Cotton Crisis and Farmer’s Suicides: Analysis of the Recent Happenings in India

Updesh Khinda, Assistant Professor, School of Business, Lovely Professional University, Phagwara, Punjab, India
Husna, Student at School of Business, Lovely University, Phagwara, Punjab, India

Abstract

India is mainly an agricultural based economy and majority of its rural population depends upon agriculture. Farmer’s suicides are the most tragic and dramatic symptom of the crisis of survival faced by Indian peasants. Nowadays the problem of farmers’ suicides is one of the vital concerns. A total of 5,650 farmers have committed suicides during 2014, accounting for 4.3% of total suicides victims in the country. (Report of National Crime Records Bureau (NCRB), Ministry of Home Affairs, GOI, 2015). Causes of Farmer Suicides’ Bankruptcy or Indebtedness and ‘Family Problems’ are major causes of suicides, accounting for 20.6% and 20.1% respectively of total farmers’ suicides during 2014. The other prominent causes of farmers’ suicides were ‘Failure of Crop’ (16.8%), ‘Illness’ (13.2%) and ‘Drug Abuse/Alcoholic Addiction’ (4.9%) (Economic Survey, 2014-15). In present study an effort is being made to study the rise in farmer’s suicide due to failure of cotton crop in India.

Keywords: Cotton crisis, Farmer’s suicides, Bankruptcy, Crop failure

Introduction

India is the third largest producer of cotton in the world after China and USA. In India cotton is grown in three zones which are as follows

a) Northern zone – it comprises of Punjab, Haryana and Rajasthan.

b) Central zone – it comprises of Gujarat, Maharashtra and Madhya Pradesh.

c) Southern zone – it also comprises of Andhra Pradesh, Tamil Nadu and Karnataka.

But the major producers of cotton in India are Punjab, Gujarat and Maharashtra.

The cotton crisis in 2015 happed in the cotton belt of the Northern zone of India, especially Punjab and Haryana. It has occurred when the whitefly attacked the cotton crops. The whitefly cases are not new in India as they have occurred already in previous years, and they were controlled by intensive spraying of chemical pesticides. But in the current situation it is different when compared to the previous years, whereby the damage done by the whitefly is too big i.e. It has destroyed many farms. The whitefly sucked the cotton plant stems. The plants which used to grow upto five to six feet could not go beyond three to four feet.

The Northern states of India are the most affected by the whitefly attack. Where by the cotton belt in Punjab especially the Malwa district has been affected the most on the cotton crop. It is said that this year the whitefly have appeared earlier than usual and it spread to many farms because there was drought, hot and cloudy weather which is good for its survival. The whitefly tends to feed on the leaves of a plant especially the undersides. They suck the sap of the cotton leaves thus affect the growth of the plant. The farmers were warned before about the whitefly attack in the farms but there was no response thus they ended up suffering huge loss and fell under debt trap. Due to all this some of farmer’s committed suicide and others are seeking for help from the government which has offered giving them compensation for their loss.

Farmers have suffered a loss of approximately Rs 42,000 crore and 75% of the crop is destroyed hence because of this loss this year the total amount of cotton harvested will fall compared to the previous years. The government is in the front line to make sure that cotton crisis are solved and the farmers are compensated.

Analysis Of The Cotton Crisis:

The whitefly have destroyed two third of the cotton in Punjab. Punjab has nearly 12 lakh acres of land which was used for cotton cultivation of BT cotton type. This type of cotton resists some of the pests like Bollworm. The farmers raised the loan from banks to grow cotton crop. Most of the farmers had also taken land on lease to grow cotton crops. The Peasantry economy of India is already into debt trap. The farmers had to uproot the cotton plants. They were unable to recover the cost and payment of debt. All this lead to increase the suicide rates of Indian farmers mainly in Malwa Cotton Belt.

