

PULSE INDIA



AN INDIA PULSES AND GRAINS ASSOCIATION PUBLICATION

Vol: II Issue 03 November – December 2016

In This Issue:



International Year Of Pulses 2016 In Review



Unlocking The Inherent Goodness In Pulses Through Fortification



**Union Agriculture Minister Presided The Closing Ceremony Of
“International Year Of Pulses 2016”**



**R&D For Enhancing Both Horizontal And Vertical Expansion Of
Pulses Production**

..... **INFINITE**
POSSIBILITIES !!!



**INTERNATIONAL
BROKERS OF GRAINS, PULSES,
OILSEEDS AND SUGAR**



ESARCO EXIM PVT LTD

4B, S.B.TOWERS, 2/FL, 37 SHAKESPEARE SARANI, KOLKATA- 700017, INDIA

- Tel : + 91 33 2281 1764
- Fax : + 91 33 2281 1767
- Email : business@esarco.com
- Web : www.esarco.com



From the Chairman's Desk

Dear friends,

Greetings of the Season from all of us at India Pulses and Grains Association!

The year 2016 has been a great year with an excellent monsoon that has led to a significant increase in the pulses sowing for both Kharif and Rabi. As per the Ministry of Agriculture's 1st Advance Estimates, the Kharif production of pulses is likely to be 8.70 million tons vis-à-vis a target of 7.25 million tons.

IPGA, through sustained efforts over the last two years has managed to have Imported Pulses reclassified as a Low Risk Food Item and convincing FSSAI to allow Single Sampling for Comingled Cargo under single IGM. These two Orders will help faster clearances of consignments from Port.

It is a great matter of pride for all of us that IPGA is being recognized globally as the nodal body for the Indian Pulses Trade & Industry. In the last few months, Government delegations from Argentina and Kaduna State (Nigeria) have met the Association in Mumbai to discuss trade relations and we are in the process of finalising a MoU with both. Similarly, trade members from Argentina, Nigeria and Brazil have also met with the Association in Mumbai with the aim of establishing trade relations in India.

Friends, you would recall from the last issue of Pulse India that IPGA has undertaken a Water Resource Revival Project in 10 villages of Marathwada just before the monsoons. I am very happy to report that the project has been a tremendous success and the entire river and canal excavation work has yielded the desired results. The wells in these villages have got recharged and are full of water and similarly, the water table has improved remarkably. Farmers from these areas have also approached the Association to discuss pulses cultivation in these areas as well as undertaking additional work. The Association is seriously considering continuing this work and will need the support of the entire trade. My team at the Association will connect with you very shortly with all the necessary details and seek your support.

The year 2016 was declared as The International Year of Pulses by the United Nations and December marks the end of the same. However, we believe that a lot needs to be done in this space, especially with respect to increasing domestic production and improving the nutritional security of the country. We propose to continue working towards both these objectives and will be exploring our relationships with ICRISAT as well as ICAR-IIPR and relevant Ministries to achieve both the goals.

Before I end this note, I would like to take this opportunity to wish all a Very Happy & Prosperous New Year 2017.

Regards

Pravin Dongre
CHAIRMAN
India Pulses and Grains Association

PULSES GATEWAY OF INDIA

Advantage KPCT

- ▶ Plant Quarantine (PQ) office available near the port
- ▶ Food Safety and Standards Authority of India – Getting certification at the earliest
- ▶ Additional movements for CFS not required
- ▶ Avoid multiple handling
- ▶ Quicker clearance at the terminal
- ▶ Most competitive handling charges
- ▶ Clean & modern warehousing facilities
- ▶ Save minimum USD 100 / 20'
- ▶ FSSAI currently at Chennai coming soon at KPCT
- ▶ Distance advantage to various Dhall Mills in Andhra Pradesh



**KPCT
 Sales Team**

Chennai:
Mr Vivek Nair
 +91 87544 10789
 vivek.n@krishnapatnamport.com

Singapore:
Capt Gagan Mehrish
 +65 9061 3751
 gagan@kpcl.sg



Contents

World - Pulses	
	Brian Clancey 4
International Year Of Pulses 2016 In Review	
	Robynne M. Anderson 9
Unlocking The Inherent Goodness In Pulses Through Fortification	
	Parag Gadre 15
Production Report-Usa Pulse Crop 2016	
	Shakun Dalal 19
Canadian Pulse Production Sees Record High Despite Weather Challenges	
	Anya McNabb..... 24
R&D For Enhancing Both Horizontal And Vertical Expansion Of Pulses Production	
	ICRISAT 26
Canada: Outlook For Principal Field Crops	
	Bobby Morgan 29
Union Agriculture Minster Presided The Closing Ceremony Of “International Year Of Pulses 2016”	
 37
IPGA’s Initiatives in 2016	
 43

*Disclaimer: The views and opinions expressed in the articles published in **PULSE INDIA** are those of the respective Authors alone, and do not necessarily reflect the opinions or policies of India Pulses and Grains Association (IPGA) and its Office bearers. The Association is neither responsible for the accuracy of any of the information and data supplied by Authors nor responsible for any offense caused inadvertently through interpretation of grammar, punctuation or language. IPGA and its office bearers are not responsible for readers taking or refraining from taking actions on the basis of information provided by the Authors. The Association and its office bearers are not responsible for any loss suffered as a result of any action taken or refrained from being taken as a result of any information contained in the publication.*

Edited and published by Pradeep Ghorpade for an on behalf of India Pulses and Grains Association having its registered office at B/1002, 10th floor, Sarvodaya CHS Ltd., Building No. 11, Khernagar, Bandra (East), Mumbai 400051. Printed for India Pulses and Grains Association by Apollo Printing Press, 259, SICOFT LTD., 69 Satpur MIDC, Nashik- 422007.



World - Pulses

Brian Clancey
STAT Publishing

December marks both the end of the International Year of Pulses (IYOP) and a moment when world pulse production set new records despite opening with a disastrous decline in output on the Indian subcontinent.

Production of all classes of dry edible pulses ended up around 53.99 million metric tons, compared to 50.19 million in 2015 and the recent five-year average of 50.28 million.

While dry edible bean and chickpea output were little changed from 2015, field pea and lentil output increased sharply mainly because of record harvests in both the United States and Canada.

Canada's lentil crop was officially pegged at 3.25 million MT and peas at 4.84 million, up from 2.54 and 3.2 million respectively in 2015. Harvests in the United States jumped from 239,213 to 564,093 MT for lentils and from 829,311 to 1.25 million MT for field peas.

This year's production gains did not occur because of the IYOP. But, an argument can

be made that in the months prior to and in the 21 months after the United Nations passed a resolution designating 2016 as the IYOP, a lot of market creation and development benefitted from prospects of a year long promotion of global pulse consumption.

A dizzying array of packaged products which use whole, split and fractionated pulses have been released by food manufacturers in recent years. Those product releases built on trends in many western countries which have seen the flat to downward trends in pulse consumption reverse direction.

That is reflected in global per capita usage levels for pulses. Per capita disappearance is expected to average 7.38 kilograms per human being this year and 7.6 kilograms in 2017, continuing an upward trend in usage that started in 2009. Every year since 2009, per capita pulse disappearance has been above the previous five-year rolling average. This has resulted in a situation where it is dangerous to assume that just because pulse output is up, that prices will be significantly lower.



Consumption trends in India have underscored this point. While rising production has resulted in harvest selling pressure on its domestic markets, improved rural incomes have resulted in greater demand for pulses as people increase spending on food.

Between 2005 and 2009, per capita pulse consumption in India averaged 15.49 kilograms per year, with domestic production averaging 14.31 million MT per year and imports 3.12 million. At the level, the annual gap between how many pulses were eaten and the minimum dietary needs of the population averaged 2.24 million MT per year. The difference between actual and optimum consumption was over five million MT per year.

Between 2011 and 2015, India's average per capita pulse consumption jumped to 17.68 kilograms per year, with domestic production averaging 17.68 million MT and imports 3.89 million. This meant that on average India had enough pulses to cover its minimum dietary needs, but was still 2.84 million MT short of the optimum quantity recommended by nutritionists.

Even so, India has just gone through two years in which the available supply of

pulses was below both its minimum and optimum dietary needs. This season is witnessing a dramatic reversal. For the first time, India will have more than enough pulses available from all sources to cover its optimum dietary requirements.

The change started to affect markets in November and December as heavy arrivals of new crop tur or pigeon pea from India's kharif or monsoon season coincided with a record Australian desi chickpea harvest. Both events add to the psychological impact of what could be a record rabi season pulse crop. Competition for available demand on the Indian subcontinent could see world prices for field peas, desi and small kabuli chickpeas face added pressure in 2017.

Markets are not without demand pressures. China remains a significant buyer of field peas for further processing into starch, protein and fiber isolates as well as green peas for sprouting and fried snacks.

World lentil production is now estimated at 6.42 million MT, up from 5.12 million during the 2015 calendar year. As is the case in Canada, most production is red lentils.



With inferred use only expected to grow from 5.39 to 5.74 million MT, the world's residual supplies of lentils should climb from 183,000 to 868,000 MT, with most of the carry over held by Canadian farmers. Ending stocks in that country are forecast to jump from 73,000 to 700,000 MT. Production in Canada jumped from 2.9 to 3.32 million MT. Unofficial data reveals red lentil output advanced from 1.89 to 2.42 million MT, while large greens jumped from 467,800 to 537,900 MT and small green from 165,700 to 204,100 MT.

However, a combination of quality issues in Canada and strong export movement through at least the end of December have combined to lift world trading levels well above their harvest lows. Having said that, Canadian lentil exports between August and October are down 198,000 MT from last year at 744,331, while U.S. movement during the same three-month period climbed from 78,157 to 122,905 MT.

Any price weakness will likely occur during the first half of 2017. However, the gross income potential of lentils will likely remain relatively strong until after North American farmers finalize their seeding intentions. As a result, Canada's lentil area

is not expected to decline significantly in 2017, with some of the drop in red lentil plantings offset by increases in green. It would not be surprising to see Canadian farmers seed 5.59 million acres of lentils in 2017. If yields return to their recent three-year average, production will approach 3.4 million MT, compared to 3.25 million this year and 2.54 million in 2015.

