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India

Grain and Feed Annual

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Report Highlights:

Indian MY 2014/15 wheat production should hit 96 MMT from 31.5 MHA (both records) if favorable weather and moisture conditions continue. MY 2014/15 rice production is forecast at 104 MMT from 44 MHA but depends on the 2014 monsoon. Pulse production is forecast down to 18 MMT on production shifts to wheat. MY 2013/14 guar output was down on lower area planted due to weaker prices. MY 2014/15 exports of wheat, rice and corn are forecast down from the year prior due to softening global prices.

Commodities:

Wheat

Production:

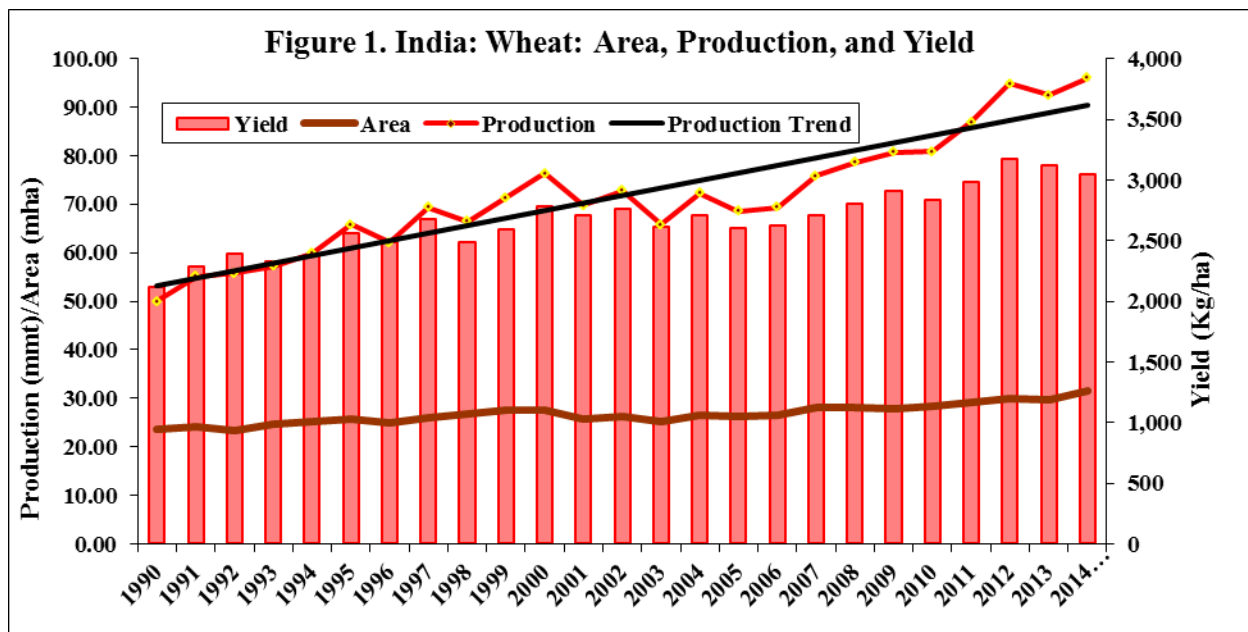
Riding on a wave of back-to-back bumper crops since 2005, India is heading for another record wheat harvest this summer on record planting and favorable growing conditions in major wheat growing areas. Assuming normal weather conditions through harvest (April), Post forecasts marketing year (MY) 2014/15 wheat production at 96 MMT compared to last year's 92.5 MMT and the previous record of 94.9 MMT in MY 2012/13.

Timely harvest of the preceding *kharif* (winter harvested) crops coupled with good late season (September-October) monsoon rainfall provided favorable soil moisture conditions for wheat planting in most growing areas. The timely announcement of the minimum support price (MSP) of wheat by the Government of India (GOI), relatively strong market prices in MY 2013/14 and the expectations of additional bonuses from the state governments (over and above the GOI's MSP) due to the upcoming Parliamentary elections in April 2014 encouraged farmers to plant additional area to wheat. The Ministry of Agriculture's latest provisional wheat area planted estimate for MY 2014/15 is 31.5 million hectares, an unprecedented increase of more than six percent over last year's record area.

Adequate soil moisture and relatively low temperatures during November/December provided optimal conditions for emergence and tillering. Scattered rains during December/January have been beneficial for the standing wheat crop, currently in the flowering and early seed setting stages. There have been no incidents of pest or disease outbreaks in the major growing areas. These conditions have fueled the expectation of a bumper 2014 wheat harvest as trade sources are currently estimating the crop in the range of 94 to 98 MMT. While the official advance estimates for the upcoming wheat crop have not been released, media reports have quoted senior government sources as expecting the crop to touch 100 MMT.

Weather from February through harvest (April) will be critical as a rise in temperature during critical grain filling in February/March and/or rains and hailstorms at the time of harvest in March/April could affect productivity prospects. An extended winter and low temperatures through the first week of April, as experienced in the record production year of 2012, could bolster yield prospects. Assuming normal weather conditions from now on, Post forecasts the MY 2013/14 wheat yield lower at 3.0 tons/hectare compared to the MY 2012/13 record yield of 3.2 tons/hectare.

Indian wheat is largely a soft/medium hard, medium protein, white bread wheat, somewhat similar to U.S. hard white wheat. Wheat grown in central and western India is typically harder, with higher protein and gluten, compared to wheat grown in northern India. India also produces around one million tons of durum wheat, mostly in the states of Madhya Pradesh and Rajasthan. Farmers are increasingly shifting from durum wheat to higher yielding non-durum varieties as the durum yield is significantly lower than that of regular wheat varieties and the government's continued increase of MSP has reduced the price premium. Most durum wheat is typically purchased by the private trade at a price premium for processing into higher value/branded bakery and confectionary products.



Source: Ministry of Agriculture, GOI; and FAS/New Delhi estimates for MY 2014/15.

India's wheat production has exceeded trend in the last four years on higher planting and productivity due to the government's policy of steady increase in the MSP and generally favorable weather conditions. Despite wheat's being largely irrigated (more than 91 percent), monsoon rainfall affecting ground water availability and soil moisture conditions at the time of planting are critical for a good harvest. Indian wheat cultivation faces two major future threats – global warming/climate change and Ug99. Unscientific irrigation practices and over-exploitation of ground water are increasingly causing water table depletion and soil salinity in the wheat growing areas in northern India. Depletion of irrigation water resources is likely to put pressure on wheat cultivation in north India in the next few years, forcing farmers to explore less water intensive crops like corn, pulses and oilseeds.

Most commonly sown wheat varieties available to farmers were released more than a decade ago and are showing signs of obsolescence as farmers continue to reuse farm grown seeds with seed replacement rates around 20 percent in most wheat growing states. The Indian Council of Agricultural Research (ICAR) institutes and various state agricultural universities (SAUs) continue to develop new wheat varieties with higher yield potential and better grain qualities, largely through traditional breeding methods. Given that seed production and marketing are largely done by public sector institutions, the new wheat varieties have failed to make sufficient inroads due to limited seed multiplication, distribution and extension facilities. Current biotechnology applications in wheat are limited to experimental marker-assisted breeding for resistance to biotic and abiotic stresses and for quality traits.

There is a growing concern among policy makers and researchers about the vulnerability of the wheat crop to global warming and changing climatic conditions, particularly the rise in temperatures during March/April at the grain filling stage. Of the total area under wheat cultivation, researchers estimate that about 10 million hectares are prone to terminal heat stress. According to some local research, a one-degree Celsius rise in temperature during the growing season can result in a 3-to-7 percent decrease in grain yields. The Indian Council of Agricultural Research (ICAR), India's apex agriculture research

agency, along with various state agriculture universities (SAUs) is closely researching the potential climate risks to wheat to develop appropriate response mechanisms and technologies to mitigate risks.

Indian wheat also faces the threat of the dreaded wheat rust Ug99, as more than three-fourths of wheat acreage is planted to varieties susceptible to the disease. Although agricultural researchers assert that the agro-climatic conditions in the major wheat belt of northern India are not conducive to the spread of Ug99, the highly mutative nature of the Ug99 strain could make India's wheat growing belt vulnerable to this rust. Consequently, ICAR and the SAUs continuously survey and monitor the wheat crop for various rusts, including Ug99. ICAR is also screening newly developed wheat varieties in the country for resistance to Ug99. The government has been encouraging replacing susceptible varieties with Ug99-resistant varieties in the major wheat growing area.

Consumption:

Wheat consumption (FSI) in MY 2014/15 is forecast at 87 MMT on sufficient domestic production and expected higher supplies of subsidized government wheat through the Public Distribution System (PDS) with the implementation of the new National Food Security Act (NFSA, see GAIN reports [IN3105](#) and [IN3037](#)). Expected near-record government procurement is likely to increase the already 'more-than-sufficient' government wheat stocks, forcing the government to continue sale of wheat at subsidized prices to local millers through the Open Market Sales Scheme (OMSS). Wheat for feed consumption and residual is forecast at 4.5 MMT on expected steady demand from the dairy feed sector and damage to the abnormally large government-held wheat stocks.

Wheat (FSI) consumption in MY 2013/14 is estimated to increase by more than eight percent to 86.9 MMT on higher government wheat sales under the PDS and OMSS programs. Since November 2013, local millers have been sourcing government wheat for meeting the bulk of their consumption requirement as open market availability of wheat has been very tight. Wheat for feed consumption in MY 2013/14 is estimated at 4.8 million tons on strong demand from the dairy/poultry sector and higher supplies of damaged/inferior wheat from government stocks. Market sources report that a significant portion of the lower quality wheat leaked from the PDS finds its way into the livestock feed sector. Also see attachment.

Wheat is the staple food for most Indians, mostly consumed in the form of homemade *chapattis* or *rotis* (unleavened flat bread) using custom milled *atta* (whole wheat flour). Some wheat is also used for various wheat-based processed products like raised breads, "biscuits" (cookies) and other bakery items. Their share of the market is gradually rising. With growth in the economy and an expanding middle class, Indian households are diversifying their consumption patterns with an expanding share of high-value and high-protein items, like fruits, dairy products, meat, and processed foods. Recent National Sample Survey Organization surveys indicate that per-capita consumption of wheat at household levels has been relatively flat over the last decade (see [IN2026](#)).

Typically, whole wheat is distributed through the public distribution system to be subsequently custom milled by the household for home use. Most wheat retained by farmers (40-45 percent), after saving some quantities for seed use for the next season, is also custom milled, mostly in the *chakkies* (small flour mills) for home consumption and small quantities for feed use (mostly lactating cows and

buffaloes). Nevertheless, branded and packaged wheat *atta* marketed by large food companies is gaining market share in urban areas due to convenience.

The organized milling sector is relatively small with about 1,000 medium to large flourmills in India, with aggregate milling capacity of 24-25 MMT, which mill mostly *maida* (flour) and semolina to cater to institutional demand, and produce bran flakes for the mixed feed industry. However, the average capacity utilization by these mills is only around 45-50 percent, processing about 12 million tons wheat every year.

Some quantity of government-held wheat (mostly spoiled or of inferior quality) is also used for animal feed. Market sources report higher usage of wheat for animal feed in the last few years due to higher spoilage and leakage from the government PDS at significantly lower prices.

Government Procurement

Due to a steady increase in the government support price and back-to-back record production, government food grain (wheat and rice) procurement increased strongly during 2007 to 2012. However, government wheat procurement in MY 2013/14 went down to 25.1 MMT, a whopping 34 percent below the previous year, largely due to relatively high open market prices and speculation about domestic production lower than officially claimed. Forecast record production and the higher procurement price (MSP plus expected additional state bonuses) are likely to fuel the MY 2014/15 wheat procurement higher to 36 MMT. However, domestic prices and limits to the effectiveness of government procurement operations may temper the overall procurement prospects.

Given the likelihood of Parliamentary elections in April 2014, the formation of the new government will coincide with the peak wheat arrival and government procurement season (May-June). Post-election formation and functioning of the new government will also influence wheat procurement volumes, particularly in the states of Uttar Pradesh, Madhya Pradesh and Bihar, where the crop comes late. Market sources report that wheat procurement may exceed 40 MMT (against the previous record of 38.2 MMT in 2012) if domestic market prices fall under the influence of weak international prices and the government ensures effective procurement in most states.

Upcoming high wheat procurement will likely aggravate the government's food grain storage problems, particularly in the major origination states of Punjab, Haryana, and Madhya Pradesh. The government's current roofed storage capacity, including leased space, is estimated at around 53-54 MMT, wherein higher value rice gets priority over wheat for storage. Assuming a normal pace of procurement and sales by the government, wheat stocks on June 1, 2014, are likely to balloon to an estimated 48 MMT while rice stocks are estimated at 31 MMT. Consequently, large quantities of government wheat will have to be kept in the open under tarpaulin cover and plinth (CAP) storage including temporary open storage space during the procurement period (May-July). Storage under these conditions results in significant losses due to damage from rain, temperature fluctuations, rodent/pests, and losses to pilferage.

