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PULSE INDIA

AN INDIA PULSES AND GRAINS ASSOCIATION PUBLICATION

- Myanmar Pulses Trade – August 2021
- Pulses Production for Sustaining Self Sufficiency
- The Blissing Brown – Black Eye Bean

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Chairman Message

Dear Members,

The global Covid-19 pandemic continues to impact human life in many ways. The second wave has affected us severely. Since the Covid-19 pandemic hit India last year, IPGA had decided to dedicate certain resources to fighting the pandemic and supporting frontline workers as well as victims through it. Last year, IPGA contributed a sum of INR 21 lakhs to the PM-CARES fund, as well as provided 11,000 food grain ration bags to migrant families and families stuck in containment zones. This year, IPGA supported a noble cause of providing quality and critical healthcare to the less privileged citizens of Gujarat and step up the fight against COVID-19. IPGA donated a ventilator to Shrimad Rajchandra Love and Care (SRLC) Hospital in Dharampur, Valsad District, Gujarat. As the nodal body of the pulses trade, we are proud of all the CSR work done so far. We will always step up to support all the state and central government efforts in this time of crisis. This ventilator will be useful for years to come beyond COVID. We hope that our effort encourages other similar Associations to come forward and contribute.

While we are still coming to terms with the losses, the impending third wave has unsettled us even further coupled with the challenges posed by the pulses sector and the unpredictable rains. Monsoon started very well in the month of June and continued till 20th June. Between 20th June to 7th July there was a dry spell. However the monsoon revived with full pace in July. August had been quite lull and country has faced deficient rainfall however IMD has predicted above normal monsoon during the month of September. Though the Kharif crop has been sown little more than the last year the actual output will be known only during the harvest time. If the crops face heavy rainfall activity during harvest period, we may see some damage to urad and moong crop. Rajasthan has seen a dry spell in the month of august hence we may see a drastic reduction of moong production in the state of Rajasthan however everything will be clear by end of September 2021.

In a recent video conference with Hon'ble Commerce Secretary, Shri B V R Subrahmanyam, IPGA had also requested for an extension in the arrival deadline for pulses imports from Myanmar and East Africa by 60 and 90 days respectively. This was primarily because the disruption in global logistics has caused severe shortage of containers as well as vessels.

IPGA welcomes the Government's latest decision of accepting IPGA's request and extending the import window for Tur, Urad and Moong under OGL till December 31st, 2021. The disruption in monsoon for about three weeks between June and July compounded by the excessive rainfall is expected to hamper the production of Tur, Urad and Moong this year which could result in severe shortage in domestic production. The Government of India, taking early cognisance of this, has taken a proactive step by extending the import window which will ensure adequate imports of these pulses to tide over the ongoing festive season till the time the new domestic crop arrives in the market. This will also help stabilize the prices during the festival season.

Tur is harvested in East Africa around August and shipments start in the month of September. However, due to non-availability of containers as well as vessels connecting to India from transit ports, these cargoes are taking far more than the normal sailing time. The trade was worried that the extended sailing time would result in cargoes reaching India post November 30th, 2021 which was the initial deadline. With the arrival deadline being extended till BL Date of December 31st and arrival before January 31st, 2022 gives importers ample time to procure and ship the pulses to India.

The IPGA Knowledge Series Webinars were conceptualized to discuss, explore and deliver key insights on topics of critical interest to the pulses sector in India and the world at large. IPGA has hosted eight such extremely successful webinars which have had an average of around 700 participants from over 25 countries.

The most recent Knowledge Series webinar was the Kharif Sowing Overview webinar to present an in-depth understanding of sowing this season against the backdrop of erratic monsoon patterns, impact of Government Policies and effect of COVID-19 pandemic. While the Kharif season began on a good note with timely monsoon and good sowing of pulse crops, the erratic monsoon pattern from mid-June to mid-July caused a rainfall deficit. IPGA's webinar saw a host of industry experts who helped understand the Kharif sowing pattern, and the impact of monsoon on recovery.

IPGA recently signed an MoU with the India Myanmar Chamber of Commerce (IMCC) to work towards establishing a framework for cooperation aimed at contributing to sustainable socio-economic development through increased competitiveness and trade, improved business environment, and to be used as a basis for the formulation and implementation of technical cooperation projects, specifically in the pulses sector. The joint webinar on Tur, Urad and Moong scenario in India and Myanmar was the first such initiative under the tenets of the MoU.

IPGA along with Pulse Australia and Austrade co-hosted chickpeas and lentils webinar under the aegis of IPGA Knowledge series. The webinar featured a focused discussion on Chickpeas and Lentils including key factors like production, demand-supply scenario, etc. in India and Australia and was organized as a part of the Australian Government's Australia India Business Exchange (AIBX) program.

Underlining the rising inflation burden on consumers, including food price inflation, IPGA sought to initiate immediate measures to curb the skyrocketing prices of pulses and grains in the retail market. Retail prices have been traditionally higher than wholesale prices. However, each time a surge in prices is reported, wholesale traders end up bearing the brunt for inflation whereas retailers be it online or offline, organized or unorganized, are seldom under the spotlight. IPGA put forth suggestions to the government to devise a process to keep retail prices in-sync with the wholesale prices. Also we stressed on the need of a policy initiative to regulate retail prices of pulses. The survey conducted by us across four cities in June 2021 revealed that the price spread between wholesale and retail prices is fairly large. RBI Annual Report has pointed out the vast difference between wholesale and retail.

While there could be a variety of reasons for the difference, the Government or Department of Consumer Affairs needs to take a closer look at the same. At present, there is no regulation on retail prices of pulses leading to an indiscriminate surge in prices leaving the end-consumer to pay exorbitant prices for pulses and grains – which are necessities in any Indian household. IPGA firmly believes that the need of the hour is to regulate retail prices of pulses and grains, on an urgent basis so that consumers reeling under severe inflation can get some relief.

We are committed to bring to all its stakeholders many more interesting webinars under the IPGA Knowledge Series culminating in The Pulses Conclave that is held every two years in the month of February. The information on all forthcoming webinars, Association activities and The Pulses Conclave will be available on our website www.ipga.co.in.

Last but not the least, stay safe, stay healthy and follow all COVID protocols, especially with the onset of the festival season.

ZAVERCHAND (JITU) BHEDA
CHAIRMAN
India Pulses and Grains Association

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Myanmar Musings

Vatsal Lilani

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IPGA: You have been in pulses for 25 years primarily out of Myanmar. Can you tell us a bit about living in Myanmar and How do you see the changes in the trade over this time?

I have lived in many countries but of all I love Myanmar the most because the people are extremely nice, simpleand not burdened with complications of their own making which reflects in the way they treat and welcome foreigners. Successive governments have placed a lot of emphasis on ease of doing business particularly for the export trade and there isn't a plethora of rules and lengthy paperwork to comply with. The country is large but mostly lush and green and has been endowed with rich soil, plenty of water from perennial rivers and monsoon rains and long hours of sunshine; perfect ingredients for robust agriculture which is why the country exports over 3 million tons of rice, 1.4 million tons of pulses and over 2.5 million tons of maize. Having India, China and Thailand as neighbours has helped in developing a large ecosystem for land border trade and this shall only grow as infrastructure and connectivity improves further.

As far as the trade is concerned, I have seen the number of active pulses exporters out of Myanmar reduce from 25 to about 10. There has been this churn in spite of the volumes having increased as some overstretched themselves and then lost their way and few thought the daily effort to buy, sell and negotiate for every penny wasn't worth the effort. The trade has withstood lots of shocks from frequent change in government policy to impact of climate change and as importantly the withdrawal of large MNCs and a quiet ascension of family owned/operated companies that now dominate the trade.

We see names only of Indian sounding companies on vessel manifests for Myanmar pulses. Why is that?

In the pulses trade globally, India is the largest importer and buys every large type of beans or lentils that's grown anywhere in the world. There are countries that import lots of beans but just of one type or colour, but India imports green mung beans, red kidney beans, black matpe, yellow & green peas so in short, all possible colours and shapes. Every region in India has its native preference and the end use or application of the pulses isn't fungible. For instance, you cannot use Toor dal to make dosas. You need Urad no matter what its price be. It is this diversity and scale which is driven by a large, primarily vegetarian population that makes India as a standout. India cannot be overlooked if an originating country desires scale in the pulses trade and Myanmar is no exception. In most countries, local suppliers prefer selling material to an Indian origin person who is resident in their own country for ease of collecting payments and ironing out issues as they may arise. It's because of this that persons of Indian origin have resided at origin of production & dominate the global trade of pulses whether it be out of Australia, Canada, Myanmar or even a smaller country like Madagascar.

You are a person of Indian origin holding Canadian

citizenship and live between Myanmar & Singapore. So, you get the see all the sides of the recent debate that's raging on OGL, stock limits, MOUs and import licenses. What's your take?

I think it's true that not being physically in India allows one to view and listen to the various camps rather dispassionately. I think the trade is on the same page as the government that farmers need a remunerative price and the cost to the consumer must be reasonable. This for any country to achieve isn't easy because there is a very thin line that cannot be crossed in either direction.

All that the trade wants is consistency of policy because every time there is a sudden policy change, someone in the supply chain takes a hit and more often than otherwise it's the overseas trader that is invested but not yet paid. Thus, predictability of policy is only possible if prices don't gyrate and that's only possible if the weather doesn't play spoilsport and that is in no one's hands. So, the solution to this CATCH-22 situation perhaps lies in allowing imports until it's not viable for them to be profitably sustained. As the old adage goes – Allow water to find its own level!

Talking about the weather, had India not had the last two years of unseasonal rains, it would have been self-sufficient in several types of pulses; so, the question for any government is - how does it manage such a tricky situation where there is a huge known unknown. It's not easy and I am full of admiration for this government as I see they are trying very hard to balance various stake holders in spite of all the criticism. Several MOUs have been signed as a part of the effort to ensure that farmers in other pulse supplying countries continue their plantings. The Ministry regularly interacts with different players within the domestic supply chain who have different and often conflicting interests and hears them patiently before taking a final call on the road ahead. That said, perhaps the answer to the question of keeping prices in check lies in what many other much smaller countries successfully do - the government agencies hold sufficient stock at all times and strongly intervene every time they see prices even slightly raising their heads.

How has Myanmar started growing Toor and how's the demand supply situation out of there?

Toor or Pigeon peas seeds were brought by the British during the Raj along with growers mostly from the Bihar region. They grew it for their own consumption and post 1988, exports started to India which have now grown manifold. It cannot tolerate water logging and so is mostly grown in the Sagaing, Magwe& Mandalay regions which is a dry belt; either between sesame or intercropped with sesame. A lot of farmers started to grow Toor as it provides ample wood for burning but fortunately for them it soon started to provide much more than just that. It's a low maintenance, sturdy, monsoon crop that is planted in July and takes 6 months to get to market.

The planting area has dropped from 6.5 lakh hectares in 2017 to 4.4 lakh ha in 2019 and below an estimated 2.5 lakh ha in 2020 reflective of demand from its main market, India. Production is commensurately lower from a high of 300,000 Mt in 2015 to just 80,000 Mt in 2020. The border trade in pulses jumped from 300,275 Mt in 2018 to 452,339 Mt the very next year to an estimated 575,000 in 2020 indicative of farmers having moved away from Toor to Green Mung which has abundant overland demand from China where its extract is now also used to manufacture an egg substitute.

What challenges do traders face currently and how do you navigate them?

With best compliments from

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Unlike the grain business, pulses are not very scalable. This automatically limits the margin for error because the canvas is much smaller to recover from an expensive mistake. In order that the trade does not suffer unforced errors, predictability is important otherwise one can end up suffering for no fault of one's own. The only way to possibly navigate through such choppy waters is to keep costs low, exposure amounts and duration to the minimum and trade with counter parties that are good for their word. In my 25 years of being in this industry I can tell you this with some measure of conviction; that nothing else works when the fan starts to move!

Myanmar and India have recently signed an MOU for 100,000 Mt annually. How do you see this unfolding?

Principally, it's a step in the right direction. That said, India is a vast nation that is growing economically at a rapid pace and has pulled millions out of poverty. When a country does better economically, the first thing its people do is eat and live better and that leads to a migration from potatoes to pulses. The modern, organised on and offline trade is now in Tier 2/3 cities and with greater distribution shall come more accessibility and thus higher demand. It's possible that all the demand forecasting matrices that were good so far shall now have to be substantially reworked given these new set of conditions and demand unseen hitherto that could be unleashed.

