

Role of Indian Pulses and Grain Association in the Development of Pulses Import: A Case of Indian Pulse Industry

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Abstract—In today's time the size of the world economy for pulses is 61.3 million MT. India, one of the world's largest producer as well as consumer of a variety of pulses produces 22% i.e. 13.50 million MT of the world's production. As the country has a huge population which is vegetarian and is mainly dependent upon pulses as its most important source of protein the amount of consumption of pulses in India is about 16 million MT. In order to meet this massive demand, India depends upon the import of pulses of up to 2-3 million from countries like Myanmar, Canada, Australia, USA, Africa and so on. The import basket consists of some remarkable varieties of peas, beans and lentils that are less-familiar in India. Yellow peas, dun peas, green peas, cow peas, green lentils, red lentils, broad beans, kidney beans and so on are primary examples. The Indian pulses and grain association (IPGA) is the head body for pulses industry and trade. This case study tries to review the problems faced by India in the export of pulses and various solutions to those problems. The functioning of the Indian pulse and grain association and the assistance provided by them in the development of pulses import in India

Keywords: Pulses, Import, Export, Agriculture, Indian economy, Indian consumers.

1. INTRODUCTION

India is the largest producer, largest consumer and the largest importer of pulses in the world. In India Pulses are grown in around 24-26 million hectares of area producing 17-19 million tones of pulses annually. India accounts for over one third of the total world area and over 20 per cent of total world production. India primarily produces Bengal gram (chickpeas), red gram (tur), lentil (masur), green gram (mung) and black gram (urad). For majority of vegetarian population in India, pulses are the major source of protein. Pulses and pulse crop residues are also major sources of high quality livestock feed in India.

In the world, major markets from where India is importing the pulses are:

- Small Chickpea: Burma, Tanzania, Australia, China, UAE
- Pigeon pea: Burma, China and Tanzania

- Black gram: Burma, Singapore and Thailand
- Mung bean: Burma, Singapore, China and Australia
- Green and yellow peas: Canada, Australia, Hungary, Tanzania and US
- Lentil: Netherland, Syria, Canada, Turkey, China
- Large Chickpea or Kabuli: Australia, Canada, Turkey, Iran and Burma

2. EXPORT / IMPORT / DOMESTIC AVAILABILITY OF PULSES

India has banned export of all pulses since 2006 except Kabuli Chana. Import of pulses in 2011-12 was 34.96 lakh MT compared to import of 27.80 lakh MT, in 2010-11 and 37.64 lakh MT in 2009-10. Import in 20010-11 had come down due to significant increase in production.

Total availability of pulses for domestic consumption (production + imports- exports) in 2011-12 was 205.26 lakh MT which is close to availability of pulses in the previous year. A summary position of production, export & imports and net availability is presented in the following table:

Table 1: Net availability of pulses from 2005-13

Pulses	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Production	133.9	142.0	147.6	145.7	147.0	182.4	172.10	175.20(T)
Export	4.54	2.64	1.82	1.45	1.29	2.06	1.75	0.66 (Apr-Sep)
Import	19.94	25.04	29.45	25.8	37.64	27.80	34.96	16.74 (Apr-Sep)
Total Availability	149.3	164.4	175.23	170.05	183.35	208.14	205.31	191.28 (Apr-Sep)

Source: agricoop.nic.in

3. EXPORT/IMPORT/DOMESTIC AVAILABILITY OF DIFFERENT PULSES

Production and export/import of major pulses grown in India is given the following tables:

3.1 Tur

Table 2: Net availability of Tur (Qty in MT lakh)

Tur	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Production	27.4	23.1	30.8	22.7	24.6	28.6	26.50	27.80
Export	0.3	0.2	0.02	0.01	0.03	Neg	0.07	0.006 (Apr-Sep)
Import	2.3	2.5	3.1	5.0	3.9	3.5	4.70	2.80 (Apr-Sep)
Total Availability	29.6	26.0	33.9	27.7	28.5	32.1	31.19	30.59 (Apr-Sep)

Source: agricoop.nic.in

3.2 Gram

Table 3: Net availability of Gram (Qty in lakh MT)

Gram	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Production	56.0	63.3	57.5	70.6	74.8	82.20	75.80	79.60(T)
Export	0.40	0.60	1.60	1.30	0.95	2.01	1.70	0.62 (Apr-Sep)
Import	2.80	1.30	1.50	2.00	3.40	1.00	2.06	0.90 (Apr-Sep)
Total Availability	56.90	64.20	57.90	72.7	74.85	80.67	76.16	79.88(Apr-Sep)