Table 1. India: Government Wheat Procurement and PDS Operation

Marketing Year	Production	GOI Procurement	MSP	GOI Total	Offtake from	PDS Issue Price	Food Subsidy
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		t ¹		Cost	GOI Stocks				y
Apr–Mar	Million Metric Tons	Million Metric Tons	INR Per Metric Ton	INR Per Metric Ton	Million Metric Tons	INR Per Metric Ton			INR Billion
						APL	BPL	AAAY	
2005/06	68.64	14.79 (21.6)	6,400	11,778	16.71	6,100	4,150	2,000	230.80
2006/07	69.35	9.23 (13.3)	7,000	13,118	11.88	6,100	4,150	2,000	240.10
2007/08	75.81	11.13 (14.6)	8,500	13,806	12.25	6,100	4,150	2,000	312.60
2008/09	78.57	22.69 (28.9)	10,000	14,246	14.89	6,100	4,150	2,000	437.50
2009/10	80.68	25.38 (31.5)	10,800	14,944	22.38	6,100	4,150	2,000	584.43
2010/11	80.80	22.51 (27.8)	11,000	15,953	23.03	6,100	4,150	2,000	638.44
2011/12	86.87	28.34 (32.6)	11,700	17,526	24.27	6,100	4,150	2,000	728.23
2012/13	94.88	38.15 (40.6)	12,850	19,324	33.24	6,100	4,150	2,000	850.00 ₃
2013/14	92.46	25.09 (27.1)	13,500	21,290	29.20 ²	6,100	4,150	2,000	900.00 ₃
2014/15 ²	96.00	36.00 (37.5)	14,000	n/a	n/a	6,100	4,150	2,000	n/a

Sources: Ministry of Agriculture and Food Corporation of India, GOI

Notes: Exchange rate INR 62.10 = US\$ 1 on February 8, 2014

¹ Figure in parentheses is GOI procurement as percentage of total production

² FAS/New Delhi estimate

³ GOI budget estimate, actual expected to be higher

PDS - Public Distribution System

APL - Above Poverty Line

BPL - Below Poverty Line

AAAY -Antyodaya Anna Yojana (Poorest of the Poor)

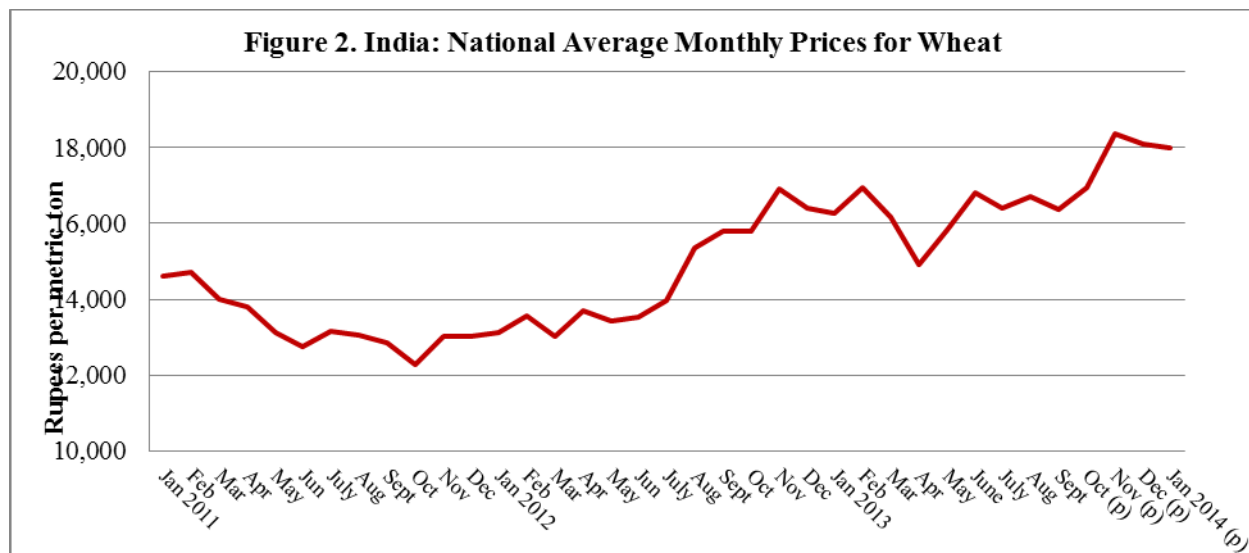
National Food Security Act (NFSA) to Raise Food Subsidy

According to [official data](#), over the last eight years, the government's unit cost of wheat has nearly doubled to INR 21,290 (\$343) per ton in 2013/14 due to the steady increase in MSP and higher overhead costs associated with long-term leasing of private warehouses. With the PDS sales price of wheat unchanged since 2002, the GOI's food subsidy spending is likely to balloon significantly higher than the GOI's budgeted estimate of INR 900 billion (\$14.5 billion) in Indian Fiscal Year (IFY) 2013/14 on high cost and larger off-take of wheat under PDS, and subsidized sales under OMSS and export quota.

On September 12, 2013, India's much debated [National Food Security Bill, 2013](#), was signed into law. This Act creates an entitlement for eligible beneficiaries (50% of the urban and 75% of the rural populations) to receive 5 kilograms of rice, wheat or coarse grain (millet) at subsidized prices of 3, 2 and 1 rupee per kilogram, respectively, for at least the first three years after enactment. This equates to about two thirds of India's population, or roughly 820 million people. This measure will likely raise the food subsidy bill to over INR 1.12 trillion (approximately USD 18.4 billion) per annum. See GAIN Report [IN3105](#) for more details. The GOI and the state governments are exploring the possibility of

phased implementation of the proposed law by 2015, but the actual implementation will depend on its priority as accorded by the new government after the upcoming Parliamentary elections.

Prices



Source: Agmarket News (<http://agmarkweb.dacnet.ic.in>), Ministry of Agriculture, GOI

Despite sufficient domestic supplies (near-record production and record opening stocks), domestic wheat prices in MY 2013/14 have been very firm on strong demand and relatively tight open-market wheat supplies. Domestic prices have started weakening since January on expectation of a record upcoming crop and weak international prices. Spot prices in the first week of February 2014 were ranging between INR 15,200 (\$245) to INR 17,700 (\$285) per metric ton in major producing states. Government wheat is currently available to local millers under the OMS scheme in the price range of INR 15,400 (\$248) to INR 17,500 (\$281) per ton. More than sufficient opening stocks, expected weak international prices and forecast record domestic production will pressure the domestic prices further through the first quarter of MY 2014/15. However, government's support price and procurement operation would contain any significant decline in domestic wheat prices.

Trade:

Indian wheat exports took off in August 2012 after the GOI announced exports of wheat from government stocks. However, weak international prices have affected government wheat exports during MY 2013/14, forcing the government to lower the export floor prices from \$300 per ton to \$260 per ton in November 2013. The increasing implied subsidization of government wheat exports is a major concern for the government on meeting its World Trade Organization commitments, and the government is unlikely to lower the export floor price below \$260.

India's MY 2014/15 wheat exports are forecast to decline to 3 MMT, most of which will be private exports (open-market wheat procured by private trade) and some spillover of government wheat from the existing current two MMT quota announced in August 2013. With international prices expected to remain depressed during the upcoming marketing year, it will be very difficult for the government to

export wheat with \$260-per-ton floor price. Due to the increase in the procurement price (INR 14,000 (\$225) to INR 15,500 (\$250) per ton) for the upcoming season, the government will have to raise the subsidy significantly higher to off load any wheat in the export market. With OMSS reserve prices in major states ranging from \$248-\$281 per ton, domestic millers, opposition politicians and foreign competitors will object to any lowering of the minimum export price. However, export prospects may improve if either international prices improve or the value of Indian rupee declines significantly.

MY 2013/14 wheat exports are estimated at 6 million tons as Indian wheat has not been very price competitive in the international market. The government announced the two-MMT export quota in August 2013, but global wheat prices have been on a downward trend and the government parastatals assigned to export the quota are struggling to find buyers. See [IN4001](#) for more information on the government wheat tenders and export performance through January 2014.

Table 2. India: Government Wheat Tenders Against the New Export Quota

Agency	Quantity Allocated or Tendered (Tons)	Tender Close	Shipment Period	Price (US\$ per ton FOB)	Port of Loading
STC	120,000	Nov 15, 2013	Nov 25-Dec 28, 2013	286.20	Mundra
PEC	70,000	Nov 15, 2013	Nov 20-Dec 20, 2013	289.90	Krishnapatnam
PEC	90,000	Nov 15, 2013	Nov 20-Dec 20, 2013	284.70	Kandla
MMTC	60,000	Nov 15, 2013	Nov 22-Dec 21, 2013	285.95	Kakinada
MMTC	55,000	Dec 12, 2013	Dec 22, 2013-Jan 25, 2014	283.10	Pipavav
PEC	110,000(120,000) ¹	Dec 12, 2013	Dec 23, 2013-Jan 25, 2014	285.41	Kandla
PEC	35,000	Dec 12, 2013	Dec 22, 2013-Jan 25, 2014	287.10	Vizag
PEC	70,000	Dec 16, 2013	Dec 26, 2013-Jan 31, 2014	281.50	Krishnapatnam
MMTC	85,000 (100,000) ¹	Dec 23, 2013	Jan 3-Feb 4, 2014	283.11	Kakinada
STC	40,000(200,000) ¹	Dec 23, 2013	Jan 4-Feb 3, 2014	288.30	Mundra
STC	125,000(160,000) ¹	Jan 8, 2014	Jan 18-Feb 18, 2014	282.60	Mundra
STC	70,000	Jan 10, 2014	Feb 1-Feb 28, 2014	283.60	Chennai
PEC	45,000 (120,000) ¹	Jan 14, 2014	Jan 20-Feb 25, 2014	281.31	Kandla
PEC	70,000	Jan 14, 2014	Jan 20-Feb 25, 2014	279.52	Vizag
STC	40,000 (120,000) ¹	Jan 23, 2014	Feb 1, Mar 5, 2014	278.20	Mundra
MMTC	60,000	Feb 3, 2014	Feb 10-Mar 10, 2014	NA	Pipavav

		2014	2014		
PEC	100,000	Feb 14, 2014	Feb 25-Mar 25, 2014	NA	Kandla
MMTC	80,000	Feb 14, 2014	Feb 20-Mar 19, 2014	NA	Kakinada
PEC	70,000	Feb 24, 2014	Feb 28-Mar 28, 2014	NA	Krishnapatnam
STC	50,000	Feb 24, 2014	March 6-April 6, 2014	NA	Chennai
STC	150,000	Feb 24, 2014	March 6-April 6, 2014	NA	Mundra
Tenders Cancelled					
PEC	40,000	Oct 4, 2013	Oct 15-Nov 15, 2013	Cancelled	Kandla
STC	60,000	Oct 4, 2013	Oct 15-Nov 15, 2013	Cancelled	Mundra
MMTC	50,000	Oct 4, 2013	Oct 15-Nov 15, 2013	Cancelled	Mundra
MMTC	60,000	Jan 14, 2014	Jan 20-Feb 24, 2014	Cancelled	Pipavav
MMTC	120,000	Jan 23, 2014	Feb 1-Mar 5, 2014	Cancelled	Kakinada
PEC	100,000	Feb 3, 2014	Feb 10-Mar 10, 2014	Cancelled	Krishnapatnam
PEC	35,000	Feb 12, 2014	Feb 20-Mar 25, 2014	Withdrawn	Vizag

Note: STC- [State Trading Corporation](#); PEC - [Project Export Corporation](#); and MMTC - [Minerals and Metals Trading Corporation](#)

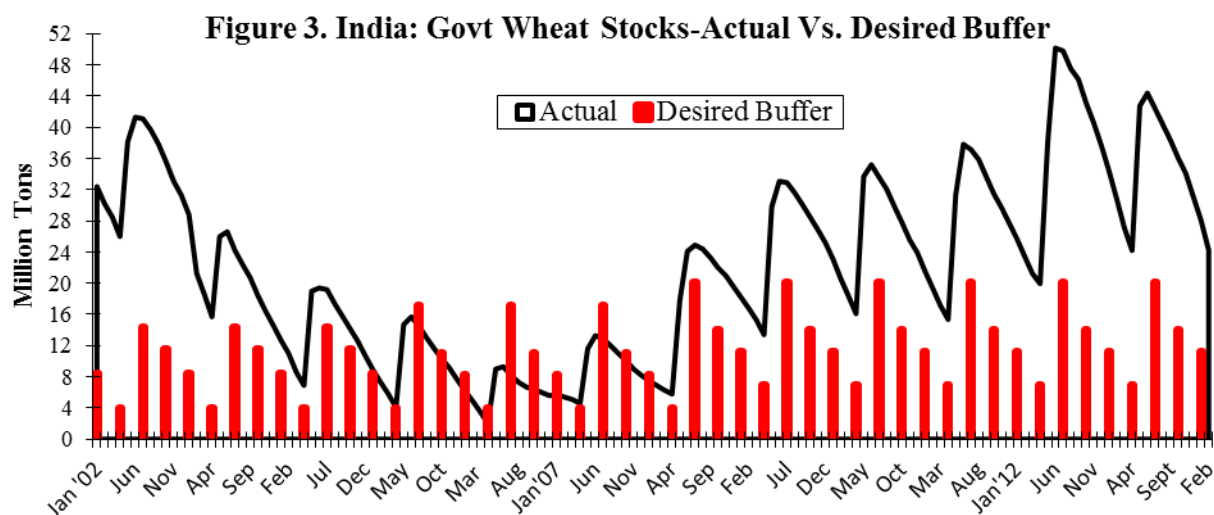
¹ Tender allocated partially, with figure in parenthesis indicating the total quantity tendered.

