

A Study On Export Of Soybean From Indore

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EXECUTIVE SUMMARY

Agriculture plays a crucial role in Indian economy. It is the backbone of our economic system. Agriculture not only provides food and raw material but also employment opportunities to a very large proportion of population. In India the main occupation of working population is agriculture. About 70 per cent of our population is directly engaged in agriculture. In advanced countries, this ratio is very small being 5 per cent in U.K., 4 per cent in USA., 16 per cent in Australia, 14 per cent in France, 21 per cent in Japan and 32 per cent in USSR. The most popular and the largest produced oilseed in the world is soybean. It has got the support of wide variety of climates and soils and that is why it is considered to be the most economical crop.

Madhya Pradesh is one of the fastest growing States of India. Since its formation in 1956, Madhya Pradesh has grown from being agriculture and mining based economy to an industry or services based economy. With an area of more than 150 lakh hectares being under cultivation, agricultural crops such as soybean, wheat, paddy, jowar, maize, gram, masur, tuar and mustard are the main crops. The state has a well-built infrastructure that has attracted investments in various sectors. The emergence of industrial goods

among the top export items is an indication of the rise of the industrial sector in Madhya Pradesh.

INTRODUCTION

Agriculture, for decades, had been associated with the production of basic food crops. Agriculture and farming were synonymous so long as farming was not commercialized. But as the process of economic development accelerated, many more other occupations allied to farming came to be recognized as a part of agriculture. At present, agriculture besides farming includes forestry, fruit cultivation, dairy, poultry, mushroom, bee keeping, arbitrary, etc. Agriculture may be defined as an integrated system of techniques to control the growth and harvesting of animal and vegetables. It is an uncomplicated endeavour comprising of technical and practical processes that helps in the maintenance of the ecological balance and protects human resources; and most importantly it is a viable food production system.

Soybean belongs to the legume family of East Asia and is related to peas and clove. It is an oilseed bean, oval in shape, which is produced on a bush-like, green soybean plant. Size of soybean is like the size of a common pea. As, it provides oil and protein in bulk; soybean is also called a miracle crop. It comprises around 45% proteins and 18% oil. This, 5000 years old, crop is very nutritive in nature and a wide variety of climates and soils support this crop. It also contains unsaturated fatty

acids in high proportion. The most popular and the largest produced oilseed in the world is soybean. It has got the support of wide variety of climates and soils and that is why it is considered to be the most economical crop and has a good worth. Before Second World War, soybean was not considered an important crop and thus was not used on a large scale. But after the war, it rose up as one of the most important crop of the world Soybean production constitutes around 55% of the total world production of oilseeds and figures around 170-185 million tons. The production of soybean has showed an increase of 5.35% during the last 10 years.

Fig.: Supply and distribution of soybean in major producing countries and the World.

