricultural, before 1977 there was only one variety of cotton, which was called ACALA 15-17-30, which was imported from American. This Variety was one of the best variety, its result was also satisfactory for all cotton Growers in Helmand, Kundoz, Heart and Farah provinces. Also there was another variety (F-108) of cotton which was introduced by the former Soviet Union to Herat cotton growers on that time as well; its result was also good. After 1977 due to no proper research the quality of cotton seeds became poor and poorer and supply of cotton also reduced accordingly. In 1979 another variety of cotton seed imported from American which named ACALA 15-17-75 and introduced for the farmer in Helmand and Kundoz (Aortabalaqi cotton research farm), its result was an excellent but later on it was also mixed and last its productivity. Some data and figures given by research department of ministry of Agricultural department which shows the cotton production in MT as follows;

<u>No.</u>	<u>Province</u>	<u>1972/MT</u>	<u>1973/MT</u>
1.	Kunduz	27,246	56,000
2.	Mazaresharif	15,000	25,000
3.	Herat	5,150	10,000
4.	Helmand	3,200	11,000

### COTTON GINNERIES AND INDUSTRIAL CORPORATION IN AFGHANISTAN

According to the information which is available many private ginneries are available in cotton grown areas and also there are a large scale industrial for processing of the cotton, which are running now a days in;

- Spinzer Ginneries and Press Corporation in Kunduz,
- Mazaresharif Ginneries and Press Corporation.
- Helmand Ginneries and Press Corporation provinces.
- Herat Ginneries and Press Corporation provinces.

The key to efficient processing and quality sales of cotton it the costs and losses that occur in ginning. A detail survey of the private sector ginneries are required from the mentioned provinces.

#### 1. Cotton Gin in Kunduz Province;

Kunduz is located in northern Afghanistan and borders Tajikistan and four other Afghan provinces. According to the Central Statistics Office of Afghanistan, there are approximately 820,000 people living in Kunduz. Like other provinces throughout the country, the main economic activities in Kunduz are related to agriculture. The

provincial Department of Agriculture estimates that 90% of people are directly working in agricultural or live stock activities. The Spinzar cotton gin is the only industrial entity in Kunduz. In addition to agricultural activities, the province is also known for producing traditional Afghan products such as carpets.

### **1.1 Spinzar Corporation Overview;**

Spinzar, which means white gold when translated into English, was formed in 1936 by a group of traders. The entity was started with eight million Afghanis (Afs) of start-up capital and later sold to the state-owned Miley Bank of Afghanistan in 1944. Today Spinzar Corporation remains state-owned and is controlled by the Ministry of Light Industry and Foodstuffs.

Spinzar owns and operates a number of different businesses in a variety of industries.

The group consists of a hotel (Spinzar Hotel, Kabul), a hospital (Spinzar Hospital Kunduz), various real estate holdings including farms and homes, Spinzar Club (a large guest house in Kunduz) and a large cotton gin with branches throughout Kunduz. While the holdings of Spinzar are diverse, this report focuses on the cotton gin in Kunduz and its associated by-product processing facilities.

Currently the Spinzar Gin in Kunduz employs a total of 575 staff. Of the 575 staff, 178 are production related staff, 230 are general service staff (cleaners, guards, etc) and the remaining 167 staff are administrative staff. Before 1979, it was common for Spinzar cotton gin to process more than 100,000 tons of raw cotton per season. An example of the processing activities in 1975, (received from the Director of Spinzar) has been included in this report. Today, the gin has processed less than 500 tons of raw cotton for the current season, far less than what is capable given the condition of the factory. The main gin is capable of the ginning of cotton as well as the processing of all of the by-products of cotton ginning. In the past, ginning activities were conducted on an industrial scale throughout Kunduz, with **12 different** branches performing various activities in the ginning process. Today, many of the branches have been destroyed and are no longer operational.

### **1.2 Spinzar Gin (Main)**

The main gin in Kunduz has full processing capabilities. This includes the ability to process lint cotton, edible oil, hull, seedcake for animal feed and soap. Currently, due to a lack of seed cotton, the gin is processing only lint and seed. This issue will be examined later in the Situation Analysis section. Recent inspections by international and national engineers have concluded that the main gin equipment is in good operational condition. Some of the by-product processing equipment requires spare parts which can be produced on-site in the foundry located next to the gin. Parts which cannot be built on-site can be sourced from the original manufacturers.