Provisional official trade statistics indicate that wheat exports for April to November 2013 reached 3.8 million tons, with the major export destinations being Bangladesh, Korea, Indonesia, Saudi Arabia, Djibouti, Yemen, Philippines and other Asian countries (see Table 4). A significant share of India's wheat exports is meant for feed use, particularly in southeast Asia and the Middle East. Due to tight open-market wheat supplies, private exports of wheat have come down significantly since November 2013, and most recent wheat exports have been from government-held stocks. In addition, wheat product shipment is estimated at around 100,000 metric tons, mostly wheat flour. At the current pace of exports, MY 2012/13 exports are estimated to reach 6.0 million tons (1.2 million tons government wheat and the balance private exports and wheat products).

Despite continuation of the zero import duty policy, opportunities for imports of wheat into India since MY 2011/12 have been precluded due to subsidized sales of wheat under OMSS. Imported wheat is relatively costlier to local millers *vis-à-vis* local wheat after accounting for shipping, clearance and inland transport costs.

Stocks:

Government wheat stocks have been drawn down in MY 2013/14 due to lower procurement and higher sale of wheat in the domestic market. Government-held wheat stocks on February 1, 2013, were estimated at 24.2 MMT compared to 30.8 MMT at the same time last year, but still significantly higher than the government's desired peak stock of 20.1 MMT (on July 1).



Source: Food Corporation of India, GOI

Assuming current pace of exports and domestic off take in February/March, MY 2013/14 ending stocks are estimated at 19.0 MMT compared to 24.2 MMT for MY 2012/13 ending stocks. MY 2014/15 ending stocks are forecast to increase to 20.5 MMT on expected higher procurement and lower offtake of government wheat for exports. Nevertheless, these stocks are more than three times the government's desired stocks of 7 million tons (4 million tons buffer and 3 million tons of strategic reserve).

Estimates of privately-held wheat stocks are not available, but are expected to be minimal due to risks stemming from anti-hoarding provisions of the Essential Commodities Act. The PS&D table does not include privately held stocks.

Policy:

Research & Development:

The agriculture sector is a high priority for the GOI, wherein the planned allocation for agriculture and allied sectors was raised by 18 percent to INR 187.81 billion (\$3.4 billion) in the budget for Indian fiscal year 2013/14 (April-March). While the crop wise allocation is not available, rice and wheat account for the majority of spending as they have been the focus crops for food security. The GOI supports research, development and extension activities for transfer of new varieties and improved production technologies (seed, implements, pest management) to farmers. ICAR conducts wheat research and development at the national level, which is complemented by state agricultural universities, regional research institutions, and state agricultural extension agencies at the regional and state levels.

The central and state governments also support farmers by subsidizing input supplies and agricultural credit at affordable prices.

In 2007, the government launched a National Food Security Mission (NFSM) (<http://nfsm.gov.in/>) to address food security concerns due to the slowdown in the growth of food grain production in the last decade (2000). Given that further growth in area under wheat is limited, the NFSM seeks to bridge the yield gap through promotion and dissemination of improved technologies: seed, integrated nutrient management, integrated pest management and resource conservation technologies, particularly in the western and central states. Besides the NFSM, other targeted programs like the National Agriculture Development Program (*Rashtriya Krishi Vikas Yojana*) and Special Program to Bring the Green Revolution to Eastern India are being implemented by the GOI through the state governments.

Price Support:

The GOI establishes a minimum support price (MSP) for wheat on the basis of recommendations by the Commission for Agricultural Costs and Prices (CACP). Some states also provide additional bonus to their farmers over and above the MSP out of their own exchequers. The state governments of Rajasthan and Madhya Pradesh gave a bonus of INR 1,500 (\$24) per ton to their farmers under the MSP program in MY 2013/14 and are likely to extend it in MY 2014/15 also. Government parastatals like the Food Corporation of India (FCI) and various state marketing agencies bear the mandate to procure wheat at the MSP for central government stocks. Subsequently, the government allocates wheat for distribution through the public distribution system and welfare schemes at a subsidized price. In years of surplus procurement and stocks, the government sells wheat in the open market to the private trade at market prices. The government policies relating to the MSP for essential agricultural crops and the price for the PDS supply serve the twin objectives of providing remunerative prices to farmers and affordable prices to poor consumers. See tables 1 and 18 for historical MSPs.

Trade Policy:

On September 9, 2011, the GOI removed the ban on exports of wheat, which had been enforced since February 2007, with some exceptions – occasionally allowing exports to countries like Nepal, Bangladesh and Afghanistan on humanitarian grounds. On July 3, 2012, the government approved exports of two million tons of wheat from government-held wheat stocks to bring the government food grain stocks down to a more manageable level. Three government parastatals were designated to undertake the exports through open tenders, and the two-million-ton quota was exhausted by December 2012. On December 26, 2013, the government approved the export of an additional 2.5 million tons of wheat from government-held stocks for shipment through June 2013 (see [IN3001](#)). In August 2013, the government announced a new 2-MMT export quota, but had to lower the export floor price from \$300 per ton to \$260 per ton in November 2013. The off take of the government wheat has been very slow due to weak international prices. Exports of wheat from government-held stocks are unlikely to continue unless international prices improve significantly.

Currently, wheat imports by the government and private trade incur zero import duty. The government lowered the duty on wheat imports to zero in September 2006 for a short period and this was subsequently extended indefinitely in October 2007. The GOI's phytosanitary requirement pertaining to the 31 specified quarantine weed seeds (wheat sample drawn from a single consignment not to contain

more than 100 quarantine seeds per 200 kg sample) and other SPS issues have effectively barred U.S. wheat shipments to India.

Marketing:

The rapidly growing fast food industry and modernizing wheat-based food industry generate demand for specialty flours (used in pizzas and burger buns) that require varieties of wheat India does not grow. In addition, market sources report steadily declining acreage under local 'hard and high-protein' wheat varieties like *Sharbati* and *Lok-1* grown in central India could create a shortage of high-protein wheat for blending of flour for the rapidly growing baking/confectionary industry. However, U.S. wheat continues to be denied market access to India despite numerous discussions at the technical and policy levels.

Production, Supply and Demand Data Statistics:

Table 3. India: Commodity, Wheat, PSD

(Area in Thousand Hectares, Quantity in Thousand Metric Tons, Yield in MT/Hectare)

Wheat India	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Apr 2012		Market Year Begin: Apr 2013		Market Year Begin: Apr 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	29,860	29,860	29,400	29,600		31,500
Beginning Stocks	19,950	19,950	24,200	24,200		19,000
Production	94,880	94,880	92,460	92,460		96,000
MY Imports	16	16	20	20		0
TY Imports	20	20	20	20		0
TY Imp. from U.S.	0	0	0	0		0
Total Supply	114,846	114,846	116,680	116,680		115,000
MY Exports	6,824	6,824	6,500	6,000		3,000
TY Exports	8,648	8,648	5,500	5,500		3,000
Feed and Residual	3,400	3,400	3,500	4,800		4,500
FSI Consumption	80,422	80,422	86,480	86,880		87,000
Total Consumption	83,822	83,822	89,980	91,680		91,500
Ending Stocks	24,200	24,200	20,200	19,000		20,500
Total Distribution	114,846	114,846	116,680	116,680		115,000
Yield	3.	3.1775	3.	3.1236		3.0476

Table 4. India: Commodity, Wheat, Prices Table

Prices In	Rupees	per uom	metric ton	
Year	2011	2012	2013	%Change
Jan	14,611	13,106	16,279	24.2
Feb	14,724	13,561	16,953	25.0
Mar	13,983	13,033	16,171	24.1
Apr	13,790	13,699	14,925	8.9
May	13,112	13,423	15,822	17.9
Jun	12,762	13,529	16,816	24.3
Jul	13,164	13,961	16,391	17.4
Aug	13,049	15,339	16,698	8.9
Sep	12,858	15,789	16,351	3.6
Oct	12,274	15,780	16,936	7.3
Nov	13,019	16,924	18,370	8.5
Dec	13,036	16,397	18,084	10.3
Exchange Rate	62.10	Local Currency/US\$		
Date of Quote	02/8/2014	MM/DD/YYYY		

National Average Monthly Wholesale Price of Wheat

Source: Agmarket News (<http://agmarkweb.dacnet.ic.in>), Ministry of Agriculture, GOI.

Table 5. India: Commodity, Wheat¹, Export Trade Matrix

Time Period	April-March	Units	Metric Tons
Exports for	MY 2012/13		MY 2013/14 ²
U.S.	105	U.S.	31
Others			
Bangladesh	1,774,039	Bangladesh	1,284,917
Korea Republic	1,053,751	Korea Republic	630,652
Yemen	507,233	U.A.E.	370,937
U.A.E.	498,131	Indonesia	309,647
Djibouti	461,109	Saudi Arabia	138,600
Ethiopia	395,677	Djibouti	137,609
Indonesia	375,433	Yemen	104,541
Thailand	300,685	Philippines	100,342
Oman	206,965	Oman	95,893
Tanzania	197,691	Thailand	85,543
Philippines	185,108	Malaysia	77,020
Qatar	104,843	Vietnam	70,577
Total for Others	6,060,665	Total for Others	3,406,278
Others not Listed	454,042	Others not Listed	365,974

Grand Total	6,514,812	Grand Total	3,772,283
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¹ Trade figures in the PSD includes wheat products.

² Provisional data for the period April thru November 2012

Source: Global Trade Atlas & Directorate General of Commercial Intelligence, GOI.

Commodities:

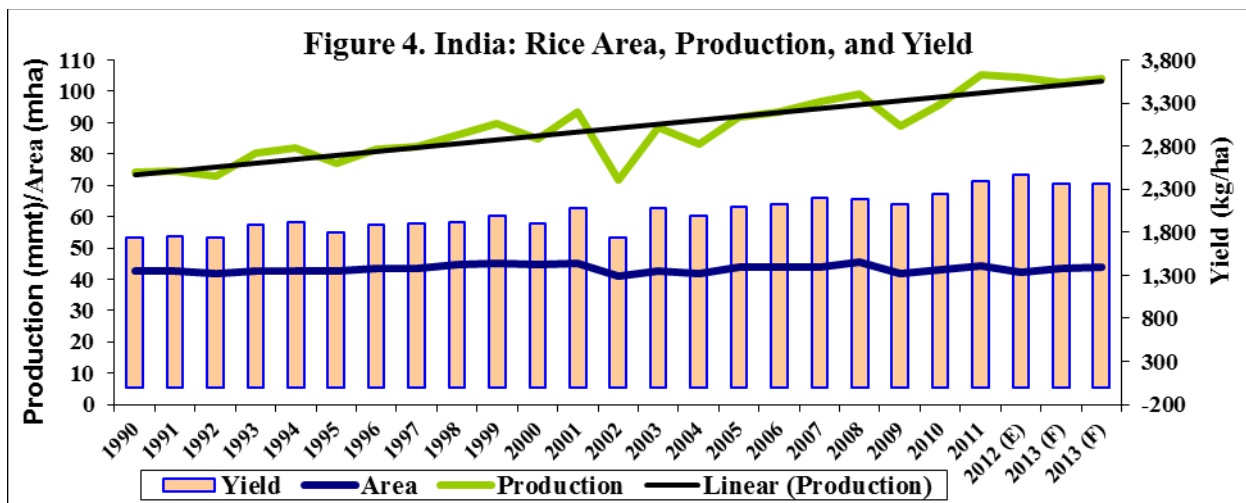
Rice, Milled

Production:

Assuming normal weather conditions and normal southwest monsoon (June –September), India’s MY 2014/15 (October/September) rice output is forecast higher at 104 MMT from 44.0 million hectares, marginally higher than the estimated MY 2013/14 production of 103 MMT. Timely and well distributed 2013 monsoon rains lowered cost of cultivation and supported good yields. Relatively strong prices during MY 2013/14 (Figure 5) further augmented farmers’ returns, which should encourage them to continue to plant rice in the upcoming season upon the onset of 2014 monsoon. While the weakening of global prices may affect local prices for the upcoming *rabi* (winter planted) rice, expectation of continued increase in the government’s MSP mitigates rice growers’ concerns about potential significant price declines. However, a timely and well distributed (over space and time) monsoon would be critical for the MY 2014/15 rice crop. A poor/erratic 2014 monsoon could bring down production by 10-12 million tons from the forecast level as more than 40 percent of rice area is unirrigated.

Despite higher planting of *kharif* rice, ‘below-normal’ monsoon rains during July-August in the states of Uttar Pradesh, Bihar and some pockets of other eastern states affected yield prospects. Planting of *rabi* (winter) rice is currently ahead of last year’s level on improved soil moisture due to the late monsoon rains in September/October. Consequently, Post estimates MY 2013/14 rice production at 103 million tons (90 million tons *kharif* rice and 13 million tons *rabi* rice).

Rice is one of the most important food crops of India, cultivated throughout the country and contributing more than 40 percent of total food grain production. Rice is predominantly a rainfed crop, planted in the *kharif* season after the onset of the monsoon in June. However, there is a small *rabi* crop taken in the states of West Bengal, Andhra Pradesh, Odisha and Tamil Nadu. India’s rice production shows a steady upward trend, but production is subject to wide year-on-year fluctuations compared to wheat as a significant portion of the crop is not irrigated.



Source: Ministry of Agriculture, GOI; and FAS/New Delhi estimates for MY 2013/14 and 2014/15.

