PHD CHAMBER

PROGRESS HARMONY DEVELOPMENT

Estd. - 1905

Agronomics 2014

Impact on Economic Growth & Inflation

PHD RESEARCH BUREAU

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From President's Desk

Sharad Jaipuria

Agriculture is the back bone of the Indian economy which not only provides the principal means of livelihood for large proportion of population but also holds vital supply demand linkages with other sectors of the economy. Hence the growth of the sector is critical to fuel growth in the other sectors of the economy.

Improving agricultural growth and productivity is critical for ensuring food security, containing price pressures, increasing employment opportunities, raising rural incomes, poverty alleviation, making growth more inclusive and stabilizing the overall macroeconomic environment. To achieve this, the government must ensure a 4% agriculture growth (YoY) on sustainable basis by improved yields, productivity and irrigation facilities, minimise wastages from 25-30% to less than 10% with augmenting storage capacities. Improving the agriculture infrastructure would go a long way to facilitate farm produce to deliver at consumers' doorsteps. For building strong agricultural infrastructure, there is a strong need to push public and private sector investments in the agriculture sector.

Further, our country is largely dependent on the monsoon as a substantial part of the agricultural produce comes from the rain fed crops. Weak or bad monsoon is always considered as a big set back to India's economy and always results in registering lower agricultural output. Hence, it is necessary to facilitate farmers in the bad years by ensuring increased power supply, availability of fuel etc to farmers so that the sowing process is completed without delay.

We believe that the government's agenda for the development of agricultural infrastructure and agricultural technology would foster much needed economic growth in the coming times. We appreciate the proposals unveiled by the government for this sector in the Union Budget 2014-15. Focus on increasing irrigation facilities, farm markets, financial help to landless farmers and Kisan TV to provide real time information to farmers would help to increase productivity of the farm sector. We firmly believe that effective implementation of reforms would go a long way to enhance productivity and efficacy of agriculture sector in the coming times.

At PHD Chamber, we are working actively in promoting the development of agriculture sector and assure the government for all the support in implementation of policies.

Saurabh Sanyal

From Executive Director's Desk

The study 'Agronomics 2014' brings together the latest developments in the area of agriculture sector including foodgrains production, sowing of crops, monsoon behaviour, analyses their impact on agriculture growth and food inflation and suggests measures to mitigate the challenges impacting the overall growth of the sector.

India is a strong rural demand led economy which provides employment to more than 50% of the population, hence, at this juncture, accelerating the growth rate of agriculture sector is necessary not only to ensure food security but also to achieve a high and inclusive growth. However, Indian agriculture is heavily dependent on monsoons in a substantial way. Hence, uncertainty in monsoon behavior significantly affects agricultural performance.

Against this backdrop, policies should be executed in such a manner that we must achieve a 4% agriculture growth (YoY) on sustainable basis factoring monsoon behaviour with improved yield/productivity along with expanded irrigation facilities and fertilizer availability. The government must adopt effective measures to enhance the efficiency of irrigation as it is one of the key factors to increase the crop yield.

At this juncture, it is necessary to identify ways to radically enhance the productivity of irrigation through appropriate institutional reforms, incentive environment and better management in the coming times. Further, ensuring credit availability to small & marginal farmers to adopt modern farm techniques and implementation of farm insurance schemes to take care of crop losses due to unforeseen natural calamities is necessary for increasing farm productivity in the coming times.

I commend and appreciate the tireless efforts of PHD Research Bureau team led by Dr. S P Sharma, Chief Economist and assisted by team members Ms. Surbhi Sharma and Ms. Bhawana Sharma for producing this study.

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Executive summary

The role of the agriculture sector remains critical to the Indian economy as it accounts for about 55% of employment in the country. Moreover, this sector is a supplier of food, fodder and raw materials for a vast segment of industry. The agriculture sector in India met with a major turning point in the 1960s, post the implementation of Green Revolution due to which during 1970s and 1980s, India achieved self sufficiency in the foodgrains production and tremendous growth in rural economy. However, the green breakthrough achieved in the 1970s, and 1980s is gradually disappearing. Since 1990, agricultural sector experienced poor performance and has become major cause of concern for food security, rural poverty and unprecedented rise in prices.