On an annual total consumption of Toor of 4.3 miomt, the MOU quantity possibly doesn't provide a full safety net for the increased demand. If this argument is accepted, the question is - Are we already behind the curve in terms of getting the Myanmar farmer to grow more? This question can be discussed till the cows come home but a simple point I would like to make is; would a higher MOU quantity have been a better idea. Perhaps the answer lies in the fact that in spite of car fuel prices having gone up, the demand for new cars too has firmed and shows no signs of abating. In the case of food, this argument becomes even stronger because you can't postpone a meal - You are not going to say I shall have breakfast at dinner time!

To sum up, this extra MOU quantity would serve as an insurance & fall back against weather disturbances and forms a fraction of the overall demand of today; much smaller vis-à-vis the projected one. Hence it shall not interfere and make a dent in the MSP collection mechanism which is the main argument against increasing imports.

Lastly, I understand you are President of OATA Myanmar. What does OATA do and what have been its achievements so far?

OATA stands for Overseas Agro Traders Association of Myanmar. Our members are pulse traders that are Head Quartered, either in Singapore or Dubai, and cumulatively account for about 85 percent of Myanmar pulses exports. We are an advocacy group & a platform to raise issues and concerns with the Myanmar authorities and government departments elsewhere. We hold elections every two years, and this shall be my last year as President because it's important to bring fresh ideas, so we limit a person to two terms. OATA has companies such as Tata International & Aditya Birla group as members which lends considerable heft in its interactions.

That said, its achievements have been several and would fill a page or two but the most important one is that in spite of all the members being competitors, we speak in a common voice on issues that we decide to take up with everyone lending their weight in full measure.

Myanmar Pulses Trade - Aug 2021

Desh Ratna

Executive Committee Member – India Myanmar Chamber Of Commerce

Global production of pulses & bean is about 92mn mt 2018/19.India is the largest producer, consumer and importer of pulses in the world.

India is the largest producer (25% - 23 mn mt of global production), consumer (29% - 26.5 mn mt of world consumption) and importer (4% - 3.5mn mt) of total produced pulses in the world. It also accounts for 33% of world growing area.

Major producing countries are emerging/ developing markets. Factors include Rapid de-regulations / liberalizations of the commodity markets in these producing countries.

Myanmar is traditional Agri based country with GDP contribution of approx. 25% (World bank 2018). Net sown area 13mn Ha, / Total crop area 21mn Ha, Dominated by small farmers, low use of agro chemical, and low farm mechanization,

Myanmar globally a top producer and exporter of Pulses and Beans dray, Myanmar is leading country in pulses and beans among ASEAN countries. India and China are major markets for Myanmar pulses.

Myanmar contributes 8% of Total world Pulses export by Value, and to India contributes to almost 45% of Pulses & Beans Exports by value. (Highly dependent on India policy of Pulses trade - India had put restrictions on Import of Myanmar Agro Commodities during the same period). Myanmar remains India's premier partner and fall back on Pulses deficit coverage.

Myanmar grows about 24 types of beans and pulses, including Black Matpe (black gram), Toor whole (pigeon pea), Mung bean (green gram), Soya bean, Chick peas, Butter bean, Cow pea, Lima bean, Black eyed bean, Ground nut, and Kidney Bean.

Production by Variety (2018-19)

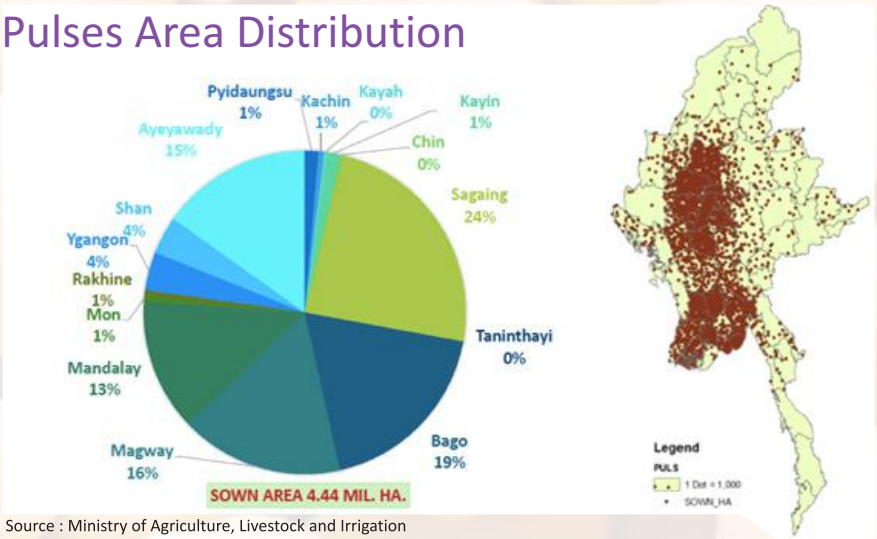
SN	Pulses & Beans	Sown Area (000' ha.)	Harvested Area (000'ha.)	Yield (MT/ha.)	Production (000' MT)
1	Black Gram	947	946	1.44	1,359
2	Green Gram	1,169	1165	1.25	1,458
3	Butter Bean	63	63	1.19	75
4	Bocate	126	126	1.28	161
5	Sultani	12	12	1.16	14
6	Sultapya	105	105	1.25	131
7	Soybean	139	139	1.51	210
8	Chick Pea	383	383	1.42	543
9	Pelun	124	124	1.30	162
10	Pigeon Pea	445	444	1.18	525
11	Peyin	42	42	1.05	44
12	Pebyugalay	13	13	1.09	14
13	Pegyi	99	99	1.19	118
14	Pegva	11	11	1.07	12
15	Garden Pea	46	46	1.30	60
16	Peyazar	1	1	0.96	1
17	Penauk	79	79	0.88	69
18	Other Pulses	258	258	1.16	299
	TOTAL :	4,061	4 057	1.30	5,254

Source: Mintstry of Agriculture, Livesstock and Irrigation

World Pulses Export IN USD

Product - Dried Leguminous vegetable shelled, whether or not skinned or split.						
Exporter	**% share**	**2014**	**2015**	**2016**	**2017**	**2018**
World		1,01,03,283	1,12,77,761	1,21,18,528	1,19,89,273	93,62,609
Canada	22%	29,00,098	33,05,735	31,04,880	26,52,442	20,48,008
Australia	8%	7,96,848	13,15,599	15,19,197	22,47,598	7,56,207
Myanmar	8%	8,86,219	13,06,388	13,87,966	9,17,562	7,35,755
USA	7%	9,14,955	8,09,399	10,16,990	10,32,401	6,92,950
China	6%	7,75,953	6,34,709	7,02,707	6,06,677	5,53,484

Pulses Area Distribution



Source : Ministry of Agriculture, Livestock and Irrigation

Myanmar exports 16 lacs Mt of Pulses & Beans valued at USD 1.1 Bn. Apart from China India imports approx. 7 lac mt of pulses, approx. 45% imports from Myanmar in 2018/19.

Approximately 80-90 percent of total Toor whole production and 70-80 percent of total Black Matpe is exported to India and the domestic wholesale prices are highly dependent on India's demandof Pulses exports.

In Myanmar, beans and pulses are grown immediately after the harvest of the main rice crop in the delta region (lower parts of Burma), Ayerwadi region, Sagai Region and are grown as a monsoon crop in the central plain areas and in Shan State (southeastern part of country).

About 70 percent of all beans and pulses are grown during the winter season with residual soil moisture, which reflects the yield per unit area. The yields range between 1.0 -1.3 metric tons (MT)/hectare. Technological intervention in all stages of farming is necessity.

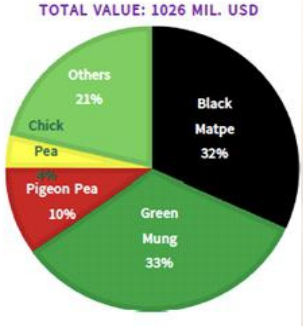
Myanmar Pulses Export

	Year	Black Gram	Green Gram	Pigeon Peas	Chick Peas	Others	Total
Quantity (000' MT)	2014-15	626	355	308	209	626	1,498
	2015-16	483	331	227	202	483	1,243
	2016-17	562	407	185	271	562	1,424
	2017-18	528	350	225	44	214	1,318
	2018-19	616	474	182	77	291	1,640

	Year	Black Gram	Green Gram	Pigeon Peas	Chick Peas	Others	Total
Value (Mil USD)	2014-15	470	360	208	9	153	1,200
	2015-16	498	333	230	20	134	1,215
	2016-17	672	349	160	29	189	1,399
	2017-18	344	271	100	36	136	887
	2018-19	326	343	101	38	218	1,026

Myanmar Pulses Export (2018-19)

Pulses	Value (mil. USD)	Quantity (000' MT)	Avg. Price (USD/MT)
Green gram	343	473,822	724
Black gram	326	616,073	530
Pigeon pea	101	182,169	556
Groundnut	86	70,654	1223
Chick pea	38	76,777	496
Cowpea	29	55,494	522
Butter bean	23	30,143	774
Other pulses	20	35,725	571
Kidney bean	20	27,463	726
Rice bean	13	24,093	529
Bocate	7	13,307	531
Sultani/pya	5	8,460	599
Lablab bean	5	7,773	646
Penigyar	5	10,288	480
Soybean	3	6,386	429
Nylon	1	1,434	840
Total:	1,026	1,640,060	626



Source: Ministry of Commerce

EXPORTS FROM MYANMAR OF SPECIFIC PULSES TO COUNTRIES

GREEN GRAM	BLACK GRAM	PIGEON PEAS
CHINA	INDIA	INDIA
INDONESIA	PAKISTAN	NEPAL
SINGAPORE	UAE	SINGAPORE
VIETNAM	BANGLADESH	UAE
BANGLADESH	THAILAND	CANADA
PHILLIPINES	SINGAPORE	USA
JAPAN/MALAY	VIETNAM	MALAYSIA/PAK

MYANMAR MARKET RESTRAINTS – POSSIBLE UPSIDES IN FUTURE

Myanmar as country has been facing challenges with respect to trade to India due to following factors.

- Dependency on single market for exports of BMP, GMB, PP thus Market and product diversification is seen happening.
- Sea -Freight is high in current scenario – part of the global challenges.
- Covid and Internal challenges have led to logistics cost being high from village to port.
- Current challenges on Banking – Liquidity and fund remittance
- Vessel loading constraints due to rains during the rainy season.
- Currency volatility and weakening.
- Requirement of mid-stream intervention - modernization of storage and processing sector
- Quality seeds and farm mechanization intervention at farm level.
- Banking reforms and steps toward LC payment will enhance biz volume,
- Clarity on quota and policy for import in India will provide stability.
- More direct container vessel is required between India and Myanmar.
- Digitalisation of documents are required for phyto, COI & other certificates.

MARKET OUTLOOK - Irrespective of Government policies prices will remain range bound and will be on the upper side post August.

FUTURE INTERVENTIONS

- In recent years farmers in Myanmar have been unclear on the traditional trade flow to India due to policies and likely to stay away from sowing pulses as per earlier pattern and would rather prefer Maize, Sugarcane, Soya bean, etc. Stable policies would lead to clear path of production of specific pulses and subsequent sufficient supply side.
- Vessel loads are better option for movement of cargo and direct vessel is preferred.
- Possibilities to invest in quality seeds production, Farm mechanization, post-harvest crop management and it can be jointly studied and executed with government bodies in Myanmar.
- Possibility of growing pulses (Red Lentils, RKB, YP & Desi chana) in Myanmar – white paper has been presented to UMFCCI from IMCC – Agri vertical.

Sources:

1) https://pulsepod.globalpulses.com/pod-feed/post/a-global-perspective-on-pulse-production

2) MPBSA – Myanmar /Local Industry / forums / discussions

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The Blissful Brown - Black Eye Bean

Harsha Rai

Global Sales Head - Mayur Global Corporation

The black-eyed pea or black-eyed bean and Brown eyed beans is a legume grown around the world for it's a medium-size, edible bean. It is a subspecies of the cowpea, an **OldWorld** plant domesticated in Africa, and is sometimes simply called a cowpeas.

The brown as well as black eyed beans are popular for their sweet taste, smooth texture and high nutritional value and have extensive use in various cuisines and preparation.

