2020

Cluster Profile
Cotton Ginning and Pressing, Bahawalpur

Turn Potential Into Profit

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1 Description of Cluster

1.1 History and Background of the Cluster

Bahawalpur, is a city located in the Punjab province of Pakistan and anchors the 11th most populous metropolitan area in Pakistan with an estimated population of around 798,509. Cotton is the major cash crop of the Bahawalpur Region. The availability of abundant cotton crop has resulted the emergence of 'Cotton Ginning and Pressing' industry in the Bahawalpur and adjoining areas since pre-partition. Due to flourish of textile value added products in the country, 'Cotton Ginning and Pressing' sector being the source of main raw material for the textile products has also transformed manifolds. It is one of the most important sub sector of textile value chain. Textile sector is the largest exporting sector in Pakistan, so performance of textile sector is predominantly reliant on 'Cotton Ginning and Processing' industry and vice versa. Around 80% of the demand of cotton bales of Pakistan's textile industry are being met by locally.

According to Pakistan Cotton and Ginners Association (PCGA) and State Bank of Pakistan study, there are about 1,200 cotton ginning units with approximately 60% ginning units located in Punjab and 40% units in Sindh. Many of these units (around 20%) are non-operational due to various factors but mostly due to low availability of cotton and power shortages. Within Punjab industry is predominantly scattered in and around the regions of Rahim Yar Khan, Bahawalpur and Multan.

The Cotton Ginning and Pressing Cluster Bahawalpur is recognized as the major industrial base of the region. The majority of the units in the Bahawalpur cluster are of medium and small size with exception of very few large units. The units are predominantly operating in an unorganized manner with conventional low-tech manufacturing technology and processes. Small units employ very limited technology. The main reason for lack of automation and mechanization in this cluster is due to unavailability of funds. Most businesses are either family owned or established by the owners themselves. Presently, Bahawalpur Cotton Ginning and Pressing Cluster is comprising of around 163[1] units and is providing direct employment opportunities to around 10,000 people.

1.2 Defining the Products

Ginning is the mechanical process for separating cotton into its constituents namely lint (Cotton Fiber) and Cotton Seed. The Seed Cotton that comes from the field has to be subjected to various treatments in the ginning factories depending upon its inherent characteristics such as trash contents, moisture contents, length of the fiber, variety of seed i.e. fuzzy or black, method of seed cotton transportation, storage practices, handling practices inside the ginning factories and finally subjected to ginning process for separation of fiber and seed before packing into bales etc.

Basically, bales of cotton produced after ginning and pressing is the major produce of cluster. The textile sector is the major and sole customer of produced cotton bales.

[1] Source: Bahawalpur Chamber of Commerce and Industry (BCCI)

Pakistan is the world's fourth largest cotton producer and third largest cotton consumer with domestic consumption fluctuating between 14 million to 16 million bales on average. In order to meet its local cotton demand, Pakistan needs to import nearly 2 million cotton bales per year[2].

1.3 Core Cluster Actors

There are around 180 cotton ginning and pressing units currently present in Bahawalpur region. The key industry statistics are as follows:

The producers of cotton bales manufacturers of the above mentioned products are the core cluster actors. According to industry sources, Lahore plastic products manufacturing cluster comprises of around 1,500 manufacturing units, with majority of the units are of small and cottage sizes, with some medium and large ones. The key industry statistics are as follows:

Table 1: Cotton Ginning and Pressing Cluster, Bahawalpur

Number of Units	Approximately 180 units • Large and Organized Sector: 11 Units • Medium: 30 Units • Small and Un-organized Sector: 140 Units
Employment Generated	About 10,000 people are directly employed by the ginning and pressing units. The estimated employment generation involving temporary labor or indirect labor is not available.
Capacity Utilization	55% to 60%

Source: Bahawalpur Chamber of Commerce & Industries (BCCI); Skilled Labor & Industrial Development Database.

1.4 Other Cluster Actors

The key cluster support actors who provide support services to core cluster in the area are including but not limited to raw material suppliers, machinery suppliers, finishing and packaging service providers etc.