The implication is Canada and the world are entering a period where available supplies will likely exceed prospective demand by a wide margin. Even so, the stocks to use ratio is expected to remain around 15% through the end of the 2017-18 marketing year, enough lentils to cover 54 days of demand at a time when per capita lentil consumption is growing.

After averaging 584 grams per person between 2010 and 2014, per capita consumption is expected to average 678 grams this year and 730 in 2017. Some of the gains are accounted for by the development of new food products using whole, split and fractionated lentils.

The simple truth is it is impossible to expand demand and uses by keeping production closely aligned with known usage.



World Pulses Supply-Demand Summary

(metric tons)

Production	2014	2015	2016	2017	Average
Beans	21,850,000	22,456,000	22,078,000	22,352,000	22,274,800
Chickpeas	13,636,500	11,476,080	11,948,800	13,153,600	12,392,676
Lentils	4,676,000	5,123,000	6,422,000	6,111,000	5,186,600
Peas	11,352,000	11,132,000	13,540,000	12,856,000	11,550,400
Total	51,514,500	50,187,080	53,988,800	54,472,600	51,404,476
Total Supply	2014	2015	2016	2017	Average
Beans	22,788,000	23,308,000	22,583,000	22,959,000	23,024,200
Chickpeas	13,966,500	11,700,080	12,002,800	13,467,600	12,605,476
Lentils	5,594,000	5,573,000	6,605,000	6,979,000	5,843,600
Peas	11,842,000	12,012,000	13,940,000	13,926,000	12,038,400
Total	54,190,500	52,593,080	55,130,800	57,331,600	53,511,676
Trade	2014	2015	2016	2017	Average
Beans	3,721,000	3,944,000	3,631,000	3,937,000	3,785,200
Chickpeas	1,252,000	1,695,000	1,551,000	1,243,000	1,507,564
Lentils	2,960,000	2,871,000	3,262,000	3,605,000	2,828,000
Peas	5,100,000	4,290,000	5,390,000	4,890,000	4,602,000
Total	13,033,000	12,800,000	13,834,000	13,675,000	12,722,764
Inferred Use	2014	2015	2016	2017	Average
Beans	21,936,000	22,803,000	21,976,000	22,243,000	22,266,200
Chickpeas	13,742,500	11,646,080	11,688,800	13,307,600	12,367,676
Lentils	5,144,000	5,390,000	5,737,000	6,048,000	5,235,600
Peas	10,962,000	11,612,000	12,870,000	12,216,000	11,410,400
Total	51,784,500	51,451,080	52,271,800	53,814,600	51,279,876
Ending Stocks	2014	2015	2016	2017	Average
Beans	852,000	505,000	607,000	716,000	758,000
Chickpeas	224,000	54,000	314,000	160,000	237,800
Lentils	450,000	183,000	868,000	931,000	608,000
Peas	880,000	400,000	1,070,000	1,710,000	628,000
Total	2,406,000	1,142,000	2,859,000	3,517,000	2,231,800
Stocks to Use	2014	2015	2016	2017	Average
Beans	4 %	2 %	3 %	3 %	3 %
Chickpeas	2 %	0 %	3 %	1 %	2 %
Lentils	9 %	3 %	15 %	15 %	12 %
Peas	8 %	3 %	8 %	14 %	5 %
Total	22 %	10 %	29 %	34 %	22 %

BASED on historical data from the FAO and other country specific data sources
Copyright) 2016 STAT Publishing Panama Ltd. All Rights Reserved

PULSES



Pulses.org | @LovePulses



GLOBAL PULSE DAY

January 18, 2017

#LovePulses #GlobalPulseDay

Join the celebration!

Eat pulses on January 18, 2017 to raise awareness of the benefits of pulses for both people and the planet!

Events will take place globally and be shared through social media.

Follow @LovePulses on Twitter and Facebook for more updates.

Visit pulses.org for more information, and to register your event.



GPC

GLOBAL PULSE CONFEDERATION



International Year of Pulses 2016 in Review

Robynne M. Anderson

*President Emerging ag inc and secretariat to
the Global Pulse Confederation for IYP 2016*

As 2016 comes to a close, I want to take a moment to reflect on the success of the International Year of Pulses (IYP). IYP was a vision five years ago of Hakan Bahceci, then President of the Global Pulse Confederation, and now the Year has surpassed virtually every goal the industry set. Millions of consumers all over the world have shown a keen interest in pulses because of their benefits for people and the planet. This has led to a wildly successful year, highlighted by the fact that GPC's IYP campaign was awarded last week: Best International Campaign of 2016, by the judges of the influential CorpComms Awards. The judges described it as 'a truly good, multi-channel approach for a campaign rooted in real insights'.



Maggies Bear fest

It was with great excitement that we launched the Year on November 10th of 2015 at the Food and Agriculture

Organization (FAO) in Rome, Italy. The FAO launch ceremony placed pulses at the center of food security solutions. A week later saw the North American launch, as a luncheon took place at the United Nations Headquarters in New York City, hosted by His Excellency Michael Grant, Permanent Representative of Canada to the UN. Celebrating pulses and IYP, it brought together Ambassadors, the Assistant Secretary General of the UN, UN agencies, and a pulse sector delegation of 30. Huseyin Arslan, President of GPC, spoke on behalf of the association highlighting the activities to take place. The goal of the luncheon was to mark the start of the International Year at UN Headquarters, where the General Assembly vote took place, and provided an opportunity to share information, heighten public awareness, and encourage connections, as well as share a delicious pulse-based meal.

In addition, the American Pulse Association, organized a media event to highlight the nutritional role of pulses to 100 journalists, bloggers and other influencers. Taking place at the Michelin-starred restaurant, Public, this dinner convened five famous chefs, who ran



tasting sessions to demonstrate the versatility of pulses. The chefs were Alex Guarnaschelli from Food Network, Michael Solomonov of Sahav, Seamus Mullen of Tertulia, Sam Mason of OddFellows Ice Cream, and Brad Farmerie of Public. They created dishes such as: a lentil pumpkin-style pie with white bean whipped cream, split pea ice cream, and the US “National Signature Dish,” a Lentil & Cauliflower Taco recipe created by blogger Cookie and Kate. The chefs were alongside experts who spoke to the key pillars that make pulses the future of food: nutrition, sustainability, versatility and affordability/food security. Many attendees took the “Pulse Pledge” while at the event – a commitment to eating pulses at least once a week in 2016.

These launches started a wave of attention for IYP which we saw in particular on January 6th, 2016 – Pulse Feast. Around the world, people raised awareness of the health, nutrition and sustainability benefits of pulses for people, animals, and the planet. Pulse Feast was a celebration shared live and through social media with people eating beans, peas, lentils and chickpeas. During the 48 hour period of Pulse Feast we saw 141 events in 36 different countries around the globe and we achieved a social reach of 21 million people.

The world is celebrating the International Year, with over 500 IYP events registered



Australia Pulseating Foodies event

on iyp2016.org. This includes our signature events that have occurred throughout the Year in every region of the world. These signature events have covered a wide variety of topics throughout the entire pulse value chain and have been attended by over 4000 participants. Beyond the hundreds of events we have seen a strong uptake in the news and on social media since our launch in November 2015.

Our social reach has been enormous since the launch of the Year, with a total reach of 4 billion, 600 million impressions on social media and 3.9 million video views on our Facebook page. The media has also provided extensive coverage on IYP with over 2185 articles written on the Year so far. And we are not even done – closing ceremonies will follow in early 2017!

We also created www.pulses.org as a consumer-facing website, which will be an ongoing legacy resource long past the end of 2016. The website is home to about 400 pulse-based recipes – including the Best of India - , 700 photos, videos, blogs, and consumer resources. Pulses.org also



provides useful information on how to cook with pulses, and information on how and where they grow globally. We started the Year having limited resources referencing the benefits of pulses, and ended it with a plethora of materials – an important and exciting legacy to leave behind. They are available for all of you to use.

As part of our efforts to develop more resources, including delicious recipes, we encouraged chefs, food writers, restaurant owners and other food experts from around the world to donate a pulse-oriented recipe to be featured in our Gourmet Gurus section on pulses.org. There they provide recipes, tips, and tricks for cooking the dishes and so much more. Individuals who contribute recipes have contributed blog posts about their experiences with pulses. One of the primary objectives of the Year is to inspire people with the many nutritious and tasty dishes that can be made using pulses, which are not only good for our health and are affordable, but also the health of the planet.

Another primary goal for the Year is to help build a more educated public with respect to the benefits of pulses. A vital component of educating the public is educating our youth. With this in mind we developed the International Year of Pulses KS2 Education Pack. These six lesson plans highlight the benefits of pulses from

both a nutritional perspective and environmental perspective. They also teach children about where pulses come from and how they are farmed – something that is often overlooked in educational systems. We thrilled to have seen them used all over the world, including but not limited to India, Canada, Philippines, and South Africa.

In addition to our wonderful photography, recipes, and school kits, we have developed a number of useful infographics and guides which highlight the important benefits of pulses. These infographics cover a variety of topics including: health and nutrition, cooking with pulses, growing pulses, exploring the cultural contexts of pulses throughout history and modern times, and food security. Recently, we released a short guide on pulses and how they are an important component of weight management. Mounting evidence suggests that eating one daily serving of pulses – beans, peas, lentils and chickpeas – is a useful weight control strategy. This short guide was created to help people make healthier dietary choices. Under the guidance of leading nutritionist Leslie Beck RD, it flags some of the important science on the role of pulses in weight management. We hope the guide will encourage professional dieticians and nutritionists to look afresh at these ancient, affordable and highly nutritious crops.



Amsterdam Committee Blijebon event

We wanted consumers to have new and exciting products to make it easier to integrate pulses into their diets. To do this we created the #LovePulses Products Showcase to foster new products. The Product Showcase featured 8 national competitions and 1 virtual competition, resulting in over 12 new and innovative pulse based products. One of the most successful was in India in February at the Pulses Conclave.

On July 19th at the International Food Technology (IFT) Expo in Chicago, winning teams from the national and virtual competitions presented their innovations at a #LovePulses Products Showcase event in front of an audience of over 100 food experts. During the Expo the winning teams offered samples to the crowd of 23,000 food scientists, technologists,

agriculturalists and foodies in attendance. The teams also made cooking demonstrations, captivating the audience for their hour long session at the Cooking Up Science booth. The variety of products developed demonstrated the versatility of pulse crops and proved that innovation in new food products is unlimited.