Normal and near-normal monsoons since 2010 have supported higher yields, but Indian rice yields are below the world average. There are both wide variation in the levels of rice productivity among the major producing states in the country and scope for increasing productivity by expanding irrigation facilities and adopting technology. In 2010/11, the government launched a Special Program to Bring the Green Revolution to Eastern India by promoting the Green Revolution and other improved technologies to the eastern region of the country comprising Bihar, Chhattisgarh, Jharkhand, eastern Uttar Pradesh, West Bengal, and Odisha. The government is promoting a “System of Rice Intensification” technology in some rice growing states, which requires less water and chemical fertilizer but is highly labor intensive. The eastern states have realized significant productivity gains due to the various government programs supporting Indian rice production in the last few years.

Many agricultural experts have expressed concerns that the current rice production techniques impose serious environmental burdens and cannot sustain projected food demand after 2020. Surplus rice growing states like Punjab, Haryana, Uttar Pradesh, and Andhra Pradesh follow intensive rice-wheat or rice-rice cropping systems, and are facing severe environmental issues, including declining water tables, deteriorating soil health and emergence of resistant disease/pests in the growing areas. Indian rice cultivation also faces the challenge of climate change as a significant share of the rice crop is produced in coastal regions, which are susceptible to a rise in the sea level. Climate change issues like glacier melting and aberrations in the monsoon rain patterns may also potentially affect the rice crop. However, a significant cropping shift out of rice is not imminent in the near future due to the government’s continued emphasis on supporting rice-wheat production through minimum support price (MSP) procurement and a lack of more profitable crop rotation alternatives.

India’s long-grain Basmati rice production has been growing strongly after the introduction of the PUSA 1121 variety, an evolved high-yielding variety. Indian Basmati rice is traditionally grown in Punjab, Haryana and western Uttar Pradesh. Market reports suggest that cultivation of PUSA 1121 has spread to other parts of Uttar Pradesh and Madhya Pradesh. Basmati rice production in MY 2013/14 is estimated at 7.5 MMT from 1.8 million hectares compared to record production of 7.8 MMT from 1.9 million hectares in MY 2011/12. Basmati growers have realized good prices during the current season

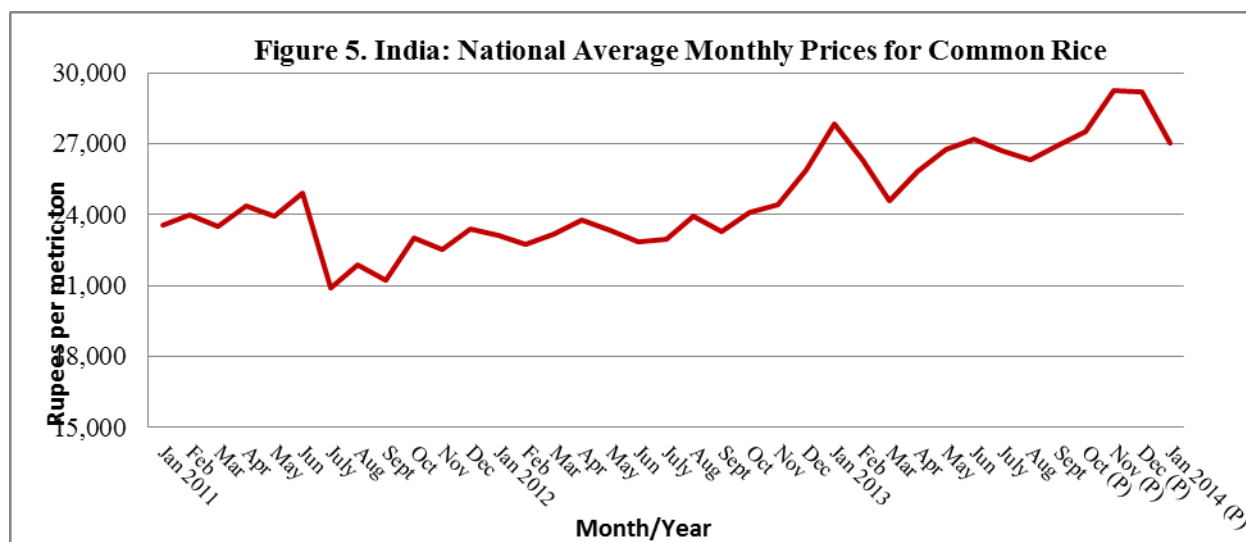
on strong export demand. Consequently, Basmati production in MY 2014/15 is forecast to increase to 8.5 MMT from 2.0 million hectares.

There are about 45-50 varieties of hybrid rice, most developed by private seed companies, of which about 25 are popular in the market. The National Food Security Mission set a target to plant three million hectares to hybrid rice by 2011-12. Despite sustained government efforts, area under hybrid rice is estimated not to have gained in the recent years, and was estimated at 1.8 million hectares in 2013/14, unchanged from last year. Most of the hybrid rice is cultivated in eastern India - eastern Uttar Pradesh, Bihar, Jharkhand, and Chhattisgarh. Growth of area under hybrid rice is severely hampered by (i) the inability of the existing hybrids to cater to the vast diversity in consumer preference for rice, (ii) low incremental yields, and (iii) poor milling quality over traditional varieties. Nevertheless, several private seed companies and public sector institutions are developing improved hybrid rice varieties targeting quality and yield enhancement traits, which should accelerate hybrid rice adoption by Indian farmers.

Efforts are also underway, mostly in the private sector, to develop transgenic rice varieties to incorporate resistance to various pests, diseases and abiotic stresses. However, approvals and commercialization of transgenic rice are still years away.

Consumption:

Rice is the major staple food for a majority of Indians (about 70 per cent of the population) across the country. Rice consumption in MY 2014/15 is forecast to increase by three percent to 98 million tons on expected sufficient domestic supplies and higher sales of government rice through the PDS as various states implement the new NFSA. Rice consumption in MY 2013/14 is estimated at 95.0 MMT compared to 93.5 MMT in MY 2012/13, a modest increase of 1.5 percent, almost equal to the population growth rate (1.4 percent per annum). Strong domestic prices have restrained growth in domestic consumption in the last two years.



Source: Agmarket News (<http://agmarkweb.dacnet.ic.in>), Ministry of Agriculture, GOI.

Domestic rice prices have shown a strong upward trend since the beginning of MY 2012/13 (see Table 8), fueled by significant hikes in the MSP for paddy rice (Table 6) and relatively tight domestic supplies (strong government procurement and exports). Domestic prices have started weakening since December 2013 on faltering exports.

More than 4,000 varieties of rice are grown in India to meet the varied consumer preferences. For government procurement purposes, rice is classified into two categories - Common (length to breadth ratio less than 2.5) and Grade A (length to breadth ratio more than 2.5). In the past, most rice under the government procurement program came through a mandatory levy on local millers. Depending on the state, local rice millers must sell to the government a fixed portion of their milled rice (ranging from 75 percent in Punjab and Haryana to 50 percent in Andhra Pradesh, and even lower in marginal surplus states) at pre-established rates, called the “levy price,” which are linked to the MSP of paddy rice plus milling costs. With the government’s raising the MSP significantly in recent years, local millers have reduced their purchases of paddy rice for milling. Thus, the government has been procuring larger quantities of paddy rice bought at the support price, which is subsequently custom-milled for the government by private millers at government expense for storage and distribution through PDS.

Table 6. India: Government’s Rice Procurement and PDS Operation

Marketing Year	Production	GOI Procurement ¹	MSP for Paddy (Unmilled Rice Common variety)	GOI Economic Cost	Offtake from GOI Stocks	PDS Issue Price		
						INR. per metric ton		
	Million Metric Tons	Million Metric Tons	INR per metric ton	INR Per metric ton	Million Metric Tons	APL	BPL	AAY
2005/06	91.79	27.58 (30.0)	5,700	13,912	n/a	7,950	5,650	2,000
2006/07	93.35	25.11 (26.9)	6,200	15,499	n/a	7,950	4,150	2,000
2007/08	96.69	28.74 (29.7)	7,450	17,407	n/a	7,950	4,150	2,000
2008/09	99.18	34.10 (34.4)	9,000	18,201	25.69	7,950	4,150	2,000
2009/10	89.09	32.03 (36.0)	10,000	19,831	28.35	7,950	4,150	2,000

2010/11	95.98	34.20 (35.6)	10,000	21,229	31.97	7,950	4,150	2,000
2011/12	105.30	35.06 (33.3)	10,800	23,049	31.44	7,950	4,150	2,000
2012/13	104.40	34.02 (32.6)	12,500	26,485	31.37	7,950	4,150	2,000
2013/14 ²	103.00	31.00 (30.1)	13,100	29,180	n/a	7,950	4,150	2,000
2014/15 ²	104.00	n/a	n/a	n/a	n/a	7,950	4,150	2,000

Source: Ministry of Agriculture and Food Corporation of India, GOI

Notes: Exchange rate INR 62.1 = US\$ 1 on February 8, 2014

¹ - Figure in parentheses is GOI procurement as percentage of total production

² - FAS/New Delhi estimate

PDS - Public Distribution System; APL - Above Poverty Line; BPL - Below Poverty Line; and AAY -*Antyodaya Anna Yojana* (Poorest of the Poor)

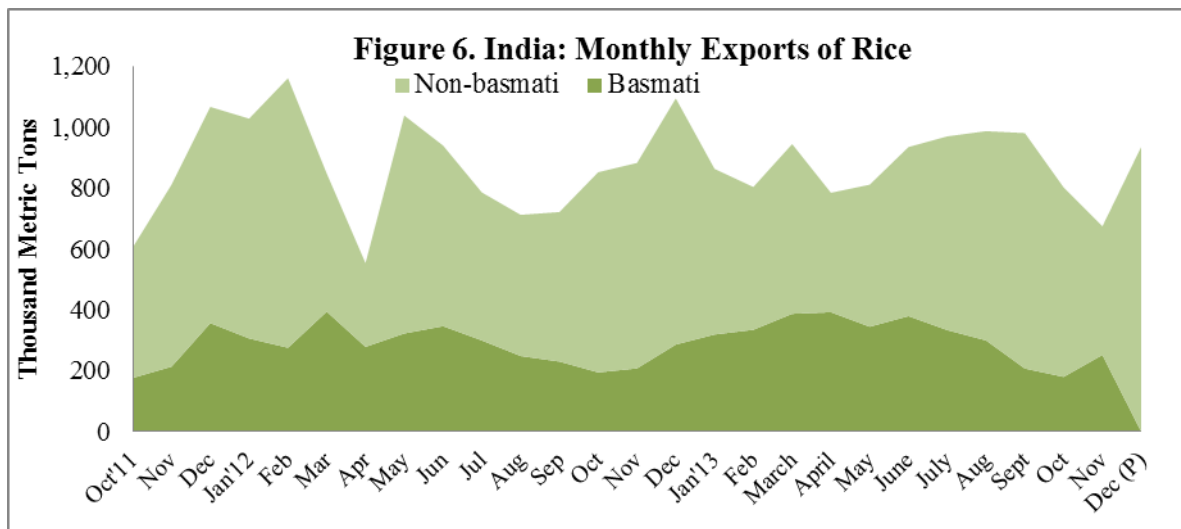
The government raised the MSP for paddy rice by nearly 5 percent for the MY 2013/14, and has set a rice procurement target of 36 MMT against last year's procurement of 34.0 MMT. Government rice procurement as of February 7, 2014, was estimated at 21.9 MMT compared to 23.8 MMT last year during the corresponding period. However, recent weakening of open market price of rice may support government rice procurement in coming months. Consequently, total GOI rice procurement in MY 2011/12 is expected to reach 31.0 million tons, much lower than the government target. As in the case of wheat, there has been no increase in the retail price of rice distributed through the PDS since July 1, 2002, while the MSP has more than doubled over the last decade, contributing to the GOI's growing food subsidy budget.

The livestock feed industry uses deoiled rice bran, rice waste from the milling industries, and small quantities of broken/damaged rice in the poultry and livestock feed sectors. However, there are no official or industry estimates available of feed consumption.

Trade:

India's rice exports for MY 2014/15 are forecast lower at 8.0 MMT (split equally between Basmati and non-Basmati) on expected weak international prices and expected lower import demand from Iran. An expected increase in the MSP for the upcoming season will sustain domestic prices and affect MY 2013/14 export prospects. However, a depreciation in the value of the Indian rupee or an increase in global prices could raise the exports higher than the current forecast.

Since CY 2012, India has emerged as the world's leading exporter of rice. Preliminary CY 2013 export figures from official and private sources indicate export sales totaling 10.5 MMT. Major export destinations were Iran, Saudi Arabia, Senegal, South Africa, U.A.E, Cameroon and other African countries. Iran emerged as a major buyer of Indian rice (mostly long grain PUSA 1121 variety) under the India-Iran rupee escrow mechanism against the oil import bill. Trade sources report that exports of long grain Basmati rice to Iran have slowed since October 2013 following the withdrawal of Iran sanctions by the United States and five other nations.



