

Sustainable Development of Soybean Crop and Farmers

Ashok Satwaji Hanwate

Assistant Professor, Dhanaji Nana Chaudhary Vidya Prabodhini, Loksevak Madhukarrao Chaudhary College of Social Work, Jalgaon, India

Email: [a.hanwate\[at\]rediffmail.com](mailto:a.hanwate[at]rediffmail.com)

Abstract: Soybean is a very good cash crop for farmers. As a result, the economic status of farmers has also improved. However, compared to cotton and sorghum, safflower, and other crops, the above example also shows that soybean is a hindrance to sustainable growth to some extent. Due to soybean, farmers do not get kadaba. So he has reduced the number of animals he keeps. It does not get as much fuel as cotton wood. As a result, large trees are cut down and used as fuel, leaving farms desolate. This naturally reduces the amount of oxygen we get from nature. The ozone layer in the atmosphere is therefore increasing in heat. So the question of global warming is facing us. So even if the soybean crop is beneficial. Considering some of the above, some remnants are becoming dangerous to you.

Keywords: Benefits of soybean crop, soybean crop and sustainable development, soybean and animal husbandry, use of soybean and wood as fuel for cooking

1. Objective

- 1) To study the benefits of soybean crop to farmers.
- 2) To study the effect of soybean crop on other factors.

2. Hypothesis

- 1) Farmers' income has increased due to soybean crop.
- 2) Large trees have been uprooted due to non-use of soybean crop as fuel.
- 3) The number of animals is declining as the soybean crop is not providing food to the animals.

3. Introduction

Soybean in India is a very useful crop for farmers to increase their income. Soybean has arrived in India in the twentieth century. In fact, it is a research seed produced in foreign countries. Earlier, we used to cultivate safflower in large quantities as oilseeds. And it may be used as an oilseed. In the later period, sunflower was an alternative to oilseeds, which were also widely cultivated and sown by the farmers. Mustard is widely used as oil seed in Rajasthan. This is called mustard oil. Safflower oil, sunflower oil, vinegar oil, flaxseed oil, mustard oil, sesame oil, etc. are used as edible oils in Maharashtra to get fat in daily life. Coconut oil is used to massage the scalp.

India is an agricultural country. More than 130 million people live in these countries. The population is growing rapidly. Similarly the land does not grow. On the land that is available, construction of roads, construction of dams, construction of ponds, construction of houses, etc. are due to declining use. Projects such as the use of that land (SEZ) Special Economic Zone have given different attention to the method of use. But if you look at the soybean crop, it is clear that soybean is a new crop in India. But. Due to the use of this crop, the production of this crop increased to a large extent in Maharashtra. Today thousands of hectares of soybean crop are cultivated.

The first in Marathwada was Bahlugaon district. In Hingoli, a farmer planted soybean crop for the first time in 1996. And he got more than ten quintals per acre. So the rest of the farmers planted soybean crop as an experiment. Other people have also started getting higher yields from 2000 due to soybean crop cultivation and in a shorter period of time. Farmers turned to soybean instead of cotton. As a result, the economy of many farmers improved in a very good way. But the farmers who had as much land as they had remained. Due to planting of soybean crop. People neglected the cultivation of this crop of cotton.

Soybean Crop Historical Background

The origins of soybean in India are almost four decades old. During this period, the crop has shown incomparable growth in area and production. Soybean has been the major rainfed crop in central and peninsular India. Soybean resulted in increased crop intensity and consequently increased profit per unit land area. In India, soybean will be a major crop of rainfed oilseeds. Simulation studies and agricultural demonstrations show that the rainfall capacity of soybeans in India, including current varieties, is approximately 2.1 tonnes per hectare compared to the national productivity. Therefore, there is a large difference between the potential of the extracted and the actual yield. Reducing this yield gap can double soybean production. The National Agricultural Research System has so far been successful in meeting the research demands of the agricultural and industrial communities. Further improvements in the quality of soybean grains and soybean oil are possible through the use of new research methods and the exploitation of recent advances in biology.