In addition to the LovePulses Product Showcase, the Global Pulse Confederation for the International Year of Pulses has developed a number of exciting research papers. Most recently, we have released the 10-Year Pulse Research Strategy report which will be used to set an agenda for global discussion and mobilize champions to advocate for accelerated pulse research investments. This report was motivated by the large gap between the potential of pulse crops for meeting global



sustainability challenges and the current capacity to seize this potential.

Development of the 10-Year Research Strategy builds on earlier scoping work, such as a global survey of pulse research funding, and relies on collaborative engagement with pulse research stakeholders.

The 'Global Pulse Productivity & Sustainability Survey' conducted by the Global Pulse Confederation for IYP suggests that annual investment hovers at only \$175m per annum for the 13 crops in the pulse category. Compare this to the billions invested into other crops such as corn. The bottom line is we need a 10-fold increase in pulse research funding. With over 800 million people suffering from acute or chronic undernourishment, increasing pulse research is vital. We can only meet the world's protein needs with better varieties of chickpeas, peas, beans,

and lentils. In addition to the research the Global Pulse Confederation has conducted, we have also received numerous other technical reports, submitted from Argentina, Australia and France. All are available on iyp2016.org.

The resources, events, and recipes would not have been possible without our 38 national committees. All of which participate in unique and exciting ways. From pulse food trucks in the Netherlands to schools in the Philippines using the lesson plans in grade schools. In India, the International Year of Pulses was celebrated at a Food Fest at the Salsabeel Central School in Mundur Thrissur. The event focused on the importance of pulse items in the daily food of children. The slogan of food fest was "Love Pulses, Love Vegetables". The students of grades four to twelve brought a variety of delicious pulse based dishes, prepared at home with the help of their parents, to the



Pulse Feast-Hakan Foods



school. This year, as part of IYP, beans will be cultivated in the school campus with the help of students and teachers. We have seen pulse emoji's developed in Japan and pulse stamps in Argentina. From Australia to India, Argentina to Columbia, Canada and the US, the engagement from our committees has been fantastic.

With billions reached globally, hundreds of events and delicious recipes, countless resources developed this has been an extremely successful year and we are excited to continue the momentum past 2016. One such way we hope to maintain the excitement around pulses is with Global Pulse Day on January 18th. Global Pulse Day aims to achieve five things:

- Encourage people around the world to eat pulses on January 18th

- Create a global movement to eat more pulses through social media
- Raise awareness on the benefits of consuming pulses for people and the planet
- Promote the idea of Global Pulse Day
- Continue the momentum of the International Year of Pulses 2016

Join us in celebrating pulses on January 18th, Global Pulse day. Visit www.pulses.org/global-pulse-day for more information on how to participate in this exciting event and sign up for the ThunderClap at <https://www.thunderclap.it/projects/50361-global-pulse-day>.

Please help reignite the passion for pulses!



Pulse Feast-UAE



Unlocking The Inherent Goodness In Pulses Through Fortification:

*Parag Gadre
Tata Chemicals Ltd*

Some essential facts that one needs to understand about pulses.

First, from a consumption perspective, pulses are going to be increasingly important in the dietary habits of an average Indian consumer. Normatively, this is desirable because the average Indian under-consumes protein. The International Monetary Fund based on FAO data plots protein consumption against the level of development for a number of countries and India remains an outlier with lowest protein intake. The average Indian consumes about 100% less protein than those in other countries at a similar level of development. Given the generally poor levels of nutrition and health (reflected in stunting rates), increasing protein consumption is a high policy priority. Further, given the low cross elasticity of substitution in demand between pulses, there is a need to ensure the availability of all pulse varieties and having boosted nutrition even in limited portion of consumption which can be achieved through fortification.

Second, More protein does not necessarily mean more pulses. After all, there are other sources of protein including eggs,

meat, poultry, and soya. But rough estimates suggest that for the average Indian consumer, pulses are the lowest cost source of protein may be except for soyabean. The report on “Incentivising Pulses Production Through Minimum Support Price (MSP) and Related Policies” illustrates quite effectively that the cost of obtaining a kilogram of protein from pulses is about 1/2 of that of a kilogram of meats and about one third that of an equivalent quantity of milk. (Refer Table below)

Cost per unit of protein across foods (Rupees per kg of protein)		
Food items	NSS 68 th round	
	Rs. per kg of protein	
	Rural	Urban
Pulses		
Pigeon Pea	260	290
Gram, Split	217	232
Gram, Whole	200	237
Green Gram	259	284
Lentils	208	223
Black matpe	235	259
Peas	154	192
Gram flour	217	226
Other		
Milk (liter)	613	731
Egg (number)	447	437
Fish/prawn	611	758
Goat/meat/mutton	1094	1220
Beef/buffalo/meat	490	478
Chicken	447	463

Source: National Sample Survey Office.

Third, Pulses are now globally recognized for their environmental advantages and



key role in providing optimum nutrition, fighting malnutrition, obesity, and preventing lifestyle diseases such as cancer, type2 diabetes, and cardiovascular diseases.

Pulses can be considered super food or food of the future around the world.

Despite the awareness of pulse benefits and a growing world population, pulse consumption is declining, even in India, the world’s largest and oldest pulse consumer. In India, the country with the longest tradition of using pulses daily, this declining consumption permeates across all socio-economic strata and is accompanied by a decline in pulse production, largely due to the economic disadvantage of pulses vis-à-vis more lucrative crops. Now besides increase pulse supply and demand, there is need to think of leveraging pulses as nutrition carriers for Micro Nutrients, Minerals and enhanced Proteins. There is an urgent need for technologies that commercially produce a variety of competitive fortified pulses and pulse-based products.

The transition to fortified pulses will involve three key elements. First, placing nutrition and health sensitivity as a core driver of technological innovation, product category transformation, and commercialization requires a strategic shift in mind set and business activities. Second, to change product and brand

portfolio in a nutritious and health sensitive direction, businesses have to be able to produce an appealing product that balances immediate sensorial desires (e.g. tastiness) and long term benefits (e.g. healthiness). And third, these can be produced at a price point that the consumer can afford and/or be willing to pay, without affecting product profitability.

The Nutrient value composition of pulses in general

Positive Constituents (Nutrients / Facilitators)	Negative Constituents (Anti Nutrients /Inhibitors)
Poly Phenols, Catechins and Gallocatechins, Tannins, Phenolic acids. Phytosterols	Phytic acid , Trypsin Inhibitors, Protease Inhibitors Hemagglutins
Starch (High Amylose), High Proteins (20 -25%) Fibers(5 to 15%), Resistant Starch, Oligosaccharides	Dihydroxy Phenylalanine, Glycosides, Favisam factors, Vincine and covincine, Saponins, Cyanogens
Micro Nutrients: Vitamin a, B1, B3 , Folic Acid Minerals FE, Ca, Mg, Zn, K	



This complexity, protein and starch structures, level and type of oligosaccharides, level of anti-nutrients change with different variety of pulses, the processing and cooking conditions resulting in a wide variety of textural and sensorial variations that are appealing to taste buds. These in combinations with wide variety of spices seem to be the essence of Indian traditional use of pulses in daily diet. The ingrowth or external fortification challenge is to further enhance the positive constituents so as to meet >30% of RDA in some pulses and to reduce anti nutrients so as to have better bio absorption of nutrients. Fortification ideas should focus on enhancing benefits such as reducing risk of obesity, diabetes mellitus, cardiovascular diseases, Increase satiety and weight loss- Fibres, trypsin inhibitors and lectins may reduce food intake, Dietary fibres and resistant starch of pulses have been shown to alter energy expenditure, High amount of insoluble fibres can further improve colon health. Low GI, can further supply Potassium, Iron of fortified with these minerals.

Technology intervention for fortified or enhanced pulses

Functional properties in Pulses can produce different textures and tastes for fortified pulse-based foods. Pulse chemistry and the subsequent behavior in food matrices changes based on

treatments pulses receive. Nutritional value of pulses can be increased and anti-nutrient levels can be minimized by choosing appropriate processing technologies, such as commercial scale germination which can be further enhanced by using a combination of different pulses along with cereals and millets. This is the base of hundreds of traditional food recipes that have been used in India's daily diet for hundreds of years. Many of these recipes are used at home and have not been commercialized or at best have been made by small-scale local industries. These recipes use a combination of different processing methods like soaking for different durations, wet grinding, fermentation, dry roasting, roasting in presence of fat, puffing, flaking etc., to obtain the desired texture and behavioral properties.

Going forward encapsulations and chelation also will have to be evaluated so as to fortify the pulse varieties. The pulses industry and corporate branded players in particular will have to galvanize the and evolve processes for fortification / enhancement of pulses, organize bio availability studies with renowned laboratories, devise models to commercialize these fortified dal consumption. Only these concerted efforts on beyond farms and seeds will make Pulses truly a super food of the future.



www.statpub.com



Platinum Level Subscription

The **Platinum Level subscription** include everything in the regular subscription plus several benefits and extra content.

Platinum subscriptions include supply-demand and trade data for Canadian red and green lentils, as well as green, yellow and split peas. Supply-demand forecasts are also included for several countries. More data will be added throughout the year.

Additional features, such as export and import statistics for India, EU member states, and other countries.

Platinum subscription benefits also include discounts on any books not included in the subscription.

Annual subscriptions cost \$1,750 plus \$50 per additional user in your company.

The **regular subscription** gives users full access to the existing STAT website.

Regular subscribers can choose to have articles sent to them by email as they are added to the website. Subscribers can change their email preferences and the selection of commodity areas from which material is emailed. Articles are sent newswire style and include coverage of major USDA and Statistics Canada crop reports.

The STAT website includes monthly updated export trade data for Canada, Australia and the United States; a broad selection of supply and demand forecasts; and weekly update price graphs.

Annual subscriptions cost \$525 plus \$50 per additional user in your company.