Growing areas in India :-

It is a minor pulse cultivated mainly in arid and semi arid tracts of grown in pockets of Punjab, Haryana, Delhi, and West UP along with considerable area in Rajasthan, Karnataka, Kerala, Tamilnadu, Maharashtra and Gujarat.

Cowpea is oldest annual legume grown throughout India for green pods, dry seeds, green manure and fodder. It is drought hardy crop also quick growing thus supressed weeds during initial stage. It also help to conserved soil and moisture.

Sowing time :-

In India the time of sowing varies according to type of crop :-

Kharif - With onset of monsoon ranging from early **June to end of July**.

Rabi - **October-November** (southern India), Summer -**2nd to 4th week of March (grain), February (Fodder),**

Hills: **April-May**.

Green manuring-Mid June to 1st week of July.

It can be grown as a pure crop in single crop and double crop rice fallows during rabi and summer season.

Harvest :-

For grains, the crop can be harvested in about 90-125 days after sowing when pods are fully matured. Green pods for use as vegetable can be harvested 45 - 90 days after sowing depending on the variety.

Imports from several different origins :-

There is no Government data available on the exact production of brown /black eye beans but as per boots on the ground the production ranges between 95000-105,000 mt.

Production in India is lower than the demand in the country and this is the reason India imports this variety from various origins mentioned below :-

Brazil :-

Brazil grows beans crop three times in an year and brown eye beans are basically the second crop which is planted in the month of February. Normally new crop from the second bean harvest hits the market in mid-May. But this year harvest was late and hence market saw arrivals by mid June.

Due to strong demand for feed from the meat industry, which is looking to supply China and other export markets ,corn priced were much higher and hence incentivized brazilian growers to seed more corn instead of beans.

Usa :-

Blackeye Bean is the main type of cowpea grown in California. Also known as black eye peas in Southern United States. Last few years there has been decline in cowpea production in Southeastern United States and and Texas. But the demand for black eye beans appears to be relatively constant.

Blackeye beans are well adapted to the late spring and summer growing conditions of California's Central Valley.

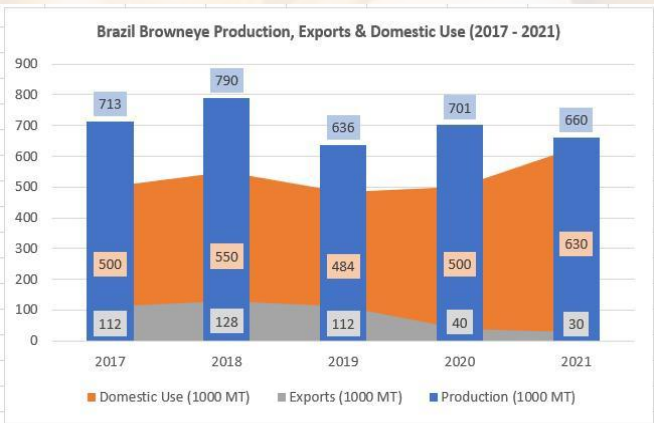
Production is ranging between 20,000mt to 25,000 mt.

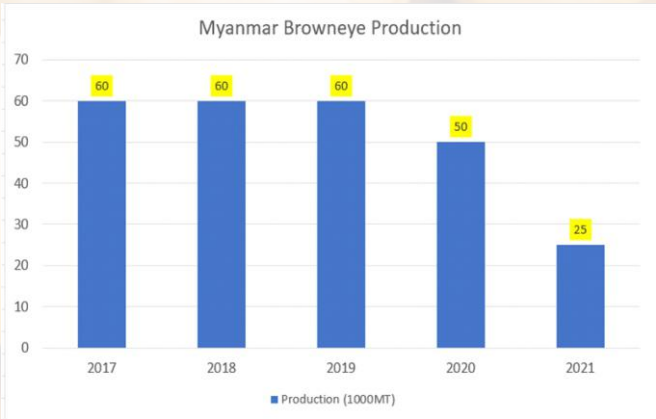
Myanmar :-

In Myanmar, Black-eyed bean is gown in winter (starting October) and harvested in February to April.

Delta area (Bago & Ayeyarwady) and central dry zone (Sagaing and Magway) are the major production region, also Mandalay , Mon Shan (North) and Irrawady

Myanmar's production for black eye beans is decreasing from last two year and stands at close to 25000-28000 mt as compared to an average 60,000 mt production in 2017 , 2018 and 2019.





Peru : -

The Black Eye Bean is produced in all the North coast of Peru.

Peruvian government is involved in promoting pulse consumption as a reliable and commonly protein source. Another emerging consumer trend is healthy eating. High protein, low sugar, and low-fat foods are becoming more popular among Peruvian consumers. Peruvians consume 80% of marketed pulses between May to November.

El Niño negatively impacted pulse/ beans production in 2017.

In 2019 , out of total the pulse production in Peru , black eye bean took total 7% share which brings total production of black eye close to 22000 mt and is consistent in last last 2 years.

Madagascar :-

The black eyed beans grown in Madagascar is primarily a cash crop, intended for export, for Indo-Pakistani processing markets , turkey, Middle East and European premium market but note it is also consumed locally. Seeding starts in the month of February and Harvest starts in the month of June.

There are mainly two qualities exported mentioned below :-

A) HPS or the hand picked quality which is basically for the upscale market like Europe.

B) Machine Cleaned quality which is mainly for Middle east and Asia.

This year seeding for black eyed beans was atleast 20-25% lower than last year. Last year production was close to 38000 mt approx, this year expected close to 31000 mt.

Health benefits of Black/Brown Eye beans:

Current market, weather and logistics :-

With weather change in all growing areas ,the production of beans have been declining. On the other hand because of pandemic the demand for beans is increased. Prices this year remained higher due to less production and higher demand and sea freight which has made overall export price go higher every month. Long delays at transhipment port , lack of empty containers, lack of shipping space is making situation even more difficult.

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Pulses Production for Sustaining Self Sufficiency

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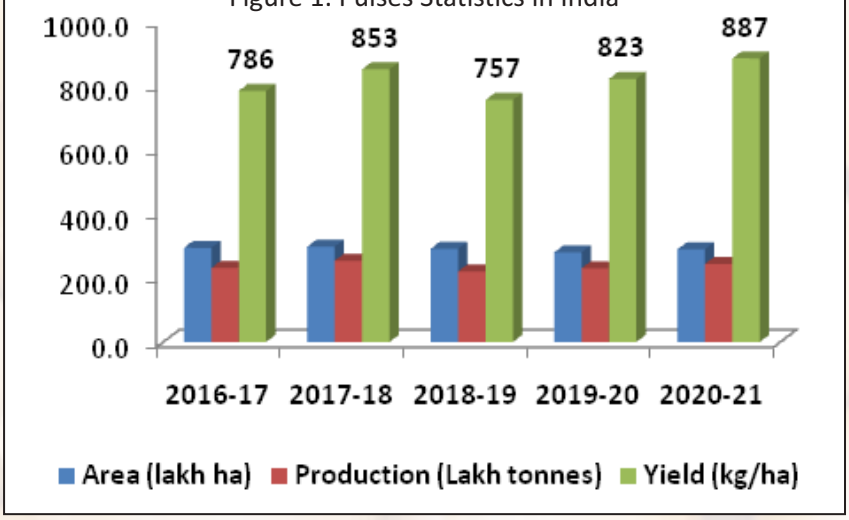
A. Introduction

Indian farmers grow more than a dozen and half pulse crops during rabi (October-April), kharif (July-October) and zaid (March to June) or greeshm (April-June) seasons in different parts of the country. The cultivation of these protein rich crops spread over non-conventional areas during last 15-20 years. The development of a large number of high yielding and short duration varieties insulated against major biotic and abiotic stresses, and increased infusion of quality seeds of such new releases, in spite of area shift from northern to central and southern India, ensured increased production and productivity of nutri-dense pulses in our country.

In recent years, India has achieved self-sufficiency in pulses through increase in indigenous production of total pulses as it registered impressive growth during last five years with the evidence that production jumped from 162.60 lakh tonnes (2015-16) to 230.30 lakh tonnes (2019-20). Further, production went up by 69.0 lakh tonnes during 2020-21 as per fourth production estimates (257.20 lakh tonnes)registering impressive growth in productivity from 786 kg/ha (2016-17) to 887 kg/ha (2020-21).The production of total pulses gone up during last 5 years and is mostly due to increase in productivity as evident from the **Figure.1** The ever highest production of pulses could be recorded during 2020-21 which is mainly due to improved productivity. It is worthwhile mentioning that during 2017-18 we exported pulses to the tune of 28.7 lakh tonnes of worth Rs. 1800 crores which may further go up due to higher production in India.

Figure 1. Pulses Statistics in India



The meeting requirement of pulses for ever growing population and increasing demand for vegetarian source of protein is still a challenge to sustain self-sufficiency in indigenous supply of pulses due to competition from other companion crops in different seasons. To bridge the demand-supply gap in protein rich pulses that is still around of 20-25 lakh tonnes on an average basis, appropriate research and developmental strategies need to be in place so that self sufficiency in pulses production can be ensured. The current policy support has not only to continue but a lot more has to be done.

B. Production scenario

Indigenous pulses production has attained new heights during 2020-21 when Indian farmers could produced about 257.20 lakh tonnes of pulses (DAC&FW, 2021) from 289.89 lakh ha.

area registering impressive productivity of 887 kg per ha surpassing all previous records of the production and yields. The total pulses production registered overall increase of 41 per cent when compared to 2010-11 which is mainly due to total rabi pulses (53.1 %) which is due to impressive increase in chickpea which has about 46.6 per cent of the total pulses production and of 42 per cent of the total rabi pulses production (Table 1). This could happen due to availability of quality seeds of newly released varieties insulated against major biotic and abiotic stresses, matching integrated crop production technologies, and enabling policies of the Government of India to support pulses industry. The maximum per cent increase was recorded in case of mungbean (71.7%) followed by lentil (54.2%), pigeonpea (49.6%), chickpea (45.8%), urdbean (32.9%) and other rabi pulses (32.3%) whereas other kharif pulses showed huge reduction (-39.8%) in production (Table 1).The positive policy support in terms of massive popularization of newly developed high yielding varieties through minikits for creating awareness, declaration of remunerative minimum support price (MSP), procurement at MSP, and balanced import duty on major pulses helped farmers in fetching higher price for farm produce. The reduction in production of other kharif pulses can be addressed through implementation of promotional schemes targeting said kharif pulses. There is still need to address issue of yearly variations if mungbean and urdbean production to reduce dependency on import of these two pulses.

C. Technologies available

Recently, India has attained self sufficiency in indigenous pulses production with the technologies developed under National Agricultural Research and Education System (NARES) system. It could have been possible due to development and adoption of improved varieties and matching production and protection technologies for optimizing yields at farmers' fields. In growth of the Indian pulses industry, international organizations like International Crops Research Institute for the Semi Arid Tropics (ICRISAT), International Center for Agricultural Research in the Dry Areas (ICARDA) and World Vegetable Centre (WVC) also contributed significantly by way of development of high yielding varieties, sharing genetic resources, tools and techniques. Some of the significant technologies developed are presented in following paragraphs.