Country	Year	Area (m ha)	Production (m t)	Opening Stock (m t)	Domestic supply (m t)	Imports (m t)	Total Supply (m t)	Dom. Utilization (m t)	Exports (m t)	Closing stock (m t)
Argentina	2017/18	16.70	42.00	15.50	57.50	2.30	59.80	48.50	6.00	5.30
Argentina	2016/17	17.75	56.00	16.20	72.20	1.60	73.80	50.80	7.50	15.50
Argentina	2015/16	19.53	57.50	15.00	72.50	0.40	72.90	47.65	9.05	16.20
Argentina	2014/15	19.79	61.40	9.90	71.30	0.02	71.32	44.80	11.52	15.00
Brazil	2017/18	35.05	114.00	6.47	120.47	0.30	120.77	47.77	71.00	2.00
Brazil	2016/17	33.91	114.08	1.99	116.07	0.30	116.37	45.40	64.50	6.47
Brazil	2015/16	33.25	95.44	0.96	96.39	0.40	96.79	43.21	51.59	1.99
Brazil	2014/15	32.09	96.23	1.93	98.16	0.32	98.48	43.20	54.32	0.96
China	2017/18	8.20	14.61	14.58	29.19	99.50	128.68	114.18	0.42	14.09
China	2016/17	7.21	12.94	14.75	27.69	96.15	123.84	109.04	0.22	14.58
China	2015/16	6.45	11.61	16.25	27.86	85.75	113.60	98.69	0.17	14.75
China	2014/15	6.59	12.16	14.22	26.38	81.09	107.47	90.91	0.32	16.25
India	2017/18	10.60	8.00	0.90	8.90	0.26	9.16	8.96	0.05	0.15
India	2016/17	11.50	10.50	0.10	10.60	0.05	10.65	9.57	0.18	0.90
India	2015/16	11.60	7.10	0.70	7.80	0.10	7.90	7.78	0.03	0.10
India	2014/15	11.00	8.50	0.29	8.79	0.01	8.80	8.07	0.03	0.70
USA	2017/18	36.22	119.52	8.21	127.73	0.68	128.41	57.11	56.20	15.10
USA	2016/17	33.47	116.92	5.35	122.27	0.61	122.88	55.51	59.16	8.21
USA	2015/16	33.06	106.85	5.20	112.05	0.65	112.70	54.66	52.69	5.35
USA	2014/15	33.42	106.88	2.50	109.38	0.90	110.28	54.95	50.13	5.20
World	2017/18	125.66	336.77	51.39	388.16	154.31	542.47	349.13	151.34	42.00
World	2016/17	121.21	348.76	44.37	393.13	148.63	541.75	341.26	149.10	51.39
World	2015/16	121.80	314.84	43.97	358.81	134.84	493.65	320.37	128.92	44.37
World	2014/15	119.86	319.95	33.33	353.28	126.45	479.73	304.28	131.48	43.97

Source: AMIS, FAO website.

Around 30% of the world's total produce is traded annually. USA is the leading producer of soybeans followed by Brazil and Argentina. The major exporters of soybean in the world are USA, Brazil and Argentina whereas the major importers are China and European Union. About 85% of the soybean produce is crushed and bi-products of soybean are derived. On crushing soybeans, 18% soy oil is recovered and the rest in soy meal. Crushing or processing, nowadays, is done with the use of chemical methods. These by-products are traded individually but are annually produced. Iran, China and eastern nations are major importers, while Argentina Brazil is major competitors for India. The origination of soybean lies in the north-eastern areas of China. It was cultivated about 5000 years ago and was considered as one of the sacred crops.

Asian people have been eating soybeans and also using it in different medicines. A 2200 B.C written record had been found in China relating to soybeans. Soybeans started to become popular and reached Japan and China by 1st century A.D. When soybeans were introduced to U.S.A, it was not given the due importance. In the early 1900's, it was a subject of testing for the American scientists. America introduced more varieties of soybean during this period. After the 2nd world war, production of soybean increased dramatically and since then the same scenario continues the annual production of soybean in India is around 7 million tons.

Madhya Pradesh being the leading producing state of India contributes to around 75% of the total Indian production and is also called the soybean bowl in India. Likewise soybeans, the rate of production of soy meal in India is on an increasing level with a production figure of 5 million tons.

Soy oil is considered as one of the most important edible oil in the country. Indian production of soy oil is around 1 million tons annually and it accounts for about 18% of total consumption of oils in the country.

Madhya Pradesh, a landlocked State situated in the central part of India, shares its borders with five States, namely Rajasthan in the north-west, Uttar Pradesh in the north, Gujarat in the west, Maharashtra in the south, and Chhattisgarh in the north-east. Spread over an area of 308.3 thousand sq. km., it is the second largest State in India by area. The State is part of the peninsular plateau of India, and is endowed with rich natural resources which beget a vibrant agricultural and industrial sector.

Madhya Pradesh has the country's largest forest cover of 77.5 thousand sq. km, and also has large reserves of minerals such as iron ore, diamonds, copper ore, magnesium ore, limestone, coal, marble and granite. These natural resources are complemented by substantial human capital.

