



# Review of Research



International Online Multidisciplinary Journal

Volume - 7 | Issue - 6 | March - 2018

5.2331(UIF) 2249-894X

## “TRENDS IN SOYBEAN PRODUCTION IN HINGOLI DISTRICT FROM 2011-12 TO 2013-14”



**Dr. Anil Chidrawar**  
I/C Principal

A.V. Education Society's  
Degloor College, Degloor Dist. Nanded

**Dr. N. H. Awade**

*Dr. N. H. Awade*

Head Deptt of Business Studies, Gramin (ACS) Mahavidyalaya Vasantnagar,  
Mukhed Dist. Nanded (M.S)

Abstract. Soybean (*Glycine max* Linn.) is a leguminous and self pollinated crop belongs to family Leguminosae sub-family Papilionoideae (fabaceae). Crop

**Editor - In - Chief - Ashok Yakkaldevi**



International Online Multidisciplinary Journal  
REVIEW OF RESEARCH  
ISSN NO: 2249-894X

Review of Research (ROR) Journal is an Online International Multidisciplinary Research Journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double-blind peer reviewed referred by members of the Editorial Board. Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

## OUR CHIEF EDITORS

India



Ashok  
Yakkaldevi

Iran



Bijan  
Goodarzi

Bucharest



Ecaterina

Sri-lanka



Perera

## Associate Editors



Dr. T. Manichander



Sanjeev Kumar Mishra

## Associated and Indexed, India

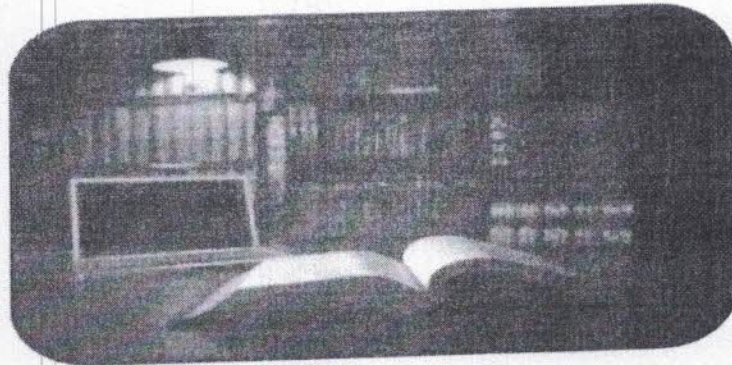
### OPEN J- GATE

- International Scientific Journal
- Consortium Scientific
- Google Scholar
- DOAJ
- EBSCO
- Index Copernicus
- Academic Journal Database
- Publication Index
- Scientific Research Database
- Recent Science Index
- Scholarly Journals Index
- Directory of Academic Resources

- Elite Scientific Journals Archive
- Current Index to Scholarly Journals
- Digital Journal Database
- Contemporary Research Index
- Mercyhurst University
- Western Technological Seminary, Holland
- Washington University



ISSN NO:- 2249-894X      Impact Factor : 5.2331(UIF)      Vol.- 7, Issue - 6, March-2018



Sr. No	Title And Name Of The Author (S)	Page No
1	Contribution of School Satisfaction, Home Environment, Temperament and Personality Disorder In Absenteeism Dr. Devendra Singh Bisht	1
2	A Review: Impact of Pesticides on The Environment R. N. Salunke, T. M. Wandre and S. V. More	9
3	A Study on The Constructive Based Teaching Strategies In Relation to Academic Achievement in English Firdose	14
4	Trends in Soybean Production in Hingoli District From 2011-12 To 2013-14 Dr. N. H. Awade and Mr. Suresh S. Kashide	22
5	An Assessment of Solid Waste Management (SWM) in Urban Area of Ara In Bhojpur District Dr. Narendra Kumar and Dr. Sunita Kumari Sharma	27

# REVIEW OF RESEARCH

ISSN: 2249-894X

IMPACT FACTOR : 5.2331(UIF)

VOLUME - 7 | ISSUE - 6 | MARCH - 2018



## "TRENDS IN SOYBEAN PRODUCTION IN HINGOLI DISTRICT FROM 2011-12 TO 2013-14"

Dr. N. H. Awade<sup>1</sup> and Mr. Suresh S. Kashide<sup>2</sup>

<sup>1</sup>Head Deptt. of Business Studies, Gramin (ACS) Mahavidyalaya Vasantnagar, Mukhed Dist. Nanded (M.S)