### **1.3 Gin Components;**

There are four gins which were manufactured in the former Soviet Union. These gins are in good operating condition and are currently being used to process the small amounts of raw cotton that can be purchased.

The bale press is in good operating condition. This is currently being used to press the lint into 182kg bales. Standard international trading bale weights range between 180kg –220kg per bale. Cloth and wire are applied by the bale press to keep each bale in tact.

There are 12 de-linting machines however only six are in working condition. The other six have been destroyed and are beyond repair.

The oil plant consists of machinery from the United Kingdom and Germany. All components of the oil plant are in good working condition but have not been used recently due to lack of available seed. Presently, there are no facilities for bottling the oil can consumer-sized portions. The existing tin container facility has not been used in more than a quarter century and does not work. Oil is kept in 180kg barrels when it is produced. The steam production system, which is used to heat the oil material and seed during processing, is fully operational and in good condition.

The soap plant is fully operational however no soap is currently being produced due to the shortage of seed cotton.

Power sources. There are a total of six generators which can supply power to the cotton gin. These generators are manufactured in Russia, Germany and the Czech Republic. Two of the generators are from Germany and have capacity of 250 Kw/hour. Of these, only one is in working condition while the other generator requires some spare parts. There are three generators manufactured in the Czech Republic, each with a capacity of

400 Kw/ hour. Two of these are in working condition while the third one requires some spare parts. Finally, the Russian generator has a capacity of 630 Kw/hour and is in working condition. Currently the generators are being used for common ginning activities whereas they typically would be used in case of emergency (city power failure).

The use of generators to supply power is not an efficient source of power supply thereby increasing production costs of cotton processing. Previously, power was sourced from the Khanabad Spinzar Dam. The dam was destroyed in 2001 by allied forces during the removal of the Taliban regime. Before its destruction, the dam was capable of providing 2,500 Kw/ hour of power, enough to supply power for the gin and other parts of the city.

According to the Director of the gin, the dam is currently being surveyed for repair by Siemens. A number of engineers in the city of Kunduz have indicated that Kunduz may be purchasing power from Tajikistan in the near future.

In addition to the main cotton processing machinery, there is also a foundry, machine tools shop, and carpentry shop on site. The main gin in Spinzar is capable of processing cotton and the full line of cotton by-products. The main gin in Spinzar is capable of processing cotton and the full line of cotton by-products.

#### **1.4 By-product Descriptions;**

- Lint - Lint is used for the production of high quality items such as clothing.
- De-lint Cotton – De-lint cotton is of lower quality than lint, and is typically used to make furniture products.

- Edible Oil - Edible oil is used for cooking and is a staple in the Afghan diet.
- Soap – Soap is created in bar form for personal use in addition to powder form for washing clothing.
- Hull – Is similar to firewood, it is used as a source of fuel. Within the gin, the hull is used for fuel for the steam production facilities.

#### **Agricultural Analysis;**

According to the Department of Agriculture in Kunduz, there is approximately 200,000 hectares (1 million jeribs) of irrigated land in the province. This irrigation is sourced from the Baghlan River and the Bangi River and is provided via the canal system. Cotton is one of the many crops that are grown in Kunduz. In addition to cotton, wheat, rice, mung beans and corn are also popular crops in the region. There is an estimated **250- 300** hectares currently cultivated with poppy.

In 2001, there was **4,400** hectares of land cultivated with cotton. This figure was the same for 2002, and is expected to increase to **5,500 hectares for 2003** due to improved irrigation conditions. Today the average yield per jerib (1 hectare = 5 jeribs) in the province is approximately **350 kg/ jerib**. This yield is somewhat low compared to other parts of the country where yields can surpass more than 600 kg/ jerib. The Department of Agriculture believes this could be improved with higher quality fertilizer and by providing farmers with better farming techniques. The Department of Agriculture currently has **42** farm extension workers and plans to expand this number to **72** next year.