The growth of agriculture and allied sector is still a critical factor in the overall performance of the Indian economy. It is evident with the fact that when agriculture and allied sector growth rate decelerated to 5% in 2011-12 from 8.6% in 2010-11, India's real GDP growth also scaled down to 6.7% from 8.9% during the same period. Further, the sector's growth rate slipped to 1.4% in 2012-13 and the same trend was witnessed in India's real GDP growth rate reaching at 4.5% for the same period. However, with the pick up in the growth of agriculture and allied sector at 4.7% in 2013-14, India's real GDP growth also scaled to 4.7% in 2013-14.

Monsoon in India continue to influence crop production and productivity in a substantial way as merely 45% of India's net cropped area is irrigated. The south-west (SW) monsoon (from June to September) accounts for nearly 75% of total annual rainfall in India and thus substantially affects agricultural performance. Nearly 60% of total foodgrains and oilseeds produced being grown in the kharif season, and with about 35% of total arable area being irrigated, Indian agriculture is still heavily dependent on rainfall. Monsoon plays critical role in promoting agriculture growth, which is evident from robust agriculture growth in times of normal monsoon as against the period of scanty rainfall.

The IMD has predicted below normal rainfall during the 2014 southwest monsoon season. The country's South-west monsoon rainfall (June to September 2014) for the country as a whole is likely to be 93% of the long period average (LPA) (Second stage forecast) with a model error of ±4% as against the first stage forecast of 95% the long period average (LPA). The seasonal rainfall during this year's monsoon for the country as a whole has been 17% below the normal. Considerable progress in foodgrains production has been recorded in 2013-14 with total foodgrains production estimated a level of 264 million tonnes as against 257 million tonnes production recorded in 2012-13.

In a nutshell, India has every potential to emerge as fastest moving world economy and a leading investment destination in the coming times, however, it requires urgent policy actions to remove bottlenecks to growth. The most important and the immediate challenge to resume the high growth momentum are to address the structural supply side bottlenecks. Inflation has been posing a major challenge to India's growth story. High levels of prices, especially vegetables, fruits, milk; eggs and fuels etc have been reflected in double digit rates of inflation. Structural supply side reforms are a must if growth is going to pick up and if double-digit growth is ever to materialize. Hence, strengthening the agriculture sector is crucial for poverty alleviation, ensuring food security, containing price pressures, increasing employment opportunities, enhancing rural incomes and making growth more inclusive, going ahead.

1. Global agricultural outlook

Global demand for agricultural products will increase steadily over the next decade although at a slower pace than in the past ten years, according to the latest Agricultural Outlook 2014-2023 produced by the Organisation for Economic Co-operation and Development (OECD) and the Food and Agriculture Organization (FAO) of the United Nations. The report notes that cereals will remain central but diets will become richer in protein, fats and sugar in many regions of the world due to rising incomes and urbanisation. It is expected that prices of major crops will continue to decline over the next two years in response to bumper crops in 2013-14 before stabilising at levels above the pre-2008 period, but clearly below historical highs.

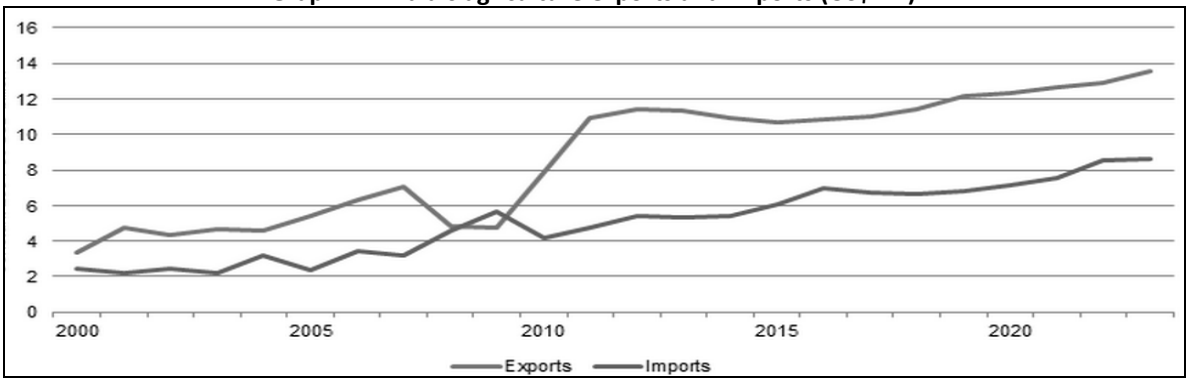
1.1 Good prospects in India for rapid agricultural development