Soybeans (*Glycine Max L. Merrill*) are the world's most important seed legume, contributing 25% of the world's edible oil and about two-thirds of the world's protein to animal diets. Soybean meal is a valuable ingredient in poultry and fish feed. The cultivation and use of soybeans was discovered at the beginning of the Chinese agricultural era. The Chinese medical collection, 6,000 years ago, mentions its use for human consumption [12]. For centuries,

people in China, Japan, Korea, Manchuria, the Philippines, and Indonesia have believed that soybeans are meat, milk, cheese, bread, and oil. This may be due to the fact that in these countries, subdivisions such as "farm cow" or "gold from the soil" have been introduced. Due to the composition of amino acids, soybean protein is called whole protein. Its nutritional value is well known in heart disease and diabetes. It is important to note that Chinese infants who use soybean milk instead of cow's milk are practically free from rickets. Today, the USA, Brazil and Argentina are the world's "Big 3" producers (Table 1). The versatility of soybeans was recently recognized in the West. By 1921, China produced about 80% of the world's soybeans. Soybeans were introduced to India in the 10th century from China via the Himalayan route and brought to Indonesia via Burma (now Myanmar). As a result, soybeans are traditionally grown in Himachal Pradesh, Kumaon Hills in Uttar Pradesh (now Uttaranchal), East Bengal, Khasi Hills, Manipur, Naga Dongar and parts of central India covering Madhya Pradesh. After China, the Indian subcontinent is also reported to be a secondary center for crop livestock. India is currently the fifth largest producer in the world after the United States, Brazil, Argentina and China (Table 1). India's contribution to the world's soybean sector is 10%, but its contribution to the world's soybean crop is only 4%, indicating a poor level of crop yield (1.1 t / ha) in India compared to other countries (compared to the global average). 2.2 ton / ha)

Indian landscape

Soybean is the tikhola crop grown in India. Soybean has become an oilseed crop in a very short period of time with an area of about 10 million hectares under cultivation. India is divided into five agro-climatic zones for soybean cultivation. These are North Hill Zone, North Plain, North East Division, Central Division and Southern Division. For each zone certain varieties are released which are adapted to their agro-climatic conditions.

Reasons for neglecting cotton cultivation: -

When the coalition government came to power in San Maharashtra, they had decided that the money for cotton would be given to farmers in five to six phases. At that time, a large number of cotton crops were cultivated by the farmers. The concept of white gold was seen as the yield of cotton in agriculture. Growing cotton and selling it to a ginning factory. This has always been theirs. Generally, if cotton is planted in June, then cotton is sown in October, November and December. And in the amount of space available to them, cotton bullocks were transported to Jinning for sale in bullock carts, tractors and other equipment. It used to take two to three days to weigh it. Farmers used to take bullock carts and stop in them. They used to stop with bullock carts. And after selling cotton, his money was paid in at least three stages, five stages, and sometimes up to six stages. As a result, farmers used to get money for cotton sold at least in November-December till June-July-August. Because of this, if the farmer wanted to marry the girls, the money for it, the money for the dowry, the full cost of the marriage, would be spent on the money coming from cotton. But if the same money does not fall on me at the time of marriage or an important transaction, then naturally the peasantry turned to the cash crop. As a result, the farmer opted for a soybean-like option. If the soybean

crop is planted in June, they start harvesting in October. On the same day the crop is harvested, the farmer gets the soybean to sell in the market. The farmer also gets money in his hand on the same day he sells soybeans. Unlike cotton, they do not need water up to six stages. As a result, farmers got cash on soybean crop rather than cotton, so the farmers turned to soybean production instead of cotton. And they started yielding at least 30 to 40 quintals per hectare. Today's price per quintal is usually at least three to five thousand rupees. The price of cotton is at least Rs 4,3900-4,200. In 1999, the price of cotton was Rs 6,000. And in the year 2020, the price of cotton is getting between Rs. 3900 to 4200.