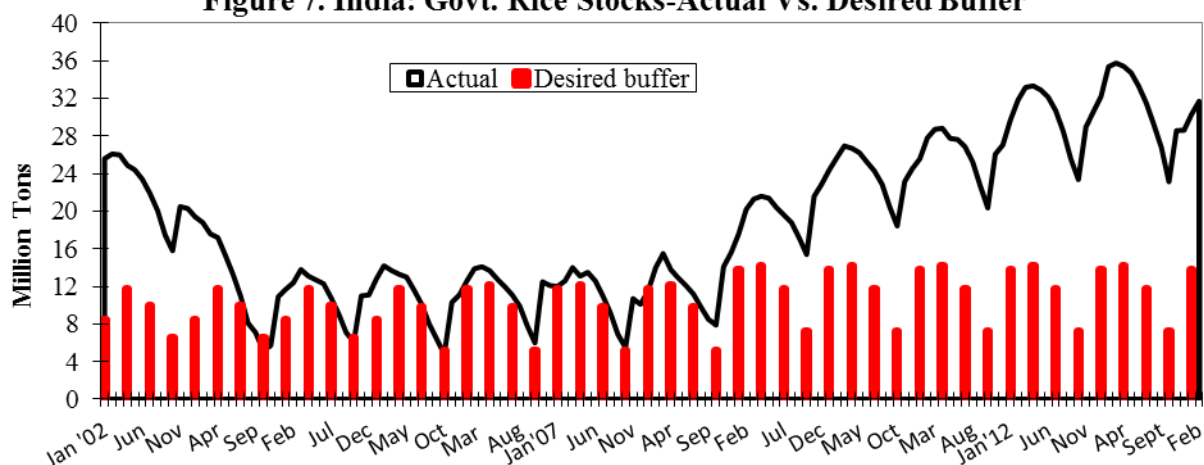
Source: Monthly exports through November 2013 from DGCIS, GOI; December 2013 derived from rice shipping data compiled by a private source, which does not break out Basmati and non-Basmati

Based on preliminary official trade data and shipping data compiled by a private source, India's MY 2012/13 rice exports for the first three months are estimated at 2.4 MMT compared to 2.8 MMT last year during the same period. Although official trade data are not available, market sources report that exports have recovered since December 2013 as domestic prices eased and stronger export demand. Post continues to estimate MY 2013/14 exports at 10.0 MMT assuming no significant changes in the price parity of Indian rice in the international market. However, global prices and the value of Indian rupee will affect exports prospects in the coming months.

Stocks:

Due to the relatively weak rice procurement in the ongoing MY 2013/14, government-held rice stocks on February 1, 2014, declined to 31.7 MMT compared to 35.4 MMT at the same time last year. At the current pace of domestic sales and expecting higher *rabi* season procurement, government rice stocks on October 1, 2014 (MY 2010/11 ending stocks) are expected to decline to 20.0 MMT compared to 23.1 MMT on October 1, 2013, but still more than double the desired stocks of 14.2 million tons.

Figure 7. India: Govt. Rice Stocks-Actual Vs. Desired Buffer



Source: Food Corporation of India, GOI

There is no published information, official or industry, about privately held rice stocks. Expected weak export demand and domestic prices are likely to result in higher buildup of privately held MY 2013/14 ending stocks, estimated at 3.1 MMT compared to 2.0 MMT at the end of MY 2012/13. The rice PS&D table includes both government stocks and estimated privately held stocks.

Policy:

Production:

The government's production policy for rice is the same as for wheat. Additionally, the GOI, with the support of state governments, has undertaken various rice-specific development schemes like the Special Rice Development Program (SRDP) and Promotion of Hybrid Rice (price subsidies on seed).

Price/Market Support:

The government undertakes a domestic price support, procurement and distribution program for rice similar to that for wheat. The GOI has banned futures trading in rice since September 2007 on price inflation concerns as policy makers believe that futures trading may lead to speculation.

Trade:

On September 9, 2011, the government lifted the export ban on non-Basmati rice, which had been in effect since September 2007 (with *ad hoc* humanitarian exports exempted from time to time). Exports of Basmati rice continued without quantitative restriction throughout the period, subject to a minimum export price (MEP), which changed from time to time. On July 4, 2012, the government removed the MEP requirement on exports of Basmati rice.

In March 2008, the GOI removed the import duty on rice, although there has been no importation of rice since then.

Marketing:

Indian high-quality Basmati and select premium 'short grain' varieties compete against U.S. rice in several markets, particularly Middle East and European countries.

Production, Supply and Demand Data Statistics:

Table 7. India: Commodity, Rice, Milled, PSD

(Area in thousand hectares and quantity in thousand metric tons, Yield in MT/Hectare)

Rice, Milled India	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Oct 2012		Market Year Begin: Oct 2014		Market Year Begin: Oct 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	42,410	42,410	43,500	43,500		44,000
Beginning Stocks	25,100	25,100	25,100	25,100		23,100
Milled Production	104,400	104,400	103,000	103,000		104,000
Rough Production	156,616	156,616	154,515	154,515		156,016
Milling Rate (.9999)	6,666	6,666	6,666	6,666		6,666
MY Imports	0	0	0	0		0
TY Imports	0	0	0	0		0
TY Imp. from U.S.	0	0	0	0		0
Total Supply	129,500	129,500	128,100	128,100		127,100
MY Exports	10,900	10,900	10,000	10,000		8,000
TY Exports	10,500	10,500	10,000	10,000		8,000
Consumption and Residual	93,500	93,500	95,000	95,000		98,000
Ending Stocks	25,100	25,100	23,100	23,100		21,100
Total Distribution	129,500	129,500	128,100	128,100		127,100
Yield (Rough)	4.	3.6929	4.	3.5521		3.5458

Table 8. India: Commodity, Rice, Milled, Prices Table

Prices In	Rupees	per uom	metric ton	
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Year	2011	2012	2013	% Change
Jan	23,578	23,105	27,828	20.4
Feb	23,998	22,764	26,300	15.5
Mar	23,507	23,193	24,577	6.0
Apr	24,370	23,750	25,825	8.7
May	23,935	23,324	26,777	14.8
Jun	24,936	22,827	27,190	19.1
Jul	20,915	22,940	26,682	16.3
Aug	21,872	23,918	26,295	9.9
Sep	21,205	23,305	26,905	15.4
Oct	22,999	24,079	27,501	14.2
Nov	22,548	24,406	29,241	19.8
Dec	23,386	25,876	29,215	12.9
Exchange Rate	62.10	Local Currency/US\$		
Date of Quote	02/8/2014	MM/DD/YYYY		

National Average Monthly Wholesale Price of Common Rice

Source: Agmarket News (<http://agmarkweb.dacnet.ic.in>), Ministry of Agriculture, GOI.

Table 9. India: Commodity, Rice, Milled, Export Trade Matrix

Time Period	Jan-Dec	Units	Metric Tons
Exports for	CY 2012		CY 2013 ¹
U.S.	119,795	U.S.	119,123
Others		Others	
Nigeria	1,171,694	Iran	1,504,496
Iran	874,538	Saudi Arabia	813,663
Senegal	865,450	Senegal	676,198
Saudi Arabia	861,210	South Africa	439,480
Cote d Ivoire	683,247	U.A.E	346,115
U.A.E.	593,754	Cameroon	288,744
Benin	470,220	Liberia	283,162
South Africa	385,774	Cote D Ivoire	278,335
Indonesia	345,885	Yemen	195,459
Nepal	337,308	Kuwait	169,734
Iraq	264,927	Bangladesh	167,191
Total for Others	6,854,007	Total for Others	5,162,577
Others Not Listed	3,576,567	Others	4,279,907
Grand Total	10,550,369	Grand Total	9,561,607

Note: ¹ Provisional official data for the period January thru November 2013.

Source: Global Trade Atlas & Directorate General of Commercial Intelligence, GOI.

Commodities:

Barley
Corn
Millet
Sorghum

Author Defined:

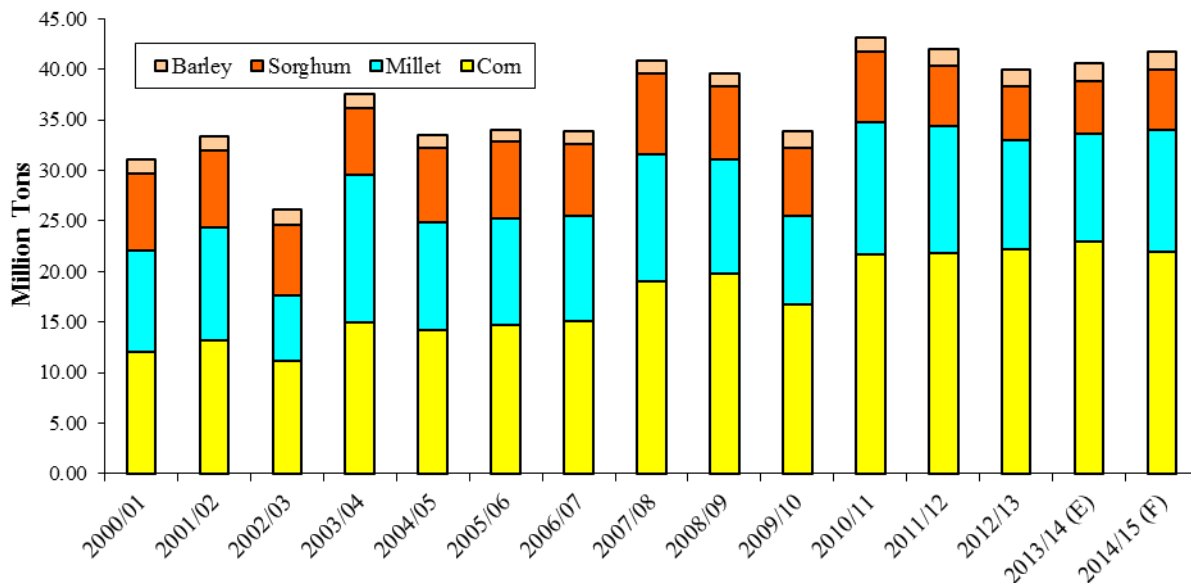
COARSE GRAINS

Production:

Assuming normal 2014 monsoon and weather conditions, India's MY 2014/15 coarse grain production is forecast higher at 41.7 MMT, compared to MY 2013/14 production of 40.5 MMT, on higher planting. Relatively low market prices during MY 2013/14 will affect planting of corn in the upcoming season while planting of sorghum and millet should recoup some area that had shifted to competing crops last year. The MY 2014/15 production forecast includes 22 MMT of corn, 12 MMT of millet, 6 MMT of sorghum and 1.7 MMT of barley. Most coarse grains are cultivated in the *kharif* season (more than three fourths), with some corn, sorghum and barley taken as *rabi* season crop. With only about 15 percent of the coarse area under irrigation, performance of 2014 monsoon rains is critical for planting and productivity of the *kharif* coarse grain crops. While monsoon rains also affect planting prospects of the *rabi* crop, winter rains are essential for higher yields and prolonged frosts during the critical crop growth stage (December-January) could temper yield prospects.

The timely and well distributed 2013 monsoon and consequent excellent soil moisture conditions encouraged farmers to shift area from 'low value' coarse grains like sorghum and millet to other competing crops (corn, pulses, oilseeds, and to some extent wheat). The Ministry of Agriculture's provisional planting estimates show lower planting of millet and sorghum in MY 2013/14. However, favorable planting conditions coupled with relatively firm domestic prices in MY 2012/13 resulted in a 7-percent increase in planting of MY 2013/14 corn. Consequently, Post's total coarse grain production estimate for MY 2013/14 is estimated at 40.54 million tons, which includes a record 23.0 MMT of corn, 10.5 MMT of millet, 5.2 MMT of sorghum, and 1.7 MMT of barley.

Figure 8. India: Coarse Grain Production Trend



Source: Ministry of Agriculture, GOI; and FAS/New Delhi estimates for MY 2013/14 and 2014/15.

Corn production in India has shown a steady upward trend in recent years on higher planting and improving productivity due to wider adoption of hybrid seeds. Market sources report planting of hybrid corn at 60 percent, which is expected to grow further in the near future as farmers shift area out of traditional cultivars to higher-yielding hybrid varieties. Corn production has also been supported by growing demand from the local poultry, animal feed and starch industry and exports. However, largely rain-fed millet and sorghum production fluctuates year to year depending on the performance of the monsoon. In the absence of any major productivity enhancing technology breakthrough and demand from commercial/industrial sector in decades, these crops are facing increasing competition from corn, cotton, soybeans, and pulses in major states, especially with the expansion in irrigation.

Production of barley, a relatively small winter crop in north India, has also been relatively steady around 1.7 MMT in recent years on continued demand from the malting and brewing industry, which has been growing at 10-12 percent per annum in the last decade. Traditionally barley production in India consists of feed-type, six-row varieties, unsuitable for malting. In the last few years a few good malting-type barley varieties have been developed under public-private breeding programs, which are gradually replacing feed barley. Trade sources report that some malting and brewing companies have started contract farming of malting barley in Rajasthan, Punjab and Haryana.

Several Indian seed companies and public sector research institutions are working on the development of various genetically engineered (GE) crops, including corn and sorghum. While public opinion of GE crops has been generally ambivalent, the regulatory policy environment has been regressive in the last few years. Several anti-biotech environmental and consumer groups have been running aggressive and sustained campaigns against GE crops and products in India. See GAIN report [IN3083](#) for further information on agricultural biotechnology in India.

Consumption:

Coarse grain consumption in MY 2014/15 is forecast to increase to 38.6 MMT compared to 37.0 MMT in MY 2013/14 on expected higher domestic production and strong demand from animal feed and industrial users on expected low prices. With corn prices declining since the beginning of MY 2013/14, there has been a strong resurgence in demand for corn and other coarse grains by poultry and animal feed sector and industrial users (starch, ethanol). Given sufficient domestic supplies, demand from these sectors is likely to remain strong in MY 2014/15 assuming no major change in the current price and economic growth environment.

