

### **Contamination reduces cotton value**

Cotton is considered to be a resilient and reliable lifeline of Pakistan's economy; however, the reduction in its productivity over several years has negatively impacted performance of the entire economy. Importance of the cotton crop can be gauged from the fact that its share of agricultural GDP is 4.5 per cent, while its share of national GDP is greater than 1 per cent. Cotton is the main raw material for Pakistan's textile industry, accounting for almost 70 percent of the basic raw material. According to the latest PCGA report, Pakistan will face a shortfall of 40 percent cotton production this year when compared to industry requirement of 15 million bales. In the fiscal year 2020, the crop size is expected to be less than 9 million bales necessitating cotton imports of almost 6 million bales. Pakistan is losing at least \$2 billion directly and at least \$8 billion USD per annum on account of low production of cotton. Increase in cotton production will have a direct impact of \$ 1 billion per 1 million bales and a 7 times multiplier impact on the fiscal flows in economy. A normal cotton crop provides livelihood and employment to millions of the extremely poor and goes a long way in the struggle to fight off poverty.

Keeping in view the current year's cotton crop shortfall and low productivity of crop, a further decline in cotton production can also be expected next year if the margin of farmer's income from cotton production remains inferior as compared to other competing crops.

The low cotton production and poor quality is combination of several factors (poor quality seed, fake pesticides, poor pest management, obsolete ginning technology and a high level of contamination) leading to a sharp decline in production and profitability of the cotton crop. Some of the factors impacting the productivity and quality of cotton are:

Cotton production this year has been adversely affected by unfavourable weather conditions, attack of pink bollworm, whitefly, cotton leaf curl virus (CLCV), and other insects which were not controlled because of adulterated pesticides and bad quality seed. The high infestation of insect pests resulted in the loss of 2-3 million bales. This loss has further increased with the use of pesticides as 80 percent of pesticides are being used on cotton alone while remaining 20 percent are used on all other crops. Quality pesticides are required for effective pest control which are not available in Pakistan.

However, Pink Boll Worm can only be controlled by GMO varieties; pesticides cannot control it. When this pest appears on the surface of crop the damage to the crop has already occurred and whitefly has already gone beyond ETL (Economic Threshold Level).

Another measure of the disaster is the failure of cotton seed which is unproven, substandard and not resistant to pests and diseases (the old generation BT cotton). The world has shifted to 3rd generation genetically modified seeds and improved their cotton production and yield per acre but Pakistan still has the inferior quality and compromised seed. Due to this lack of quality seed, farmers have to buy the unproven seed and then undertake expensive sprays to control

pests. As a result, the cost of producing cotton becomes substantially higher as it costs \$ 1.8 per kilogram for Pakistan compared to India \$ 0.71 per kg.

Weak Regulatory Framework, Complex and Unreliable Seed Registration Process allows proliferation of propagation and marketing of unsubstantiated seed. This is the biggest barrier to genuine foreign or local companies to enter the market and develop Pakistan specific seed through genetic modification targeted at the Pakistan specific problems.

The average farm-gate price of Phutti this season was Rs 3800 per 40 kg and ginning cost was roughly Rs 700 per bale plus 7% wastage. In contrast, market price of cotton was almost Rs 9800 per 40 kg (KCA-rate of grade 3 cotton). This huge difference in marketing and risk margin disappears into thin air. This huge gap between the farm gate and the market price generates inefficiency and inadequate return cash flow for the farmers.

There is indeed a great need to increase the cotton productivity of cotton which could increase the farmer's income and meet the local requirements to promote the domestic textile industry. If this could be done exports of textiles would get a boost, economic activities in the country would accelerate, the foreign exchange could be saved and employment would increase. Not only is cotton production significantly less than its consumption, the produced cotton is also of low quality and highly contaminated. The international standard of contamination is 2.5 gram per bales whereas Pakistan's cotton contains 18 grams of contamination per bale.

Contamination in hand-picked cotton in Pakistan is one of the most pressing issues concerning the quality and value of cotton. The Pakistani cotton is one of the most contaminated cottons in the world. Untrained cotton pickers from field to low ginned quality standards all add to cotton, fetching lower value in the market. Pakistani ginned bales contain up to 10% trash, world averages only 2 to 3 percent. There is a need to improve cotton quality by controlling contamination and trash content through enforcement of the standards laid down in the Cotton Control Act and Cotton Standardization Ordinance.

High trash content increases the processing losses and lowers the quality of output of yarns. Stains in cotton adversely further affect the dyeing process. Poor quality cotton in terms of its physical properties not only raises the processing costs at the initial input and intermediate stages but also reduces the output and quality of the final textiles, yarns, fabrics and apparels.

In the case of plastic material which is one of the most vicious forms of contamination, the damage becomes visible only by the time the fabric leaves the final finishing process, at which stage it is too late to apply any remedy. This can be described as the most significant contaminant which lowers the price yield of Pakistani cotton. Contamination of these polypropylene strings are mostly white colored or blue or red coming from fertilizer bags are extremely difficult to remove from cotton and even highest technology machines for its removal can remove only partially.

Polythene is also a contaminant and should be removed as well, but it normally melts at high temperature in the dying process of fabric but the polypropylene does not melt and remains in fabric and is spun with the cotton yarn and very difficult to remove at fabric stage. Such fabric or garment where polypropylene is found is eventually rejected from export or sold at a lower value.

The cleaning of contaminants is one of the costliest processes in spinning mills and none of the machines used for removing the contaminants can remove all the contaminants. In the process of cleaning trash, some contaminants get removed hence the machine- picked cotton is found with lower trash and contamination, however, if proper cleaning is used for hand-picked cotton in ginning and pressing factories, the same will certainly have lower contamination and lower trash with the advantage of better fibre parameters and a far better price for cotton farmers.

Traditionally, cotton is manually picked by women. Besides many benefits, a big problem of manual cotton picking is that the cotton pickers are essentially the biggest source of cotton contamination. The polypropylene contamination comes from fertilizer bags as lady pickers make picking bags or sheets from these bags and this is the biggest and worst contaminant. A comprehensive training and capacity building program should be developed to establish a system in the private sector for picking, grading and classifying cotton. Labelling of cotton bales with trash content, moisture content and weight of cotton bale should be made mandatory.

#### Table

Farmer's income can be increased by at least 10 percent only by controlling contamination factors. In conclusion, the difference of 10 to 14 percent in prices of "A" index cotton and grade-3 Pakistani cotton can be reduced and a substantial increase in cotton value can also be achieved by controlling contamination alone which is possible through adopting the following steps;

- \* All fertilizer should be packed in cotton bags to avoid contamination.
- \* Ban on use of Polyethylene film cotton-picking bags.
- \* Bags made of cotton be provided to cotton pickers to reduce contamination at the time of cotton picking. These bags should be prominently stamped and inked to avoid their usage for other purposes.
- \* Specialized targeted outreach programs should be designed to educate women cotton pickers focusing on the implementation of the better quality standards while picking cotton bolls from fields and how the better quality cotton with less contamination can add to the wages that women receive. These programs should have women trainers' proficient in the local language of the area for efficient communication necessary for better learning.
- \* Cotton pickers should be incentivized in the form of Rs. 100 incremental wage per maund if the cotton picked is free of contamination, whereas, farmers will get at least PRs. 500/maund extra.
- \* Incentives shall be provided to ensure that proper premiums are paid for increased production of contamination-free graded cotton.

(The views expressed in this article are not necessarily those of the newspaper)