Cost of Income: -Bt Seed is a modified variety for cultivation of Cotton Seed. Earlier in Maharashtra, a 750 gram bag of cotton seeds cost between Rs 125 and Rs 225. At the same time for cotton, there was a huge cost for manure, chemical fertilizer, spraying, diagnosis, weeding, tillage, plowing, etc.

In 2000, a bag of cotton seeds would cost 120 rupees. The same cotton seed Bt seeds were available at a price of more than twelve hundred rupees. Since it is a modified seed Its prices skyrocketed. Chemical fertilizer prices have risen sharply. In the year 2000, a bag of 50 kg of chemical fertilizer was available for Rs.250. The price of his bag has gone up by more than Rs 1,800 today. Moreover. In the year 2000, a laborer working on two thousand farms would be earning twenty rupees and thirty rupees a day. Today the same wage has risen to at least three hundred rupees. The prices of chemicals used for spraying were around Rs. 250 per liter in the year 2000. Today, the same prices are more than Rs. In addition, the farmer used a hand pressure pump to spray it. Now the pump running on the machine is spraying with the pump running on the motor, etc. And they have to pay the price. This would have seen rising costs. In 2000, he got a price of Rs 6,000 per quintal. He felt good about them. But given the current rise in inflation, he wants farmers to pay more for cotton. But in the year 2000, he got a price of six thousand rupees per quintal. And in the year 2020, the farmer is getting Rs. 3900 to 4200 considering the rising cost as above.

Compared to cotton and soybean, 30 kg of soybean is sown per acre and it requires about one bag of chemical fertilizer. Then identify the interval at least twice. If larvae fall, spray at least twice. And within four months the crop comes home. And many times up to three thousand four thousand rupees per quintal, maybe even later. Moreover, the yield per acre is quintal. This gives farmers a higher yield at a lower cost. Inevitably the two crops would have been compared. Soybean crop earns more money in less time. Then wheat, gram or any other crop can be grown in place of soybean. Money comes and then that crop comes too. This provided farmers with a better alternative to soybean than cotton. Eventually the soybean system of soybean crop in the farmer's house improved.

Soybean storage and cotton storage

Soybeans and cotton are two crops that farmers cannot store at home. And it is not used for storage. Soybeans cannot be used as dal at home. It is also not possible to extract its oil at

home. So the oil of safflower crop was removed. At the same time, after the oil was extracted, the cattle used to get heaps for consumption.

And the animals were in good health because of the food. Soybeans cannot be stored in houses as there are no missionaries available to farmers to make edible oil from soybeans. Moreover, pulses cannot be made from it or used for any other purpose. So they have no choice but to sell the crop. Naturally they have to sell it in the market. And since it is sold, farmers cannot extract edible oil. And his oxen are not slain.

Soybean and Hybrid Jwari: -

Jwari production is affordable to the farmers. A three kg bag costs Rs 250. One acre requires three kg of seeds. A bag of chemical fertilizer weighs 50 kg. Weeding, weeding in the field, preferably no spraying is required. The harvest period is about four months. Yields are at least eight to ten quintals or more per acre. Considering the cost of farming. The yield is higher. In addition, cattle get kadaba to eat. Not only that, **Jwaribhakri** is very well digested in daily diet. They can also store sorghum indoors all year round. Timely if they need to be sold to the market. The price of hybrid **Jwari** is at least twelve hundred to eighteen hundred rupees. And the price of Shalu sorghum or Talaki sorghum is more than 3000 to 5000 rupees. Apart from that we find that **Jwari** is very beneficial for fulfilling the promise. The oxen get kadaba as food. The farmer can store kadaba. The farmer gets sorghum bread as food. And selling in the market also makes money. Apart from that after four months the place where **Jwari** is grown. There can be another crop in that place.

However, the soybean plant does not grow much. Therefore, it is removed from the threshing machine during harvesting. Beans are thrown into the threshing machine with the plant. So he had a barn. The soybean crop was different. Soybeans get soybean husks. This is where it is not okay to eat cattle. It becomes difficult for farmers to store warehouses. Kutar deteriorates quickly when wet with rain. That is why it is impossible to store it. So from the point of view of animal feed, **Jwari** husk is beneficial but soybean is not.