Source: agricoop.nic.in

3.3 Urad and Moong

Table 4: Net availability of urad and moong (Qty in lakh MT)
(Source: agricoop.nic.in)

Urad and Moong	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Production	22.0	25.6	29.8	22.1	19.2	35.6	35.40	31.60(T)
Export	Neg	Neg	Neg	Neg	Neg	Neg	0.008	0.009 (Apr-Sep)
Import	0.8	3.3	3.3	4.4	7.1	4.3	4.30	2.98 (Apr-Sep)
Total Availability	22.8	28.9	33.1	26.5	26.3	39.9	39.69	34.57 (Apr-Sep)

3.4 Other Pulses (Rajma, Yellow Peas)

Table 5: Net availability of Rajma and yellow peas (Qty in Lakh MT)

Other pulses	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Other Kharif	5.4	7.1	9.5	8	5.1	13.3	9.30	15.30(T)
Other Rabi	23.1	22.9	20	22.3	22.9	22.7	25.0	23.10(T)
Total Other	28.5	30	29.5	30.3	28	36	34.30	38.40(T)
Export	2.8	1.2	Neg	Neg	Neg	Neg	0.04	0.03 (Apr-Sep)
Import	14.0	17.9	21.5	14.4	23.3	19	23.90	10.06 (Apr-Sep)
Total Availability	38.44	46.63	51.05	44.7	51.22	53	58.16	48.43(Apr-Sep)

(Source: agricoop.nic.in)

Table 6: Demand and supply balance sheet for pulses (000 tonnes)

Total pulses	2010-11	2011-12	2012-13	2013-14
Production	18,240	17,090	18,340	19,770
Imports	2,780	3,500	4,010	3,500
Total supply	21,020	20,590	22,350	23,270
Total Export	209	175	200	200
Domestic Use	20,811	20,415	22,150	23,070
Total utilization	21,020	20,590	22,350	23,270
% imports to Production	15.2	20.5	21.7	17.8

Source: FAO

Because of the high level of fluctuations in pulse production (due to biotic and abiotic stress) and price, farmers are not very keen on taking up pulse cultivation despite high wholesale pulse prices in recent years. Nevertheless, improvement in yields, has contributed to superior pulse productivity in latest years, with for the most part of the increase in pulse productivity in current times in gram. Low pulse yield in India compared to other countries is attributed to poor spread of improved varieties and Technologies, abrupt climatic changes, vulnerability to pests and diseases, and generally declining growth rate of total factor productivity.

There has been significant increase the MSP (minimum selling price) for many of the pulses. This has resulted in an above normal growth in pulse production in recent years. Earlier in the past four years, there have been considerable increases in pulse utilization.

The growing inequality linking production and using up of pulses has resulted in high imports of pulses in present years with imports in 2012-13 (Apr-Mar) attaining a record 4.0 million tonnes an enhancement of 500,000 tonnes over 2011-12.

Despite being world's largest producer of pulses, only small amount of pulses are being exported from India, both because of two reasons which are restrictions on exports and the high demand in the local market.

IPGA has identified a few key factors that affect pulses production, productivity and marketing in India. Fragmented landholding, cultivation on marginal lands, dependence on rain-fed cultivation, and susceptibility to pest & disease attacks, poor rural infrastructure, remunerative farm-gate prices as well as adequate flow of price market information to growers are some of the major challenges of Indian agriculture in general and pulses in particular.

4. INDIAN PILSES & GRAIN ASSOCIATION (IPGA):

In India the Indian Pulses and Grains Association (IPGA), is the head body which is responsible for buying and selling of pulses, dealing mainly with the import and export of grains and pulses in the country. IPGA acknowledged by the Indian government and Ministry responsible for Consumer Affairs and has effectively addressed countless issues faced by the exporters and importers making it an all India rallying point for pulses and grains trade.

The Indian pulses and grain association has above 270 members together with associations from all over India taking the pan-India reach shut at 10,000 stakeholders. The IPGA also enjoys the support of the Indian government, Ministry of Consumer Affairs, Food and Public Distribution (Department of Consumer Affairs) as well as National Associates and CICILS.

4.1 IPGA objectives:

- In the pulse and grain trade and industry the Indian pulse grain association plays a leadership role.
- It assists in policymaking and even provides policy inputs for the government at various levels.
- It provides strategic advice to the government as well as to agribusinesses across the chain.
- Seek to monitor foreign trade in pulses and grains so as to be able to provide effective forward looking guidance to trade and the policy makers.
- It provides help in research at every level possible.
- It connects the Indian stakeholders with the international trading community.