<sup>2</sup>Assistant Professor, Degloor College, Degloor. Dist. Nanded (M.S)

### ABSTRACT

*Soybean (Glycine max-Linn.) is a leguminous and self pollinated crop belongs to family Leguminosae sub-family Papilionoideae (fabaceae). Crop cultivars generally reach a height of around 1 m (3.3 ft), and take 80-120 days from sowing to harvesting. Soybeans, like most legumes, perform nitrogen fixation by establishing a symbiotic relationship with the bacterium Bradyrhizobium japonicum and capable of transforming nearly 60-100 kg atmospheric nitrogen into 30-40 kg nitrogen in the soil. It is categorized as an oilseed rather than a pulse, despite being rich source of protein and used as food and feed by the human as well as livestock across the globe because soybean cannot be cooked as a normal pulse. Parts of plants like leaves, stalks and stems are also used as dry fodder for the animals.*



**KEY WORDS:** Seed, Rainfall, Yield, Agriculture.

### INTRODUCTION

Domestication of soybean has been traced to the eastern half of North China in the eleventh century B.C. or perhaps a bit earlier. Soybean has been one of the main plant foods of China along with rice, wheat, barley and millet. According to early authors, soybean production was localized in China until after the Chinese-Japanese war of 1894-95. The first use of the word "soybean" in U.S. literature was in 1804. However, it is thought that soybean was first introduced into the American Colonies in 1765 as "Chinese vetches". For many years, most of the references to this crop were by people working in eastern and southeastern United States. Most of the early U.S. soybeans were used as a forage crop rather than harvested for seed. Most of the early introductions planted in these areas were obtained from China, Japan, India, Manchuria, Korea, and Taiwan.

Sustained growth in crop production can be achieved provided the sustainable growth in profitability, fuelled with higher yield increase, outpaces the growth in cost of production. Sufficient returns from the crop encourage farmers to continue with the crop over the years in the cropping system and also affect changes in crop mix in the non-traditional areas. The question arises that whether cost of cultivation of soybean is rising or profitability shrinking from crop? Against this backdrop, it is pertinent to understand



the changes in cost of cultivation and profitability from soybean cultivation over time. The specific objectives of the paper are to find out the trends in the costs and returns from soybean to throw light on the impact on the profitability of farming in most important oilseed crops of the country.

### INDIAN SCENARIO:

Soybean is the numerouno oilseed crop in India. Soybeanhas become an important oilseed crop in India in a veryshort period with approximately 10-million ha area underits cultivation. India is divided into five agro-climatic zonesfor soybean cultivation. These are northern hill zone,northern plain zone, north eastern zone, central zone, andsouthern zone. There are specific varieties released for eachzone which are suited to their agro-climatic conditions.

There has been an unprecedented growth in soybean; areawhich was just 0.03 m ha in 1970 and has reached to9.30 million ha in 2010. The mean national productivityhas increased from 0.43 t/ha in 1970 to 1.36 t/ha in 2010.

The major soybean growing states are Madhya Pradesh,Maharashtra, Rajasthan, Karnataka, Andhra Pradesh, andChattisgarh. Due to rapid expansion, crop surpassedarea and production of rest of the oilseeds in2006–07. Soybean is now predominantly grown as rainfedcrop in vertisols and associated soils with an average cropseason rainfall of 900 mm, which varies greatly acrosslocations and years. Introduction of soybean in these areahas led to a shift in cropping system from rainy seasonfallow followed by post-rainy season wheat or chickpeasystem fallow (wheat/chickpea) to soybean followed bywheat or chickpea (soybean–wheat/chickpea) system. This has resulted in an enhancement in the cropping intensityand resultant increase in the profitability per unit land area.

Introduction of soybean has helped in improving the socioeconomic conditions of large number of small andmarginal farmers probably due to the fact that even underminimum agricultural inputs, management practices, andclimatic adversities, it fetches profitable returns to thefarmers. In fact, soybean is one of the most resilient cropsfor the rainfedkharif season as despite aberrant weatherconditions in recent past, the crop has maintained its performance.The area under soybean is spread in latitudinalbelt of about 15\_–25\_N comprising the states of MadhyaPradesh, Maharashtra, Rajasthan, Chhattisgarh, AndhraPradesh, and Karnataka. These states together contribute toabout 98 % of the total soybean production in the country.