Regular Subscription



www.statpub.com

To become a member please contact:

Brian Clancey

Phone (Canada) 604-636-7030 • subs@statpub.com

Mail: 170 - 422 Richards St., Vancouver, B.C., Canada V6B 2Z4

Or visit our website:

<https://www.statpub.com/subscribe.html>



Production Report-USA Pulse Crop 2016

*Shakun Dalal
SD Consultants*

The USDA National Agricultural Statistics Service (NASS) released their crop production data this week for acres planted, harvested, production and yield, including those for dry peas, lentils and chickpeas.

USADPLC recently released our 2016 production report as well, and below are the differences between the two reports.

The NASS dry pea production figure is slightly below the USADPLC estimate, but it is not a significant difference.

NASS lentil production is almost 10%

below our estimate, and that is significant, especially given the large volume of lentil sales that are already on the books. [NASS lentil acreage is actually higher than our number, but NASS yield is lower.] Based on the NASS production number, we exported 14% of 2016 lentil production in August & September.

The differences between the USADPLC and NASS planted chickpea acreage numbers are negligible, but the NASS figures show a difference between planted and harvested acres for chickpeas that is much higher than usual. Typically, almost all chickpea are harvested.

2016 PEA'S CROP	USADPLC	NAAS
ACRES PLANTED	1,268,000	1,383,000
ACRES HARVESTED	1,208,100	1,334,800
PRODUCTION (MT)	1,255,911	1,226,027
YIELD ILB/ACRES	2,292	2,029
2016 LENTL'S CROP	USADPLC	NAAS
ACRES PLANTED	930,000	935,000
ACRES HARVESTED	867,000	917,000
PRODUCTION (MT)	623,307	564,093
YIELD ILB/ACRES	1,585	1,356
2016 US CHHICKPEA'S CROP	USADPLC	NAAS
ACRES PLANTED	290,000	321,100
ACRES HARVESTED	283,180	227,500
PRODUCTION (MT)	226,497	TBA
YIELD ILB/ACRES	1,763	TBA



EXPORT NUMBERS OF US PULSES IN OCTOBER 2016

After the record-setting month for exports in September, we expected to see a decrease in export volumes in October. October exports did in fact decrease for the month, but the pace of exports still remained decidedly hot.

DRY PEAS:

Pea exports dropped from almost 100,000 MT in September to 38,600 MT in October and most of that decline came in shipments to India. Shipments to China and the Philippines declined too, while shipments to Mexico and

Pakistan increased. One likely factor in the drop in pea exports was simply harvest timing. With peas harvested first, processors got started on pea processing in August and early September while lentils and chickpeas were still coming in, but day-by-day processors were able to dedicate more processing capacity to the strong market demand for lentils and chickpeas, pushing peas off the processing lines.

LENTILS:

Lentil exports also fell in October compared to September, but the

monthly total was still good enough to be the 2nd largest monthly lentil export volume we have ever seen – second only to September, of course. ‘Win, place and show’ remained the same as for the prior month – India, Canada and Spain, and it was nice to see export volumes increase to Spain, Mexico, Peru and Turkey. After two months in the 2015-16 marketing year, we had exported 65,000 MT of lentils, equivalent to 27% of the 2015 lentil harvest.

In contrast, we have exported about 106,000 MT in the first two months of the 2016-17 marketing year, but because of our record setting production volumes, that represents only 19% of the crop. We have a long way to go to empty those bins this year.

KABULI CHICKPEAS:

As with lentils, our chickpea exports fell in October compared to September, but also as with lentils, October was the 2nd largest monthly chickpea volume on record -- second only to the prior month.

In last month’s export commentary, we noted that Canadian buyers were “scooping up” US chickpeas to cover their positions after weather decimated



the Canadian chickpea crop. As we predicted last month, Canadians did take even more chickpeas in October than in September, becoming UAS leading chickpea export market for the month. India, Spain, Pakistan, Italy and Turkey all took nice volumes as well.

Final note: Along with the rest of the pulse-producing world, USA is also watching the pulse plantings in India. After two years of poor pulse harvests, India had a good monsoon season in 2016, setting them up to produce a record pulse

crop with the winter crop that is now being planted. Plantings however have been proceeding slowly – in part because of weather and in part because of disruptions in India’s financial system – and as of last week, pulse acres planted were at ‘average’ levels. India will need to do better than average in plantings to have the bumper crop they are hoping for. With four weeks to go in the planting season, they may get the weather and the financial relief they need to ‘go big’ on pulses this season, but at this point there is still a lot of uncertainty.

EXPORT NUMBERS OF US PULSES IN SEPTEMBER 2016

From the time that we first reported the 2016 projected plantings, we have been saying that this would be a crop year like no other. That sentiment continued through harvest, as we saw record production levels for dry peas, lentils and chickpeas. And it is certainly the case for the September export numbers just released by USDA NASS. Our marketing year runs from September through August each year. We kicked off the 2016-2017 year with a bang.

Pea exports for September 2016 totaled 98,779 MT, just below the record monthly export volume of 100,613 MT set in September 2009.

Lentil exports for September totaled 62,400 MT, far above the previous record of 41,961 MT set in April 2013.

Chickpea exports exploded for the month, hitting 28,257 MT, an amazing 130% higher than the prior one-month record of 12,290 MT set in October 2011. In September 2016 in aggregate, we exported 189,436 MT with a value of \$107.6 million. That is a very strong beginning to the new crop year, but given the size of the 2016 harvest, we are going to need a series of solid months of pulse exports to absorb our record harvest volumes.



DRY PEAS:

Pea exports in September 2016 can be summed up in one word-India. India was the largest taker of green peas, yellow peas, and even split peas. Overall, India accounted for 74,000 MT of the total of 98,000 MT exported. China was a distant second at 5,000 MT. Pakistan, Philippines, Mexico and Colombia all took higher volumes than a year ago, but all of them were dwarfed by the shipments to India.

LENTIL:

India was also the leading taker of exported lentils in September 2016, but Canada gave them a run for the money. India took about 19,000 MT for the month of September 2016, where as, Canada was at 17,500 MT.

We know that of the 17,500 MT of US lentils exported to Canada, some were shipped to Vancouver for export, and that since those shipments were not destined for a bonded warehouse facility, the export destination was shown as 'Canada'.

However, we think most of the lentils sent to Canada were blended with

Canadian lentils to raise the overall grade to a Canadian # 2. Making a # 2 would allow Canadian lentil shippers to meet contractual obligations.

We would not be surprised to see large volumes of lentils going to Canada in October as well, they have a lot of blending to do in order to get their rain-damaged lentils up to grade.

CHICKPEAS:

Can you guess leading export destination for US chickpeas in September? If you said, "India", you've been paying attention. India took 20,607 MT of US chickpeas for the month of September 2016, or 73% of our total chickpea exports.

Spain and Turkey took most of the rest, with Canada also scooping up US chickpeas due to weather-related losses for the Canadian chickpea crop.

As with lentils, it would not be surprising to see our chickpea exports to Canada go even higher in October since traders estimate that at least 70% of Canadian chickpea crop has been lost to wet conditions.



MARKET NEWS : PEAS, LENTILS & CHICKPEAS

Growers Price Chart (Price in US \$ for US #/CWT. In # 1 Grade)

	DEC 2 nd	DEC 9 th	DEC 16 th	DEC 23 rd
Pacific Northwest				
Whole Green Peas	09.50-10.00	09.50-10.00	09.50-10.00	09.50-10.00
Whole Yellow Peas	10.00	10.00	10.00	10.00
Lentil Brewer	27.00-28.50	27.00-27.50	27.00-27.50	27.00-27.50
Lentil Richlea	25.00	25.00	25.00	25.00
Kabuli Chickpeas	35.00-36.00	35.00-36.00	35.00-36.00	35.00-36.00
Northern Plains				
Green Peas	10.00-10.41	10.41-11.67	10.00-11.25	10.83-11.25
Yellow Peas	10.41-12.50	10.00-12.92	10.42-14.17	10.83-14.17
Lentil Richlea	35.00-38.00	38.00-40.00	36.00-40.00	35.00-41.00
Kabuli Chickpeas	45.00-47.00	46.00-47.00	36.00-47.00	36.00-47.00
CANADA				
Green Peas	11.35	11.35	11.33	11.17
Yellow Peas	10.74	10.74	11.23	11.08
Field Peas	08.90	08.90	08.90	08.67
Lentil Laird	48.09	48.34	47.96	49.40
Lentil Red	24.00	24.00	22.31	21.70
Lentil Richlea	39.76	40.90	40.27	39.73
Desi Chickpeas	26.17	26.17	25.82	25.48
Kabuli chickpeas	42.47	42.47	41.91	41.35

COMPARED TO LAST WEEK-DECEMBER 16th: Contract product is moving steady with trucking being a issue. The next USDA report will be issued after the two holiday weeks on January 10, 2017.

NOTE:

PNW: Prices reported on a cwt basis, Del warehouse, thresher run and U.S. No. 1's.

Northern Tier: Prices reported on a cwt basis, Del warehouse, thresher run and U.S. No. 2's or better.

COMPARED TO LAST WEEK-DECEMBER 9th: Trading activity was steady with light demand. According to NASS crop report December 9, 2016, dry edible beans harvested acres is 1567.5. According to FSA acreage report December 1, 2016, dry edible beans planted acres is 1836.5.

COMPARED TO LAST WEEK-DECEMBER 2nd:

Trading activity was steady with light demand. Contract product is moving steady. Trucks are hard to come by in the Pacific North West.



Canadian pulse production sees record high despite weather challenges

*Anya McNabb
Pulse Canada*

With 2017 on the horizon and snow covering the ground across most of the prairies, Canadian pulse farmers are looking back on the 2016 growing season and what it might mean for the 2017 pulse crop.

In the spring, strong prices led to a major increase in seeded acres of pulses. 5.86 million acres of lentils were seeded, while 4.2 million acres of dry peas went into the ground. Both numbers represented a substantial increase from 2015.

“Last year at this time, the impact of smaller Indian pulse crops was felt all the way back in western Canada in the form of very high prices for peas, lentils and chickpeas,” said market analyst, Chuck Penner. “Farmers were able to lock in these strong – in some case record – prices and boosted acreage sharply.”

But farmers know better than anyone that seeded acres don’t necessarily equate with production.