Food use accounts for a major share of consumption of sorghum, millet, and barley, while corn is increasingly being used for feed and industrial use, particularly poultry feed and starch. Some new barley varieties are being used for brewing (around 600,000 metric tons).

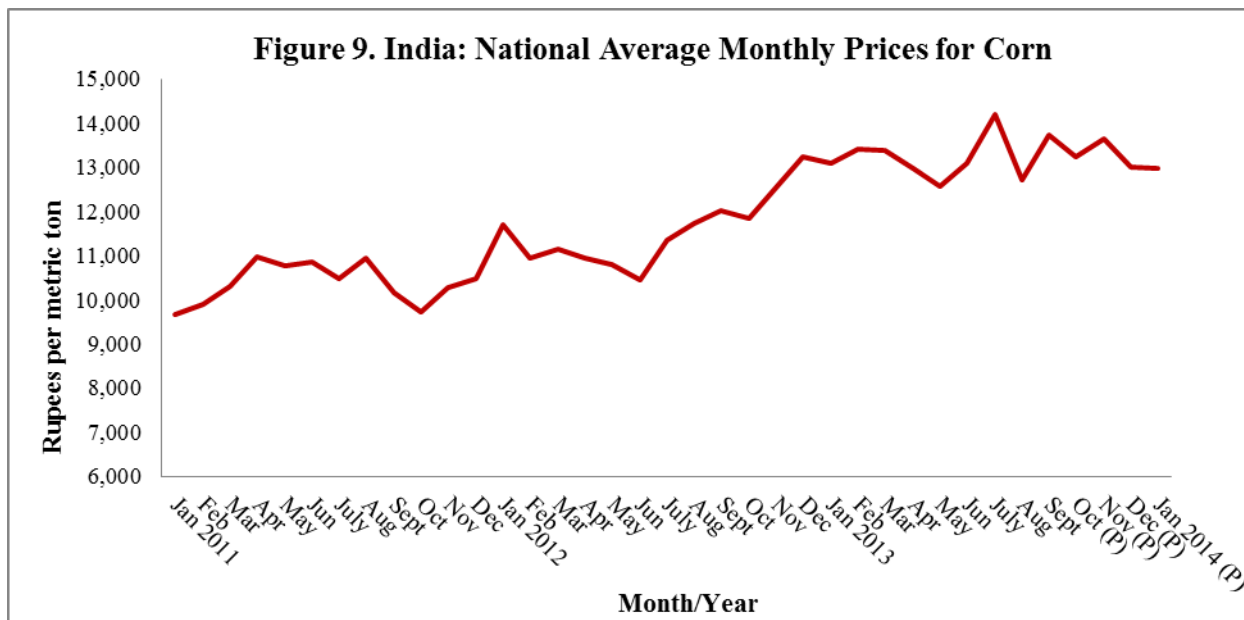
Traditionally, coarse cereals were the staple diet of Indians. Since early 1970s, coarse cereals have been increasingly replaced by rice and wheat due to genetic improvement (Green Revolution) and the government's focus on these two crops for food security. Economic growth has also led to a steady shift away from coarse grains as they are perceived as inferior to rice and wheat by consumers with rising income levels. Nevertheless, coarse grains remain the staple diet for a large section of the subsistence farmers and rural poor in growing areas. Consumption of coarse grains is also improving among particularly "health conscious" and diabetes-prone Indians for their richer nutrient and fiber contents.

Growing demand from the animal feed (poultry) and industrial starch sectors continues to fuel consumption of corn. After two consecutive slowdown years, the poultry industry has bounced back in MY 2013/14 with improved profit margins due to relatively low corn prices and stable poultry product prices. Assuming stable price parity, corn demand from the poultry industry is expected to grow by 12 percent in MY 2013/14 and 8 percent in MY 2014/15. Corn demand for starch, mainly used by the textile industry, has also recovered strongly on improved demand resulting from a rebound of the textile industry following MY2012/13's slowdown. In MY 2014/15, more than half of corn consumption will go for feed use (10.8 MMT), primarily for poultry feed, with about 1.8 MMT consumed by the starch industry, about 1.2 MMT for alcohol and other industrial use, and the balance for food.

Sorghum and millet are largely used for food while inferior quality products (rain damaged) go for cattle feed. The high tannin content of Indian sorghum restricts its use in poultry rations, but its use in the production of spirits, industrial alcohol, and starch is reportedly increasing. India's domestic ethanol program is based on molasses, a sugar industry byproduct, as feed stock, and does not allow use of cereal grains for producing ethanol for fuel. Consequently, the domestic ethanol program does not affect the domestic market for food, feed and trade in cereal grains and their byproducts.

Prices

Despite strong domestic demand, corn prices have declined in MY 2012/13 on weak international prices and strong domestic supplies.



Source: Agmarket News (<http://agmarkweb.dacnet.ic.in>), Ministry of Agriculture, GOI

Corn prices across the major markets in the first week of February 2013 ranged from INR 11,800 (\$190) to INR 13,250 (\$213) per metric ton, about 5 percent lower than previous-year prices during the corresponding period. Prices of other coarse grains have been higher on lower production. National average sorghum prices in the first week of February 2013 were estimated at INR 18,300 (\$295) per metric ton, about 7 percent higher than last year, and pearl millet prices at INR 15,600 (\$251) per metric ton, about 24 percent over last year.

Trade:

India's corn exports in MY 2014/15 are forecast lower at 2.5 million tons on expected strong domestic demand. Typically Indian corn is discounted for quality vis-à-vis other origins and export volumes largely depend on the price competitiveness of Indian corn in the global market. Consequently, any significant improvement in international corn prices or weakening of the value of Indian rupee may improve the export prospects. India exports most of its corn to southeast Asian countries like Vietnam, Indonesia, Malaysia, Taiwan, and neighboring Bangladesh. Occasionally, India exports small quantities of sorghum and barley, largely to neighboring countries and the Middle East. Relatively tight domestic supplies are likely to limit exports of sorghum and barley in MY 2014/15 to small quantities.

After two consecutive years of record corn exports, MY 2012/13 exports are estimated to decline to 3 MMT on relatively weak export demand and strong domestic off take. Market sources report that Indian corn is barely competitive in the global market due to weak international prices. Provisional export figures compiled by a private source for the first two months of MY 2013/14 (November-December 2013) estimate corn shipments at about 440,000 metric tons compared to 780,000 metric tons during the corresponding period last year. Market sources report that export prospects are likely to improve after the harvest of *rabi* corn in March, bringing down domestic prices. India's ability to ship in relatively small lots is also an important selling factor in neighboring and south Asian markets.

Assuming stable global corn prices for the remaining part of the season, MY 2013/14 exports are estimated to reach 3.0 million tons, more than 36 percent lower than last year's record exports.

Policy

Production:

The GOI production policy and programs for coarse grains are nominally the same as for wheat and rice, but with significantly lower attention and budgetary support. The government's minimum support price (MSP) procurement program and food distribution program through public distribution system (PDS) for coarse grains are very limited and less effective than those for rice and wheat. During the current season, the government has had to intermittently undertake MSP operations in the states of Andhra Pradesh, Karnataka and Maharashtra, procuring about 500,000 metric tons of corn by end of January 2014.

Unlike wheat and rice, the government does not typically maintain a buffer stock of coarse grains to keep prices in check. The GOI does not allow use of food grains, including coarse cereals, for ethanol for fuel. Efforts to produce ethanol from other feed stocks like sweet sorghum stover and crop waste are still in an experimental stage.

The current biotech regulatory policy environment continues to hamper approval of genetically engineered corn, even though some of the events are at an advanced stage of regulatory approval. Most biotech events in other coarse grains are still at the developmental stage, and are yet to be submitted for regulatory approval.

Trade:

Currently, GOI imposes no restrictions on exports of corn, millet, sorghum, or barley, and imports are allowed subject to the effective import duty and phytosanitary conditions specified in the Plant Quarantine (Regulation of Imports into India) Order 2003. The basic import duty on sorghum and millet is 50 percent, and zero for barley. Imports of corn outside the TRQ are subject to a 50-percent import duty.

India's existing trade policy allows imports of corn under a tariff rate quota (TRQ) of 500,000 metric tons at zero duty. To import corn under TRQ at zero duty, the importer must obtain a Tariff Rate Quota Allocation Certificate issued by the Directorate General of Foreign Trade (DGFT). The Certificate is issued in accordance with the procedure as may be specified by the EXIM Facilitation Committee from time to time through a public notice. However, TRQ imports are managed only through specified state trading enterprises and cooperatives, and thus are not accessible to private trade. The TRQ was not utilized in 2012/13 and imports under TRQ are unlikely in the coming marketing year.

The GOI's phytosanitary requirement pertaining to the limitation on weed seeds, ergot and other SPS issues, and absence of approval of biotechnology events have effectively banned U.S. coarse grain exports to India, including corn and barley. Imports of any biotech product, including genetically modified corn and products, are subject to approval by India's biotech regulatory agency, the Genetic

Engineering Appraisal Committee (GEAC). The GEAC has approved no biotech coarse grains or byproducts for import.

Marketing

India currently does not import corn or other coarse grains. However, the growth of the poultry and starch industries may eventually create demand for imported corn in next five to ten years, while growth in the brewing industry may fuel demand for malting barley in near future.

Production, Supply, and Demand Data Statistics:

Table 10. India: Commodity, Corn, PSD

(Area in Thousand Hectares, Quantity in Thousand Metric Tons, Yield in MT/Hectare)

Corn India	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Nov 2012		Market Year Begin: Nov 2013		Market Year Bein: Nov 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	8,710	8,910	9,400	9,500		9,000
Beginning Stocks	570	570	619	619		1,529
Production	22,230	22,230	23,000	23,000		22,000
MY Imports	10	10	10	10		10
TY Imports	10	10	10	10		10
TY Imp. from U.S.	0	0	0	0		0
Total Supply	22,810	22,810	23,629	23,629		23,539
MY Exports	4,691	4,691	3,000	3,000		2,500
TY Exports	4,768	4,768	3,000	3,000		2,500
Feed and Residual	8,900	8,900	10,100	10,100		10,800
FSI Consumption	8,600	8,600	9,000	9,000		9,500
Total Consumption	17,500	17,500	19,100	19,100		20,300
Ending Stocks	619	619	1,529	1,529		739
Total Distribution	22,810	22,810	23,629	23,629		23,539
Yield	3.	2.4949	2.	2.4211		2.4444

Table 11. India: Commodity, Corn, Prices Table

Prices In	Rupees	per uom	Metric ton	
Year	2011	2012	2013	%Change
Jan	9,676	11,696	13,084	11.9
Feb	9,902	10,952	13,405	22.4
Mar	10,308	11,137	13,368	20.0
Apr	10,976	10,928	12,977	18.8
May	10,755	10,794	12,555	16.3
Jun	10,856	10,439	13,093	25.4
Jul	10,476	11,337	14,181	25.1
Aug	10,951	11,728	12,714	8.4
Sep	10,155	12,025	13,716	14.1
Oct	9,729	11,826	13,237	11.9
Nov	10,277	12,537	13,634	8.7
Dec	10,464	13,243	13,005	-1.8
Exchange Rate	62.1	Local Currency/US\$		
Date of Quote	02/08/14	MM/DD/YYYY		

National Average Monthly Wholesale Prices of Corn

Source: Agmarket News (<http://agmarkweb.dacnet.ic.in>), Ministry of Agriculture, GOI.