This year the control of whitefly has been difficult compared to the previous years, reason the chemical pesticides have been ineffective in controlling the pests. The farmers have sprayed their farms many times (i.e. from July to August, they have sprayed 10 to12 times) but nothing happened, the whitefly became resistant to the chemical sprays. But the analysis shows that the. Besides the natural calamity and dwindling prices, the cotton...
farmers were also betrayed by the state agriculture department officials who recommended spurious pesticides and minted money. Though the state government arrested the agriculture director Mangal Singh Sandhu and other officials but that was not enough to rescue the farmers who lost both the money and the family members. The corrupt officials and pesticide manufacturers not only cheated by farmers by recommending the spurious pesticides but also by selling the pesticides at inflated prices.

Also Fazilka district has lost about 40% of the standing cotton crops which makes it also the badly affected districts in the Malwa region, and the farmers have uprooted 700 acres of land in different districts, about 99,000 acres have been damaged partially or substantially because of the attack.

**THE DISTRICTS AND NUMBER OF HECTARES LOST BECAUSE OF CRISIS**

![Bar chart showing the districts and number of hectares lost due to crisis.](chart.png)

*Source: Reports of various authentic newspapers*

This picture shows the whiteflies and their eggs on a cotton leaf. Whereby they feed on the cotton leaves when they are sucking the sap from it.

This picture also shows how the cotton crop is destroyed by the whitefly in the field.

**Causes of wide spread of white flies:**

The following are the main reasons for the wide spread of the whitefly in the farms and causes massive damage:

1. **Weather Condition**

   In this situation the experts say that in this year there was persistent drought, as in there was no rain, this situation has led to the wide spread of the whitefly in the farms whereby the drought was associated with hot and cloudy weather. In this case it was easy for the whitefly to spread in many field, but if rain could have been there it could have wiped away the whitefly and hence their expansion could have been less.

2. **The Use Of Spurious Pesticides**

   The farmers were using pesticides which are not tested or approved if they are suitable for killing the pests. The farmers didn’t know that the pesticides are not good for killing the pests and they were desperate to stop the expansion and destruction of the whitefly. The farmers had to spray the farms many times, some sprayed ten to twelve times and the pesticides were sold at a very high price i.e. Rs3200 each.
The Use Of Un-Recommended Cotton Seeds

Farmers have used cotton seeds which are not approved by the government and PAU. The Bt type of cotton seed which was sold by the private firms it was not tested by the government as the private firms have developed its own genetically modified cotton seed i.e. Bt cotton seed which is resistant to pests like Bollworm, but it was not tested for other pests such as whitefly, aphids and mealybugs. Also these seeds were sold at very high price and about 30% of the Bt cotton which was cultivated was either BCHH 6488 or BCHH 6588 types which were not recommended by PAU.

Dissemination Of Information

In this situation the farmers were not giving out any response from the information given to them. The farmers were warned about the whitefly but they didn’t respond to it and thought that the spread will be controlled but at the end it was not easy to control them. Also the farmers did not get the information about spurious pesticides, both of this led to the wide spread of the whitefly in the farms as a result the cotton crops were destroyed and the farmers incurred losses.

Also another cause is the late sowing of the cotton in the farms, where by 30% of the cotton was sown 15 to 30 days late compared to the normal cut-off date of May15. Whereby the cotton was tender in July to August, during this time the weather is hot, humid and cloudy which is conducive for the spread of whitefly hence the cotton crops were much affected. The tender cotton has a high risk of being affected by the whitefly than the matured cotton as the whitefly cannot suck on their leaves because they are matured.

The Effects Of The Crisis

The cotton crisis has led to the following effects to both the farmers and the society as a whole:

It has led to destruction of the cotton farms

The cotton farms are destroyed by the whitefly, and the damage done is too big thus some of the farmers had to clear their farms as there is nothing left in the farms all of the cotton is destroyed i.e. there is nothing to harvest. Whereby the crop loss is estimated to be 40% to 50% of the crops which is 1.5 to 2 million bales

Also the yields have decreased

Because of the whitefly destruction the yields or harvest of cotton in the cotton belt have decreased, that is only those who have used the organic pesticides and other cotton types were able to harvest cotton but others couldn’t. But those who harvested the yields are low as the farms were as attacked by the whitefly but they were able to control the expansion and destruction of the whitefly by using other means. It is expected by the traders that harvested cotton this year will be 0.8 million bales for Punjab and about 1.9 million bales for Haryana as compared to the previous year when an estimation of 1.5 million bales were produced in Punjab and 2.6 million bales were produced in Haryana.