IPGA strives to be a comprehensive provider of requisite domain knowledge on the pulses and grains sector. In addition to addressing the issues of industry and trade, IPGA works with policymakers, researchers and related others, both domestically and globally. IPGA is working towards creating an ethical business environment and supports good trading practices.

IPGA's aspirations are not just national but to play a leadership role in the region (mainly South Asia) and a dominant role in the global marketplace. In pursuance of its objectives IPGA will seek to address issues that impact production, productivity and marketability of pulses in the country. These include input management, improved agronomic practices, logistics, procurement policy, and inclusion of pulses in Public Distribution System (PDS), to name a few.

IPGA, as the apex body of the national industry and trade, will take the onus of essaying a leadership role in domestic agribusiness and play a more proactive role in the global domain to foster healthy relations among Indian market participants and between India and all associates overseas. IPGA works closely with governments at various levels - including the Government of India, State governments and other authorities - to assist in evolving dynamic policy responses by providing market-related inputs and strategic advice with respect to domestic and global agribusiness.

Being importers, IPGA members across the country play a critical role in bridging the demand-supply gap by arranging for timely import of pulses.

IPGA has identified a few key factors that affect pulses production, productivity and marketing in India. Fragmented landholding, cultivation on marginal lands, dependence on rain-fed cultivation, and susceptibility to pest & disease attacks, poor rural infrastructure, remunerative farm-gate prices as well as adequate flow of price market information to growers are some of the major challenges of Indian agriculture in general and pulses in particular.

IPGA will work with the Government and related institutions to look at these key areas that stymie growth and explore solutions to increase output, raise yields, improve quality and deliver better foods to consumers. Regardless of having the world's biggest area for plantation of pulses and in spite of being the world's major manufacturer of pulses, the yield for each hectare in our countryside (about 600 kgs/ha) is less than half the world average and a third of the yield in best-in-class countries like Canada.

4.2 Assistance provided by IPGA:

The Indian pulse and grains association (IPGA) has taken the initiative to bring the stakeholders of the pulse chain together. In order to meet the nutritional requirement of the growing population IPGA is doing a long term assessment of what can be produced domestically and what needs to be imported. They are also working on the sustainability of pulses and safeguarding the interest of all the stakeholders which include the farmers, the traders and the consumers.

As a regulator of the commodities market, their effort has been to work with various stakeholders to see that the physical trade along with the futures market also develops. They are also trying to promote the online trading in commodities. One of

the aspects that they are focusing is on the quality of warehousing that is provided in the futures markets. They have mandated that all the warehouses in the exchange space must register themselves with the warehouses regulator. In 2013, they also mandated setting up the Settlement Guarantee Fund in every exchange. To improve the depth of the market, they have significantly liberalized and enhanced position limits in commodities like chickpeas.

It is a serious endeavour by the Indian Pulse and Grain Association to get all the stakeholders all across the country and the complete value chain of pulses which comprises of Dal Mills, Traders, importers, mediators, producers, commodity exchanges, logistics providers, regulators and policymakers all together on one platform and to have a common voice in today's fast-growing pulses business. The Trade Meet is being held at a critical stage of time when the crop numbers are starting to coming in and there have been talks of shortfall in the Rabi crop production especially of pulses due to a variety of reasons like recent hailstorms and unseasonal rains in various parts of the country.

The Pulses market is at a crucial juncture and needs right kind of support from the government. As association of the stakeholders of the pulses markets in India and in the world we hope the government will take the right kind of policy measures to facilitate the Pulses trade and in the process ensure the right nutritional supply for the population.”

IPGA, last year, had commissioned GGN Research to conduct a Kharif and Rabi Crop Survey and findings of the Rabi harvest were presented at the Trade Meet. The All India estimates for Chana, Lentils and Yellow Peas for this Rabi harvest are as follows:

Table 7: Estimate for 2014-15 of Chana, Lentils and yellow peas

S r. N o.	Cro p	Estimates for 2014-15					
		Acreege ('000 Ha)	Ch an ge	Yield (Kgs/ Ha)	Ch an ge	Produ ction ('000 MT)	Chang e
1	Cha na	8365	- 13 %	665	- 2%	5563	-15%
2	Lent ils	1361.20	- 5%	511	72 %	696.07	64%
3	Yell ow Peas	795.90	3%	740	28 %	588.79	32%

Source: FAO

IPGA works closely with governments at various levels - including the Government of India, State governments and other authorities - to assist in evolving dynamic policy responses by providing market-related inputs and strategic advice with respect to domestic and global agri-business. IPGA will also seek to monitor foreign trade (import and export) in pulses and grains so as to be able to provide effective forward-looking guidance which will further help the

Government in policy formulation. In pursuance of its objectives IPGA will seek to address issues that impact production, productivity and marketability of pulses in the country. These include input management, improved agronomic practices, logistics (scientific storage and movement), procurement policy, and inclusion of pulses in publicly funded welfare programs, to name a few. IPGA will take the onus of essaying a leadership role in domestic agri-business and play a more proactive role in the global domain to foster healthy relations among Indian market participants and between India and all associates overseas.