Extension workers assist farmers with better growing techniques and input conservation methods. The lack of quality fertilizer and the lack of quality seed are the biggest challenges in the area. The cotton seed that is currently used is ACALA 15-17-75 and it has been in the region for almost 30 years.

The following chart summarizes the amount of raw cotton that can be harvested by farmers in Kunduz based on the information provided:

Year	Hectares	Jeribs(1 hectare = 5 Jeribs)	Avg Yield per jerib(kg)	Potential Harvest (tone) Raw cotton
2001	4,400	22,000	315	6,930
2002	4,400	22,000	315	6,930
2003 exp	5,500	27,500	250	9,625

The potential harvests represent the raw cotton that could be processed at the Spinzar cotton gin. When the Spinzar gin processes the cotton, it is able to provide seed to the farmers to plant for the following season. Farmers who receive seed for planting from the gin are obligated to bring a minimum amount to the Spinzar for processing. Currently this amount is **210kg/jerib**. In 2002, Spinzar distributed 14kg/jerib of seed to 1,015 different farmers. A total of **49,238 Kg** of seed was distributed which covers **3,517** jeribs

of land. The gin should therefore receive approximately **739** tons of raw cotton (which the gin must pay for) for processing. Farmers are welcomed and

encouraged to bring more raw cotton to the gin. If a farmer who receives seed does not deliver the minimum **210kg / jerib**, he must pay the gin for the seed that he received.

Cotton is a profitable crop for farmers. Interviews were conducted with farmers to determine the costs per jerib involved in growing cotton. While the costs differed slightly at each farm, the costs were approximately **2,000 Afs (\$40 USD)** per jerib. Farmers therefore could earn a reasonable profit by growing cotton. The farmer could sell his raw cotton to the gin at the set price of **10.5 Afs / kg. (350 kg times 10.5 Afs/kg = 3,675 Afs)**. Therefore farmers could expect to earn approximately **USD \$33.5 ((3,675 – 2000)/50)** per jerib of cotton. Income would increase with higher yields and higher prices received for their raw cotton. However it should be noted that the costs would tend to rise with yields as better inputs would be required. The typical costs involved with farming cotton are:

- Plowing
- Fertilizing
- Weeding two or three times per season
- Planting
- Picking
- Pesticide
- Manure
- Transportation

Farmers will employ some or all of these inputs when growing cotton.

## Summary

The Spinzar cotton gin is the only industrial entity in the province of Kunduz. Currently it is operating far below its capacity in the production of lint cotton and cotton byproducts. Efforts should be made to revitalize this asset to create economic benefits to Kunduz and the Transitional Islamic State of Afghanistan (TISA) as history has shown that this gin is capable of purchasing and processing far greater quantities of cotton than it is today. The increased level of economic activity would provide employment, both directly to those at Spinzar and indirectly to those who work downstream from cotton production, foreign exchange for trade and reduced foreign dependence through the domestic production of goods which are currently imported.

Privatization of State-Owned Enterprises (SOE) will require time and a lot of effort if the transformation is to be successful. Success will be achieved if the privatized firm can operate in a transparent environment and focus on the pursuit of profit and sustainability. The new privatization laws in Afghanistan should facilitate this effort by providing the necessary framework to encourage private sector investment for the country. Improvements in security and infrastructure that are currently underway should further strengthen the case for private investment in Afghanistan.



## Spinzar Branches

Branch Name	Facilities	Status
Amam Sahib District	-4 gin machines Capacity 180-200 tons per 24 hours -6 de-lint machines Capacity 120 tons per 24 hours -Oilier -75 tons of seed per 24 hours -3 generators -Spinzar houses, club and storage	Destroyed
Archie District	-4 gin machines Capacity 180 tons per 24 hours -6 de-lint machines Capacity 120 tons per 24 hours -3 generators -Oilier – 54 tons of seed per 24 hours -Houses, club	Destroyed
Takhar Province Branch	-4 cotton gins Capacity 40-60 tons per 24 hours -1 generator	Destroyed
Baghlan Branch	-4 cotton gins Capacity 40-60 tons per 24 hours -2 generators	Destroyed
Kalaazal Branch	-4 cotton gins Capacity 40-60 tons per 24 hours -2 diesel generators	Destroyed
Chardara Branch	-Purchasing Branch – used only for purchasing cotton	Empty
Dashtakala Branch	-Purchasing Branch	Destroyed
Iangy Branch	-Purchasing Branch	Destroyed
Pol-e-Khomri Branch	-Purchasing Branch	Empty
Baghlan Industrial	-Purchasing Branch	Destroyed
Sherkhan Branch	-Exporting Branch	Empty
Kunduz Main	-Full Processing Capabilities as outlined in main report	Operational