It has led to bad quality of cotton

That is to say the cotton harvested which was affected by the whitefly is of bad quality, the pests have made the cotton loose quality. And now the farmers are suffering because they are selling the cotton at a low price, and they can’t fetch higher prices because of the quality of the cotton. They are getting losses as they won’t be able to cover their costs which they had incurred during the cultivation process.

It has led to the farmers’ suicide;

The crisis has left many farmers in a loss that is they have lost all of their money invested in the farms, and most of them took a loan from the banks or money lenders. That is they became indebted and when they think on how to repay back their debts when all their crops are destroyed they end up killing themselves in fear of losing their lands as collateral because they don’t have any means of repaying their debts. It is estimated that 15 farmers have killed themselves during this period.

Other economic activities have been affected

In this most of the economic activities have been affected when the farmers went on a strike on the railway tracks, thus making the trains which were going to Amritsar from Delhi and Mumbai to get stuck at Ambala railway station because they have blocked the railway. This has made the railway transportation sector to lose a lot of money. The farmers were not satisfied by the compensation which was announced by the government, they want more money because they say that the compensation announced does not even cover their production cost. They are demanding for Rs 40000 per acre as compensation compared to the one given by the state government of Rs 8000 per acre to the farmers who suffered complete loss.

Actions taken to solve the crisis

The actions taken to solve the cotton crisis by the central and state government are as follows;

The government has provided compensation to farmers:

The government has announced compensation of Rs 640 crore to be given to the farmers who have suffered on the whitefly attack in the Malwa region. Rs 643.58 have been released by the Punjab government as compensation to the farmers who have suffered a loss of cotton crop because of whitefly and other pests to nine districts.
in the state. That is Rs 8000 per acre to the ones who have faced complete loss. Also the government is providing compensation to the families which had suffered a loss of their people who have committed suicide.

Officials responsible for the sale spurious pesticides have been arrested: The state government has arrested the top official of Punjab agriculture department for his alleged role in the supply of the spurious pesticides, which farmers have used in their farms and couldn’t stop the spread of whitefly. Mangal Singh Sandhu the Punjab agriculture director was arrested from his residence by police from Bathinda and later on he was suspended after the submission of the report which shows the irregularities in the purchase of the pesticides. And also teams have been formed to investigate those involved in the supply of the spurious pesticides to the farmers. Also the state government has registered criminal cases against five distributors who have allegedly supplied spurious pesticides. The state government has arrested officials responsible for the sale spurious pesticides and those pests or insects they have no auxiliary pesticides to the farmers. Also the government is providing compensation to the families which had suffered a loss of their people who have committed suicide.

NBRI is developing whitefly resistant cotton plant: The National Botanical Research Institute (NBRI) has developed a cotton crop which is resistant to the whitefly. They have developed a gene which is derived from a vegetable, and the gene was found effective against the whitefly after being tested on the cotton plants at the Institute’s polyhouse. “The gene makes whitefly sterile thus it controls the reproduction of the pest”, Dr PK Sing said that, he is the principle investigator of the project ‘Development of Resistance against Whitefly in Cotton’ at the institute.

Making of new pesticides: It is advised that new pesticides which can stop the expansion of the whitefly should be made so that the whitefly problem can be solved. Also it is advised that organic pesticides should be used instead of chemical pesticides which affect even the friendly pests of the crops and those pests or insects are prey to the harmful pests of the crops. And The Union Agriculture Ministry had advised and mentioned 30 pesticides and 5 pesticide combination which can used to control the pest attack.