In recent years, soybean has shown a rapid increase in areain southern parts of the country, particularly in the states ofMaharashtra, Andhra Pradesh, and Karnataka. MadhyaPradesh since beginning has been the major contributor tothe soybean area and production, currently contributing59 % of area and production followed by Maharashtra witha contribution of 28 and 26 % in terms of total area andproduction of the country. The crop can be grown in most parts of India, and states like northeast states, HimachalPradesh and Jharkhand, have good potential of soybean.

### CONSTRAINTS TO SOYBEAN PRODUCTION:

Despite having made rapid stride for both coverage andtotal production, soybean still suffers on productivity front.There are a number of constraints, pertaining to climate,edaphic, production, and technology aspects as mentionedbelow that hinder higher productivity.

- Most of the area under soybean cultivation are a rainfed.
- Erratic behavior of monsoon affecting planting.
- Large spatial and temporal variability in rainfall.
- Soil moisture stress at critical growth stages, especiallyseed-filling stage.
- High-temperature stress at critical growth stages.
- Biotic interferences to crop growth.
- Limited mechanization.
- Poor adoption of improved production technology—low risk covering ability.



- Monocropping and poor varietal diversification increasing risk chances.
- Timely availability of quality inputs.
- Poor/inadequate technological information.
- Poor utilization in food chain owing to characteristics of soybean.
- Road blocks in utilization as pulses because of hard-to-cook characteristics of soybean.
- Psychological stigmas and conventional food habits.
- Lack of awareness about health/nutritional benefits.
- Presence of anti-nutritional factors in soybean.
- Limited entrepreneurship for processing.

**Harvesting:**

Timely harvesting of the crop, when pods turn pale yellow, is recommended to avoid shattering. More mechanical damage is occurred with combine harvesting in over mature crop. Manual threshing may be used for retaining seed for sowing purpose.

**Marketing Support:**

Soybean is covered under Minimum Support Price (MSP), which is announced well before the harvesting of crop. National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) is the Nodal agency to undertake procurement of soybean under Price Support Scheme (PSS). Year wise details of MSP and Average Market Price of soybean during peak seasons of last three years indicates that the price of soybean never falls below MSP mainly because of large demand of raw material by Solvent Extraction Plant and global competition for export of soybean de-oiled cakes. This has facilitated faster growth in area expansion of soybean.

**Nutritive Values:**

The unique chemical composition of soybean seed which includes about 20% oil and 40% protein besides number of nutraceutical compounds such as isoflavones, tocopherol and lecithin has made it one of the most valuable agronomic crops in the world. Owing to its oil and protein profile, this crop has an important role in nutritional security. However, the food uses of soybean in the country are meager (5-6%). Currently, almost 100% of the oil extracted from soybean is consumed in the country rather a large quantity (about 3.0 million tonnes) of soybean oil is also imported. A variety of soya food products given below are being popularized and promoted:

- ☑ **Soyamilk:** Soybean milk can be used in the same way as dairy milk.
- ☑ **Tofu:** It is made by coagulating the hot soya milk and used as a substitute of dairy paneer.
- ☑ **Soya Nuggets:** These are protein rich (>50%) products made of soybean.
- ☑ **Bakery Products:** Soybean can be fortified with wheat flour for making bakery products.
- ☑ **Noodles:** Noodles and vermicelli are a form of pasta and popular in India.
- ☑ **Soya Flour:** Full fat soya flour obtained by grinding whole soybeans with heat treatment / toasted to minimize enzyme action or defatted flour produced after complete removal of oil from soybeans.
- ☑ **Soya Protein:** The defatted soya flakes (after oil extraction) are the basis for different soybean products like soya flour, soya concentrate and soya protein highly digestible source of Amino Acids.
- ☑ **Substitute for pulses:** Soybean is traditionally used as pulses in Uttarakhand and as fermented food in North-Eastern region.
- ☑ **Soya Lecithin:** Lecithin is obtained from degumming of soya oil.

**Hingoli District Scenario:**

Sr. No.	Year	Area (Hectares)	Production (Tonnes)	Yield (Kg/Ha)
1	2011-12	146700	204200	1392

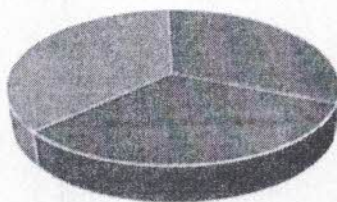


2	2012-13	150500	286700	1905
3	2013-14	170000	186000	1094

(Source: Oilseeds statistics – A compendium – 2015 from ICAR- IIOR)

From the above it is clear that the soybean production in hingoli had been increased from 2011-12 to 2012-13 and then again decreased from 2012-13 to 2013-14. The area for cultivation of soybean crop had been increased during the study period that means the farmers were engaged themselves in cultivation of soybean crop in their fields. The natural things were directly affecting the production of the soybean crop.