Table 12. India: Commodity, Sorghum, PSD

(Area in Thousand Hectares, Quantity in Thousand Metric Tons, Yield in MT/Hectare)

Sorghum India	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Nov 2012		Market Year Begin: Nov 2013		Market Year Begin: Nov 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	6,300	6,300	6,000	5,900		6,200
Beginning Stocks	223	223	145	145		125
Production	5,300	5,300	5,500	5,200		6,000
MY Imports	0	0	0	0		0
TY Imports	0	0	0	0		0
TY Imp. from U.S.	0	0	0	0		0
Total Supply	5,523	5,523	5,645	5,345		6,125
MY Exports	228	228	50	20		50
TY Exports	231	231	50	20		50
Feed and Residual	750	750	750	700		800
FSI Consumption	4,400	4,400	4,700	4,500		5,000
Total Consumption	5,150	5,150	5,450	5,200		5,800
Ending Stocks	145	145	145	125		275
Total Distribution	5,523	5,523	5,645	5,345		6,125
Yield	1.	0.8413	1.	0.8814		0.9677

Table 13. India: Commodity, Millet, PSD

(Area in Thousand Hectares, Quantity in Thousand Metric Tons, Yield in MT/Hectare)

Millet India	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Nov 2012		Market Year Begin: Nov 2013		Market Year Begin: Nov 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	9,100	9,100	10,000	9,200		10,500
Beginning Stocks	790	790	450	450		350
Production	10,760	10,760	11,500	10,600		12,000
MY Imports	0	0	0	0		0
TY Imports	0	0	0	0		0
TY Imp. from U.S.	0	0	0	0		0
Total Supply	11,550	11,550	11,950	11,050		12,350
MY Exports	0	0	0	0		0
TY Exports	0	0	0	0		0
Feed and Residual	1,400	1,400	1,500	1,200		1,500
FSI Consumption	9,700	9,700	10,000	9,500		10,000
Total Consumption	11,100	11,100	11,500	10,700		11,500
Ending Stocks	450	450	450	350		850
Total Distribution	11,550	11,550	11,950	11,050		12,350
Yield	1.	1.1824	1.	1.1522		1.1429

Table 14. India: Commodity, Barley, PSD

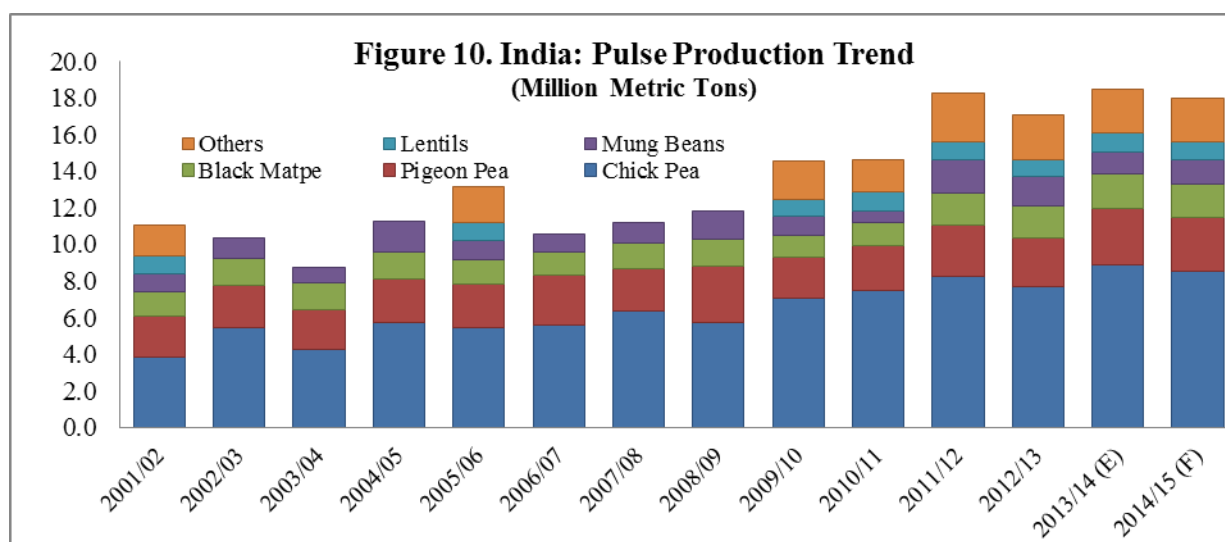
(Area in Thousand Hectares, Quantity in Thousand Metric Tons, Yield in MT/Hectare)

Barley India	2012/2013		2013/2014		2014/2015	
	Market Year Begin: Apr 2012		Market Year Begin: Apr 2013		Market Year Begin: Apr 2014	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	770	770	780	790		810
Beginning Stocks	242	242	110	110		200
Production	1,620	1,620	1,740	1,740		1,700
MY Imports	40	40	50	50		50
TY Imports	50	50	50	50		50
TY Imp. from U.S.	0	0	0	0		0
Total Supply	1,902	1,902	1,900	1,900		1,950
MY Exports	267	267	350	100		100
TY Exports	542	542	50	100		100
Feed and Residual	200	200	200	200		250
FSI Consumption	1,325	1,325	1,250	1,400		1,500
Total Consumption	1,525	1,525	1,450	1,600		1,750
Ending Stocks	110	110	100	200		100
Total Distribution	1,902	1,902	1,900	1,900		1,950
Yield	2.	2.1039	2.	2.2025		2.0988

PULSES

Production

India is the world's largest producer, consumer and importer of pulses. India's MY 2014/15 (April/March) pulse production is forecast at 18.0 MMT, marginally lower than MY 2013/14 record production of 18.5 MMT. Most states received relatively higher monsoon rains during September-October coinciding with the harvest of *kharif* pulses (mostly pigeon pea, mung beans, and black matpe). Consequently, production of *kharif* pulses is estimated lower at 5.8 MMT compared to last year's 5.9 MMT on harvest losses due to untimely rains. According to the preliminary planting figures from the Ministry of Agriculture, area under *rabi* pulses (mainly chickpeas, lentils, and peas) through January 2014 is estimated higher at 15.6 million hectares compared to 14.9 million hectares last year. Soil moisture and weather conditions have been generally favorable in most growing areas for planting of pulses. However, market sources reports shift of traditional chickpea growing areas with some irrigation facilities to wheat due to relatively weak chickpea prices. Nevertheless, good monsoon rains during September-October has supported overall planting of *rabi* pulses, including chickpeas, as additional traditionally fallow land has been brought under cultivation on sufficient soil moisture at the time of planting. The area shift in chickpea acreage is likely to result in overall lower yield than last year's record. Consequently, *rabi* pulse production is estimated lower at 12.2 MMT compared to last year's record 12.5 MMT.



Source: Ministry of Agriculture, GOI; and FAS/New Delhi estimates for MY 2014/15

Pulses are grown both in the *kharif* and *rabi* seasons with more than two thirds produced in the latter. Most pulses are grown under rainfed conditions (85 percent) using subsistence agricultural practices. Consequently, pulse production largely depends on the monsoon, winter rains and temperature conditions. Limited varietal improvements, low resilience to soil moisture stress, poor pest resistance, and low input use have contributed to low yields. Madhya Pradesh, Uttar Pradesh, Maharashtra, Andhra Pradesh, and Karnataka together account for about 70 percent of the country's pulse production, with Madhya Pradesh contributing more than 25 percent.

In the last few years, the government has raised the minimum support prices (MSPs) for pulses relatively higher than for rice and wheat (see Table 18) to encourage a production shift away from rice and wheat. The government also has various other programs to support pulse development (see policy section). Despite the government's recent measures, pulse cultivation in India has been unable to compete with less risky crops like wheat and rice, traditionally the GOI's focus crop for food security. Pulse production has not been attractive to farmers due to a largely ineffective procurement policy and historically low government support of improved production technology *vis-à-vis* wheat and rice.

Consumption

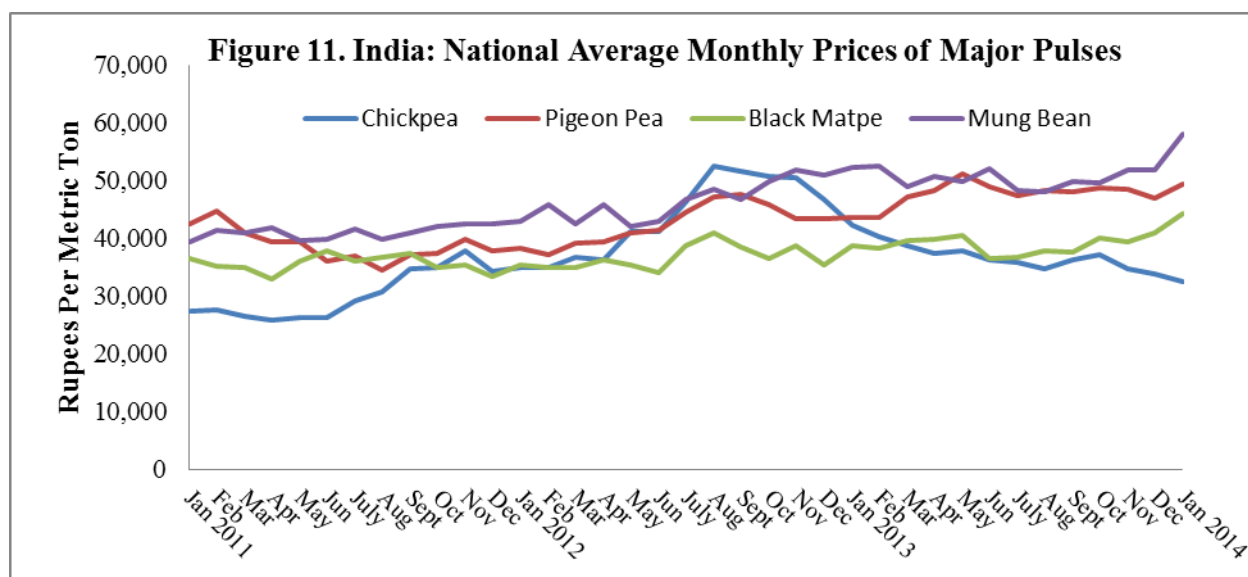
Economic growth has continued to fuel increased pulse consumption in recent years. Consumption in MY 2014/15 is forecast higher at 22.5 MMT compared to 21.5 MMT last year on continued strong domestic demand for the rising Indian population.

Pulses are an integral part of the traditionally vegetarian Indian diet as one of two major protein source along with dairy products. Pulses are one of the cheapest protein sources in an average Indian's diet. One kg of any pulse costing \$1 to \$2 can be the major protein source for 3-4 meals for a family of five. Due to increasing demand and purchasing power of Indian consumers, market prices of pulses in the last few years have been relatively firm despite back to back bumper domestic production and continued strong imports.

Stagnating domestic production over the last two decades has forced India to augment its domestic consumption needs from the global market. However, the global availability of pulses traditionally preferred by the Indian consumers, such as pigeon peas, mung beans, and black matpe, are limited to a few neighboring suppliers like Myanmar and African countries. Higher prices of traditional pulses have forced Indian consumers to shift to non-traditional imported pulses like yellow peas (Canada, Australia, USA) and dung peas (Australia) as a low-cost substitute. In the past, government agencies have imported large quantities of yellow peas to be made available through various government distribution networks at subsidized prices. However, market sources report that imports of yellow peas by government agencies have discontinued since MY 2012/13.

Prices

Reports of lower *kharif* pulse harvest resulted in pulse prices firming up since September. However, prices of chickpeas have continued to decline on record domestic production and expectation of another bumper *rabi* harvest in MY 2014/15. Future pulse prices will largely depend on the arrival of the *rabi* pulse harvest and value of rupee *vis-à-vis* international currencies (US\$).



Source: Agmarket News (<http://agmarkweb.dacnet.ic.in>), Ministry of Agriculture, GOI.

Trade

Continued strong domestic demand fueled India's pulse imports in MY 2012/13 to a record 4.1 MMT compared to 3.6 MMT in the previous year and the previous record of 3.8 MMT in MY 2009/10. Imports in MY 2013/14 are estimated lower at 3.2 MMT on improved domestic supplies (record production) and higher cost of imports (depreciation in the value of Indian rupee). Imports are forecast to recover in MY 2014/15 to 3.6 MMT on continued strong domestic demand provided the value of the Indian rupee and international prices remain stable.

The value of the Indian rupee declined sharply from May 2013 (INR 52-53/USD) to a historic low in August 2013 (INR 67-68/USD). Since then the Indian rupee has recovered and stabilized at around INR 62-63/USD, which is about 20 percent lower than the average value of the Indian rupee in MY 2012/13 (INR 53/USD). Preliminary official trade data for the first eight months of MY 2013/14 estimate pulse imports at 1.99 MMT compared to 2.47 MMT during the same period last year.

Table 15. India: Imports of Pulses by Type and Major Suppliers (Quantity in Thousand Metric

Tons)

Type	2010/11	2011/12	2012/13	Major Suppliers
Dry Peas	1,504.6	2,039.7	1,370.3	Canada, Russia, USA, Australia, France, Ukraine
Pigeon Peas ¹	346.1	Na	Na	Myanmar, Tanzania, Mozambique, China, Malawi
Mung Beans	432.0	409.3	642.8	Myanmar, Australia, Uzbekistan, Tanzania, Kenya
Chickpeas	100.7	206.5	697.6	Australia, Russia, Tanzania, Myanmar, Mexico, USA
Lentils	161.2	117.9	506.3	Canada, Australia, USA, Myanmar, Turkey
Kidney Beans	105.6	63.3	147.0	China, Myanmar, Ethiopia, Kenya, Madagascar
Other Beans	73.0	131.1	187.4	Myanmar, Brazil, Madagascar, Tanzania, France
Other Dried Legumes	127.7	658.3	506.4	Myanmar, Tanzania, Malawi, Mozambique, Kenya
Total	2,851.0	3,626.1	4,057.9	

Source: Directorate General of Commercial Intelligence, GOI

¹ Breakout for imports of pigeon pea not available for MY 2012/13 and MY 2013/14, and is included in other dried legumes.

Yellow pea imports reached a record high of 2.04 MMT in MY 2011/12, largely driven by government imports. With the government imports declining sharply in last two years, yellow pea imports have moderated since MY 2012/13. While a breakout of MY 2013/14 pulse imports is not available, market sources report that yellow peas continue to account for a dominant share as they are relatively cheaper *vis-a-vis* other pulses. However, imports of chickpea are likely to decline sharply on weak domestic prices.

India imports dry green peas, yellow peas, lentils and garbanzo beans (chickpeas) from the United States, which are typically higher priced. India is the second largest export market for U.S. pulses after Mexico. Imports of pulses from the United States had grown strongly from 2005 to 2009, reaching a record level of 224,250 metric tons in CY 2009, declining to 84,143 metric tons in CY 2011, and subsequently recovering to 181,221 metric tons in CY 2013.

Policy

Production:

Traditionally, the GOI's food grain production programs have focused on rice and wheat, with limited investment in pulses. Stagnating domestic production, rising imports and escalating domestic prices have forced the government to assess strategies for enhancing domestic production of pulses. In 2010, the government launched the [Accelerated Pulse Development Program](#) as part of the [National Food Security Mission](#). Pulses were included in the government's National Food Security Mission. The government also launched under the National Agriculture Development Program ([Rashtriya Krishi](#)

[Vikas Yojna or RKVY](#)) a [focus program in targeted 60,000 villages in unirrigated areas for increasing pulse crop](#) productivity and strengthening market linkages.