Farmer’s Suicide: This refers to the situation by which a farmer kills himself because of various reasons. In India farmers suicides are increasing year after year. Last year a total of 5,650 farmers have committed suicide this is according to National Crime Record Bureau (NCRB) that is in every hundred villages one farmer commits suicide last year, male are 5178 and females are 472. The leading states for the suicides are Maharashtra, Telangana, Madhya Pradesh, Chhattisgarh and Karnataka this according to the last year’s data. And Punjab had 24 farmers suicide while Haryana had 14 farmers suicide. There are reports from various reputed and authentic newspapers all over the India regarding farmers recent suicides. The marginal and small farmers are the ones who commit suicide because they have no auxiliary source of income apart from agriculture.

### Data on Farmers’ Suicides (gender wise) and All Suicides (gender wise)

<table>
<thead>
<tr>
<th>Year</th>
<th>Male Suicides</th>
<th>Female Suicides</th>
<th>Total farm suicides</th>
<th>Mail as % of total suicides</th>
<th>All Male Suicides</th>
<th>All Female Suicides</th>
<th>Total suicides (Male + Female)</th>
<th>Farmer’s suicides as % of all suicides</th>
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<tr>
<td>2002</td>
<td>15308</td>
<td>2663</td>
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<td>85.2</td>
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<td>CAGR</td>
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<td>-3.8</td>
<td>-2.64</td>
<td></td>
<td>2.47</td>
<td>1.35</td>
<td>2.06</td>
<td>-</td>
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</tbody>
</table>

**Source:** Various reports of National Crime Records Bureau (NCRB), Ministry of Home Affairs, GOI.
Analysis: It is very clear that the percentage of farmer’s suicide in total suicides was showing declining trend. But the main concern is that in the recent times the farmers mainly in Punjab and Harayana have committed suicides in a huge number and still they are committing suicides.


Analysis: This pie chart shows the percentage of the farmers suicide in India basin on gender which happened last year. Whereby in this the total suicides were 5650 out of which 472 were females and their percentage was 8.3% and 5178 were male and their percentage was 91.6%
Analysis: The above pie chart shows the farmers suicide state wise that is from the leading states of suicide. Whereby Maharashtra had 2568 suicides which were 45%, Telangana had 898 suicides which were 16%, Madhya Pradesh had 826 suicides which were 15%, Chhattisgarh had 443 suicides which were 8%, Karnataka had 321 suicides which were 6% and other states together had 594 suicides which were 10%.

Current scenario of farmer’s suicide:
The current farmer’s suicides occurred in the cotton belt of the Punjab and Haryana state. Many farmers have committed suicide in recent times mainly from August to till now. A few of them are Balbir Singh (25) of Dayalpur village, Jagdev Singh (62) of village Bhagwangerh and Didar Singh (25) of village Maazi. Punjab. All this happened mainly because of the whitefly attack and the price falling of Basmati rice. There are more farmers suicide reported and most of them are of the same reason of being under debt trap. The farmers who ended up their lives were mainly small and marginal farmers. They took land on The farmers use poison or pesticides for killing themselves and some hang themselves. Some of them committed suicide by jumping in front of the train. One various serious issue we have analyzed that the number of suicides of very young farmers (25-35 years) is very high. This statistic itself show the severeness of suicide problem and the amount of indebtedness on farmers and on their children.

This picture shows a farmer who has committed suicide in the well near the farm.

The Reasons Behind The Farmers Suicide
There are various reasons which made farmers kill themselves, they are as follows:

Indebtedness or bankruptcy:
The farmer commits suicide because of the fear on how to repay the loan. Most of the farmers take loan from the bank or money lenders for productive purposes that is can be for purchase of the tractors or use it for cultivation and others use it for recreational purposes like weddings. And they depends on their crops for the repayment of the debt thus when they suffer a completely loss in their farms they become devastated because they have no other means to repay their debts hence they end up committing suicide.