Agricultural outlook 2014-2023 by the OECD and FAO projects a relatively optimistic scenario for India, which is projected to sustain production and consumption growth of food, led in particular by higher value added sectors. It noted that the subsidies to encourage greater use of fertilisers, pesticides, seeds, water, electricity, and credit, as well as market support prices, have contributed to strong annual agricultural output growth in the last decade. Further, these programs continue to promote production growth enabling Indian agriculture to expand per capita supplies considerably, although rising resource pressures reduce absolute growth rates over the next decade.

1.2 Trade surplus of India in agricultural commodities is expected to remain stable

India is among the leading exporters of agricultural products, with a trade surplus that has grown from around USD 4 bn in 2000 to about USD 22 bn in 2013. Rice accounts for the bulk of exports, followed by cotton and fishery products. Exports of wheat and coarse grain vary, and have often reached high levels, and exports of protein meal and cotton are rising. On the other hand, India continues to be the largest importer of edible oils and pulses in the world.

Graph 1.1 India's agriculture exports and Imports (US$ Bn)



Source: OECD-FAO Agricultural Outlook 2014-2023. Note: Data in real terms at constant 2004-06

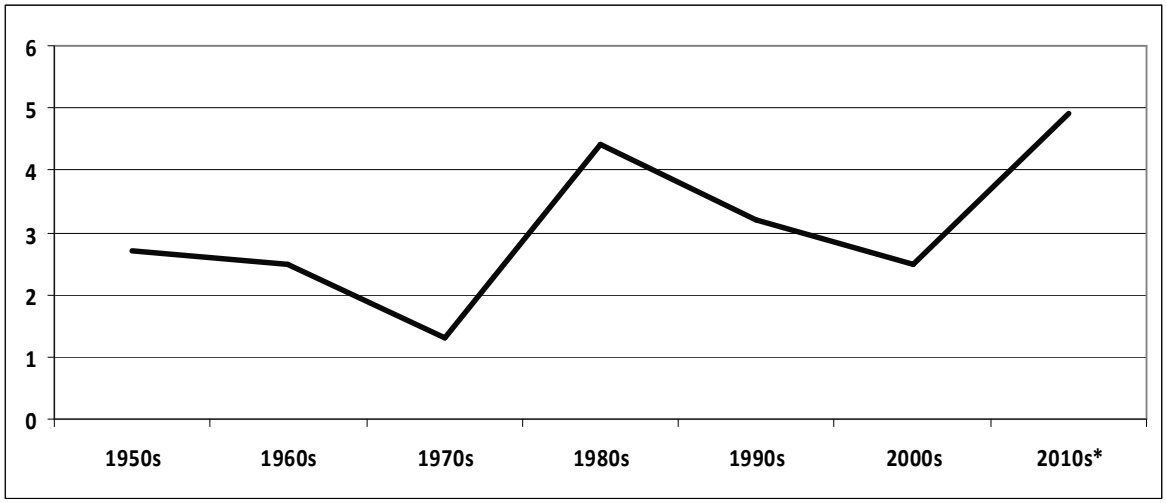
2. Overview of the Indian agriculture sector

The role of the agriculture sector remains critical to the Indian economy as it accounts for about 55% of employment[1] in the country. Moreover, this sector is a supplier of food, fodder and raw materials for a vast segment of industry. The agriculture sector in India met with a major turning point in the 1960s, post the implementation of Green Revolution due to which during 1970s and 1980s, India achieved self sufficiency in the foodgrains production and tremendous growth in rural economy.