“Canada is a very large country,” said Lee Moats, Chair of Pulse Canada’s Board of Directors. “2016 was like most years in

that, because of our geographical size, there was lots of variability in weather that could impact production. Really what we saw were extremes.”

Some pulse crops throughout Western Canada saw little challenge from the weather and did very well, while some were quite hurt by weather.

“I think it is accurate to say that it was a cool, wet year on the prairies for the most part, and a hot, dry year in Ontario,” said Alberta pulse farmer, Allison Ammeter, who is the chair of the Alberta Pulse Growers and also served as the chair of the International Year of Pulses Canada Committee during 2016. “Both scenarios affected quantity and quality of pulses, but there seems to be a good amount of all grades available.”

Moats, also a farmer, who grows lentils near Riceton, Saskatchewan was one of the more fortunate producers when it came to weather. “Our farm saw fairly dry conditions throughout the growing season, which was good for my red lentils. We ended up with an outstanding crop and good prices.”



And overall, while the record seeded acres of pulses were definitely impacted by the extremes in the weather throughout Canada's pulse growing regions, production still hit record highs.

"For peas, crop conditions were favourable while lentil yields suffered but acreage had expanded enough to still produce a record crop," said Penner.

Statistics Canada reported production of 8.38 MT of all Canadian pulses in 2016. Lentil production was recorded at 3.25 MT, which was a 27 per cent increase from

2015. Dry pea production hit 4.84 MT, a 51 per cent increase over last year.

"Despite a difficult harvest, I think that most pulse farmers are looking to 2017 with optimism," said Moats.

Kevin Price, Senior Trading Manager at Agrocorp International, echoed this optimism, specifically for lentils. "We feel it's possible that acres could hit 5.6 M, with the growth coming from an increase in green lentils. With that you could see production at 3.5 MT on average yields, which would be another record."



India Pulses and Grains Association *launches*

DISPUTE SETTLEMENT COMMITTEE for Domestic and International Trade of Pulses in India.

The IPGA-Dispute Settlement Committee, for a nominal fee, will accept disputes between all trade stakeholders, including Importers, Exporters, Traders, Brokers, Indentors, Millers, CHAs, etc.

For more details visit :

http://www.ipga.co.in/Dispute_settlement_committee

For further information contact :

IPGA office : +91-22-26479132/33

E- mail : ipga-dsc@ipga.co.in

Website : www.ipga.co.in



R&D for enhancing both horizontal and vertical expansion of pulses production

Rajeev K Varshney, Mahendar Thudi, Rachit Saxena, Lekha Pazhamala, Manish Roorkiwal, Himabindu Kudapa, CV Sameerkumar and Pooran M. Gaur

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru - 502 324, India *Author for correspondence: r.k.varshney@cgiar.org

Pulses play an important role in food and nutritional security especially in developing countries, besides replenishing soil fertility. Inclusion of pulses in crop rotations will enhance environmental sustainability by reducing emission of greenhouse gases. For fostering the importance of pulses, the year 2016 has been declared as International Year of Pulses by Food and Agriculture Organization of United Nations. Among pulse growing countries across the globe, India stands first in production and consumption of a variety of pulses that include chickpea (*Cicer arietinum*), pigeonpea (*Cajanus cajan*), urd bean (*Vigna radiata*), mung bean (*Vigna mungo*), lentil (*Lens culinaris*) and field pea (*Pisum*

sativum). About 32% of global pulse area and 26% of pulse production (19.9 million tonnes, FAO, 2014; Figure 1a) comes from India. Chickpea alone contributes to 47% of total pulse production followed by pigeonpea (16%), black gram (10%) and remaining 27% by other pulses in India (Figure 1b). The ever increasing population, rapid climate changes and urbanization are key factors that have strong impact on availability and market price of pulses. Large yield gaps in the demand and supply, for instance 21.3 million tonnes of pulses were required against available 17.09 million tonnes in combination of higher price led to decline in per capita consumption from 69 grams in 1961 to 32 grams in 2005.

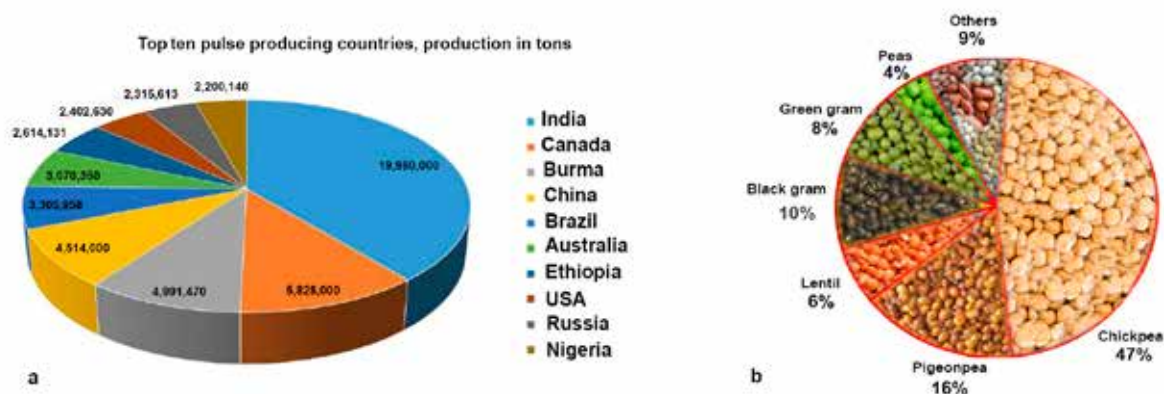


Figure 1: Important pulse producing countries and share of each pulse in India in terms of production. (a) Top ten pulse producing countries; (b) percentage share of different pulses in India.



Horizontal expansion by growing pulses under rice fallows and popularizing pigeonpea hybrids

In India there is a tremendous scope for the expansion of pulse growing area with short duration varieties of chickpea and pigeonpea. Mono-cropping of rice has led to nutrient mining and degradation of soils. Rice followed by pulse crops will lead to sustainable and a more diversified cropping system, also building soil structural properties. There is vast area of 11 million hectare of rice fallows in India. There is a need to bring rice fallow under pulses crops (like chickpea, pigeonpea and lentil) cultivation for providing sufficient pulses to growing population in India. As a first step in year 2016, a total of 1800 hectares of rice fallows area has been planned with chickpea and pigeonpea in the state of Odisha (www.taas.in/documents/SW_Pulses_Base%20Paper_April2016.doc). The low productivity, however, remained a concern, in these pulses. The availability of hybrids in pigeonpea has a potential to overcome the yield stagnation. Hybrids are climate resilient, resistant to major diseases, drought tolerant, withstand vagaries of monsoons better than local cultivars and exhibit tremendous plasticity in various phases of crop growth, providing assured yield to the small and marginal farmers of rainfed agriculture in India. The benefit to cost ratio (B:C) under rainfed ecologies is up to 4:1 compared to the 2:1 from the available varieties (OCTF MORACCO, Annual Report

2015-16). Under irrigated ecologies and innovative interventions such as drip irrigation and transplanted technology, the B:C ratio of 7:1 has also been achieved in farmers' fields.

Hybrids are adapted to sole and intercropping situations and also possess good milling and nutritional attributes. A total of 10 pigeonpea hybrids including ICPH 2671, ICPH 3762 and ICPH 2740 were released for commercial cultivation in India. In the year 2016, 705 tons of hybrid seed were produced by ICRISAT, public sectors, private sectors, non-governmental organizations (NGOs), progressive farmers, for-profit organizations (FPOs) from more than 150,000 hectares that were under pigeonpea hybrid cultivation in India. Further, ICRISAT, public, private, NGOs, progressive farmers, FPOs have planned hybrid seed production in 680 hectares of land in 2016. This is expected to yield 850 tons of hybrid seeds that would be sufficient to cover more than 250,000 hectares in year 2017. To ensure purity of the F_{1s} parental lines seeds, hybrid seed purity testing kit has been developed which is capable of detecting <2% of seed adulteration. These easy to use testing kits have been made available to private seed companies and public organizations.

Vertical expansion for enhancing crop productivity by integrating genomics and transgenic interventions.

Amidst the soaring demand of pulses in



India, genomic and transgenic interventions varieties could provide a solution for developing superior varieties with enhanced yield and resistance/tolerance to biotic/ abiotic stresses to increase crop production. While genomic resources enable the development of improved lines with enhanced stress response by bringing natural genetic variation in elite varieties in much precise and faster manner, transgenic technologies would particularly be useful in cases (e.g. insect resistance) where the existing germplasm lacks certain desirable trait or could not be introduced to the cultivated genotypes due to genetic barrier using conventional and/or marker-assisted breeding. In recent years, use of genomic resources for developing improved varieties is becoming routine and several varieties with enhanced stress tolerance have been developed. For instance at ICRISAT, marker assisted backcrossing (MABC) approach has been used to introgress genomic region containing QTLs for several drought tolerance traits into elite chickpea variety, JG 11 to enhance yield under rainfed conditions. MABC approach was also used for developing fusarium wilt and ascochyta blight resistant elite chickpea cultivar, C 214. Similar efforts are also being carried out at Indian Agricultural Research Institute (IARI, New Delhi), Indian Institute of Pulse Research (IIPR, Kanpur) for developing drought tolerance lines in chickpea.

Globally, transgenic varieties of soybean with insect resistance and herbicide tolerance have occupied largest area of cultivation. Similar success have not been achieved in developing transgenic pulse crops as yet. However in these crops, major work has been undertaken for insect resistance and improving nutritional quality. Some institutes like ICRISAT, IIPR and Asam Agricultural University have undertaken research to generate transgenic lines for pod-borer (*Helicoverpa armigera*) resistance in pigeonpea and chickpea.

Outlook

Although there is a lot of emphasis nowadays on development activities to enhance pulses production in short-term, it is essential to continue to invest in research for continuous development of superior varieties in long-term. Modernization of breeding by infusing modern genomics and biotechnology tools is the need of hour to develop better varieties in faster manner to cater the need of tomorrow. Therefore pulses stakeholders including national and state government organizations, private sector, policy makers as well as organizations like India Pulses and Grains Association need to ensure good balance of investment between "R" and "D" in "R&D" in the pulses sector. Infact, private sector should also collaborate with public sector for making "R" stronger that will have transformational gains for all the actors in pulses value chain.