Family problems: Also some farmers commits suicide because of family reasons like quarrels, when they are forced to get married and when the parents do not want their kids to marry the people they love.
Illnesses: Another reason for suicide is illness whereby when someone has suffered a lot from a disease like cancer which has no cure they tend to kill themselves because they are tired of suffering. They mostly consume poison.

Farming issues: Also farmers tend to kill themselves because of farm issues that is it can be that they have suffered from a crop loss maybe because of drought or attack from the pests, hence due to the shock they get they may end up killing themselves because they depend on their farms for them to run their life on a daily basis with their families.

Actions taken to solve the suicides: The suicides happen because of some reasons or problems but there are ways which we can take to avoid those problems whereby they are;

Ensuring flexibility in the conditions for the loan taken by the farmers: whereby the government can make sure that the farmers do get loan conditions which they are on their favour and also they can get extensions in the payment of their debt.

Education; The farmers need to be educated on how to improve their farms and also on how to use other farming methods like crop rotation, and be aware of the existing government schemes which are on their favours. So that they may be able to increase their production and later on avoids suicides.

The government should interfere on the exploitation done by the middlemen; the middlemen exploit the farmers by setting up a lower price for their crops this makes the farmers earn very small amount of money which does not even cover their production cost like what happen in Basmati rice prices. Also the government has to make sure the MSP is properly followed in the agriculture market so that the farmers will not fall under loss and at the end kill themselves.

Also there should be a specific body which alerts the farmers if there is any weather changes or new disease of the crops. This body will help the farmers be aware of what is going to happen and how to prevent it, thus they will be able to save their crops hence they won’t get loses thus there will be no suicides.

Suggestions:

Basing on the cotton crisis and farmers suicide some suggestions for government and policy makers are given below:

a) 1 The Punjab Agricultural University (PAU) to work hand in hand with other research firms so that they can come up with the best cotton seed which resists all kind of pests and diseases so that what happened this year should not be repeated again.

b) 2 Also the government should make sure it improves its system in checking the quality and the strength of the new pesticides which they are being produced before it is being supplied to the people. Also it has to set rules which make the officials not to take bribes from the suppliers so that they can be allowed to supply the pesticides.

c) 3 Also there should not be any dissemination of the information; that is when the special bodies give out information about a particular problem like whitefly and tells them on how to avoid the problem they should respond and not react fast, they should not keep quite.

d) 4 And the government should give enough compensations to the farmers when they are under crisis; The government provides compensation to its people but sometimes those compensations are not enough that is even if they are given to the farmers they are less than the cost they have incurred like this time it has given Rs 640 crore but the actual loss of the farmers its approximately Rs 42000 crore.

Conclusions

The cotton crisis which happened in Punjab and Haryana and affected almost two third of the cotton in the cotton belt was already known by some of the experts because they knew that the conditions were favourable for the growth of the whitefly and it long survival in the cotton farms. We strongly believe that both the farmers and the suppliers of the spurious pesticides are to be blamed for the crisis. This is because the farmers were warned about the whitefly crisis but they did not react also the farmers didn’t use the cotton seeds recommended by PAU instead they have Bt cotton seed which was not recommended. Also the suppliers of the spurious pesticides are to blame for the wide spread of the whitefly because the pesticides were ineffective. And many farmers committed suicide because they had suffered a loss in the farms and some had to uproot the cotton from the farms, these farmers had taken loan for production of their crops in the field hence when they were destroyed by the whitefly they ended up in a debt trap hence they commits suicide.

We recommend that in case of this crisis or any other crisis the government should be the first one to take actions i.e. to inform the farmers about it and also to investigate on the officials and suppliers of pesticides if they are supplying the right pesticides. Also it should formulate any relief scheme which deals with compensation to the farmers if any crises happen/occur.

Also the cotton seeds should be improved that is if possible to make a new cotton seed which has strong genes which can kill the pest like new cotton gene developed by NBRI which is resistant to pests like whitefly and its designed to stop the production of the whitefly.
Therefore the crisis can be avoided if the solutions are taken into action and are well implemented; also there will be no farmer’s suicide because of the crisis if everything is well implemented.

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