Table 2: Other Support Actors, Cotton Ginning and Pressing Cluster, Bahawalpur

Description	Details
Raw Material – Cotton Suppliers	Raw material needs are mostly met through local farmers who supply raw cotton to ginning factories. Very few establishments buy from the same available farmers or require different ones due to inconsistent supplies. Some ginning factories in the cluster have their own farms for cotton cultivation but may still depend on few suppliers for raw material.

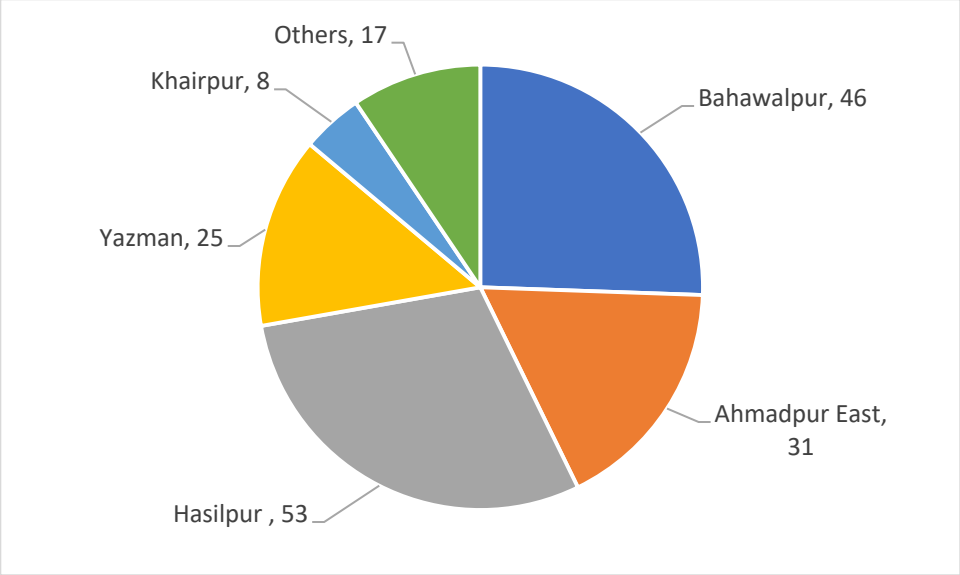
[2] Source: Pakistan Cotton and Ginners Association (PCGA)

Machinery Suppliers	There are very few local manufacturers of ginning machinery. Most of the machinery is imported from China and other countries.
Transportation Source	Seed cotton (Phutti) is generally transported through jute bags or tractor trolleys in polypropylene bags as well as jute yarn that also form a big cotton holder, into ginning factories. More volume from the farm owner or wholesale market to this factory can be transported. The system of polypropylene and the jute thread cause major spinning and weaving problems.
GIN Houses	There are few storage houses / go downs places, which provided the storage facilities for cotton bales. The stored bales are delivered to textile spinning and weaving mills.

1.5 Geographical Location

The cluster is distributed around the city; however main concentrations are on:

Figure 1: Location Wise No of Units – Cotton Ginning and Pressing, Bahawalpur



1.6 Current Cluster Scenario

The cluster requires major investment for transformation of industry from conventional technology to complete automation technology in order to be competitive in the market.

This sector is seasonal with huge dependence on favorable weather condition for high production and quality cotton. Cotton Ginning mostly suffers from rising cotton prices and low cotton quality compared to international standards which results in reduced sales. Ultimately ginning production depends upon following three main components

- Availability of harvested raw material of cotton

- Availability of energy and modern process
- Operational technology and skilled labor

The ginning process produces the cotton seed as a by-product, which is sold to oil mills for oil extraction purposes. The further processing of seed lead to produce edible oil and cotton seed cake for animal feed. Therefore ginners operate as processors as well as traders; as processor of cotton bales for textile sector and as trader selling cottonseeds to oil mills through commission agents.

2 Analysis of Business Operation

2.1 Production Process

Raw material for ginning factory arrives as Phutti in large trailers or modules used for hauling it from the field and for storing it until ready for ginning.