CANADA: OUTLOOK FOR PRINCIPAL FIELD CROPS

*Bobby Morgan
Pulse and Special Crop Analyst
Market Analysis Group/Grains and Oilseeds Division
Sector Development and Analysis Directorate/Market
and Industry Services Branch*

This report is an update of Agriculture and Agri-Food Canada's (AAFC) November outlook report. For most crops in Canada, the 2016-17 crop year started on August 1 and ends on July 31, although for corn and soybeans, the crop year started on September 1 and ends on August 31.

The outlook for 2016-17 incorporates the final estimates of yield and production from Statistics Canada's Principal Field Crop report which was released on December 6, 2016. These estimates are based on a survey of 26,500 farmers in Canada, conducted from October 21 to November 13. Farmers were asked to provide information on the actual amount of grain that was harvested. However, due to the late harvest in Western Canada, it is estimated that about 5% of the crop was not harvested and will be left in the field over the winter. The unharvested production in Western Canada is roughly estimated by AAFC at 3 to 6 million tonnes (Mt) and has not been included in the production estimates

for this report. Depending on the severity of the winter, some of the unharvested crop may be harvested in the spring. In Eastern Canada, the corn and soybean harvest is complete.

For many crops, the average yield was at a record or near-record level. However, the extended harvest in Western Canada has had a negative impact on crop quality in the affected regions, and crops left out over the winter may see additional negative impacts, depending on the severity of the winter. For all field crops in Canada, production for 2016 is estimated at 91.7 million tonnes (Mt), about 7 per cent higher than last year but 6 per cent lower than the record production in 2013. For all principal field crops, despite lower carry-in stocks from the previous year, total crop supply, domestic use and carry-out stocks are expected to increase, while total exports are forecast to remain strong, although slightly lower than last year. In general, grain prices are expected to average lower than last year.



Canada: Principal Field Crops Supply and Disposition

	Area Seeded	Area Harvested	Yield	Production	Imports	Total Supply	Exports	Total Domestic Use	Carry-out Stocks
	thousand hectares		t/ha	----- thousand tonnes -----					
Total Grains And Oilseeds									
2014-2015	26,057	25,086	2.98	74,708	2,322	95,428	42,927	39,003	13,498
2015-2016	26,554	25,596	3.08	78,877	2,013	94,388	42,724	39,144	12,520
2016-2017f	25,612	23,791	3.48	82,891	1,553	96,964	41,789	41,675	13,500
Total Pulse And Special Crops									
2014-2015	3,418	3,329	1.98	6,584	168	8,077	5,973	840	1,264
2015-2016	3,592	3,556	1.81	6,424	148	7,836	5,626	1,901	309
2016-2017f	4,616	4,475	1.97	8,804	244	9,357	5,851	1,891	1,615
All Principal Field Crops									
2014-2015	29,475	28,415	2.86	81,292	2,490	103,505	48,901	39,843	14,762
2015-2016	30,146	29,152	2.93	85,302	2,160	102,224	48,350	41,045	12,829
2016-2017f	30,228	28,267	3.24	91,694	1,797	106,321	47,640	43,566	15,115

Source: Statistics Canada (STC), f: forecast by AAFC except for area, yield and production for 2016-17 which are STC.

Pulses and Special Crops

Dry Peas

For 2016-17, production increased by 51% to a record 4.8 Mt due to higher yields and record harvested area, particularly in

Alberta. Yellow and green pea types are expected to account for about 4.2 Mt and 0.5 Mt, respectively, with the remainder spread across other varieties. Supply has



increased by only 29%, to a record 5.0 Mt, due to tight carry-in stocks. Exports are forecast at a record 3.2 Mt, with India, Bangladesh and China currently Canada's top three markets. Carry-out stocks are forecast to increase sharply due to the excess exportable supply. The average price is expected to fall from 2015-16, due to the abundant supply and expectations for larger carry-out stocks in 2016-17.

During November, the on-farm price of yellow peas and green peas in Saskatchewan rose by over \$50/t. This was largely due to solid export demand. For the crop year to date, green dry peas prices have been maintaining a premium of over \$15/t above yellow dry peas. Last year, green peas were at a \$75/t discount to yellow peas.

In the US, area seeded to dry peas for 2016-17 is estimated by the USDA to have risen to a record of 1.4 mln acres. This is largely due to an increase in area in North Dakota. With estimates of above average yields, US dry pea production is estimated by USDA to rise by 48% to a record 1.2 Mt. As a result, US dry peas are expected to compete, on a smaller scale, in Canadian export markets such as India and China.

Lentils

For 2016-17, production increased by 28% to a record 3.2 Mt as record harvested area was partly offset by lower yields and

higher abandonment. Large green production is estimated to be above last year at 0.6 Mt and red lentil production rose to nearly 2.5 Mt. Production of the other remaining lentil types is estimated to have fallen to 0.1 Mt.

Supply increased by only 16% due to tight carry-in stocks. Exports are forecast to decrease to 2.0 Mt. To-date India, Turkey and Bangladesh are the top export markets. Domestic use is expected to be higher than the previous year due to a below average grade distribution. Carry-out stocks are forecast to rise sharply. The overall average price is forecast to fall sharply below the record levels achieved in 2015-16 due to larger carry-out stocks and a higher proportion of grade distribution below No.1 grade.

During the month of November, the on-farm Saskatchewan No. 1 grade large green lentil price rose by about C\$230/t when compared to last month, while No. 1 red lentil prices increased over C\$40/t. This was largely due to solid export demand and the quality of the Canadian lentil crop, which is considered to be below average. There was a decrease in the supply of No.1 or No.2 grade Canadian lentils for 2016-17 when compared to last year. No.1 large green lentil prices are forecast to maintain a premium of \$485/t over No. 1 red lentil prices, versus \$420/t in 2015-16.



sipdco



S.I.P.DHANASEKARAN & CO

Custom House Agent

S.I.P.DHANASEKARAN & CO established in 1997. We specialize in the **Import clearance of Agricultural Commodities & more on Pulses.**

We are providing **Custom Clearance Service** to Importers at **Chennai Port & Krishnapatnam Port.** Being an authorized Custom House Agent, we handle documentation and clearance of Goods for our Importers. With effective system, advance planning and team work we ensure our Importers Goods are delivered in time.

- **Trusted CHA**
- **Committed to Quality Since 1997**
- **Bringing Service to Your Door Step**

147 (Old No.73), 2nd Floor, Thambu Chetty Street, **Chennai - 600 001**

Phone: Off : 044 - 42162763,42665497, Fax: 044 - 42051240

E-mail :sipdsons@gmail.com, Web :www.sipdco.com



In the US, the area seeded to lentils for 2016-17 was forecast by the USDA at 0.9 mln acres, up 90% from 2015-16 due to higher area seeded in Montana and North Dakota. With estimates of above average yields, 2016-17 US lentil production is estimated by the USDA to rise to over 0.5 Mt, more than double the 2015-16 level.

Dry Beans

For 2016-17, production fell marginally to 234 thousand tonnes (kt), consisting of 69 kt of white pea bean types and 165 kt of colored bean types. Production in Ontario fell, mostly due to lower area for both bean types. In Manitoba, production rose due to higher area for white bean types. Colored bean production fell due to lower yields which more than offset higher area. In Alberta, colored bean production rose with an increase in area.

Supply is expected to fall, as lower carry-in stocks combines with lower production. Exports are forecast to be similar to the previous year. The US and the EU are forecast to remain the main markets for Canadian dry beans, with smaller volumes exported to Mexico and countries in Africa. Carry-out stocks are also expected to decrease. The average Canadian dry bean price is forecast to increase sharply due to the lower supply in North America.

In the US, area seeded to dry beans is estimated by the USDA to have decreased sharply to nearly 1.3 mln acres, largely due

to lower area seeded in Michigan. US total dry bean production (excluding chickpeas) is estimated by the USDA to fall below 1.1 Mt, down 16% from 2015-16 as a result of lower area. The largest decrease came from the black bean and white pea bean classes. US export markets continue to be Canada, EU and Mexico.

Chickpeas

For 2016-17, production fell by 9% to 82 kt, due to record levels of abandonment compared to the five and ten-year average. There were harvest delays in October due to wet and cold conditions and, as a result, crop quality is expected to be below average. However, supply is forecast to decrease by nearly 50% from last year due to a combination of lower production and carry-in stocks. Exports are forecast to decrease sharply from 2015-16 due to the limited supply; the US and Pakistan are expected to be the leading markets for Canadian chickpeas. Carry-out stocks are expected to decrease to tight levels. The average price for all grades of chickpeas is forecast to rise, for the second consecutive year, due to lower world and Canadian stocks.

US chickpea area seeded is estimated by the USDA at a record 0.32 mln acres, up 55% from 2015-16. Assuming normal yields and abandonment, 2016-17 US chickpea production is forecast by AAFC at a record 0.21 Mt, up sharply from the previous year.



Mustard Seed

For 2016-17, production nearly doubled to 234 kt, mostly due to higher area and yields. Production of all three major types of mustard (yellow, brown and oriental) increased as a result. Supply, however, increased by only 55% due to lower carry-in stocks. Exports are expected to be higher than last year at 115 kt. However, carry-out stocks are forecast to rise sharply. The US and the EU are expected to remain the main export markets for Canadian mustard seed. The average price is forecast to fall due to large Canadian and world carry-out stocks.

Canary Seed

For 2016-17, production fell by 19% to 120 kt, due to a sharply lower harvested area resulting from a high rate of abandonment. Exports are expected to be lower than last year. The EU and Mexico are forecast to remain the main export markets, followed by Brazil and the US. The average price is forecast to decrease from the 2015-16 level.

Sunflower Seed

For 2016-17, production fell sharply to 51 kt, due to lower area compared to a year ago. Supply rose marginally to 106 kt, however, due to large carry-in stocks. Exports are forecast to be slightly lower than last year and as a result, carry-out

stocks are forecast to rise. The US is expected to remain Canada's main export market for sunflower seed. The average price is forecast to be similar to 2015-16 despite an expected decrease in North American sunflower seed carry-out stocks and higher US soybean prices.