According to the Census 2011, the State of Madhya Pradesh had a population of more than 72 million, with a literacy rate of nearly 64%. Agriculture is an important source of livelihood in the State, with more than 150 lakh hectare area being under cultivation. A vast majority of the working population depends on agriculture sector with soybean, wheat, paddy, jowar, maize, gram, masur, tuar and mustard being the main crops. Agriculture activities in the State are largely supported by rivers such as Narmada, Chambal, Mahi, Tapti, Betwa, Sone, Banganga, Ken, Pench, Tawa and Shipra.

The State also has a well-built infrastructure, with the total road network being 64719 km until

January 2018. The State also accounts for approximately 7% of the national highways in the on 28th February 2018, the installed power capacity in the State was 20119.3 MW, with 19.3% being sourced from the renewable. Out of the total installed capacity, 45.6% was owned by the private sector. The State accounts for nearly 6% of the total installed power capacity in India.

Indian Soybean Market

Soybean holds a very important position in the Indian agriculture and economy and it has a worth of over Rs. 5000 crore as mentioned above, it stands at the 5th position in the list of the leading soybean producing countries with a production figure of around 7 million tons. Madhya Pradesh has the lead among the soybean producing states in India. Regarding consumption of soybean in India, it holds the 6th position in the leading consuming countries. Of the total production of soybean in India, 10-12% of it is directly consumed and the rest is crushed to derive soy meal and soy oil. Indian soy meal is considered to be one of the

country. In terms of electricity, as premium soy meals and European and Asian countries prefer to use it other than any soy meal. India exports approximately 65% of the total soy meal produced and has turned out to be one of the largest exporters of soy meal usually to the Asian countries. The soy meal is exported to South Korea, Thailand, Philippines and Japan.

Though soy meal is not imported to satisfy the growing domestic demand, but this is not in the case of soy oil. A large share of soy oil consumed in India is imported from Argentina, Brazil and US. In fact, soy oil is not permitted to export in bulk. About 1.5 million tons of soy oil is imported which makes the availability of oil in the country at 2.5 million tons. Moreover the rate of imports is still at a rising level. The prices of soybean in the Indian market are highly volatile because they depend on the prices of the international market. As reference markets, the markets at Indore and Mumbai are looked upon.

Months	Quantity (Tonnes)		Value (Rs. Lacs)	
	Prev. Year	Current Year	Prev. Year	Current Year
April	16,314.69	202,767.47	6,867.77	53,457.25
May	18,360.43	119,355.83	8,111.94	33,100.62
June	33,467.38	100,838.83	13,685.65	27,653.79
July	22,642.87	87,877.38	9,748.54	25,340.74
August	21,967.61	213,059.17	9,129.63	54,875.26
September	26,454.41	71,869.84	10,335.85	22,174.90
October	40,575.11	107,012.59	13,626.23	30,305.71
November	129,700.56	298,333.29	37,650.42	77,475.19
December	317,004.01	280,805.70	88,467.90	73,411.54
January	203,596.17	169,727.28	55,926.71	45,502.84

Fig.: Month wise export of soybean meal (HS 230400) from India in 2018

The Indian Institute of Foreign Trade (IIFT), in association with the Madhya Pradesh Government, held Focus Group Discussion with the exporters from the State to assess the various issues and challenges that the exporters face. The Export Import Bank of India also organised an industry interaction in Indore and interacted with exporters and senior Government functionaries in Bhopal and Indore. The issues highlighted during these interactions formed a critical input in shaping the recommendations that have been highlighted in the study. The major issues highlighted during various interactions, amongst others, are following:-

- Certification problems in ICDs, along with issues of container availability (especially food grade containers) and rakes availability.
- High risk of cargo rejection from foreign buyer due to quality issues.