Table 1. Production of pulses (in lakh tonnes) during last one decade in India

Crop	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21*	%increase over 2010-11
Chickpea	82.2	77.0	88.3	95.3	73.3	70.6	93.8	113.8	99.4	110.8	119.9	45.8
Pigeonpea	28.6	26.5	30.2	31.7	28.1	25.6	48.7	42.9	33.2	38.9	42.8	49.6
Mungbean	18.0	16.3	11.9	16.1	15.0	15.9	21.7	20.2	24.6	25.1	30.9	71.7
Urdbean	17.6	17.7	19.7	17.0	19.6	19.5	28.3	34.9	30.6	20.8	23.4	32.9
Lentil	9.4	10.6	11.3	10.2	10.4	9.8	12.2	16.2	12.3	11.0	14.5	54.2
Other Kharif Pulses	13.3	9.3	6.1	7.1	7.8	7.2	8.9	8.3	6.3	8.7	8.0	-39.8
Other Rabi Pulses	13.3	13.4	15.9	15.2	17.4	14.7	17.7	17.8	14.5	14.9	17.6	32.3
Total Kharif Pulses	71.2	60.6	59.2	60.0	57.3	55.3	95.8	93.1	80.9	79.2	86.9	22.1
Total Rabi Pulses	111.2	110.3	124.3	132.6	114.2	107.9	135.5	161.1	139.8	151.0	170.2	53.1
Total Pulses	182.4	170.9	183.4	192.6	171.5	163.2	231.3	254.2	220.8	230.3	257.2	41.0

*Fourth Advance Estimates of Production (in lakh tonnes) of pulses for 2020 -21 as on August 11, 2021

a. **High yielding varieties:** During last one decade more than 150 varieties of various pulses crops have been released by the state variety release committee (SVRC) at the level of states, and varieties developed under ambit of All India Coordinated Research Projects (AICRPs) at national level by the Central Sub-Committee on Crop Standards Notification and Release of Varieties, popularly known as CVRC for cultivation in different states. Besides having high yield potential, these varieties have high level of resistance against major diseases (fusarium wilt of chickpea: Pusa Chickpea 20211, Super Annigeri 1, IPC 2006-77, PBG 9, AKG 1303, RG 2015-08, Nandyal Gram 810, RLBGK 1 etc.; MYMV of mungbean: Virat, Deeksha; MYMV of urdbean: IPU 11-2,IPU 07-3, IPU02-43, Pratap Urd 1, Pant U 40, Pant U 31,Azad Urd 3; fusarium wilt of lentil: IPL 316, IPL 526, IPL 329, L 4727, RKL 14-20, IPL 220, RKL 607-1, IPL 225, KLB 345, KLS 122, IPL 526, L 4729, RKL 605-03, LL 1373, Kota Masoor 4, RL 3-5 and PL 11; powdery mildew of fieldpea: IPFD 10-12, Aman, IPFD 11-5, IPF 16-13, Pant P 250, IPFD 2014-2, Pant P 243, TRCP 9, IPF 16-13, HFP 1428, Pant P 347, HFP 715, KPF 101 and IPFD 13-2; long and medium pigeonpea: IPA 203,IPA 206, IPA 203, DRG 59, BRG 2, BRG 3, BDN 2010, BDN 711, BDNG 716, TJT 501) and tolerance against high temperature (chickpea: IPC 2006-77, JG 14) and drought (chickpea: Pusa chickpea 10216) etc.

In recent years, varieties having specific traits of farmers' (mechanical harvestable chickpea: Phule Vikram, Pusa 3062, JG 2016-24, NBeG 47, RVG 204, Shubhra, IPC 2010-134, GBM 2 etc.; hybrids of pigeonpea: IPH 09-5, ICPH 2740; short duration mungbean: Virat, Varsha, Kanika, Deeksha; cold tolerant rajmash: Utkarsh, Arun, Kota rajmash 1 and Kota rajmash 2), consumer' and industry's interest (chickpea:extra-large/large seeded kabuli Kripa, JGK 6, MNK 1, RLBGK 1, Kota kabuli chana 2, Shubhra, Ujjawal; lentil: biofortified varietieslike IPL 220 and L 4727, large seeded lentil: IPL 316 and RL 3-5;green seeded fieldpea: IPFD 10-12; shining green and extra-early maturing mungbean: Virat, Samrat; short duration pigeonpea Pusa Arhar 16 and DG (RG) 55; low neurotoxin lathyrus varieties Mahateora, Prateek etc.)have been developed and seeds of such varieties are being made available for large scale cultivation. The rapid generation advancement (3-4 generation per year) can be achieved using off-season nurseries and laboratory conditions for the purpose of mapping of desirable gene(s) and quantitative trait loci (QTLs). The speed of development of varieties can be accelerated through marker assisted breeding and the defects of mega varieties may also be corrected through marker assisted backcrossing or other newer techniques including gene editing.

b. **Improved package of practices:** Improved package of practices for yield optimization have been developed to improve productivity of pulse crops in both, traditional and non-traditional areas. The sowing of rabi pulses particularly chickpea, lentil and lathyrus using happy seeder has shown distinct economic advantages at farmers' field as crops could be sown soon after harvest of kharif crops (rice and other crops). Such interventions will help in ensuring large area coverage under rabi pulses after harvest of paddy in eastern India where about 2.0 million ha area can be covered with suitable varieties of pulses. The increase in seed rate by 20%, sowing by happy seeders, foliar spray of nutrients, micro-irrigation, use of paddy straw as mulch in late sown chickpea or lentil crop, etc. have helped in improving yield levels at farmers' fields. In coastal belt of peninsular India, crops like urdbean and mungbean have vast potential if promoted in rice fallow areas. With the increasing awareness about the healthy food, there is growing demand for organic pulses. The standard packages of practices are being developed to achieve optimum yields from organic cultivation of pulses. Technologies ensuring better nutrients and water management have been developed and being refined for improving their use efficiencies. Similarly, integrated diseases, insect pests and weed management (particularly post emergence

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herbicides application) technologies have been refined and being popularized among cultivators which will certainly help in sustaining self sufficiency in pulses production.

c. **Quality seeds:** The contribution of quality seeds is well recognized and documented for improving production and productivity of the crops including pulses. Under the ambit Indian Council of Agricultural Research by the state/central agricultural universities sufficient quantity of breeder seed is being made available for further multiplication in terms of foundation and certified seeds. Government of India, Ministry of Agriculture & Farmers Welfare, Department of Agriculture Cooperation & Farmers Welfare has already established 150 Seed-Hubs to produce 1.50 lakhs quintals of quality of newly released varieties and develop trained human resources in seed production technologies of pulses. Each Seed-Hub has been assigned target to produce at least 1000 quintals of quality seed of newly developed varieties (not more than 10 years old) targeted pulse crops each year besides organizing field days to create awareness about new varieties and their seeds. The seed production plots are serving the purpose of technology demonstrations on high yielding varieties and improved package of practices. As per empirical estimates about 15000 farmers are directly participating in seed production programme in addition to other 15000 beneficiary farmers who are getting exposure by participating in field days being organized by these seed-hubs in each year. These beneficiary farmers are serving as the Ambassadors for the promotion of pulses.The creation of 150 Seed-Hubs has paid dividends as pulses production and productivity both have increased significantly during last 4-5 years and country has witnessed '***Pulses Revolution***" (Chaturvedi and Sandhu, 2020). Recognizing contribution of Seed-Hubs in enhancing production of pulses, Government of India has supported creation of Seed-Hubs on oilseeds and millets to boost their production and yields.

Since, most of the pulses' Seed-Hubs are now well established and functioning efficiently. We are sure that the timely supply of quality seed of newly released varieties of various pulses will continue in years to come. The level of awareness that has been created about pulses cultivation and importance of high yielding varieties, India will be able not only to sustain self sufficiency in pulses but also will be able to make its presence in pulses trade.

D. Issues

The pulses production has attained new heights when it reached to 257.20 lakh tonnes during 2020-21 reducing burden of import to a larger extent. The main issue to be addressed in future remains not only sustaining the current levels of production but also to produce more from almost same area (290-295 lakh ha) to achieve UN's Zero Hunger Target by 2030. The empirical estimates suggests that India may need about 350 lakh tonnes (consumption: 287 lakh tonnes + seed and post harvest losses: 57.2 lakh tonnes) of pulses by 2030 to meet the domestic demand due to increasing population which will be approximately ~1.51 billion. This required growth rate can be achieved by increasing productivity merely by 150-200 kg per ha i.e. from current level of 880 kg/ha to 1050 kg/ha. There are several researchable (bringing high level of climate resilience, improving acquisition and nutrients use efficiency, water productivity, cost cutting technologies, improving partitioning of photosynthates, multiple diseases and insect pest resistance, store grain pests, etc.), social (credits, farm mechanization through small tools, forecasting crop scenario and price, crop insurance, etc.) and policy (ensuring procurement at remunerative price in targeted areas, providing incentives for ecosystem service, etc.) issues also limiting promotion of pulses.

E. Implementable strategies for sustaining self sufficiency

The required research infrastructure is already in place in terms on manpower and institutions; seed-hubs are established, and various duties have been rationalized on import, and Government of India is also fully aware of its responsibility, therefore, increase in research contingencies and little change in promotional/developmental policies will help in achieving targets. We are suggesting strategies for vertical growth and horizontal expansion to help in sustaining self sufficiency in pulses production matching future demand.

The productivity of pulses can be enhanced by bridging the yield gaps; development of high yielding varieties having multi-adversities resistance to diseases; photosynthetically efficient plant types; input use efficient genotypes; exploitation of hybrid vigour in pigeonpea; popularization of improved crop management practices and bridging yield gaps.The much needed focus is required on kharif and summer season pulse crops. There is need to prepare and implement policies for promotion of kharif pulses in drought prone and uplands where rice cultivation is not so profitable. Further, there is scope for horizontal expansion of pulses during spring/summer season and intercropping systems.

i. Infusion of quality seeds of high yielding varieties: A large number of varieties having traits of interest have been developed in major pulse crops. Sufficient quantity of seed need to be produced of these varieties by ensuring 20% higher production of breeder seed and subsequent conversion of breeder seed to foundation and certified seed. There is need to tighten the weak linkages those exists in seed chain. The quality seed being produced by under the Seed-Hubs should be purchased by the state agencies ensuring timely payments of dues to the seed producing institutions. To have parity in seed sale price, the facility of production, sale and distribution subsidy available to the National Seed Corporation and State Seed Development Corporations must be extended to Seed-Hubs or public funded research institutions. In absence of parity in sale price of quality seeds, the Seed-Hubs may not remain viable for longer period. These efforts are likely to help in improving variety replacement rate (VRR) and seed replacement rate (SRR). There is further need to identify areas for quality seed production where higher seed to seed multiplication can be achieved and such areas.

ii. Cost cutting technologies : In view of increasing wages of farm laborers and often their unavailability at the critical operations of cultivation, farm mechanization has become inevitable. Further, farm profits can be raised either by developing technologies for reducing cost of cultivation or by improving *per se* yield per unit area of cultivation and ensuring remunerative price. Concentrating on first option, several mechanically harvestable varieties of chickpea have been developed and adopted by farmers recently. These efforts have opened doors for development of genetically improved tailor made varieties of pulses for their amenability to combine harvesting. Often seasonal weeds cause huge crop loss and many a times it becomes difficult to remove weeds manually during kharif season. Therefore, better molecules (pre- and post mergence herbicides) for weed control need to developed and popularized to minimize economic losses. The genetic variations for tolerance against post emergence herbicides (PEH) have been found in various pulse crops and donors possessing genetic tolerance against PEH have been identified in chickpea, fieldpea and lentil.

iii. Improving nutrients acquisition and use efficiency : The other viable option is improving nutrients acquisition and use efficiency, andwater productivity. Research work on phosphorus acquisition efficiency (PAE) has demonstrated

presence of genetic variations for PAE in chickpea and rajmash. Varieties of rajmash having higher PAE are now available with The International Center for Tropical Agriculture (CIAT), Columbia. Researchers need to divert their efforts for developing varieties of various pulses having better PAE. This will help in utilizing phosphorus that is already present in soil, thus is likely to help in reducing cost of fertilizers to be applied. Nano-fertilizers and consortium of plant growth promoting rhizobia (PGPR) are now available for enhancing nutrients use efficiency. The efforts should be made to develop soil resources i.e. soils having nutrient(s) status as optimum and below critical level, for studying nutrients' responses, acquisition and use efficiencies. The integration of frontier technologies will help in enhancing efficiency of selection from large breeding population during varietal development.

iv. Climate resilient varieties : The high yielding varieties of chickpea (Bharadwaj et al. 2021), lentil, pea and mungbean having drought and heat stress tolerance are now available. These need to be popularized in their area of adoption as per recommendation. The short duration varieties of major pulses crops help in minimizing end of the season losses likely to be due to insect pests. The photo-thermo-insensitive varieties of cowpea and mungbean have paved the way for expansion of area during spring/summer season under this crop. There is urgent need to take up aggressive program for popularization of spring/summer cultivation of short duration cowpea and mungbean. Rajmash can be grown very well on mild acidic soil, therefore can be promoted in north-east hill region. The expansion of micro-irrigation network is further going to help in improving water productivity.

v. Export oriented production : The consumers' preferred varieties of chickpea (large to extra-large seeded kabuli, large seeded desi for parched grains, green seeded pea and large seeded lentils for salty snacks etc. are now available. There is need to identify suitable area for cultivation of each of these crops for better quality and large volume. For example, Central India offers such suitable environment for most of the rabi pulse crops whereas Rajasthan, Maharashtra, Karnataka and Tamil Nadu etc. states are suitable for *Vigna* (mungbean, urdbean, cowpea, horse gram, mothbean, etc.) pulse crops.