5. PULSE INDUSTRY IN OTHER COUNTRIES

Pulses can be defined as seeds of annual legumes that consist of flora such as Bambara beans, dry beans, horse beans, dry chickpeas, cow peas, dry lentils, lupines, dry peas, pigeon peas, and vetches that are used for feeding humans as well as livestock. Pulses play a significant and changing function in agricultural systems and in the diet of underprivileged people all across the world. They are perfect in achieving three developmental goals in the developing countries in recovering nutrition and health conditions, minimising poverty through advanced food security, and enhancing environment flexibility. Some of the countries of the world which are the chief producers of pulses are India (23.1%), Canada (6.7%), China (12.08%), Myanmar (7.57%), and Brazil (4.03%), which all together comprises of half of the total yield.

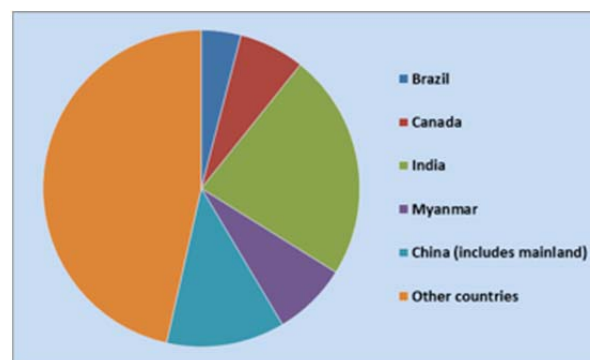


Fig. 1: Share of major pulses producers in 2012

In India, the pulses industry usually refers to a quantity of crops like chickpeas (locally known as chana), tur, masur, urad, moong, and peas. According to 2012 statistics from the United Nation's Food and Agriculture Organization (FAO), the most important pulses by production are dry beans (29.4%), dry peas (24.5%), chickpeas (13.7%), and dry cow peas (8.5%). Altogether these contribute to a total of 89% to the total worldwide output of 70 million tonnes in 2012. In world's total output, the most vital among all is dry bean both by area and production, followed by chickpea and pea. In the total global pulses output lentil contribute 4.6%, it is largely produced in Australia, Canada and India.

6. FACTORS THAT AFFECT THE MARKET

The foremost reason behind why the pulse prices are negotiated directly by the different functionaries of the market which includes exporters and importers as well is that the pulses lack scope in the future market. Due to the deficiency of the future markets for pulses and the lack of price-discovery mechanism the forecasting practices that make valuable price predictions that will help understanding the future pricing of pulse crops, enhancing the success in producing and improving the supply system. These forecasting practices are not so easy to develop; all those factors that affect such price predictions are not quantifiable.

The Price being the chief analyzable variable, the factors that influence the supply and demand side of the market need to be examined. The main supply-side determinants that have an effect on prices are productivity and area used for cultivating pulses, globally.

6.1 Issues in production:

The supply in the world is considered as the most important factor that affects the change in pulses prices from time to time. As production is mainly dependent on the condition of the weather, the factors in the long-run are area under cultivation and prospective yields. As compared to the other commodity markets like oil seeds, cereals the market for pulses is a relatively thin market amounting to a small total global output.

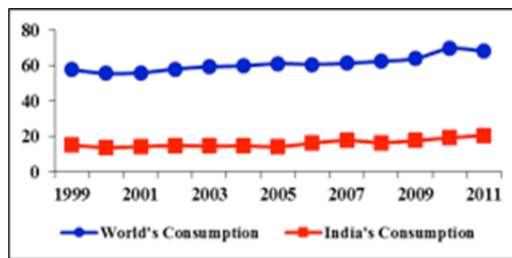
The pulses growth has risen at a slow pace of less than one and three-fourths through the same period. In absolute terms, pulse production increased from 41 million tonnes in 1961 to 70 million tonnes in 2012, showing a net increase of only around 29 million tonnes, with a growth of barely 1.4% yearly (Table 1).