## 2. Helmand Gin:

Helmand is a highly mechanized, highly irrigated province in Afghanistan. Although the agricultural sector has had a good production season, certain sub-sectors are having marketing problems. The marketing problems are exacerbated by the poor roads that make accessing distant markets difficult and expensive. The Helmand agricultural economy is closely linked to Kandahar and Herat as well as Quetta.

According to the info which provided by Light Industry of Foodstuffs Helmand ginneries donated by England and German Governments and practically started its work (established) in 1964. Herat Ginneries Corporation established 1963.

## **1.2 Cotton production in Helmand;**

In 2002, about **9,000** mt of cotton was produced on about **20,000** hectares of irrigated land in Helmand. About **5,500** mt of cotton was bought by the Bolan Company, a Government-owned organization, in LaksharGar, at a price ranging from Afs **8 to 10** per kg. The Government purchase price was determined by the Ministry of Finance through an open tendering process. Farmers, who sold their cotton to the Government cotton gin, had an estimated net income of Afs **4,290/ha**. Private cotton ginners bought the remainder of the cotton from farmers at an average price of Afs **20.4/kg**. (Note: Although cotton is widely produced, the government continues to restrict all ginning of cotton to government-owned gins only. Despite the Government's policy against private sector operating a cotton gin, **44** private sector cotton gins with a capacity of **10,000** mt/year are in operation.)

The total area of cotton production in 2003 is about **25%** less than last year. The Government-owned cotton gin will be purchasing cotton from farmers at a to-be-determined price. The gin still has **1,400** mt of cotton (in 180-kg bales that meet international standards), **120** mt of cottonseed oil that is sold locally to shopkeepers for about Afs **35/kg**, and a minor amount of cottonseed that needs to be sold.

Private cotton ginners sold the ginned cotton, about **32%** of the original cotton, at a farm gate price of about Afs **53/kg** to private traders from Pakistan. This price is above the international cotton price and may not be sustainable.

## **MARKETING OF COTTON PRODUCTION IN AFGHANISTAN**

Before war in Afghanistan (1979), cotton marketing system was strictly monopolized by the Government of Afghanistan in all the mentioned regions. Government ginner and press agencies were available in the most districts level farmer easily could bring their cotton production to those specific centers and sell it to them. According to the info which collected from the Seed Multiplication Department of the ministry of agriculture there were seven zone to provide facility for purchasing cotton from the cotton grower in the mentioned regions:

- Spinzer Corporation in Kundoz province.
- Mazarisharif Ginneries and Press Corporation.
- Helmand Ginneries and press corporation.
- Herat Ginneries and press corporation.

Each of the mentioned zone had sub/field agencies to purchase the cotton from the cotton growers. Also there were some small scale private home based ginning factories which were running as well. Still cotton purchasing and exporting is monopolized by the Government of Afghanistan. The raw cotton price was set and controlled by the Ministry of light Industry and Foodstuffs and announced via the radio to the farmers, but still there are a lot of complain about cost of production and low price which they are earning from cotton price. For example according to the official info which given by the Ministry of Light Industry and Foodstuffs, the cotton (lint) price has been set for 2003 cotton harvest as follows;

Quality/Grad	Price/kg in Afghani	Price/metric ton
First grad	13.5	13,500
Second grad	13	13,000
Third grad	12.5	12,500