vi. Market linkages Strong market linkages should be developed so that farmers can better price for the farm produce. The Government should establish information and forecasting system for crop progression during season in other countries and advise farmers to increase or reduce area under a particular crop(s). For example, most of the pea, chickpea and lentil is imported from Canada, Australia and Middle East. If we can keep our eyes on progression of these crops during season in mention countries, we can advise our farmers to increase or decrease area under targeted crop(s) as poor crops in these countries will ensure better price in India. In case, these countries are going to produce more, our farmers should be advised to reduce area under targeted crops for better return.

vii. Focused promotion of minor pulses : Ample scope exists to promote minor pulse crops in their traditional areas as most of these have climate resilience and high nutritive value. It can be achieved by pushing these crops in dry areas of the country particularly in plateau regions having sloppy lands of Bundelkhand region, north-west Rajasthan, western Gujarat, parts of Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh and Odisha. These areas can provide additional production of 10 lakh tonnes per annum.

viii. Bringing additional area under pulses : With the availability of short duration and heat tolerant varieties of chickpea and lentil more area can be added from Indo-gangetic plains (IGP), eastern Madhya Pradesh and Chhatisgarh; short duration mungbean and urdbean in rice fallow of peninsular India, pulses in intercropping e.g. chickpea with mustard/linseed; pigeonpea with

groundnut/soybean/millets, etc. offer vast potential to add about 15-20 lakh ha area and about 10 lakh tonnes of pulses to the food basket of India.

ix. Post harvest processing and value addition : There is urgent requirement of investment in refinement of harvesters, threshers and graders; development and popularization of low cost safe storage structures, and infrastructure for processing and value addition. Strengthening of Farmers Producers Organizations (FPOs) may be helpful in ensuring quality produce and volume required for milling.

x. Ensuring attractive price to producers: Government of India has already started announcing remunerative minimum support price (MSP) well in advance and has been increased substantially during last 7-8 years (Table 2); and ensured establishment of procurement centres in production zones; development of organized markets for pulses; linking farmers with FPOs, aggregations and e-NAM (markets); promotion of export of pulses like lentil and kabuli chickpea and arid legumes; production of value added products and use of by-products; branding of produce and promotion of organic pulse production.

Table 2. Minimum Support Price (Rs/Quintal) of pulses

Crops	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Pigeonpea	4350	4625	5050	5450	5675	5800	6000	6300
Chickpea	3175	3500	4000	4400	4620	4875	5100	-
Mungbean	4600	4850	5225	5575	6975	7050	7196	7275
Urdbean	4350	4625	5000	5400	5600	5700	6000	6300
Lentil	3075	3400	3950	4250	4475	4800	5100	-

Source : https://farmer.gov.in/mspstatements.aspx

F. Summary

The large scale technological demonstration on newly released varieties under Seed-Hub for their promotion, human resources development to cater quality seed and plant protection requirement, ensuring timely availability of quality bio-pesticides; creation of sustainable production units for quality bio-fertilizers and bio-pesticides manufacturing; promotion of customized fertilizers with specific nutrients like S, P, Zn, B, Mo etc.; establishment of single window system for input supply in cluster of villages; organizing trainings for farmers and input suppliers atKrishi Vigyan Kendras (KVKs), exposure visits and close interaction with research organizations and private agencies; branding of local pulses and establishing small processing units at village level are some of the interventions those will certainly help in boosting pulses production ensuring sustained self sufficiency in indigenous pulses production for future.

References

- Bharadwaj C., Tripathi Shailesh, Soren, Khela Ram Soren, ThudiMahendar, Yadav Rajesh, Sheoran Seema, Roorkiwal Manish, Patil B.S., Chitikineni Annapurna, Palakurthi Ramesh, Vemula Anilkumar, Rathore Abhishek, Kumar Yogesh, Chaturvedi SK, Dixit G.P., Singh N.P. and Varshney RK.2021.QTL-hotspot" region enhances drought tolerance and grain yield in multiple genetic backgrounds of elite chickpea cultivars in India. *The Plant Genome*DOI: 10.1002/tpg2.20076
- Chaturvedi, S.K. and Sandhu, J.S. 2020. Silent revolution in pulses production– India marching towards self-sufficiency. Indian Journal of Agricultural Sciences 90 (1): 17-24.
- DAC&FW.2021. https://eands.dacnet.nic.in /Advance_Estimates.htm

Khariff Pulses Crop Outlook 2021

Nirav Desai

Managing Partner - GGN Research Co.

SOWN AREA UNDER KHARIF PULSES CROPS

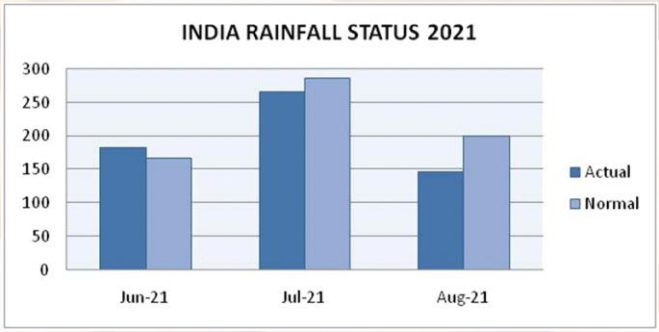
134.23 Lac Hac • 2021

As on Aug 19

132.03 Lac Hac • 2020

As on Aug 19

(Sown area is 1.67%higher in 2021 compared to 2020)



(8.8% lower than normal rainfall this year)

Actual rainfall this year
(June 1 – Aug 23)

594.5 mm

Normal rainfall of the period
(June 1 – Aug 23)

652.2 mm

The southwest monsoon arrived in India on June 3, signaling a good start to the kharif 2021 season. As on June 23, monsoon covered almost 93% of kharif acreage a week before its usual onset. However, the lull monsoon rainsin the late June and first half of July in following regions: much of the M.P, Raj. and some parts of U.P., slowed the pulses planting pace. Later on after 19 July, monsoon rains pickup its pace, resulted the area covered under kharif crops improving. As of 11 Aug, Acreage of all major kharif pulses crops such as Arhar, Urad, Mungbean mostly same area as last year.

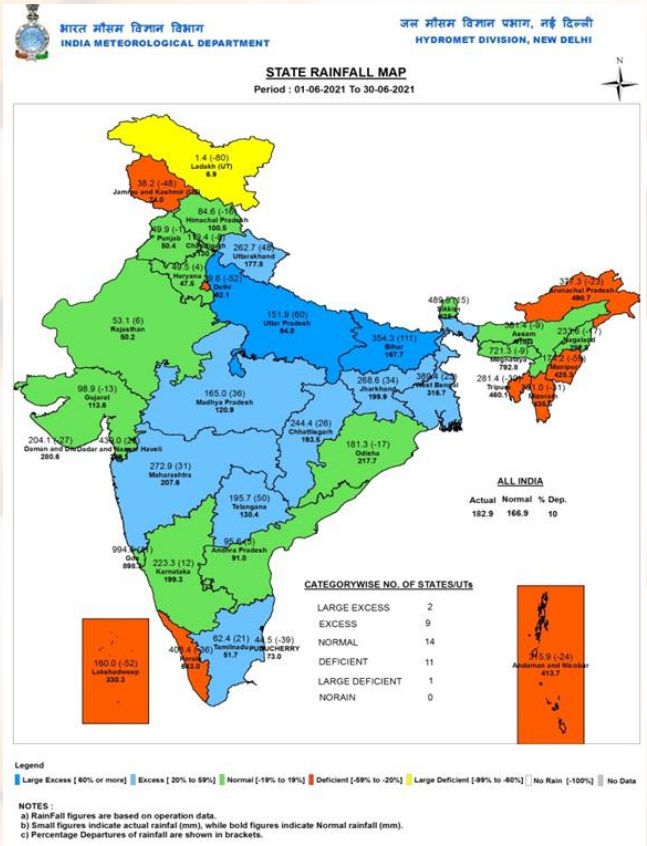
JUNE WEATHER (11% SURPLUS)

In the first month of SW Monsoon 2021,the overall rainfall at all India level in June 2021 was 182.92 mm, 11% above normal rainfall in the month at 166.9 mm. In June 2020 rainfall was 18% above normal to 196.6 mm and in June 2019 it was 33% below normal. Most of the rain occurred in the first 20 days of June. While rainfall disappeared in most of the states in the remaining month. It is clear from the fact that by June 20 India received 140 mm which was around 38% above normal. From June 20 to June 30 India received just 42 mm which is 47% below normal and that trend continues as we enter July 2021, the second month of the SW Monsoon 2021.

Rainfall was active in Madhya Pradesh, Maharashtra, Chhattisgarh, Telangana, Tamilnadu, East Uttar Pradesh, Bihar, West Bengal and Far Eastern States. While in Northwest India monsoon begins on weaker notes particularly in Rajasthan, Gujarat, Haryana, Punjab and Interior Karnataka.

Monsoonal rainfall got off to good start which has facilitated some early planting of kharif crop but the

progress of sowing halted or slowed down as rainfall begins to disappear and the weather turns warm. Most of the farmers begin to wait for the second round of rainfall. While light rains scattered in Northwest India which fails to boon up the soil moisture to facilitate early planting. So, most of the kharif planting in Northwest India is facing a delay.



Key Feature

- Monsoon got off to an early start this year but almost disappeared in most of the states in late June.
- Monsoon began on weaker note in Rajasthan & Gujarat.

This year's planting –

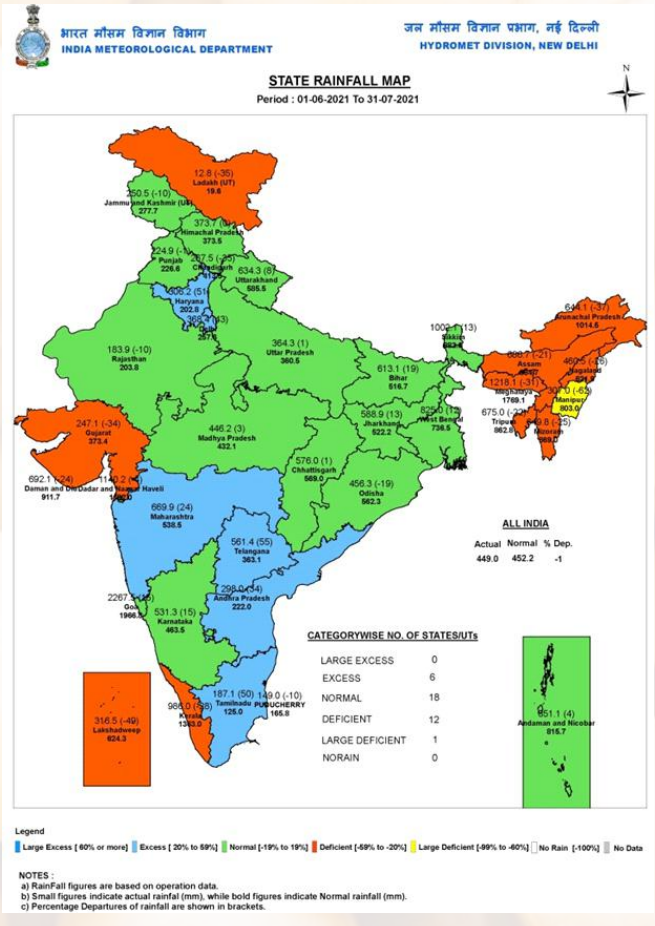
- Timely in Maharashtra & South India.
- Slightly behind regular schedule in MP & UP.
- Delayed by 10-15 days in Rajasthan.

JULY WEATHER (10% DEFICIENT)

In the second month of SW Monsoon 2021, India received 266.1 mm rainfall that is 6.73% below normal July rainfall of 285.3 mm. The surplus has been wiped out by the July 2021, the overall June July 2021 rainfall now is 449 mm, or about 0.7% below normal rainfall of 452.2 mm. The Rainfall almost disappeared or was very poor in the first 15 days of July in Madhya Pradesh, Rajasthan, West Gujarat, Uttar Pradesh, Punjab, and Haryana. While, rainfall was active in southern states. The problem started here as the top soil moisture dried up. Early planted crop begins to witness moisture stress and it becomes increasing difficult to complete remaining planting.