Soybean Crop and Livestock Availability

Farmers are already using oxen for farming. But in the modern era, tractors have been found as an option for farming. More farming can be done in less time with tractors. This has reduced the rearing of oxen by farmers.

Luckily they have sold our animals like cows, buffaloes, oxen in the market. Farmers whose homes had at least twenty cows left in one house during the 1980s. There were thousands of cows and calves in one village. Therefore, agriculture was getting manure. And there was the farm. There was no need for chemical fertilizers. But soybean crop does not provide much feed to the animals. People have reduced sorghum cultivation due to soybean cultivation. That is why they do not meet Kadaba. So animal feed is becoming very expensive. Moreover, since tractors are an option, there is a question as to who can keep cattle and buffaloes. That is why animals are drawn for sale in the market. Farmers do not get cows and buffaloes to buy

bullocks. It is bought by assassins. And use it as a mass product for captured animals. No choice. The animals are becoming extinct. Just as the tiger is becoming rare to us today. Also used for slaughtering animals like stage, cow, goat, ox, buffalo etc. The number of animals is declining as people are more inclined to sell rather than keep animals. They do not have access to fodder for animals. Due to the time spent by the farmers, it is seen that people do not keep animals. So the number of animals is declining.

Comparison of soybean and cotton

After the cotton is picked, the farmers are uprooted and the trees are collected. Traps are made by filling at least six to ten bullock carts per acre. At least ten bullock carts get fuel from one acre. And farmers use cotton palhati/ lakud, turats, etc. for cooking. Each family consumes at least two to five kilograms of firewood per day as fuel. Fuel is required for cooking. And the cotton wood in the field works a lot as a fuel for the dawn. People's poles will not be closed. Because everyone has to eat on their stomachs. They use chool and wood in rural areas to cook food. So inevitably 365 days x5 kg of wood = 1825 kg of wood or fuel. Use.

The wood obtained from cotton is used as a fuel for combustion. But since the tree is taller than the soybean crop. People put it in a real threshing machine to make it and separate the seeds. Unfortunately, axes cannot be used as fuel. This means that farmers do not get at least 1825 kg of fuel from cotton due to firewood soybeans. And farmers will not be able to turn off the mulch. They cook on the stove. Water is heated on the stove for bathing. In average 1825 kg of wood was obtained from cotton every year. They do not get wood because of soybean cultivation. So they get wood from other trees that are available to them as combustible fuel. And use it as fuel. But by cutting down other trees like acacia tree, mango tree. Began to be used as fuel. And the farmers have started cutting down the trees available on their farms.

In the year 2000, there were at least twenty trees on the farms of the farmers. In 2020, they cut down one tree each year. By 2020, there will be 00 trees on that farmer's farm. This made the soybean crop even more profitable. However, it is not used as a fuel. So the farmer had to cut down other big trees instead of cotton. And had to be used as fuel. So today there are no trees left in their fields. So soybean crop is becoming dangerous for sustainable development today.

4. Summary

Soybean is a very good cash crop for farmers. As a result, the economic status of farmers has also improved. However, compared to cotton and sorghum, safflower, and other crops, the above example also shows that soybean is a hindrance to sustainable growth to some extent. Due to soybean, farmers do not get kadaba. So he has reduced the number of animals he keeps. It does not get as much fuel as cotton wood. As a result, large trees are cut down and used as fuel, leaving farms desolate. This naturally reduces the amount of oxygen we get from nature. The ozone layer in the atmosphere is therefore increasing in heat. So the question of global warming is facing us. So even if the soybean crop is

beneficial. Considering some of the above, you are facing some danger.

References

- [1] Pradeep Aglave, Social Research Methods, Nagpur Publications.
- [2] Chavan N.L. Economics of Development, Publication Jalgaon
- [3] <https://link.springer.com/article/10.1007/s40003-013-0088> date 23/11/2020