The process starts from Cylindrical cleaning which removes leaves and other small trash from Phutti by shaking it with spiked cylinder. Removal of large sticks or hulls with revolving channel saws is carried out in sticking machines. These saws grab the seed cotton and whip it over metal bars to sling off its trash. With unusually dry cotton, gins will skip the drying stage and will, at times, add moisture to it with a special humidifier that blows warm, humid air through the gin's conveyor pipes. The seed cotton is now ready for ginning.

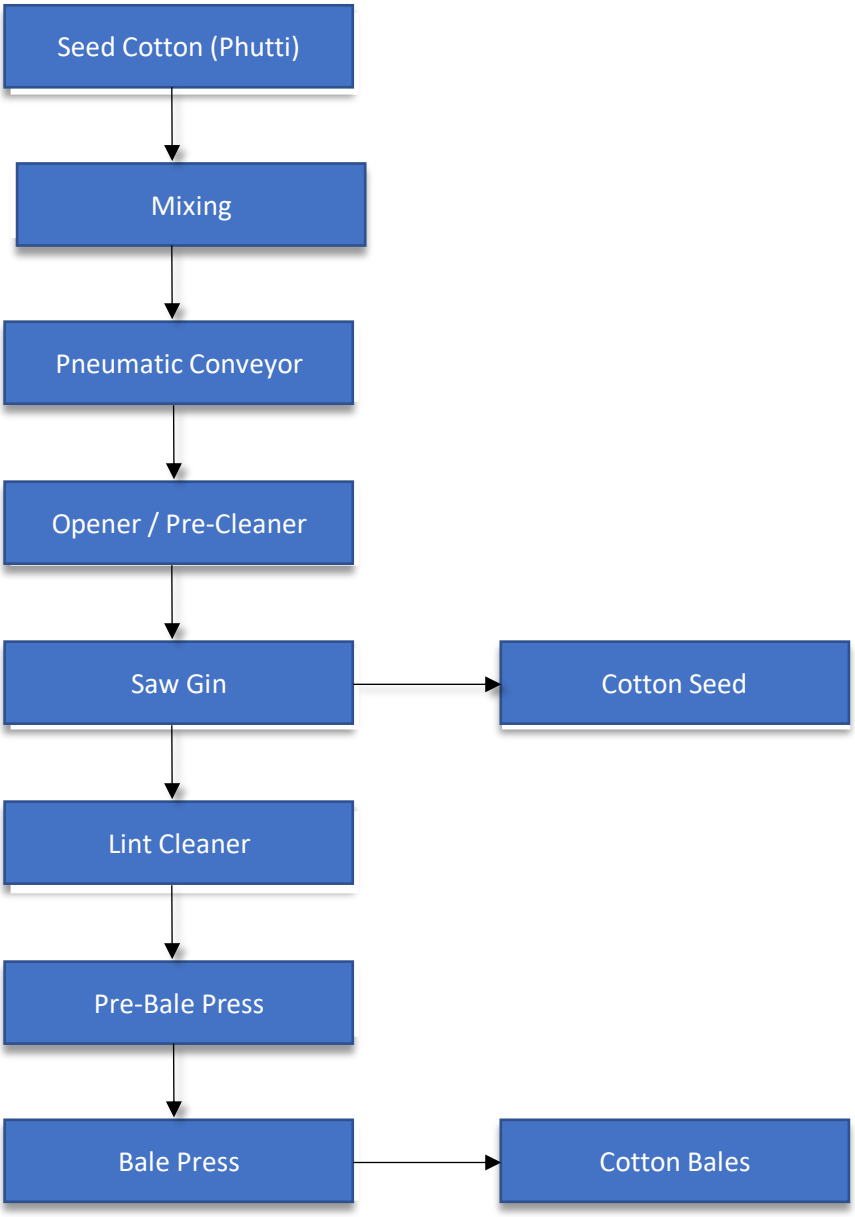
Pima cotton is conveyed to the roller gin, while upland cottons are conveyed to the saw gin for separation of seed and fiber. Lint Cleaner removes the small trash from the ginned lint left behind by the cylinder cleaner and stick machines.