However, the green breakthrough achieved in the 1970s, and 1980s is gradually disappearing. Since 1990, agricultural sector experienced poor performance and has become major cause of concern for food security, rural poverty and unprecedented rise in prices. Presently the agriculture sector in India is at a crossroads with rising demand for food items and relatively slower supply response in many commodities.

The agriculture & allied sector witnessed an annual average growth rate of 2.7% and 2.5% during 1950s and 1960s respectively which decelerated to about 1.3% during 1970s. Though, the agriculture & allied sector annual average growth rate picked up to 4.4% during 1980s, it again declined to 3.2% in 1990s and 2.5% in 2000s. Further, the annual average growth rate of the sector stands at 4.9% during 2010-11 to 2013-14.

Graph 2.1 Decadal growth rate of agriculture & allied sector (in %)



Source: PHD Research Bureau, compiled from various sources
Note: *Data pertains to annual average growth rate for the period 2010-11 to 2013-14.
The growth rate pertains to constant 2004-05 prices.

[1] Census 2011

The share of agriculture & allied sector has decelerated significantly from 30% in 1990-91 to around 15% in 2009-10. Thereafter, the sector exhibited the declining trend in terms of contribution to overall GDP and has reached to about 14% in 2013-14

The growth of agriculture and allied sector is still a critical factor in the overall performance of the Indian economy. It is evident with the fact that when agriculture and allied sector growth rate decelerated to 5% in 2011-12 from 8.6% in 2010-11, India's real GDP growth also scaled down to 6.7% from 8.9% during the same period. Further, the sector's growth rate slipped to 1.4% in 2012-13 and the same trend was witnessed in India's real GDP growth rate reaching at 4.5% for the same period. However, with the pick up in the growth of agriculture and allied sector at 4.7% in 2013-14, India's real GDP growth also scaled to 4.7% in 2013-14.

Table 2.1 Trend in India's agriculture & allied sector growth vis-a-vis India's real GDP growth (in %)

Year	Share of Agriculture in India's real GDP	Agriculture & allied sector growth	India's real GDP growth
2010-11	14.6	8.6	8.9
2011-12	14.4	5.0	6.7
2012-13	13.9	1.4	4.5
2013-14*	13.9	4.7	4.7

Source: PHD Research Bureau, compiled from Central Statistical Office, MOSPI, Government of India.
Note: * Data pertains to provisional estimates of 2013-14

3. India's foodgrains production

Notwithstanding the growth of agriculture sector, foodgrains production in the country registered an increasing trend in the past few years. During 2011-12, total foodgrains production reached a significantly higher level of 259 million tonnes from 198 million tonnes recorded in 2004-05. However, during 2009-10 the foodgrain production declined to a level 218 million tonnes. Considerable progress in foodgrains production has been recorded in 2013-14 with total foodgrains production estimated a level of 264 million tonnes as against 257 million tonnes production recorded in 2012-13.

According to the 3rd advance estimates of 2013-14, foodgrains production in the kharif season is likely to be around 129 million tonnes as compared to 128 million tonnes in 2012-13. While in Rabi season the foodgrains production is estimated at 135 million tonnes in 2013-14 as against production of 129 million tonnes in 2012-13.

Table 3.1 India's foodgrains production (million tonnes)

Year	Season		Total Foodgrains
	Kharif	Rabi	
2001-02	112.07	100.78	212.85
2002-03	87.22	87.55	174.77
2003-04	117	96.19	213.19
2004-05	103.31	95.05	198.36
2005-06	109.87	98.73	208.60
2006-07	110.58	106.71	217.28
2007-08	120.96	109.82	230.78
2008-09	118.14	116.33	234.47
2009-10	103.95	114.15	218.11
2010-11	120.85	123.64	244.49
2011-12	131.27	128.01	259.29
2012-13	128.07	129.06	257.13
2013-14*	129.37	135.01	264.38