- No government scheme to cover such risks.
- High logistics cost. For instance, logistics cost of Nhava Sheva to Dubai is INR 3,500 per container whereas the cost from Pithampur to Nhava Sheva is INR 50,000 per container.
- Very high soya seed cost in domestic market.

Warehousing & Storage Capacity

In the context of Madhya Pradesh, adequate transportation, storage and distribution services is a major constraint as sensitive product such as pharmaceuticals and perishable products account for a significant share of the State's exports.

Ownership	Capacity (Metric Tons)	Number
Private	607989	139
Cooperative	98848	19
Public	2434	5
Total	709271	163

Fig.: Cold Storage Infrastructure in Madhya Pradesh

In 2016-17, pharmaceutical was the highest exported product from Madhya Pradesh and accounted for nearly 23% of the exports. In fact, warehousing becomes quite complex in case of pharmaceutical products as different drugs require different temperature levels.

Indian Scenario of Soybean production

- India's annual production of soybean has been around 8.5-10 million tonnes in the recent years with India's production in 2009-10 estimated to be around 8.9 million tonnes by the Government of India.
- Madhya Pradesh, Maharashtra, Rajasthan and Andhra Pradesh are the major cultivators of this important oilseed, with their respective contributions usually around 60 percent, 25

percent, 6-7 percent and 1-2 percent respectively.

- Soybean is exclusively grown in the Khariff season in India, with sowing taking place after the first monsoon showers in late June or early July. Sowing can extend up to end of July in different parts of the country.
- The harvesting commences from September, with Maharashtra reporting the earliest arrivals. October and November are the peak arrival months, with all India arrivals crossing 10 lakh bags of approximately 90 kg.
- The production is dependent on the monsoon and fluctuates between years.
- India is highly dependent on imports to meet domestic edible oil requirement. Government policies are in favour of developing the domestic crushing industry and supporting
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Indian farmers and do not promote import or export of soybean. Thus, there is virtually no import or export of soybeans.

- However, India out of its total soya meal production of around 6.5-7 million tonnes, exports around 3.5 million tonnes with Vietnam, Japan, Thailand, Indonesia, UAE, Greece being the major importers.
- As per second advance estimates, estimated production of soybean in India during 2017-18 is revised downwards from 12.22 million tonnes to 11.39 million tonnes from an area of 10.56 million hectares.
- Growing demand from feed industry helping increase domestic utilisation of soybean meal.
- Final estimates for production of soybean during 2016-17 also revised downwards from 13.79 million tonnes to 13.16 million tonnes from an area of 11.32 million hectares.

Year	Area ('000 Ha)	Production ('000 Tons)	Yield (Kg/Ha)	Change in Area (%)	Change in Production (%)	Change in Yield (%)
2014-15	10910.8	10373.8	950.8			
2015-16	11604.5	8569.8	738.5	6.36	-17.39	-22.33
2016-17*	11320.0	13159.0	1162.5	-2.45	53.55	57.41
2017-18**	10560.0	11390.0	1078.6	-6.71	-13.44	-7.21

Table: Estimates of area, production and yield of soybean in India

- Due to uneven distribution of rainfall and drought conditions at critical stages of crop growth in major soybean growing districts, yield is expected to decline (by 7% over the previous year) and thus, the total production (by 13.4%) of soybean for kharif 2017 crop.
- Domestic consumption of soybean meal/ oil cake is fast increasing in India. As per USDA

data, domestic consumption of soybean oil cake is growing at an annual compound growth rate of 8.6 per cent for the period 2010 to 2017.

International Scenario of Soybean production

- As per Agricultural Market Information System of FAO global soybean production estimates for 2017-18 revised downwards to 336.8 million tonnes from 345.9 million tonnes projected during December, 2017 from an area of 125.66 million hectares.
- Sharp decline in production of soybean is projected for Argentina, due to poor soil moisture for both the spring-planted crop (larger) and the summer-planted crops. Prospects for the summer-planted crop are even less optimistic since the majority of the crop development occurred under the ongoing dry spell (AMIS, FAO).
- Estimates of soybean production in Brazil revised upwards as the conditions are favourable with the crop in the ripening to harvesting stages.