Lint cleaning of roller ginned cotton usually involves a combination of three machines:

- A cylinder cleaner
- An impact cleaner, which uses cylinders to agitate and release the trash from the lint
- An air-jet cleaner which removes the trash from the lint using high velocity air

The final stage is Bale pressing which is done by Hydraulic Cotton Bailing Press. The press compresses the ginned lint into bales that weigh between 450 and 500 pounds. These bales are then wrapped with a protective cover, ready for delivery to the warehouse from where they are sold to various textile mills.

Figure 2: Production Process Flow Diagram



2.2 Raw Materials

Raw material of cotton ginning is harvested raw cotton (Phutti). 66% of the businesses depend on different suppliers to meet their inventory needs while only 13% depend on the same suppliers for years which depicts difficulty for many businesses in fulfilling their material needs when required. 11% of the businesses are not consistent in their suppliers to meet their raw material

requirements while 12% of the businesses need new suppliers due to inconsistent quality of stock supplied[3].

Raw material needs are mostly met through local farmers who supply raw cotton to ginning factories. Very few establishments buy from the same available farmers or require different ones due to inconsistent supplies as mentioned above. Some ginning factories in this sector have their own farms for cotton cultivation but may still depend on few suppliers for raw material to fulfill any.

There is stick need of raw material requirement at large scale for cotton & Ginning Industry. Pakistan is one of the biggest importer of cotton, meaning that the total Cotton harvested area is not sufficient for industrial needs, Furthermore channel of getting raw material from local means is un-reliable. Reasons of unreliability are given below.

- Local resource does not meet product / commodity quality
- Fluctuation and violation in commodity market Price
- Raw material local delivery channel is disrupting

2.3 Technology Status and Quality Assurance

The businesses use outdated technologies with only few large manufacturers using sophisticated technology whereas, small and medium sized manufacturers employ limited technology. The main reason for lack of automation and mechanization in this segment is due to unavailability of funds to the small manufacturers for purchase and installation of such machinery. The Saw Gin machines used in Pakistan's Ginning plants are made locally, and they are adopted on same technological levels as the American brands, such as Lummus, Centennial and Continental. Locally produced single machines produce 2 bales per hour while the newly-branded continental developed American machine Eagle is producing 7-9 bales per hour.

2.4 Power & Energy Requirement

Currently the Cotton Ginning industry is suffering from low production due to various internal and external factors as discussed above. Some business owners are also concerned regarding the power shortages that they believe is the main underlying reason for performing below capacity. Pakistan consumes 141 kWh of electricity per ton approximately compared with modern ginning units consuming 100 kWh of electricity per ton.

2.5 Marketing & Sales

Spinning mills buy cotton bales directly from the ginning units for further processing. The sales are usually made against Letter of Credit. However, sales on cash and credit are also made.

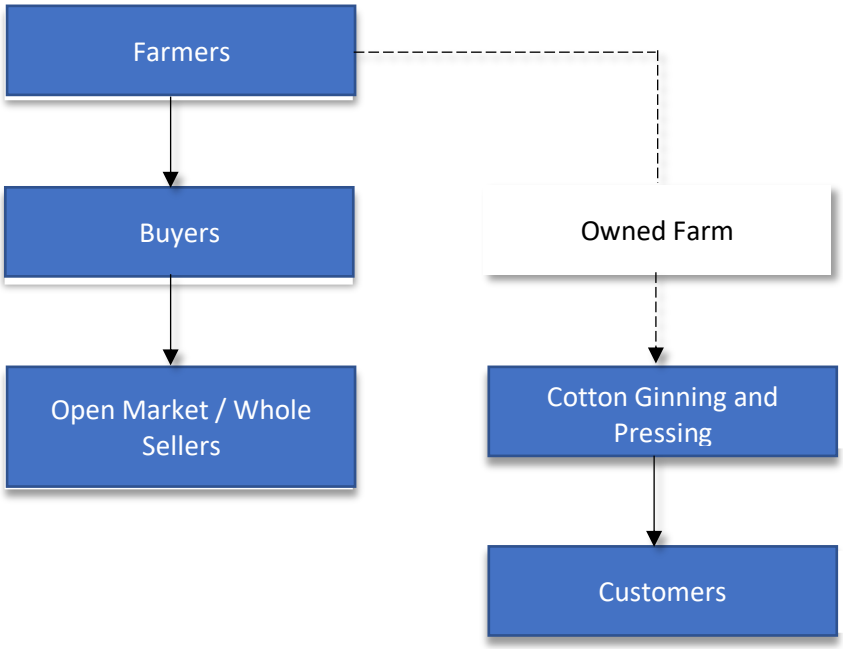
[3] Raw Material for Cotton Ginning Sector, Research Report on 'Cotton Ginning' Segment, SBP