Source: PHD Research Bureau, compiled from Ministry of Agriculture, Government of India
Note: * Data pertains to 3rd advance estimates of foodgrains production for 2013-14

3.1 Area, production and yield of major crops in 2013-14

As per the 3rd advance estimates of foodgrains production for 2013-14 the area under foodgrains has increased to about 126 million hectares from about 121 million hectares in 2012-13. Area under coarse cereals as well as the production during 2013-14 stands at 26 million hectares and about 43 million tonnes respectively. The area under oilseeds and the production stands at 28 million hectares and 32 million tonnes in 2013-14 as against about 27 million hectares and about 31 million tonnes in 2012-13, respectively.

Area under sugarcane remained at the same level of 5 million hectares during 2012-13 and 2013-14, however, its production increased to 348 million tonnes in 2013-14 from 341 million tonnes in 2012-13. Given the limitations in expanding agricultural land, improvements in yield levels hold the key for long-term output growth. However, in the case of most of the major crops, higher production in 2013-14 has been achieved by expanding acreage, rather than productivity.

There has been a slowing down of the rate of growth of yield in the major crops for the year 2013-14. The yield of foodgrains came down to 2095 kg per hectare in 2013-14 from 2128 kg per hectare in 2012-13. Yield of pulses also scaled down to 770 kg per hectare in 2013-14 as against 789 kg per hectare in 2012-13. On the other hand, Groundnut has shown the largest jump in yield; it increased to 1723 kg per hectare in 2013-14 from 995 kg per hectare in 2012-13.

Table 3.2 Area, Production and Yield of Major Crops

Group / Commodity	Area (Million hectares)		Production (Million tonnes)		Yield (kg/hectares)	
	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Foodgrains*	**120.8**	**126.2**	**257.0**	**264.4**	**2128**	**2095**
Rice	42.8	43.9	105.2	106.3	2462	2419
Wheat	30.0	31.3	93.5	95.8	3117	3059
Coarse Cereals~	**24.8**	**25.5**	**40.0**	**42.7**	**1626**	**1672**
Maize	8.7	9.3	22.3	24.2	2566	2602
Bajra	7.3	7.9	8.7	9.2	1198	1161
Pulses**	**23.3**	**25.4**	**18.3**	**19.6**	**789**	**770**
Gram	8.5	10.2	8.8	9.9	1036	974
Tur	3.9	3.9	3.0	3.4	776	857
Oilseeds^	**26.5**	**28.2**	**30.9**	**32.4**	**1168**	**1149**
Groundnut	4.7	5.5	4.7	9.5	995	1723
Rapeseed and mustard	6.4	6.5	8.0	7.8	1262	1208
Cotton^^	12.0	11.7	34.2^	36.5^	486	529
Sugarcane	**5.0**	**5.0**	**341.2**	**348**	**70**	**70**

Source: PHD Research Bureau, compiled from Economic Survey 2013-14.Notes: *Includes cereals, coarse cereals and pulses, ~Includes maize, jowar, ragi, bajra, small millets and baarley, ** Includes tur, urad, moong, gram, lentils and other pulses, ^ includes Groundnut, Rapeseed and mustard, seasamum, linseed, castorseed, nigerseed, safflower, sunflower and soyabean, ^^million bales of 170 kgs each.

3.2 Wheat procurement inches above 280 lakh tonnes

All-India progressive procurement of Wheat for the marketing season 2014-15 as on 11th July 2014 stands at about 280 lakh tonnes against the procurement of 250 lakh tonnes upto the corresponding period of last year. A closer look at states revealed that Punjab has made significant procurement of wheat at 116.41 lakh tonnes, Madhya Pradesh at about 71 lakh tonnes, Haryana with around 65 lakh tonnes, Rajasthan at about 22 lakh tonnes and Uttar Pradesh at 6.28 lakh tonnes as on 11th July 2014.