- Soybean utilization in 2017/18 projected slightly down compared to last quarter projections, on account of lower crushing forecasts for several countries, mainly for Argentina and Brazil.

- Soybean export estimates for 2017/18 also revised downwards this quarter, even higher exports by Brazil not likely to compensate for lower shipments from USA and Argentina.
- Forecast for carry-out stocks of 2017/18 crop revised down compared to previous quarter estimates and now projected to be at four-year low, mainly on downward revisions for all major soybean producing countries such as USA, Brazil and Argentina.

Soybean Price Scenario

- Supported with the policy initiatives (increase in import tariffs) and lower than expected production prospects helped improve market sentiments for soybean. Soybean prices ruled below MSP in all major markets during post-harvest months. Soybean process increased significantly from last quarter as well as over previous year same period.

State	Market	January		February		March	
		2017	2018	2017	2018	2017	2018
MP	Indore	2889	3155	2852	3524	2873	3592
	Dewas	2814	3010	2751	3409	2744	3413
	Dhar	2869	3254	2820	3633	2850	3622
	Manasa	2866	3056	2852	3331	2838	3414
	Ujjain	2942	3272	2911	3654	2890	3668
Mah	Akola	2633	3050	2637	3443	2561	3462
	Amrawati	2688	3220	2661	3316	2650	3439
	Latur	2823	3293	2783	3701	2750	3691
	Wasim	2779	3178	2618	3629	2660	3608
	Yeotmal	2799	3165	2762	3475	2662	3439
Raj	Kota	2919	3123	2825	3513	2851	3534
	Baran	2888	3121	2691	3517	2764	3494
	Bhawani mandi	2908	3109	2806	3485	2845	3547
	Ramganj mandi	2920	2816	2858	3384	2820	3512

Fig.: Average modal prices of soybean in major mandies (Rs/qt)

- Average soybean modal prices of soybean for Madhya Pradesh were lowest in the year 2017, even below MSP. The revision in import tariffs and other policy initiatives supported market sentiments and prices started improving from December, 2017 onwards.
- Wholesale price index for soybean has improved in this quarter from a low of 122 in November, 2017 to 152 in February, 2018. The wholesale price index for soybean meal and oil also increased during this quarter.
- Soybean oil prices increasing continuously since April 2017, whereas, soybean and meal prices were declining until November, 2017. The lower estimated production of soybean in the country improved the market sentiments along with the rise in import tariff.