Rains begin to improve from mid July however the precipitation varied from area to area. Few area received good moisture while other lighter. However rains covered most parts of India and supported the crop and assisted in completion of crop planting. However significance of rains was poor in Rajasthan, West Gujarat and West Uttar Pradesh.

All the khariff crops had come out of early blow of



moisture shortages and respond well the change.

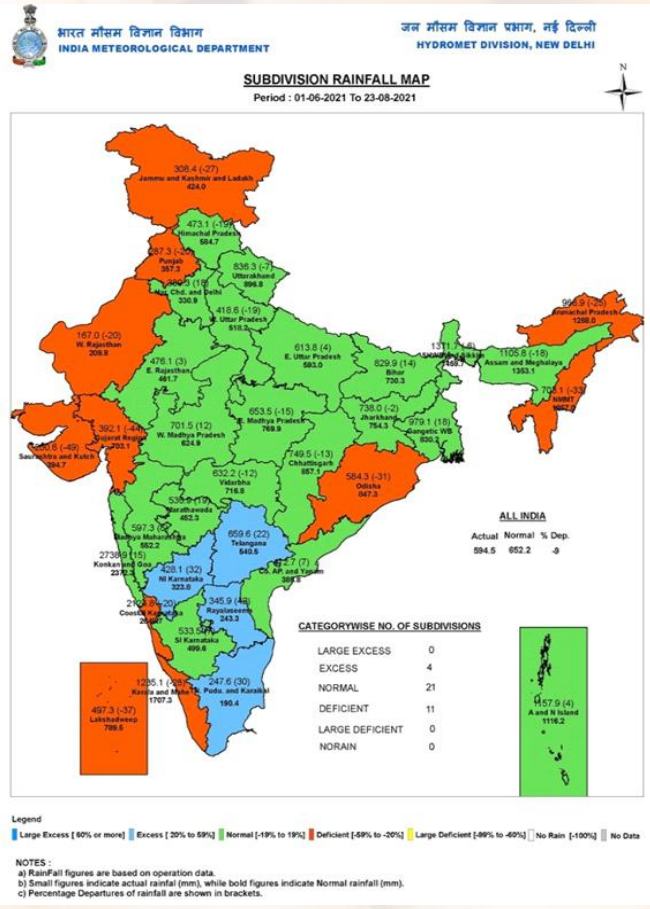
Key Feature

- July 2021 was 10% deficient versus 11% surplus in June 2021.
- The lull rains in late June and early July slowed the pulses planting pace in M.P, Raj. and some parts of U.P.
- Rains improved from mid July and covered most parts of India, supported the crop and assisted in completion of planting.

AUGUST WEATHER (27.2% DEFICIENT)

In the first 23 days of August Monsoon 2021, India received 145.5 mm rainfall that is 27.2% below normal rainfall of 199.8 mm. All India cumulative rainfall from 1stJune to 23rd Aug is 594.5 mm, or about 9% below normal rainfall of 652.2 mm.

The distribution of rainfall was uneven. Torrents rains fell in North Madhya Pradesh and Southern Rajasthan resulted in flooding and crop losses while light rains occurred in West Rajasthan, Gujarat and



eastern India. However most of the India received well timed rains to support crops. As of now soil moisture is deficient in Gujarat, west Rajasthan and nearby areas while rest of India is at adequate levels.

Key Feature

- Despite deficient, rain had occurred routinely in many crop areas.
- Dryness in the northwest is an issue for crops in Gujarat and Rajasthan.
- Rest of India received satisfactory rainfall and most of it occurred at timely intervals.

PULSES

As of 19th Aug'21 areas covered under Kharif Pulses crop is higher by 2.20 lac Hac over last year.

	2021	2020	Change	% Change
Tur (Arhar)	48.24	46.42	1.82	3.92%
Urdbean	37.06	37.00	0.06	0.16%
Mungbean	33.99	34.04	-0.05	-0.15%
Other	14.94	14.57	0.37	2.54%
Total	**134.23**	**132.03**	**2.20**	**1.67%**

- Rajasthan area seems to be lower by 20/25% as per the traders.
- Majorly all the key Kharif pulses crops areas are recorded almost same area as last year, except Tur crop as area in Karnataka state increase by 14% over last year.

Urad

As of 11 Aug'21 area covered under Urad crop is at 35.50 (same as last year)

	2021	2020	Change	Expected Yield	Production Prospects
Madhya Pradesh	15.26	15.94	-0.68	Poor than LY	Poor than LY
Uttar Pradesh	6.64	6.87	-0.23	Poor than LY	Same as LY
Rajasthan	3.97	3.67	0.30	Better than LY	Same as LY
Maharastra	4.23	3.78	0.45	Better than LY	Same as LY
Other states	6.96	6.74	0.22	Same as LY	Poor than LY
TOTAL	**37.06**	**37.00**	0.06	**Poor than LY**	**Poor than LY**

- The early start of monsoon facilitated timely Urad planting.
- Government hiked the MSP to Rs 6300 per Qtl from Rs 6000 per Qtl.
- Well timed rains in MP, Maharashtra and Uttar

Pradesh (accounts for around 70% of All India crop) had boosted the crop prospects.

- Rather some end moment shift from soybean to Urad happened in MP but Yield losses are reported in Northern MP due to heavy rains.
- On accounts of similar acreage and average to good yields in major areas the overall production may be same or slightly higher than last year.

Moongbean

As of 19 Aug'21 areas covered under Moong crop is lower by 0.41 lac Hac over last year.

	2021	2020	Change	Expected Yield	Production Prospects
Rajasthan	20.87	20.36	0.51	Better/Same as LY	Better than LY
Maharashtra	3.74	3.84	-0.10	Poor than LY	Same as LY
Karnataka	4.14	3.85	0.29	Poor than LY	Poor than LY
Other states	5.24	5.99	-0.75	Poor than LY	Poor than LY
TOTAL	**33.99**	**34.04**	**-0.05**	**Same to Poor**	**Same as LY**

- Rajasthan is the main Moong growing state which contributes 60% of nation's crop.
- Govt has hiked MSP to Rs 7275 per Qtl from Rs 7196 per Qtl. It's the highest MSP amongst pulses, this encouraged farmer to plant more Moongbean.
- Rajasthan planting is slightly delayed due to late arrival of rains. While other states started timely.
- Crops in Rajasthan are struggling for rains and have become a little too dry. This has slowed down development and affected yields adversely.
- Crop conditions in Southern parts and Maharashtra are favorable due to timely monsoonal rain.

On account of lower crop prospects of Rajasthan, which is a big area and higher crop prospects of South and Maharashtra, the overall production may be same or lower from last year.

Arhar

As of 19 Aug'21 area covered under Tur crop is higher by 1.82 lac Hac over last year.

	2021	2020	Change	% Change
Maharashtra	13.01	12.30	0.71	5.77%
Karnataka	14.15	12.45	1.70	13.65%
Madhya Pradesh	4.20	4.06	0.14	3.45%
Uttar Pradesh	3.48	3.51	-0.03	-0.85%
Other states	13.40	14.10	-0.70	-4.96%
TOTAL	**48.24**	**46.42**	**1.82**	**3.92%**

- The early start of monsoon facilitated timely Tur planting.
- There is a significant increase in area of Karnataka. While there is a slight increment in MP and MH.
- Rainfall continues to occur routinely in main Tur growing southern states and Maharashtra supporting a good outlook for 2021.
- As of now, Tur crop prospects seem to be good, but in next 3-4 months will be crucial.

Weather Forecast:

- During next 7 days Southern India into Maharashtra, western MP will see light and scattered rains.
- Maharashtra and Central India will have opportunities for monsoonal rain in Sept 2 – 10

Conclusion

- Monsoon start early but gap in rain between 15th June to 15th July curtailed the expansion of area.
- Only Tur area is slightly higher over last year.
- Though rainfall was deficient but was well distributed on timely interval which supported pulses crop.
- Only Rajasthan crop is in concern due to prolonged dry weather.
- Similar or slightly higher pulses sowing could not magnify the production.

Crop Prospects:

Urad – Same/Slightly Better, Moong – Slightly Poor, Tur – Slightly Better

Recipes

BAKED BUFFALO CHICKPEA BITES

INGREDIENTS:

- 2 large carrots, roughly chopped
- 1/2 cup rolled oats
- 2-3 garlic cloves, depending on size
- 1 (15 ounce) can chickpeas, drained and rinsed
- 1/2 cup diced green onions
- 1/4 cup hot sauce + a few tablespoons for coating
- 1/2 teaspoon fine sea salt & pepper
- vegan ranch dressing for serving

DIRECTIONS:

In a food processor, combine the carrots, oats, and garlic then blend for 30 seconds, or until finely chopped. Transfer the mixture to a large bowl and set aside.

Next add the chickpeas to the food processor and blend for 15 seconds, until finely chopped (as pictured above). You should be able to press the chopped chickpeas in between your fingers and have them stick together like a dough. Transfer them to the bowl with the oat mixture.

Add the remaining ingredients to the bowl with chickpeas and stir everything together until well-combined. Line a baking sheet with parchment paper and lightly grease or spray with high heat oil. Scoop out roughly one large tablespoon of the mixture at a time. Use your hands to roll it into a ball then place it on the baking sheet. The dough should make approximately 14 bites. Transfer the baking sheet to the refrigerator and then preheat the oven to 375°F.

Remove the bites from the refrigerator and lightly brush the edges with a little more hot sauce. Transfer them to the oven and cook for 25-30 minutes, until firm and lightly golden on the outside. Allow to cool for a few minutes, then poke with toothpicks and carefully transfer them to a plate. Serve with vegan ranch* or blue cheese dressing and enjoy!

CLASSIC LENTIL BURGERS

INGREDIENTS:

- 2 ½ cups cooked green lentils
- 1 cup carrots, finely chopped
- 1 cup onion, finely chopped
- 3 cloves garlic, minced
- 1/2 cup walnuts
- 1/2 cup sunflower seeds
- 1/2 cup flour, I used chickpea flour
- 1 cup breadcrumbs, whole grain or gluten-free
- 2 eggs, or 2 flax eggs
- 2 tablespoons tomato paste
- 2 tablespoons vegan Worcestershire
- 1 tablespoon fresh or dried thyme
- 1 tablespoon fresh or dried oregano
- 1 teaspoon fine sea salt
- 10 whole grain buns
- olive oil for cooking

INSTRUCTIONS:

Using a food processor, finely chop the onion, carrots, garlic, walnuts and sunflower seeds then transfer to a large bowl. I process each ingredient individually to achieve the best texture.

Next add half of the cooked lentils to the food processor and pulse until they appear slightly mashed, then transfer them to the bowl along with the remaining lentils.

Once you have all of the vegetables, lentils, nuts and seeds in the bowl, add the breadcrumbs, herbs, and salt.

In a small bowl, combine the beaten egg with the tomato paste and the Worcestershire. Pour the egg mixture into the bowl with vegetables and lentils and stir everything together. Sprinkle in the flour a little at a time as you continue to stir. If the mixture seems too wet, add more flour as needed. If you have time, refrigerating the mixture for about 30 minutes also helps dry out some of the moisture.

Form eight individual patties with your hands, making sure to keep them somewhat flat with rounded edges. They will hold together better if they aren't too big or thick. At this point you can refrigerate them until you are ready to cook (for up to 2-3 days) or cook them right away.

When you're ready to cook them, start by warming the olive oil over medium-heat in a skillet for at least five minutes. Once the skillet is thoroughly heated, cook the burgers on each side for about 5-6 minutes. I like the push the edges of the burger to the side of the pan as I cook them to make sure they are cooked on the sides as well. Serve on a warm bun with desired toppings and dig in!

SKILLET CORNBREAD WITH CHICKPEAS

INGREDIENTS:

- 1 cup cornmeal
- 1 cup all-purpose flour
- 2 tsp baking powder
- 1/4 tsp baking soda
- 1/8 tsp salt
- 270 ml chickpeas, rinsed and drained
- 310 mL buttermilk
- 2 large eggs
- 1/4 cup honey
- 1/4 cup butter

DIRECTIONS:

Preheat the oven to 425ºF (220ºC), and place a well-seasoned 10 inch (25 cm) cast iron skillet on the middle rack to preheat with the oven.

Combine cornmeal, flour, baking powder, baking soda and salt in a bowl. Set aside.