Currently also low price to the producer might reflect over priced cost for ginning and losses. It is also might reflect high transportation cost to markets. It might reflect the need for independent credit which allows farmers to sell to the buyers of their choice. Because many local traders and middlemen are distributing some many in advance to the farmers before the cotton harvest time to the cotton growers. During the harvest season these traders and middlemen purchase their cotton production as they wish (low price). It means the most profit goes to the pocket of local traders and middlemen. On the other hand many local traders and merchants import in large amount of cotton from other countries as well which directly affect on cotton price and its production. Traditionally traders and merchants import cotton from Pakistan, Qazaqistan, Turkamainsatan and Iran but its quality compare to the Afghan cotton is very poor and its price is cheaper than Afghan cotton, therefore due to the weak economic purchase power most of the people preferred to purchase imported cotton rather to purchase Afghan cotton which has in long term negative impact on cotton production in the mentioned regions. As it has been observed that the quality of the imported cotton is poor and it is not good, therefore Afghan traders mixing both Afghan cotton and imported cotton and sell it to the Afghan markets. Some of the traders use to export Afghan cotton to high price to the other neighboring countries (Pakistan etc). According to the Ministry of Light Industry and Foodstuffs (MoLI& F), the detail info and data on the amount of land which is under cultivation in export data presently are not available, it requires study. Also Ministry of Commerce provide some data that a total of 1,560 MT cotton was exported by Afghan traders to Pakistan in 2001 and 2002, unfortunately they had no info that the mentioned cotton was belong to Government ginneries or private sector, also they had no info about the price per MT.

### **Cotton Production and Export Estimated in Afghanistan in 2003**

No	Province	Cultivated Lands	Average yield in kg/ Hector	Total production in MT	Internal use	Export
1	Kunduz	5,500	1,250	6,875	2,750	4,125
2	Baghlan	1,833	1,049	1,924	770	1,154
3	Takhar	4,125	1,025	4,228	1,692	2,536
4	Mazar	2,500	900	2,250	900	1,350
5	Helmand	20,000	450	9,000	3,600	5,400

6	Herat	13,000	540	5,850	2,340	3,510
7	Total	46,958	5,124	30,127	12,052	18,075
8	Average	0	854	0	0	0

**Note:**

The above estimated figures were based on our best estimate of the cotton production but there is no concrete marketing information. Contacts were made with Research, Seed Multiplication Departments of MoAA, Ministry of Commerce, Statistic, light Industry and Foodstuffs Ministries.

### Governmental Textile in Afghanistan

Based on the information, which is available with the Ministry of Light Industry and Foodstuffs, there are almost eight Governmental textile factories are currently running in the some provinces as follows;

No.	Textile Name	Location		Status
		Province	District	
1	Bagrami textile	Kabul	Bagrami	operational
2	Afghan textile	Kabul	Taimani dist.# 4	operational
3	Gul Bahar textile	Kapisa	center	operational
4	Pul-e-Khomri textile	Baghlan	Pul-e-Khomri	operational
5	Balkh textile	Mazari Sharif	Center	operational
6	Kandahar	Kandahar	center	operational
7	Herat textile	Herat	center	operational

**Note:**

There are many private textile factories in Kabul and some other provinces as well, but information is not available.

**Recommendation:**

Most of the irrigation systems in cotton growing areas due to 24 years war and continues four years severe drought are destroyed or damaged.. There was no any proper maintenance for the agricultural infrastructures, most of the canals and streams are filed by sand and soil or collapsed. The main source of water in cotton grown areas are rivers, streams and canals. Recently in some areas pumps (deep wells) were introduced but its use is most costly for small and poor farmers. On the other hand digging deep wells have negative affect on irrigation water resources such as Karize and springs, therefore the water table has gown down and down every year, therefore for to increase cotton production in the regions, the following issues should be considered:

1. Providing Technical Assistance, improved seeds, fertilizer, chemicals and machineries to the farmers.
2. To upgrade water resources and irrigation systems.
3. To identify the needs of processing factories which are located in mentioned regions.

4. Survey private ginneries and identify markets.
5. Identify storage needs in the regions.
6. To rehabilitate the existing cotton industrials and processing factories which are located in Baghlan, kundos , Mazarisharif and Helمند provinces.
7. To introduce and import some gins factories.
8. To pay some subsidize prices and loans (credits) to the cotton growers in the regions.
9. To provide marketing services and information to the cotton growers in the regions.
10. To create linkages between farmer groups with the local end product producers( textile industries).

End