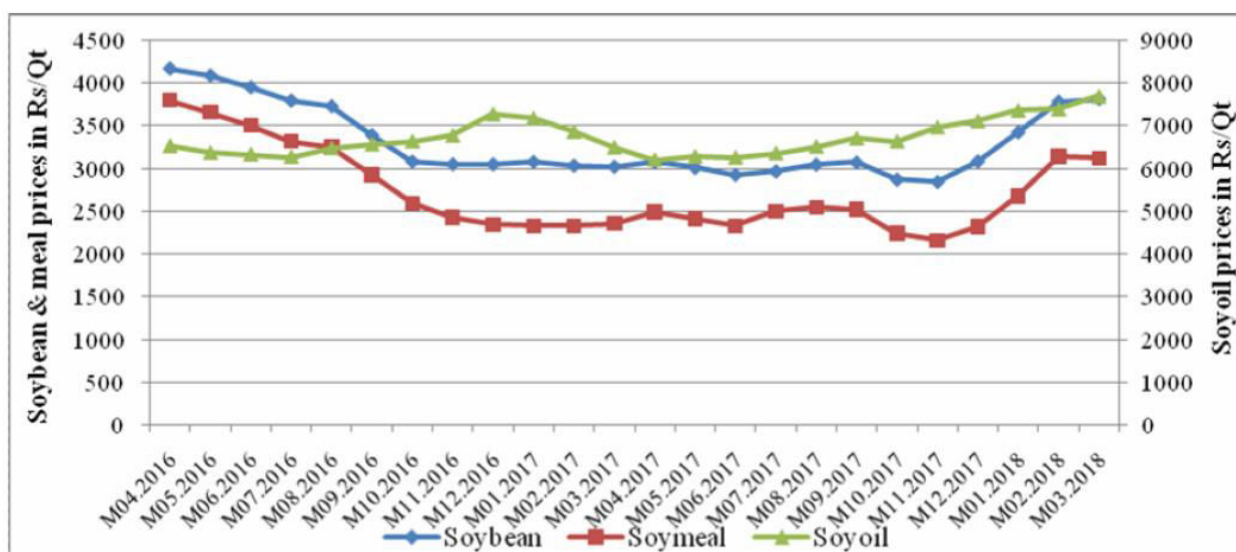


Fig.: Price movement of soybean and products at INDORE market. (Data source: NCDEX)

- Futures prices of soybean and soy oil increased over the period by 14 - 15 per cent and 4 – 7 per cent, respectively for contracts which will expire in April and May.

Policy initiatives

- Argentina reduced soybean export tax from 30 percent to 29.5 percent (Decree 1343/2016). Export taxes will be subject to further monthly reductions of 0.5 percentage points (Until December 2019), down to 18 percent for soybeans; and down to 15 percent for soybean by products (Source: AMIS, FAO).
- Argentina approved the commercialization of one GM soybean variety from Bayer SA (Resolution No. 27/2018, Source: AMIS, FAO).
- Brazil approved two new GM soybean varieties for commercialization from Du Pont and Monsanto (Source: AMIS, FAO).
- Union Budget announced on 1 Feb 2018 by GOI, 3% cess is proposed to be replaced by 10% social welfare surcharge on import duty on edible oils effective from 1 April 2018.

LIMITATION OF THE STUDY

The Study is based on secondary data and hence is open to bias. Due to the constraints from the government in sector it was not possible to get latest data. Today's trend is fast changing trend; it might be necessary to review and reconsider the report of the existing trend. The production of

- China reduced the amount of foreign material allowed in shipments of US soybeans, in January 2018. US shipments that exceed 1 percent of foreign material could be held back for testing.

- The European Commission authorized five new varieties of genetically-modified oilseeds for ten years, including four soybean and one rapeseed varieties. All derived products will be subject to EU labelling and traceability rules.

Soybean is dependent on climatic conditions so to forecast the future growth and production of the crop is not accurately considered.

CONCLUSION AND SUGGESTIONS

Soybean is one of the major crops to be exported and earns a major share of foreign exchange for the country. It helps our country to maintain current account deficit which occurs time to time when we import more goods than required. The need of the hour is to frame suitable policies to support the exporters as well as the farmers other than the already existing policies. Export potential of Soybean is although very high, in spite of having a rich stock of natural resources and skilled personnel. India is required to strengthen its position in the global market. The exporters of Soybean have to overcome various hurdles posed by several factors.

The suggestions inferred from the study are:-

- Indian Soybean exporters should establish tie-ups with advertising agencies, marketing consultants in India or destination for marketing Indian products in the stated countries.
- Focused research and development programmers are required for developing quality products for exporting to other countries.
- India must improve upon marketing, branding and packaging skills to win a higher market shares.
- Modernizing and up grading processing ability to improve the quality standards.
- A designated inspection body and the results together with a range of documents must carry out Soybean products inspection and supporting information must be collected.
- The Indian Soybean industry should look at standardizing the products and use gadgets for documentation to get the recognition of foreign countries.
- Government must provide easy credit of GST to the exporters
- Initiative should be taken by government to cover up the risk of rejection of cargo by foreign countries.
- Indian Soybean must be provided protection of intellectual Property Rights (IPR) at global level.

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