US sunflower seed production for 2016-17 is estimated by the USDA at just over 1.1 Mt, down sharply from 2015-16 and largely due to lower production in South Dakota. Production of oil type varieties is estimated by AAFC to have fallen below 1.0 Mt and the production of confectionery type varieties is estimated by AAFC to have fallen to just over 0.1 Mt. US supply is forecast by the USDA to fall by 8% to 1.4 Mt. As a result, US imports are expected to rise and domestic use is estimated to fall. US sunflower seed carry-out stocks are expected to fall sharply and provide some support for North American prices.

For 2016-17, the global supply of sunflower seed is estimated by the USDA at a record 48 Mt. This is 6% higher than last year, due to record production in Russia and the Ukraine. Despite this, world exports are expected to decrease by 18% to 1.6 Mt, but domestic use is expected to rise to a record 44 Mt. As a result, world carry-out stocks are expected to fall marginally to 2.1 Mt, well below the ten year average.



CANADA: PULSES AND SPECIAL CROPS SUPPLY AND DISPOSITION December 21, 2016

Grain and Crop Year (a)	Area Seeded	Area Harvested	Yield	Production	Imports (b)	Total Supply	Exports (b)	Total Domestic Use (c)	Carry-over Stocks	Stocks-to-Use Ratio	Average Price (d)
	---- thousand ha ----		t/ha-	----- thousand metric tonnes -----							%
Dry Peas											
2014-2015	1,613	1,588	2.4	3,810	31	4,170	3,082	404	684	20	260
2015-2016	1,489	1,470	2.18	3,201	16	3,901	2,716	1,008	176	5	365
2016-2017f	1,715	1,686	2.87	4,835	29	5,040	3,200	960	880	21	260-290
Lentils											
2014-2015	1,263	1,217	1.63	1,987	13	2,786	2,179	242	365	15	585
2015-2016	1,633	1,630	1.56	2,541	16	2,921	2,147	702	73	3	965
2016-2017f	2,372	2,323	1.4	3,248	75	3,396	2,000	796	600	21	585-615
Dry Beans											
2014-2015	126	122	2.27	278	85	368	307	26	35	11	830
2015-2016	108	107	2.31	249	80	364	324	30	10	3	775
2016-2017f	115	113	2.07	234	80	324	319	0	5	2	930-960
Chickpeas											
2014-2015	73	70	1.87	131	8	269	80	64	125	87	515
2015-2016	50	50	1.8	90	14	229	151	63	15	7	815
2016-2017f	68	44	1.86	82	20	117	75	37	5	4	900-930
Mustard Seed											
2014-2015	202	195	1.01	198	1	209	126	48	35	20	700
2015-2016	140	133	0.93	123	2	160	113	42	5	3	985
2016-2017f	212	201	1.16	234	10	249	115	44	90	57	640-670
Canary Seed											
2014-2015	111	107	1.17	125	0	185	165	10	10	6	540
2015-2016	132	128	1.17	149	0	159	146	8	5	3	580
2016-2017f	105	81	1.48	120	0	125	115	5	5	4	470-500
Sunflower Seed											
2014-2015	30	29	1.89	55	30	90	34	46	10	13	615
2015-2016	41	38	1.89	73	20	103	29	49	25	32	550
2016-2017f	28	28	1.84	51	30	106	27	49	30	40	535-565
Total Pulses and Special Crops (c)											
2014-2015	3,418	3,329	1.98	6,584	168	8,077	5,973	840	1,264	19	
2015-2016	3,592	3,556	1.81	6,424	148	7,836	5,626	1,901	309	4	
2016-2017f	4,616	4,475	1.97	8,804	244	9,357	5,851	1,891	1,615	21	

a) Crop year is August-July. Grains include pulses (dry peas, lentils, dry beans, chick peas) and special crops (mustard seed, canary seed, sunflower seed).

b) Imports and exports exclude products.

c) Total Domestic Use = Food and Industrial Use + Feed Waste & Dockage + Seed Use + Loss in Handling. Total domestic use is calculated residually. d) Producer price, FOB plant, average over all types, grades and markets.

Source: Statistics Canada (STC) and industry consultations.

f: forecast, by AAFC except area, yield and production for 2016-17 which are STC.

www.varjoon.com



V. ARJOON GROUP



With Best Compliments From:
V. Arjoon Group of Companies

Services Offered

- Custom House Agent
- Warehousing
- Transportation
- Container Freight Station
- Multimodal Transport Operator
- Ship Chartering & Ship Management
- Freight Forwarding

Head Office :

6, Hafizain Bldg, 3rd Floor, 129/131, Kazi Syed Road,
Masjid, Mumbai-400003. India.

Tel :- 022-43535454 • Fax:- 022-23429304

Email: import@varjoon.com

Corporate Office :

801, Sai Samarth Building,
Deonar Village Road, Govandi (East),
Mumbai – 400088 India

Tel No: 022-42901111

Fax: 022-42901122

Email: export@varjoon.com

Branch Office :

"Narmada", Plot No.130,
Ward 12/C, Lila shah Circle,
Gandhidham-370 201, Kutch, Gujarat, India.

Phone: +91-2836-308000

Fax: +91-2836-308011

Email: support@varjoon.com



Union Agriculture Minister presided the Closing Ceremony of “International Year of Pulses 2016” on Dec. 22, 2016

The “Closing Ceremony of International Year of Pulses and Review of various Government initiatives for enhancing pulses production” was held at Agra on December 22, 2016. The ceremony was presided over by the Hon’ble Union Minister of Agriculture & Farmers Welfare Shri Radha Mohan Singh ji who urged upon the scientists, farmers and policy makers for efforts towards making the country self sufficient in pulse production by the year 2021. Hon’ble minister

reviewed the various programmes conducted by different institutes and universities during the year.

Hon’ble Union Agriculture Minister said that the Government of India has taken a number of measures during International Year of Pulses 2016 to increase the production and productivity of pulse crops in the country. Among them, Government of India has laid down a target of 200 lakh tonne production for





the year 2016-17, 210 lakh tonne for year 2017-18 and 240 lakh tonne for year 2020-21. Shri Singh said that these steps have been taken to strengthen the formal seed mechanism of pulse crops and to increase availability of seeds of improved varieties in the country. "Pulse seed hubs" are being established in State Agriculture Universities and Institutes of ICAR and KVKs of major pulse producing states of the country. A target has been fixed to establish a total of 150 "Pulse Seed Hubs" from 2016-17 for increasing the availability of quality seeds for which a provision of Rs.225.31 crores has been made. Under this project, there is a target of 1.50 lakh quintal additional seed production per year. Each "Pulse Seed Hub" will produce a

minimum of 1000 quintal quality seeds of pulse crops per year and supply it. He also said that for the first time, Government has made provision to ascertain the sale of pulses on minimum support price for the farmers.

Apart from this, the Government has also decided to maintain a buffer stock of pulses to the extent of 20 lakh tonne so that people could be provided pulses at reasonable prices when market prices escalate. Hon'ble union minister Shri Radha Mohan Singh said that Government has increased minimum support price of the pulses to promote the cultivation and production of pulses. He praised the efforts of all the farmers, scientists and



policy makers for increasing production and productivity/ availability of pulses in the country and hoped that they would put in their best efforts to make India self-sufficient in pulses production.

The renowned pulse scientists were felicitated by the Hon'ble Union Minister and a bilingual mobile app (*ChanaMitra*) developed by ICAR-IIPR, Kanpur, was also launched for the chickpea growers on the occasion.

Hon'ble State Agriculture Minister Shri Sudarshan Bhagat emphasized upon the initiatives taken by Govt. of India for enhancing pulses production in the country.

Shri Ramashanker Katheria, Hon'ble M.P., Agra also shared his views on the occasion.

Dr Trilochan Mohapatra, Secretary DARE and DG ICAR; Dr JS Sandhu, DDG(Crop Science) and Dr AK Singh DDG(Agril. Extension) were also present during this occasion.

Earlier in the morning session, the progress of various activities initiated by Govt. of India on pulses during 2016 was critically reviewed. Also, the recommendations of the various events organised in India were presented and recommendations emerged from these events were discussed in length. The session was chaired by Dr Trilochana Mohapatra, DG ICAR and Secretary DARE.





About 300 delegates from different organizations attended this ceremony which was jointly organised by ICAR-IIPR, Kanpur and Indian Society of Pulses Research and Development. The major recommendations emerged during this closing ceremony are listed below:





Recommendations:

- In about 3 to 5 million ha of the vast rice-wheat and other fallows, depending on soil moisture and water availability, introduce a short duration pulse crop, viz., mungbean or urdbean or cowpea or horsegram.
- Enhance varietal and seed replacement rate (SRR); varieties older than 10 years should be replaced with new varieties and SRR be increased beyond 30%.
- Strengthen seed production and distribution system by public-private partnership; pending establishment of seed hubs, quality seed production through the Krishi Vigyan Kendras and from the large scale demonstrations done under the NFSM should be ensured, Pulses seed villages should be created.
- Promote mechanization in pulses and reduce the cost of cultivation through farm mechanization and integrated pest management approach; increase farm mechanization by promoting custom hiring of the implements and ensuring their availability at community level.
- Increase availability of well tested and certified bio-fertilizers and bio-pesticides with direct subsidies to farmers, linking with the *Jan Dhan Yojana*
- Increase rain-water conservation through creation of farm ponds and reservoirs; Promote efficient water management through use of micro-irrigation system, powered by solar energy, and integrate it with the *Pradhan Mantri Krishi Sinchai Yojana*.
- Integrate the pulses markets through ICT and promote E-trade, and enable farmers to use these developments to get full value for their produce.