Predominantly, Cotton Ginning sales and marketing in the cluster consists of farmers who sell their seed cotton to village merchants or local market. The seed cotton is then grouped together to grade them, based on their quality. The cotton from different farmers may be mixed prior to transporting them to the ginning factory.

The cotton bales, as end products, are then weighted and graded which are then sold to various customers. Textile factories are the biggest customers who have fixed contract with many ginning factories and so is a real source of income for the businesses in this sector.

The sales and distribution network flow in local market trade is as follows;

Figure 3: Sales and Distribution Network



Market of Ginning Industry depends upon spinning and weaving units, where cotton lint is transformed into fine thread and further goes for textile industry. Mostly spinning and weaving units are based in Multan, Faisalabad, and Lahore. A recent analysis revealed that large number of buyers are interested in importing cotton rather than purchasing local goods from ginning industry because of low quality product, especially due to the variety and cheaper rates than the local cotton.

2.6 Financing

Generally, investors rely either on their personal investment or friends and family sources of financing. Business assets and working capital are mostly fulfilled by loans from banks or cash flow from their business. Some business owners also use their own savings to meet their funding needs. Among the fixed assets, finance requirements are mainly centered on machinery and equipment of the business. Almost all of the businesses rely working capital as their primary

business funding need from which Letter of guarantee (LG) for the purchase of raw materials or finished products and finished goods is the most preferred way.

Almost all the registered financial institutions of Pakistan have their branches within the geographical area of the cluster and are providing the financing on standard market practices. However, no specific cluster based financing or lending schemes are prevalent in the cluster.

2.7 Human Resource Management

The workers in the ginning industry are mostly underqualified and underpaid resulting in non-technical human resource. These technicians, for example, cannot correctly adjust the machines leading to higher labor and energy cost. They cannot also regulate the amount of moisture and waste, which means that the cotton value is decreased. Ginners lack the ability to train and install new equipment or introduce new technology and innovation in manufacturing and operations for their employees. Also, most of the ginners don't have any knowledge about international standards.

2.8 SWOT Analysis

Strengths

- Raw material locally available
- Strong agriculture base in the country
- High capacity for high production
- Easy availability of cheap labor

Weaknesses

- The industry is largely unorganized and scattered.
- Technological obsolescence and lack of availability of modern technology
- Professional management is not perceptible in the cluster.
- No technical training institute for Ginning Industry
- High contamination in the crops
- Mostly family owned businesses result in Lack of vision / planning
- Uneven cash flows
- Limited resources for expansion

Opportunities

- Huge export potential for textile value added products
- Acquisition of latest technology

Threats

- Domestic / international political situation

- Globalization and free trade, especially Import from China is a continuous threat to the local manufacturers
- Shifting trend from cotton fiber to polyester fiber
- Unsupportive Taxation Policies
- Fluctuation in international market price
- Pest diseases on cotton crop result in low production of cotton lint
- Import of cotton

3 Institutional Setup

3.1 Entrepreneurs' Associations

Pakistan Cotton and Ginners Association (PCGA)	
Address:	PCGA House, MDA Road, Multan
Tel:	(+92) 61 4549 810, 4549 815
Web:	www.pcga.org
Cholistan Wool & Cotton Society Bahawalpur	
Address:	Habib Colony, Gulberg Road, Bahawalpur
Tel:	(+92) 345 8774 646; 321 8774 646
Fax:	(+92) 622 7310 17
PSDF Industrial Support Program	
Address:	House. No: 14-C/4, Shabir Shaheed Road, Model Town A, Bahawalpur
Tel:	(+92) 62 2889 934
Bahawalpur Chamber of Commerce & Industry (BCCI)	
Address:	Karachi By Pass (National Highway), NH-5, Basti Murad Shah, Bahawalpur
Email:	info@bcci.com.pk
Web:	www.bcci.com.pk