Table 3.3 Progressive procurement of wheat (Lakh tonnes)

State	Total procurement in marketing season 2013-14 (Apr. – March)	Progressive Procurement as on 11th July 2014	
		In Marketing season 2014-2015	In Marketing season 2013-2014
Punjab	108.97	116.41	108.78
Haryana	58.73	64.95	58.73
Uttar Pradesh	6.83	6.28	6.83
Madhya Pradesh	63.55	70.94	63.25
Rajasthan	12.68	21.59	12.68
All-India	250.92	280.23	250.41

Source: PHD Research Bureau, compiled from Ministry of Agriculture, Government of India

The progressive procurement of rice for the marketing season 2013-14 has scaled upwards to 311 lakh tonnes as on 1st August 2014 from the procurement of 336 lakh tonnes upto the corresponding period of last year. The procurement of rice has inches upwards for states like Andhra Pradesh, Kerala, Madhya Pradesh and Tamil Nadu, however, Bihar, Chhattisgarh , Haryana, Maharashtra, Odisha, Punjab, Uttar Pradesh, Uttaranchal and West Bengal have posted a decline in procurement of rice during the same period.

Table 3.4 Progressive procurement of rice (Lakh tonnes)

State	Total procurement in marketing season 2012-13 (Oct. – Sept.)	Progressive Procurement as on 1st August 2014	
		In Marketing season 2013-14	In Marketing season 2012-13
Andhra Pradesh	64.71	77.77	63.66
Bihar	13.03	8.28	12.49
Chhattisgarh	48.04	42.90	48.04
Haryana	26.09	24.06	26.09
Kerala	2.40	3.59	2.40
Madhya Pradesh	8.98	10.45	8.98
Maharashtra	1.92	1.61	1.90
Odisha	36.13	28.19	35.01
Punjab	85.58	81.06	85.58
Tamil Nadu	4.81	6.18	4.79
Uttar Pradesh	22.86	11.27	22.86
Uttaranchal	4.97	4.63	4.97
West Bengal	17.66	11.00	16.77
All-India	340.28	311.10	336.04

Source: PHD Research Bureau, compiled from Ministry of Agriculture, Government of India

Sowing in progress

As per latest information available on sowing of crops, around 67% of the normal area under kharif crops has been sown upto 1st Aug 2014. Area sown under all kharif crops taken together has been reported to be about 706 lakh hectare at all India level as compared to around 820 lakh hectares in the corresponding period of last year. Area coverage was lower by 19 lakh hectares under Rice, 11.3 lakh hectares under Jowar, 16.6 lakh hectares under Bajra, 9.8 lakh hectares under Maize, 4.6 lakh hectares under Tur, 2 lakh hectares under Urad, 4.2 lakh hectares under Moong, 6.6 lakh hectares under Groundnut, 3.2 lakh hectares under Soyabean, 2.5 lakh hectares under Cotton and 1.9 lakh hectares under Sugarcane as compared to average area(as on date).

Table 3.5 All India Crop Situation – Kharif 2014-15 (in lakh hectares)