Area (Hectares)



■ 2011-12 ■ 2012-13 ■ 2013-14

Fig.: Soybean Cultivation Area during study period.

Production (Tonnes)

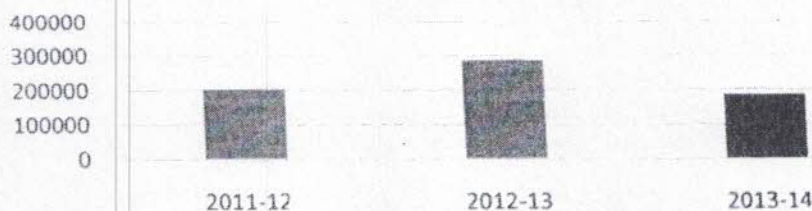


Fig.: Soybean Production during study period.

Yield (Kg/Ha)



Fig.: Soybean Yield during study period.

**CONCLUSION:**

The average cost of cultivation was observed highest on medium farm followed by large farm and lowest on small size farm. Medium farmers has the highest expenditure incurred on human labour and seed while the large farmers has the highest expenditure on machinery labour, fertilizers and plant protection chemicals. It has been observed at the time of survey that, farmers are growing soybean under rain-fed condition and none of the farmers were applying irrigation water to soybean crop. Due to uneven distribution of rainfall, soybean crop faced water stress during the critical stages of crop production cycle.



resulting low yield. To sustain growth in soybean production, soybean growers should provide some irrigation when required. None of the soybean growers were applying potashic fertilizers to soybean crop but it plays vital role in nodule formation and in enzyme activities. Therefore, it is required that farmers should apply potashic fertilizer to the soybean crop.

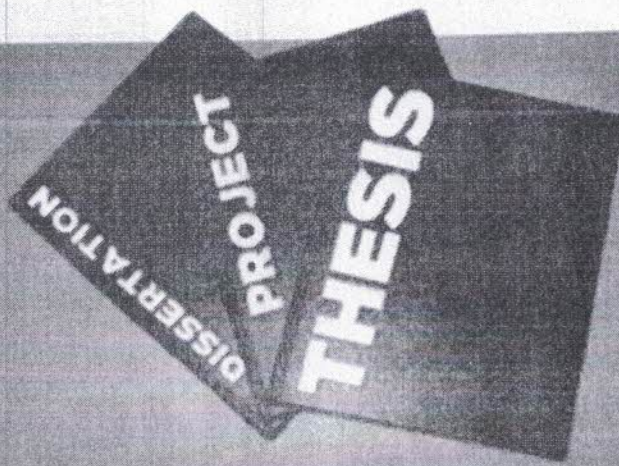
**REFERENCES:**

1. Anonymous (2013) Agricultural Statistics at a Glance, Department of Agriculture and Cooperation Ministry of Agriculture, Government of India, 2013 available at <http://www.dacnet.nic.in>
2. Jaiswal, A., and Hugar, L.B., (2011), An economic analysis of soybean cultivation vis-a-vis its competing crops in Madhya Pradesh, *Karnataka Journal of Agricultural Sciences*, 24(4): 591-592.
3. Jha, G.K., Pal, S., Mathur, V.C., Bisaria, G., Anbukani, P., Burman, R.R. and Dubey, S.K, (2012), *Edible Oilseeds Supply and Demand Scenario in India: Implications for Policy*, Division of Agricultural Economics, IARI, New Delhi.
4. Kumar, S. (2013), Economic analysis of Resource Conserving Technologies in Eastern Uttar Pradesh India, *Ph.D Agricultural Economics Thesis*, Department of Agricultural Economics, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi.





# BOOK PUBLISH at U.S.A.



# THESIS DISSERTATION PROJECT CONVERT INTO BOOK

  
Dr. Anil Chidrawar  
VC Principal  
A.V. Education Society's  
Degloor College, Degloor Dist. Nanded



**LAXMI**  
BOOK PUBLICATION, Solapur  
Ph.: 0217-2372010/+91-9595-359-435  
Email: ayisrj2011@gmail.com  
Webdite: lbp.world