In the bowl of a food processor, process chickpeas, buttermilk, eggs, and honey. Scrape down the sides and process again until combined, then add to dry ingredients and mix by hand until just incorporated.

Place butter in hot skillet in the oven until melted, about a minute. Swirl the butter around to coat the sides of skillet, then pour butter into cornmeal batter, leaving about 1 tbsp (15 ml) behind in the skillet. Mix butter into batter, then pour batter into the skillet.

Bake until a tester comes out clean, about 20 to 25 minutes. Allow to cool for about 10 minutes before cutting into 8 wedges while still in the skillet. Be sure to run a thin lifter under each piece, as the underside may adhere slightly to the base of pan.

Cook's Note: 1/2 (19 oz/540 ml) can chickpeas, rinsed and drained equals 1 cup (250 ml) cooked chickpeas.

'CHEESY' LENTIL CHILI CASSEROLE

INGREDIENTS:

- 8 ounces fusilli pasta, or pasta of choice
- 2 tablespoons olive oil
- 1 red onion, finely chopped
- 3 garlic cloves, minced
- 2 jalapenos, cored and finely chopped (can sub 1 bell pepper, if preferred)
- 8 ounces cremini mushrooms, finely chopped
- 15 ounces cooked lentils
- 15 ounces diced tomatoes
- 2 tablespoons tomato paste
- 2 teaspoons chili powder
- 1 teaspoon ground cumin
- 1 teaspoon dried oregano
- 1 teaspoon smoked paprika
- 1/2 teaspoon salt
- 1 cup vegan cheese sauce, store bought or homemade

INSTRUCTIONS:

Bring a large pot of salted water to a boil. Add the pasta and cook just until tender, or somewhat al dente. Drain and rinse the pasta with cold running water. Set aside.

Preheat the oven to 350°F then lightly grease a 9x13" baking dish.

In the same pot, warm the oil over medium heat. Add the onion, jalapeño and red bell pepper then cook for 5 minutes, until soft.

Next, add the mushrooms, garlic, chili powder, oregano, and smoked paprika. Continue to cook for about 3 minutes, stirring intermittently.

Lastly, pour in the diced tomatoes, tomato paste and cooked lentils. Stir to combine. Cook over a low simmer until the mushrooms are tender, about 5 minutes. Remove from heat then stir in the cooked pasta.

Transfer the lentil mixture to the greased casserole dish. Spread cheese sauce over top and out to the sides. Garnish with smoked paprika, diced tomatoes, and red onion. Bake in the oven for 15-20 minutes, until heated through.

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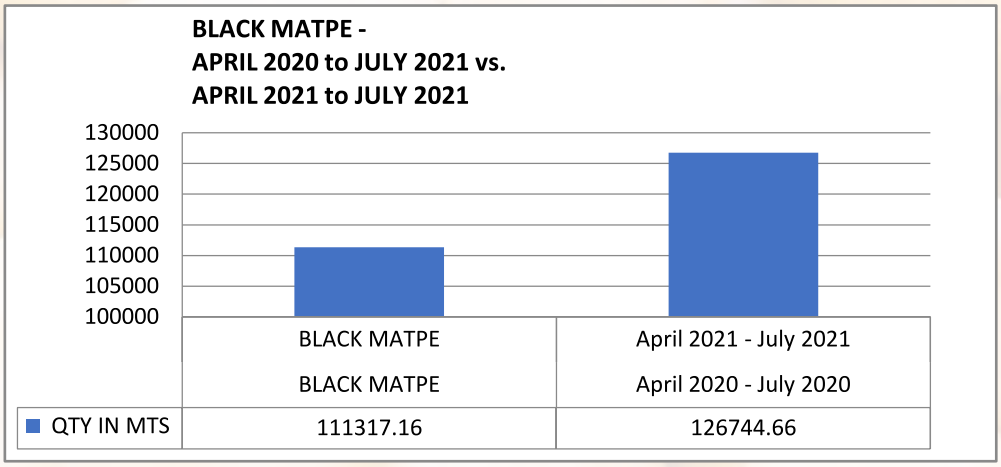
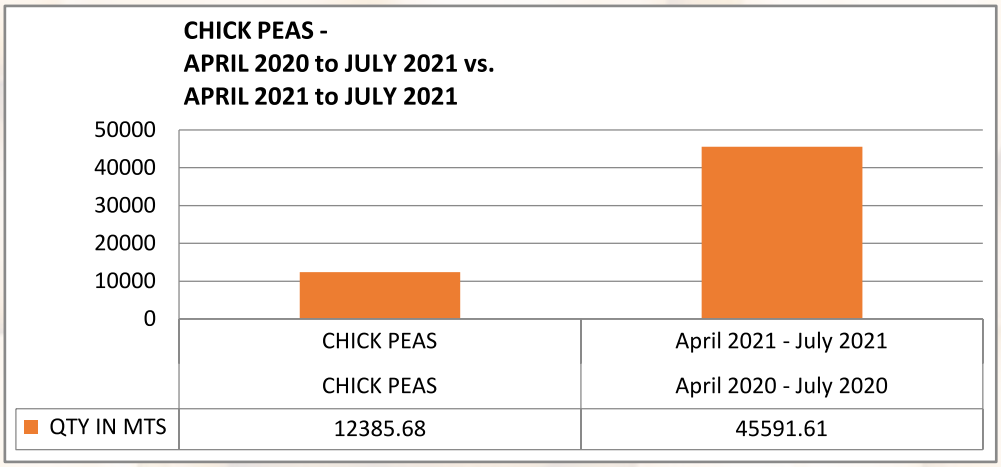
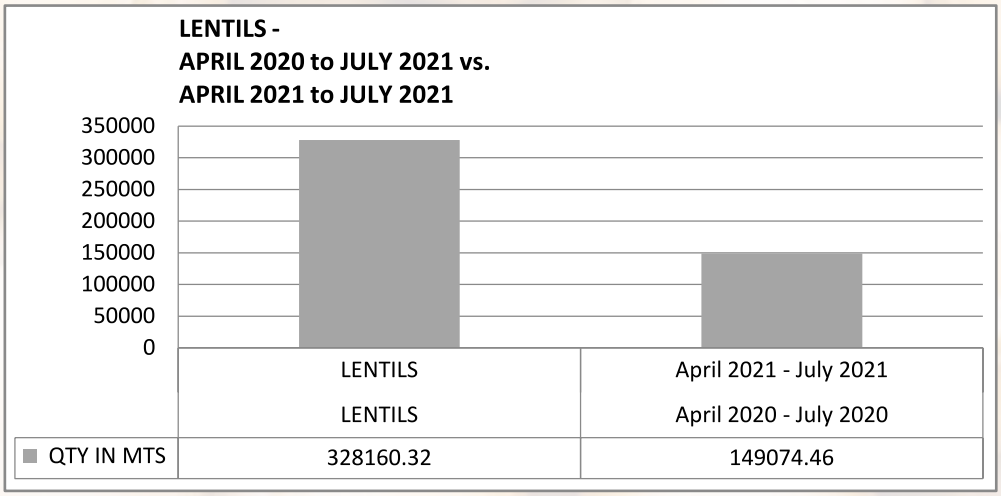
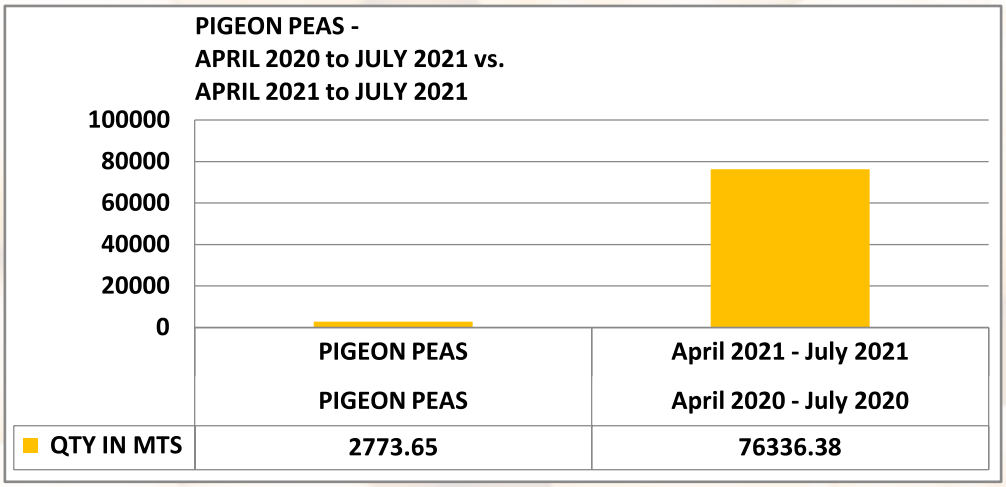
Pulses Import Data
April - July 2020 v/s April - July 2021

Nikita Chury
IPGA








PIGEON PEAS -
APRIL 2020 to JULY 2021 vs.
APRIL 2021 to JULY 2021
100000
80000
60000
40000
20000
0
PIGEON PEAS
PIGEON PEAS
April 2021 - July 2021
April 2020 - July 2020
QTY IN MTS
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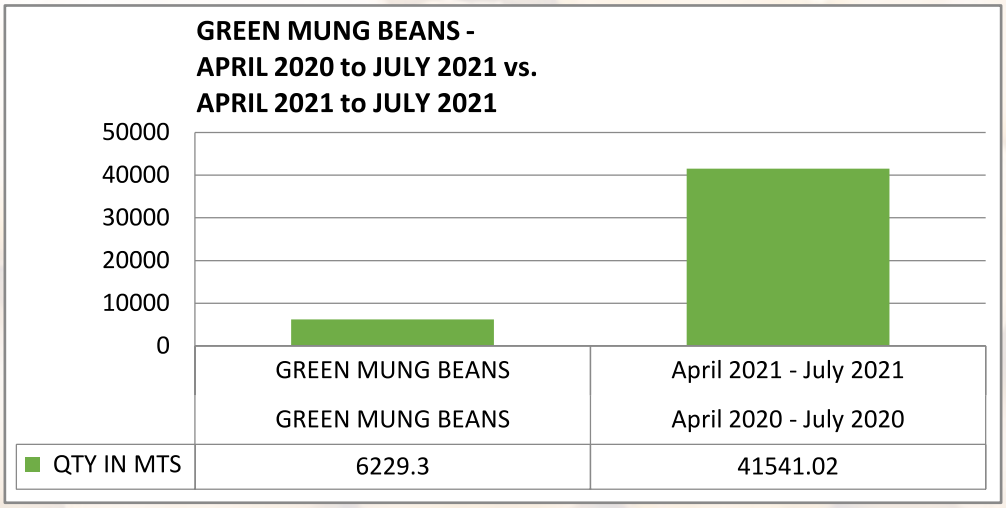
GREEN MUNG BEANS -
APRIL 2020 to JULY 2021 vs.
APRIL 2021 to JULY 2021
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30000
20000
10000
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GREEN MUNG BEANS
GREEN MUNG BEANS
April 2021 - July 2021
April 2020 - July 2020
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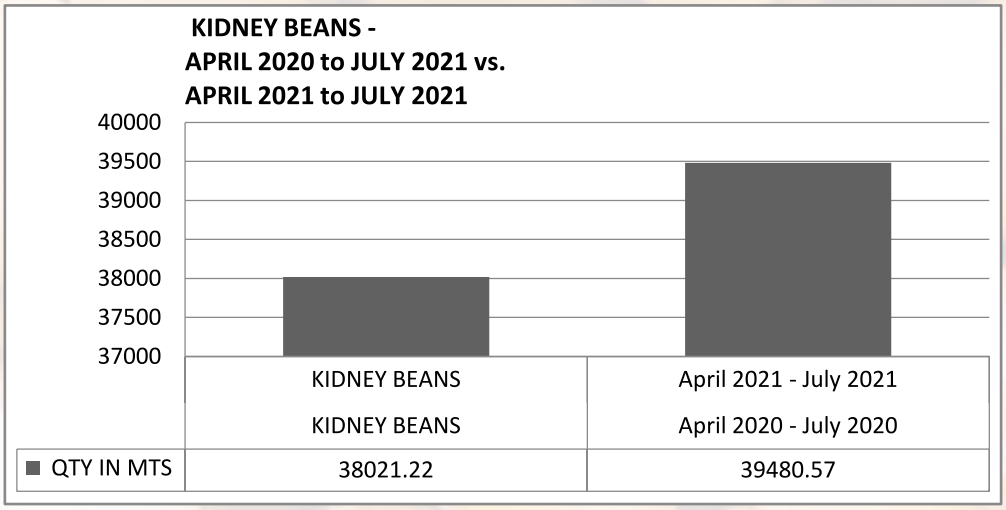
KIDNEY BEANS -
APRIL 2020 to JULY 2021 vs.
APRIL 2021 to JULY 2021
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39500
39000
38500
38000
37500
37000
KIDNEY BEANS
KIDNEY BEANS
April 2021 - July 2021
April 2020 - July 2020
QTY IN MTS
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39480.57