3.2 Support Institutions

Junior Regional Business Consultant – SMEDA	
Address:	Karachi By Pass (National Highway), NH-5, Basti Murad Shah, Bahawalpur
Tel:	(+92) 344 0369 523
Web:	www.smeda.org.pk
Email:	rbcsialkot@gmail.com
International Fund for Agricultural Development (IFAD)	

Tel:	(+92) 62 9255540
Email:	pd.sppap@gmail.com
Web:	sppap.org.pk
Punjab Small Industries Corporation (PSIC)	
Address:	Multan Road, SIE, Bahawalpur
Tel:	(+92) 62 9239353
Web:	www.psic.gop.pk

4 Major Issues and Problems

Financial

The segment is keen to use banks for routine business needs and has been using banks for certain banking products; however, the businesses operating in the segment did not have any significant awareness and therefore did not have an encouraging response towards lending products or to have a more far reaching relationship with banks and financial institutions.

This sort of reluctance with respect to bank financing products can primarily be attributed to lack of communication between the business owners and banks, as well as limited knowledge of potential customers / business owners with respect to existing or potential products that may be offered by banks. The banks can successfully expand their target market by educating the business owners to utilize banking products. The banking products need to be customized /structured to suit the specific needs of the business.

Marketing

There is no proper marketing mechanism. The government has fixed the rate of cotton bales to be sold to spinning mills. The high quality fiber should be sold at premium price. The low quality has caused increased in cotton imports.

Technology

Imported and modern machinery ginning speed is higher than local produced machinery. Also local machinery use more KWH of electricity compared to foreign machinery. For this purpose transformation of technology towards substitutes like solar system etc. is required. Pakistan Cotton Standards Institute has developed standards / grades for categorizing cotton, but unfortunately use of cotton quality meter is not available in small & medium units. Quality of cotton disrupts with time so ginning industry should adopt contamination free zones for transportation and storage. In short technical assistance in maintaining cotton quality is missing.

Human Resource

In the Bahawalpur Ginning Cluster, there is a lack of skilled and qualified labor in mostly small and medium units. Mostly unskilled staff is acquired. At present, no specific criteria for the level, requirements and technical expertise of the workers are set by the Ginners of Bahawalpur.

Complex Procedures

The poor condition of the ginning industry is also responsible for the governments arbitrary and at the moment ineffective fiscal policies and inefficient administrative procedures. Ginners require government licenses that must be renewed annually to run their factories. Nevertheless, these are not only lengthy, but also unpredictable procedures. The cost (and timespan) of the ginners who spend so much time in meeting these unnecessarily complex requirements is further increased by these obstacles.

5 Suggestion and Recommendations

Market and Export Management

- Focus on the following areas in order to achieve a high-quality output:
  - Training the labor and enhancing their wages accordingly
  - Adopting International Standards to produce optimum quality product
- Building the culture of knowledge and information sharing within the organizations

Quality Management

- Quality management and standards adaptation from farm to shelfs.
- Encouraging farmers to use high-quality seed and production technologies to improve production.
- Cotton pickers should be qualified to correctly pick cotton (with minimum contamination).

Government Support

The ginners should lobby the government for the following:

- Assuring uninterrupted supply of power by fixing a quota, or by subsidizing
- Machinery / technology to setup micro-power plants
- Liaising with the public and private sector to get easy capital
- Making Pakistan Cotton Standards Institute (PCSI) more accessible to the ginners

6 Investmenmt Opportunities

The need for following projects as potential investment opportunities in Cotton Ginning and Pressing Cluster Bahawalpur has been identified on the basis of the key strengths of this cluster;

- Spinning Mills
- Surgical Cotton Production Units
- Weaving Units
- Fabrics Dying Units

- Commercial Circular Knitting Unit
- Tents & Canvas
- Cotton Bags
- Cotton Towels

Moreover, the Pre-feasibilities on 'Textile Sector Projects' are available on SMEDA website and can be consulted for further information. The said documents can be downloaded from www.smeda.org.pk.

In case of any other relevant inquiry kindly visit SMEDA Regional Business Center - Bahawalpur.