- Encourage public-private partnership all along the value chain, in all aspects of pulses production and post-harvest handling, especially in seed production and distribution, agroprocessing and marketing.
- Towards a pulses-centric approach, establish a separate Pulses Mission and a National Pulses Board with a single window system for sustainably enhanced pulses productivity and production, which is needed for adoption of a mission-mode approach with coordination and convergence of all concerned departments and stakeholders towards achieving synergy, avoiding duplications and leveraging related initiatives.
- Incentivize the pulses producers through attractive (substantially high) minimum support price and a robust procurement network, and by linking farmers to market
- Ration pulses at subsidized rates to BPL families through the public distribution system; include pulse-based snacks/food in the mid-day meal scheme at the schools
- Create strategic reserves of major pulses and undertake buffer stocking of pulses as an integral component of pulses trade and price stabilization
- Expedite the crop insurance scheme to cover pulses. The crop insurance scheme should cover the damage caused to pulses by wild animals including blue bulls, deer, boars and monkeys, and develop clear government policy to this effect
- Provide enhanced committed core governmental funding for strengthening basic, strategic and applied research in pulses, channel funds to well designed projects and for strengthening IIPR and AICRPs, and to the technology assessment and transfer programmes; Encourage the private sector to invest in research and technology generation for the development of pulses



IPGA's Initiatives in 2016

Team IPGA

India Pulses and Grains Association, as part of its objectives, focusses on assisting Indian farmers in increasing yield and production so that India can take definitive steps towards self-sufficiency in Pulses. To this effect, IPGA undertook a major Water Resource Revival Project in 10 Marathwada villages before the monsoons. As a part of this project, IPGA undertook river and nallahs widening and deepening in these villages creating a storage capacity of over 40 crore litres and percolation capacity of over 100 crore litres of water. Taking this forward, IPGA has proposed to join hands with NAAM Foundation led by noted actor and theatre personality Mr. Nana Patekar. Mr. Pravin Dongre, Chairman – IPGA and Mr. Bimal Kothari, Vice Chairman – IPGA met with Mr. Nana Patekar and Mr. Makarand Anaspure to discuss the modalities. IPGA, in the course of the meeting, has assured Mr. Patekar all necessary support and cooperation in

their efforts to help farmers across the country. IPGA has assured Mr. Patekar that members of IPGA will purchase the pulses cultivated by farmers at a price that will cover the cost of production and ensure that the farmer also makes reasonable profit. The IPGA team will prepare a complete project plan which will include supporting farmers to cultivate pulses, increase the yield as well as ensure appropriate price realisation. Mr. Patekar, Mr. Dongre and Mr. Kothari will be meeting soon in the near future to discuss the plan and chalk out a detailed strategy to execute the plan.

India Pulses and Grains Association's vision is to make Indian pulses and grains industry & trade globally competitive and the IPGA team is actively connecting with international Government bodies as well as traders that are exploring Indian market for exporting pulses.



Mr. Pravin Dongre, Chairman, IPGA and Mr. Bimal Kothari, Vice- Chairman, IPGA with Mr. Nana Patekar



Mr. Nana Patekar and Mr. Makarand Anaspure with Mr. Pradeep Ghorpade



Mr. Jesus Silveyra with Mr. Bimal Kothari, Vice Chairman, IPGA

This year IPGA had discussions with a trade delegation from Argentina led by Mr. Jesus Silveyra, Joint Secretary of State for Agribusiness Markets, Ministry of Agro Industries, Argentina. IPGA is in the process of finalising a MoU with Argentina's Ministry of Agro Industries to develop a programme for promoting the production of pulses viz., Yellow Peas, Green Peas, Red & Green Lentils, Pigeon Peas, Black Matpe and Green Mung Beans



Team IPGA with Argentine delegation

In November, IPGA team led by Mr. Bimal Kothari, Vice Chairman, IPGA had a meeting with Malam Nazir Ahmad El-Rufai, The Executive Governor of Kaduna State, Nigeria along with his Agriculture

Committee Members. The agenda of this meeting was potential collaboration with Indian importers and members across the pulses value chain, to have a viable partnership. IPGA is looking forward to exploring trade opportunities with the delegation and will be preparing a MoU in this regard.



Team IPGA with the delegation from Nigeria

Besides above, in December IPGA team met Dassoler Agronegocios Ltd, Brazil, which a farming company with 26,000 hectare plantation, for discussing co-operation in Pulse trade between India and Brazil such as contract plantation and import from Brazil.



Team IPGA with members of Dassoler Agronegocios Ltd

We wish you a Happy New Year 2017



**NARENDRA
FORWARDERS**

Dedicated Professional Service Since 1988
CHA Lic. No.- AAACN1504FCH001 (11644)

*We specialise in
Liquid and Dry Bulk*

**A TOTAL LOGISTICAL SOLUTIONS COMPANY
ACROSS AIR, LAND AND SEA.**

**Narendra Forwarders is a single window Customs Clearing
Outfit with a host of services that brings to the
clients a unique experience that adds value to their business**

Head Office: 15021 82, Universal Majestic, 15th Floor, P.L. Lokhande Marg,
Behind R.B.K. International School, Chembur (W), Mumbai 400 043, India.
Tel. (91-22) 61 160601, Fax. (91-22) 61 160602, E-mail: info@nfplonline.com

Contact Person: Mr. Rakesh Shah (Director)

J.N.P.T. Office:

313. Freight Forwarders Premises.
Plot No. 5, Panvel-Uran Road,
Opp JNPT Township, Dronagiri,
Navi Mumbai- 400 707.
Tel: (91-22) 27470245/48/47
Fax: (91-22) 27470248
E-mail: chetan@nfplonline.com

Contact Person: Mr. Chetan Oza

Hazira/Dahej Office:

Port Users Building,
Adani Hazira Port Pvt Ltd,
Hazira, Choryasi,
Surat 394 270,
Gujarat
Tel: (91) 9004367774
E-mail: jinesh@nfplonline.com

Contact Person: Mr. Jinesh Vira

Ahmedabad Office:

Office No. 804,
Surmont Byzantine,
Opp Iscon Mall, S.G. Highway,
Ahmedabad-54
Fax: (91-79) 40025307
E-mail: chetan@nfguj.com

Contact Person: Mr. Chetan Thakkar

Kandla/ Mundra Office:

Unit No. 1&2, Plot No.16,
Sector-8. Near Gandhidham
Gandhidham- 370 201.
Tel: (02836) 232504 / 231795 /
223889 Fax: (02836) 224326
E-mail: chetan@nfguj.com

Contact Person: Mr. Chetan Thakkar

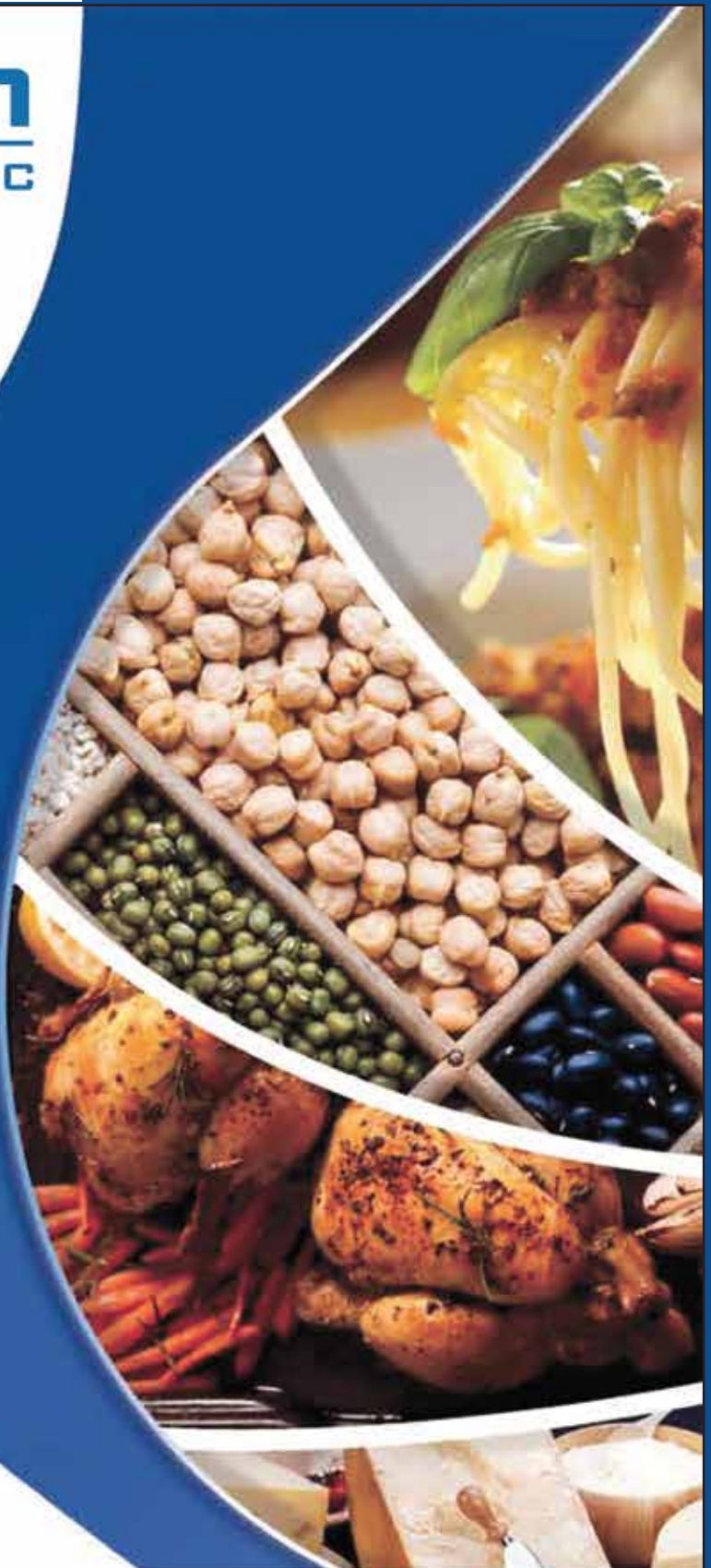


Your cargo is precious- Ensure it is in our Professional Hands



OUR NETWORK

Azerbaijan, Brazil, Bulgaria, Burkina Faso, Canada, Chad, China, Ethiopia, Georgia, India, Iraq, Kazakhstan, Kyrgyzstan, Mozambique, Nigeria, Pakistan, Russia, South Africa, Switzerland, Tajikistan, Tanzania, Turkey, Ukraine, UAE & USA



Bridging the gap between
East & West

34th Floor, BB2 Tower, Mazaya Business Avenue,
Jumeirah Lakes Towers, PO BOX 31489, Dubai, UAE
Tel : +971 4 423 0700 Fax: +971 4 423 0707
dubai@hakanfoods.com www.hakanfoods.com