Ministry of Agriculture and Farmers Welfare
Department of Agriculture and Farmers Welfare
Directorate of Economics and Statistics
Fourth Advance Estimates of Production of Foodgrains for 2020-21

As on: 11th August, 2021
(in Million Tonnes)

Crop	Season	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	
																	Target	Fourth Advance Estimate
Rice	Kharif	78.27	80.17	82.66	84.91	75.92	80.65	92.78	92.36	91.50	91.39	91.41	96.30	97.14	102.04	102.28	102.60	104.41
	Rabi	13.52	13.18	14.03	14.27	13.18	15.33	12.52	12.87	15.15	14.09	13.00	13.40	15.62	14.44	16.59	17.00	17.86
	Total	91.79	93.36	96.69	99.18	89.09	95.98	105.30	105.23	106.65	105.48	104.41	109.70	112.76	116.48	118.87	119.60	122.27
Wheat	Rabi	69.35	75.81	78.57	80.68	80.80	86.87	94.88	93.51	95.85	86.53	92.29	98.51	99.87	103.60	107.86	108.00	109.52
Jowar	Kharif	4.07	3.71	4.11	3.05	2.76	3.44	3.29	2.84	2.39	2.30	1.82	1.96	2.27	1.74	1.70	2.15	1.85
	Rabi	3.56	3.44	3.81	4.19	3.93	3.56	2.69	2.44	3.15	3.15	2.42	2.60	2.53	1.74	3.08	2.85	2.94
	Total	7.63	7.15	7.93	7.25	6.70	7.00	5.98	5.28	5.54	5.45	4.24	4.57	4.80	3.48	4.77	5.00	4.78
Bajra	Kharif	7.68	8.42	9.97	8.89	6.51	10.37	10.28	8.74	9.25	9.18	8.07	9.73	9.21	8.66	10.36	9.57	10.86
Maize	Kharif	12.16	11.56	15.11	14.12	12.29	16.64	16.49	16.20	17.15	17.01	16.05	18.92	20.12	19.41	19.43	22.00	21.44
	Rabi	2.55	3.54	3.85	5.61	4.43	5.09	5.27	6.05	7.11	7.16	6.51	6.98	8.63	8.30	9.34	7.00	10.07
	Total	14.71	15.10	18.96	19.73	16.72	21.73	21.76	22.26	24.26	24.17	22.57	25.90	28.75	27.72	28.77	29.00	31.51
Ragi	Kharif	2.35	1.44	2.15	2.04	1.89	2.19	1.93	1.57	1.98	2.06	1.82	1.39	1.99	1.24	1.76	1.78	1.96
Small Millets	Kharif	0.47	0.48	0.55	0.44	0.38	0.44	0.45	0.44	0.43	0.39	0.39	0.44	0.44	0.33	0.37	0.65	0.35
Barley	Rabi	1.22	1.33	1.20	1.69	1.35	1.66	1.62	1.75	1.83	1.61	1.44	1.75	1.78	1.63	1.72	1.80	1.67
Nutri Cereals	Kharif	14.58	14.05	16.79	14.42	11.54	16.44	15.95	13.59	14.06	13.93	12.10	13.52	13.91	11.97	14.19	14.15	15.02
	Rabi	3.56	3.44	3.81	4.19	3.93	3.56	2.69	2.44	3.15	3.15	2.42	2.60	2.53	1.74	3.08	2.85	2.94
	Total	18.14	17.50	20.60	18.62	15.47	20.01	18.64	16.03	17.20	17.08	14.52	16.12	16.44	13.71	17.26	17.00	17.96
Nutri/Coarse Cereals	Kharif	26.74	25.61	31.89	28.54	23.83	33.08	32.44	29.79	31.20	30.94	28.15	32.44	34.03	31.38	33.61	36.15	36.46
	Rabi	7.33	8.31	8.86	11.49	9.72	10.32	9.58	10.24	12.09	11.92	10.37	11.33	12.94	11.67	14.13	11.65	14.68
	Total	34.07	33.92	40.75	40.04	33.55	43.40	42.01	40.04	43.30	42.86	38.52	43.77	46.97	43.06	47.75	47.80	51.15
Cereals	Kharif	105.01	105.78	114.55	113.45	99.75	113.73	125.22	122.15	122.70	122.34	119.56	128.74	131.16	133.42	135.89	138.75	140.87
	Rabi	90.21	97.30	101.46	106.45	103.70	112.52	116.98	116.63	123.09	112.53	115.66	123.24	128.44	129.71	138.59	136.65	142.06
	Total	195.22	203.08	216.01	219.90	203.45	226.25	242.20	238.78	245.79	234.87	235.22	251.98	259.60	263.14	274.48	275.40	282.93
Tur	Kharif	2.74	2.31	3.08	2.27	2.46	2.86	2.65	3.02	3.17	2.81	2.56	4.87	4.29	3.32	3.89	4.82	4.28
Gram	Rabi	5.60	6.33	5.75	7.06	7.48	8.22	7.70	8.83	9.53	7.33	7.06	9.38	11.38	9.94	11.08	11.00	11.99
Urad	Kharif	0.90	0.94	1.12	0.84	0.81	1.40	1.23	1.50	1.15	1.28	1.25	2.18	2.75	2.36	1.33	2.90	1.60
	Rabi	0.35	0.50	0.34	0.33	0.42	0.36	0.53	0.47	0.55	0.68	0.70	0.66	0.74	0.70	0.75	0.70	0.75
	Total	1.25	1.44	1.46	1.17	1.24	1.76	1.77	1.97	1.70	1.96	1.95	2.83	3.49	3.06	2.08	3.60	2.34
Moong	Kharif	0.69	0.84	1.25	0.78	0.44	1.53	1.24	0.79	0.96	0.87	1.00	1.64	1.43	1.78	1.83	1.88	2.01
	Rabi	0.26	0.28	0.27	0.26	0.25	0.27	0.40	0.40	0.65	0.64	0.59	0.52	0.59	0.67	0.68	0.60	1.08
	Total	0.95	1.12	1.52	1.03	0.69	1.80	1.63	1.19	1.61	1.50	1.59	2.17	2.02	2.46	2.51	2.48	3.09
Lentil	Rabi	0.95	0.91	0.81	0.95	1.03	0.94	1.06	1.13	1.02	1.04	0.98	1.22	1.62	1.23	1.10	*	1.45
Other Kharif Pulses	Kharif	0.54	0.70	0.96	0.80	0.49	1.33	0.93	0.61	0.71	0.78	0.72	0.89	0.83	0.63	0.87	1.00	0.80
Other Rabi Pulses	Rabi	1.36	1.37	1.19	1.28	1.28	1.33	1.34	1.59	1.52	1.74	1.47	1.77	1.78	1.45	1.49	2.70	1.76
Total Pulses	Kharif	4.86	4.80	6.40	4.69	4.20	7.12	6.06	5.92	6.00	5.73	5.53	9.58	9.31	8.09	7.92	10.60	8.69
	Rabi	8.52	9.40	8.36	9.88	10.46	11.12	11.03	12.43	13.26	11.42	10.79	13.55	16.11	13.98	15.10	15.00	17.02
	Total	13.38	14.20	14.76	14.57	14.66	18.24	17.09	18.34	19.26	17.15	16.32	23.13	25.42	22.08	23.03	25.60	25.72
Total Foodgrains	Kharif	109.87	110.58	120.96	118.14	103.95	120.85	131.27	128.07	128.69	128.07	125.09	138.33	140.47	141.52	143.81	149.35	149.56
	Rabi	98.73	106.71	109.82	116.33	114.15	123.64	128.01	129.05	136.35	123.96	126.45	136.78	144.55	143.70	153.69	151.65	159.08
	Total	208.60	217.28	230.78	234.47	218.11	244.49	259.29	257.12	265.05	252.02	251.54	275.11	285.01	285.21	297.50	301.00	308.65

* - included in other Rabi pulses

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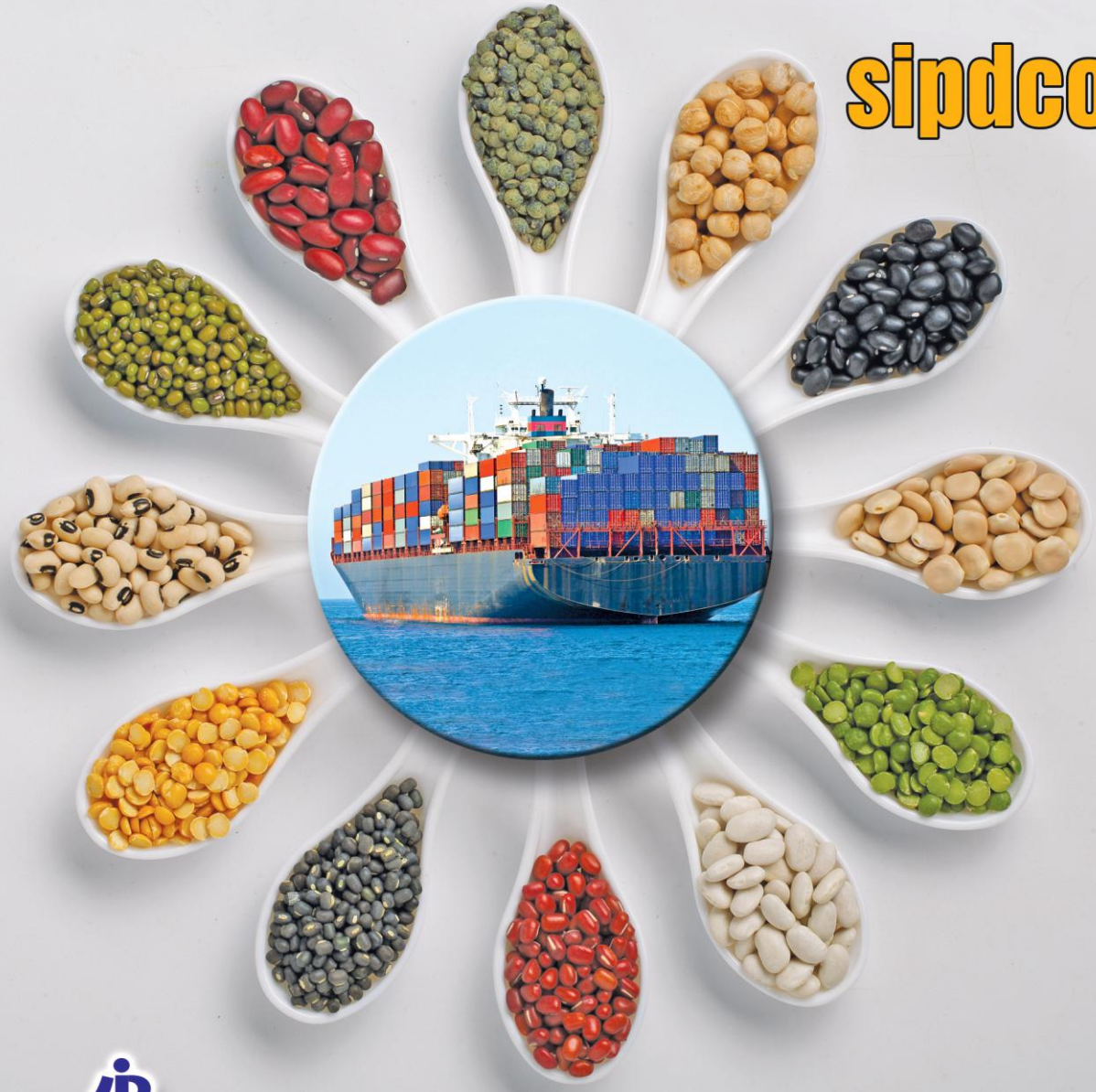

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