Market Support/Intervention:

Over the last five years, the government raised the MSP of various pulse crops by 70 to 115 percent over MY 2008/09 levels to promote pulse cultivation over rice and wheat (see Table 18). The Indian government has also disallowed futures trading in pigeon pea and mung beans until further notice under the erroneous assumption that futures contract trading is responsible for the high prices of pulses. Several state governments periodically impose stocks limits on pulses held by the private trade in an effort to control prices.

The GOI has authorized government agencies/trading companies such as National Agriculture Marketing Federation (NAFED), State Trading Corporation (STC), Project and Equipment Corporation (PEC) Ltd., and Minerals and Metals Trading Corporation (MMTC) to import pulses for sale in the domestic market at subsidized prices. In October 2012, the government approved distribution of imported pulses through the PDS with a subsidy of INR 20 per kilogram (\$320 per ton) to the designated importing agencies. However, market sources report negligible imports under the program to date.

Trade:

In June 2006, the GOI exempted pulses from the applicable 10-percent import duty through March 31, 2009, to control prices in the domestic market. This exemption has been periodically extended and is currently applicable till March 31, 2014. At the same time, the GOI also imposed a ban on the export of pulses, with the exception of large chickpeas or garbanzos, called *Kabuli chana* in Hindi, which has been periodically extended and is currently applicable till March 31, 2014. The government is likely to extend the current export bans and import tariff at zero duty for another year, i.e., until March 31, 2015.

Effective January 1, 2004, pulse (including chickpeas, peas and lentils) imports from all origins to India were subject to fumigation by methyl bromide at the port of loading, apparently to protect domestic production from stem and bulb nematode, pea cyst nematode, and bruchids, per the Plant Quarantine Regulation of Import into India Order, 2003. As methyl bromide is being phased out due to environmental concerns in most countries, it is increasingly difficult and costly to fumigate pulses with methyl bromide at the port of origin in many countries. However, the GOI has allowed fumigation by methyl bromide at the port of arrival in India on an ad hoc basis, granting periodic extensions. The GOI has granted the methyl bromide fumigation on arrival arrangement for pulses coming from the United States up to March 31, 2014, which is likely to be extended further.

Marketing

Due to stagnant domestic production and limited scope for increasing area under pulses, India will continue to import pulses in coming years. However, India is a 'price buyer' of pulses with some resistance to the premium for higher U.S. quality products, especially when lower-cost pulses are available from other competitors. Key to improving the U.S. position in the Indian pulse market is expanding the supply of yellow peas and chickpeas at competitive prices. Most U.S. type beans (navy

beans, black beans, pintos, and lima beans) are relatively unknown in India, but can be introduced if price competitive.

The GOI is encouraging Indian companies to explore opportunities to produce pulses overseas, either through contract farming or by purchasing/leasing land in several African and South American countries. In the absence of any crop specific incentives by the government, the companies involved in overseas agriculture are likely to take planting and marketing decisions based on international market prices.

Statistical Tables

Table 16. India: Commodity, Pulses, PSD

(Area in Thousand Hectares, Quantity in Thousand Metric Tons, Yield in MT/Hectare)

Pulses India	2011/2012	2012/2013	2013/2014	2014/15
	Market Year Begin: Apr 2011	Market Year Begin: Apr 2012	Market Year Begin: Apr 2013	Market Year Begin: Apr 2013
	Post Estimate	Post Estimate	Post Estimate	Post Estimate
Area Harvested	26,280	25,665	25,200	26,350
Beginning Stocks	3,011	5,877	6,525	6,613
Production	18,240	17,090	18,450	18,000
MY Imports	3,626	4,058	3,200	3,600
Total Supply	24,877	27,025	28,175	28,213
MY Exports	0	0	0	0
Feed and Residual	0	0	0	0
FSI Consumption	19,000	20,500	21,500	22,500
Total Consumption	19,000	20,500	21,500	22,500
Ending Stocks	5,877	6,525	6,675	5,713
Total Distribution	24,877	27,025	28,175	28,213
Yield	0.6941	0.6659	0.7321	0.6831

Table 17. India: Production of Pulses by Type (Quantity in Thousand Metric Tons)

Pulse\Year	2001/02	2005/06	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Chick Pea	3.85	5.47	7.06	7.48	8.22	7.70	8.88	8.50
Pigeon Pea	2.25	2.35	2.27	2.46	2.86	2.65	3.07	3.00
Black Matpe	1.29	1.33	1.17	1.23	1.76	1.77	1.90	1.80
Mung Beans	1.03	1.06	1.04	0.69	1.80	1.63	1.20	1.30
Lentils	0.92	0.99	0.95	1.03	0.94	0.90	1.02	1.00
Others	1.73	1.93	2.08	1.77	2.66	2.44	2.38	2.40
Total	11.07	13.13	14.57	14.66	18.24	17.09	18.45	17.00

Source: Ministry of Agriculture, GOI; and FAS/New Delhi estimates for MY 2014/15

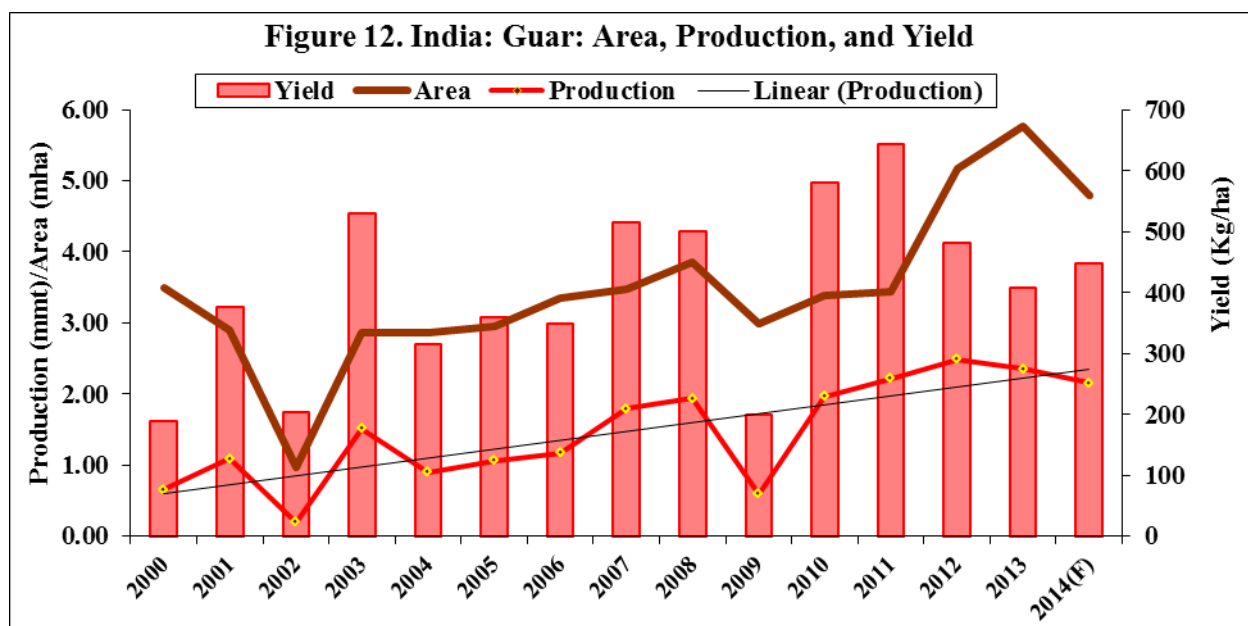
Table 18. India: Minimum Support Prices for Major Food Grains (INR/Metric ton)

Crop	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Rice, paddy (common)	9,000	10,000	10,000	10,800	12,500	13,100
Rice, paddy (Grade A)	9,300	10,300	10,300	11,100	12,800	13,450
Wheat	10,000	10,800	11,000	11,200	12,850	13,500
Corn	8,400	8,400	8,800	9,800	11,750	13,100
Sorghum (hybrid)	8,400	8,400	8,800	9,800	15,000	15,000
Pearl millet	8,400	8,400	8,800	9,800	11,750	13,100
Spiked millet	9,150	9,150	9,650	10,500	15,000	15,000
Barley	6,500	6,800	7,500	7,800	9,800	9,800
Chickpeas	16,000	17,300	17,600	21,000	28,000	30,000
Lentils	17,000	18,700	18,700	22,500	28,000	29,000
Pigeon peas	20,000	23,000	30,000	32,000	38,500	43,000
Mung beans	25,200	27,600	31,700	35,000	44,000	45,000
Black matpe	25,200	25,200	29,000	33,000	43,000	43,000
Exchange Rate – INR /USD	45.99	47.42	45.58	51.00	53.0	62.0

Source: Department of Agriculture and Cooperation, Ministry of Agriculture, GOI

GUAR BEAN

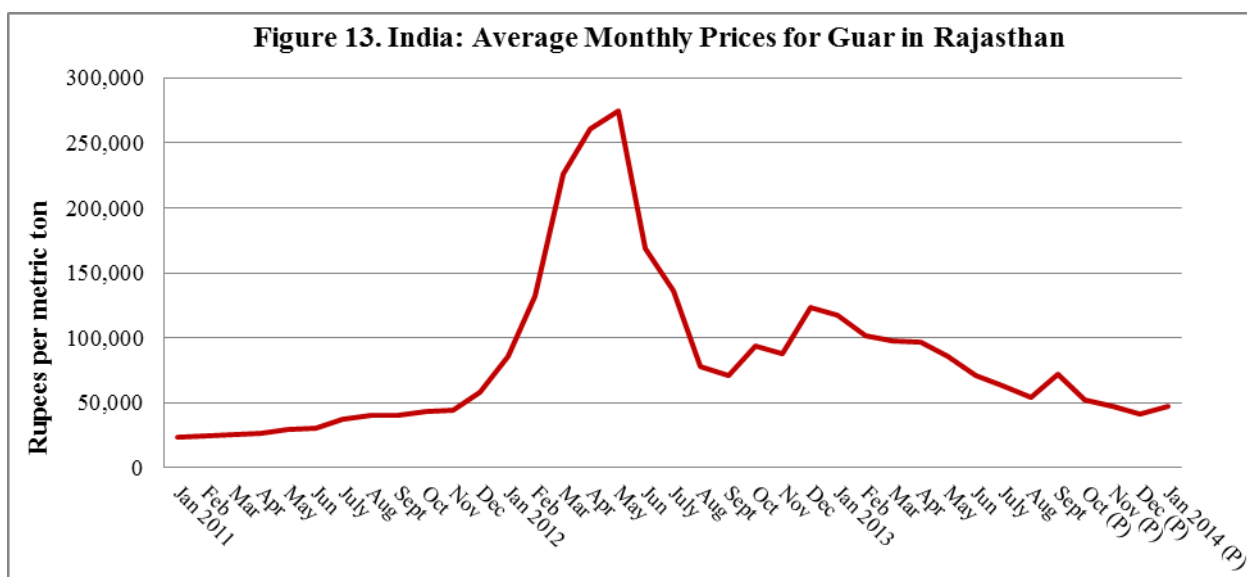
Guar bean, also known as cluster bean (*Cyamopsis tetragonoloba*), has turned into a ‘miracle crop’ for Indian farmers. Guar products emerged as India’s single largest agricultural export in 2012, surpassing rice. With about 80 percent of total exports destined for the United States, guar gum has emerged as India’s largest single export to the United States, surpassing the perennial leader, jewelry. India is the world’s largest producer of guar bean and exporter of guar gum and other products, accounting for nearly 80 percent of global share.



Source: Ministry of Agriculture and FAS estimates for MY 2013/14 and MY 2014/15.

In the last two seasons, guar bean cultivation surged to back-to-back records. Domestic prices rocketed in MY 2011/12, driven by a surge in U.S. demand for guar gum by the oil drilling industry for hydraulic fracturing of oil shale. Post estimates MY 2013/14 (October/September) guar bean planting at a record 5.8 million hectares, but production lower at 2.4 MMT due to adverse weather conditions during the crop growth stage. Expectations of good prices coupled with timely and sufficient monsoon rains during June/July supported higher planting, but yield prospects suffered due to prolonged dry weather in August/September in major growing areas in Rajasthan, Gujarat and Haryana. Post forecasts MY 2014/15 guar bean production lower at 2.2 MMT on lower planting (4.8 million hectares) due to weak prices during MY 2013/14.

The phenomenal surge in guar bean prices in MY 2011/12 to as high as INR 274,000 (\$5,074)/metric ton in May 2012 resulted in guar bean cultivation expanding in the traditional growing states of Rajasthan and Haryana and further extending to new states like Punjab, Andhra Pradesh and Chhattisgarh.



Source: Agmarket News (<http://agmarkweb.dacnet.ic.in>), Ministry of Agriculture, GOI.

Although the prices moderated significantly in MY 2012/13, speculation on higher prices encouraged farmers to shift more area from competing crops (cotton, coarse grains and pulses) to guar in MY 2013/14. However, prices have continued to decline in MY 2013/14 on weak export demand due to stocks buildup in the major importing country, the United States. Assuming prices remain weak through June 2014 at the time of planting for the next crop, some farmers are likely to revert back to planting competing crops, particularly in the non-traditional areas. In the traditional guar growing areas, farmers are likely to continue planting guar bean as current price levels provide sufficient returns due to the low cost of cultivation.