Table 8: World total pulse area, yield and production 1961- 2012

Year	'61	'67	'81	'90	2001	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12
Area (Ha)	64	64	63	70	67	77	77	77	77	77	77	77	77	77	77	77
Yield Kg/Ha	63	67	68	80	84	88	88	88	88	88	88	88	89	88	88	89
Production	41	43	45	56	58	59	66	66	66	66	66	66	67	67	67	70

Source: FAO

India, although being a major producer and consumer of pulses, due to restricted irrigation facilities and barren land areas, and poor policy initiatives to promote the pulse market, the productivity problems are much worse than those in other major pulse-producing countries. The Pulse productivity is much higher in most major pulse-producing countries than that of India. Thus, the pulse yield in Canada has enhanced from 1141 kg/ha in 1961 to 1893 kg/ha in 2012.



Source : FAO

Fig. 2: Pulses yield (kg/hectare) for major pulse producer 1999 to 2012

Table 9: Yield of pulses (kg/hectare) from 1961-2012

Country/ Year	1961	2012
China	876	1431
Myanmar	442	1323
Canada	1141	1892
Brazil	668	1027
India	540	641

Source: FAO

7. REASONS WHY PULSES ARE IMPORTED:

- 1) **Fragmented Land Holdings:** The average land-holding in India is not only small in size but split into pieces and scattered due to sub-division and fragmentation of land. This has resulted into the uneconomic land holding making investments in improved technology and inputs unviable. This has caused reduction in land productivity.
- 2) **Growing population:** The heavy pressure of population on land is caused by the limited growth of employment opportunities in the non-agricultural sector for rural people and rapid growth of rural population. In 2001, about three-quarters of the rural working population were employed in the agriculture sector.
- 3) **Land Degradation:** The natural resource degradation in rural areas has occurred due to two major problems one is the increasing population pressure that has resulted into decline in forest cover and second is the erosion and loss of top-soil which is very difficult to reverse. The increased land degradation is mainly due to the increased use of chemical fertilizers, and low quality of canal water. This has resulted into loss of nutrients in the land and fall in the productivity levels.
- 4) **Poor rural infrastructure:** The economic rural infrastructural facilities are inadequate in terms of availability of road, transportation facilities, electricity and power. The Government's expenditure on total rural development has declined tremendously. There is a marked slowdown in capital formation in the agriculture sector.
- 5) **Inadequate Irrigation facilities:** The vast proportion of cultivable land in India is rain-fed. Further, the infrastructure for irrigation is highly underdeveloped due to defective management as made known by the reality that only 52.4 percent of the land was irrigated in the year

2003. As rainfall is often inadequate, tentative and uneven, it leads to little productivity.

8. PROBLEMS FACED BY IMPORTERS IN IMPORTING PULSES:

- For the importers quality is a major consideration; the importers are enthusiastic to give petite premium for superior quality. The Traders look for good enough quality at the minimum price. Mainly the key quality attributes that the traders look for include cleanliness, uniform size, colour and shape.
- The importers of India wish to have the pulses sorted, graded and milled in India because the price of such activities is considerably lower in India than in the exporting countries. Therefore, high prices of the pulses being imported are a problem being faced by the importers.
- The departments of agriculture's export in United States credits guarantee programs like GSM-102 and GSM-103 which are not considered as an attractive offer by the Indian importers. The rate of interest that is charged on US credit are comparatively higher than those that are available in the local market therefore, the utilization of the US credit exposes the importers risk on exchange rate.
- One another major reason behind importing decorticated and ripped pulses is that the moisture from soaking which is a process that is carried out prior to the process of milling might have an effect on the quality at the time of shipping
- The use of short term credit by many importers which is easily available from many known Indian institutions and that too at an attractive rate of interest to help in increasing the imports. The Indian parastatal trading companies, which include the State Trading Corporation and the Minerals & Metals trading Corporation, are economical sources for providing finance to the Indian importers.

9. RECOMMENDATIONS:

- Subsidization of prices should be done before the end of the financial year which will lead to low prices of the pulses at the time of crop harvest in the khariff season.

- An end to the current policy of 15 percent subsidy on the imports by the government agencies should be put to an end. The Government should ask their agencies to obtain the goods from the private importers and then decrease the price by 15 per cent i.e. the subsidy charged by the government and then sell the goods to the Public Distribution System (PDS).
- In comparison to the private sector imports the government agencies which are importing pulses might not be successful in importing at professional prices.
- The pulses should be offered at the same time when they are harvested in order to cover the peak consumption so that the prices are not high later on.
- There should be uniform Central Government policies as well as state government policies in India.
- A ban should be put on the future trading and essential commodity act that has been implemented in India
- The government agencies should sell the entire stock that is imported through an electronic platform instead of selling them through a tender process. This will apprehensively minimise the cost of inviting tender and many other administrative costs which incur as a result of the government agencies. And it will even support participation by smaller players.

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