Crop Name	Normal Area for whole Kharif Season	Normal Area as on date	Area sown reported			Absolute Change over (+/-)	
			This Year 2014	% of Normal for whole season	Last Year 2013	Normal as on 1st August 2014	Last Year
Rice	391.06	240.56	221.56	56.7	237.89	-19.0	-16.3
Jowar	28.50	22.77	11.46	40.2	18.70	-11.3	-7.2
Bajra	86.69	62.12	45.53	52.5	59.37	-16.6	-13.8
Maize	71.67	67.61	57.85	80.7	74.81	-9.8	-17.0
Total Coarse Cereals	207.50	162.54	120.78	58.2	162.77	-41.8	-42.0
Total Cereals	598.56	403.10	342.34	57.2	400.66	-60.8	-58.3
Tur	38.22	30.02	25.39	66.4	32.81	-4.6	-7.4
Urad	23.12	18.36	16.34	70.7	19.45	-2.0	-3.1
Moong	24.26	18.67	14.52	59.8	19.35	-4.2	-4.8
Kulthi	-	0.13	0.06	-	0.01	-0.1	0.0
Others	22.11	14.97	10.90	49.3	11.23	-4.1	-0.3
Total Pulses	107.71	82.16	67.19	62.4	82.95	-15.0	-15.8
Total Foodgrains	706.27	485.26	409.53	58.0	483.61	-75.7	-74.1
Groundnut	46.25	34.93	28.37	61.3	36.85	-6.6	-8.5
Soyabean	99.59	98.57	95.39	95.8	117.43	-3.2	-22.0
Sunflower	4.16	1.93	1.17	28.2	1.80	-0.8	-0.6
Sesamum	18.88	9.95	10.25	54.3	10.12	0.3	0.1
Nigerseed	3.63	0.62	0.14	4.0	0.66	-0.5	-0.5
Castorseed	10.37	2.67	2.03	19.6	2.86	-0.6	-0.8
Total Oilseeds	182.89	148.66	137.36	75.10	169.71	-11.3	-32.4
Cotton	109.60	107.33	104.84	95.7	108.54	-2.5	-3.7
Sugarcane	47.02	48.36	46.42	98.7	50.32	-1.9	-3.9
Jute	8.89	8.41	8.11	91.2	8.29	-0.3	-0.2
All-Crops	1054.67	798.03	706.25	67.0	820.47	-91.8	-114.2

Source: Ministry of agriculture, Government of India
Note: The data above is as on 01.08.2014

Irrigation area needs to be enhanced

India's record of progress in agriculture over the past decades has been quite impressive. The success of India's agriculture is attributed to a series of steps that led to availability of farm technologies which brought about dramatic increases in productivity in 70s and 80s often described as the Green Revolution era. It may be noted that, the Gross area sown has grown by more than 30% in 60 years, from 144 million hectares during 1950s to 189 million hectares during 2000s. The dependency of Indian farmers on monsoon for the irrigation of their fields is well known and it is clear from the fact that only 17% of the sown area was irrigated during 1950s.

However, with increased effort from the government, there has been remarkable improvement in the area irrigated vis-à-vis area sown in the last 60 years. During 2000s more than 40% of the gross area sown was irrigated. The major sources of agricultural growth during this period were the spread of modern crop varieties, intensification of input use and investments leading to expansion in the irrigated area. Water is the most critical input for agriculture. Currently 63 million hectares or 45% of net cropped area, is irrigated.

Irrigation has been integral part of our monsoon dependent agriculture and the aggravating groundwater crisis in most of the regions of the country, needs proper consideration from the government. At this juncture, government must adopt effective measures to enhance the efficiency of irrigation as it is one of the very important factors to increase the crop yield.

It is necessary to identify ways to radically enhance the productivity of irrigation through appropriate institutional reforms, incentive environment and better management in the coming times.

4. IMD forecasts and actual rainfall scenario

The India Meteorological Department (IMD) has predicted below normal rainfall during the 2014 southwest monsoon season. The country's South-west monsoon rainfall (June to September 2014) for the country as a whole is likely to be 93% of the long period average (LPA) (Second stage forecast) with a model error of ±4% as against the first stage forecast of 95% the long period average (LPA). According to second stage forecast, the season rainfall is likely to be 85% of LPA over North-West India, 94% of LPA over Central India, 93% of LPA over South Peninsula and 99% of LPA over North-East India all with a model error of ± 8 %. Further IMD also indicates chances of El Nino occurring during monsoon are very high which carries a probability of more than 70%.

Table 4.1 IMD's first forecast vis-à-vis actual rainfall

Year	IMD's 1st forecast (% of LPA)	Actual rainfall (% of LPA)	Difference b/w forecast and actual rainfall
2001	98	92.9	-5.1
2002	101	79.4	-21.6
2003	96	102.1	6.1
2004	100	87.4	-12.6
2005	98	98.8	0.8
2006	93	99.4	6.4
2007	95	105	10
2008	99	98	-1
2009	96	77	-19
2010	98	102.5	4.5
2011	98	102.3	4.3
2012	98	92	-6
2013	98	106	8
2014	95	90^	-5

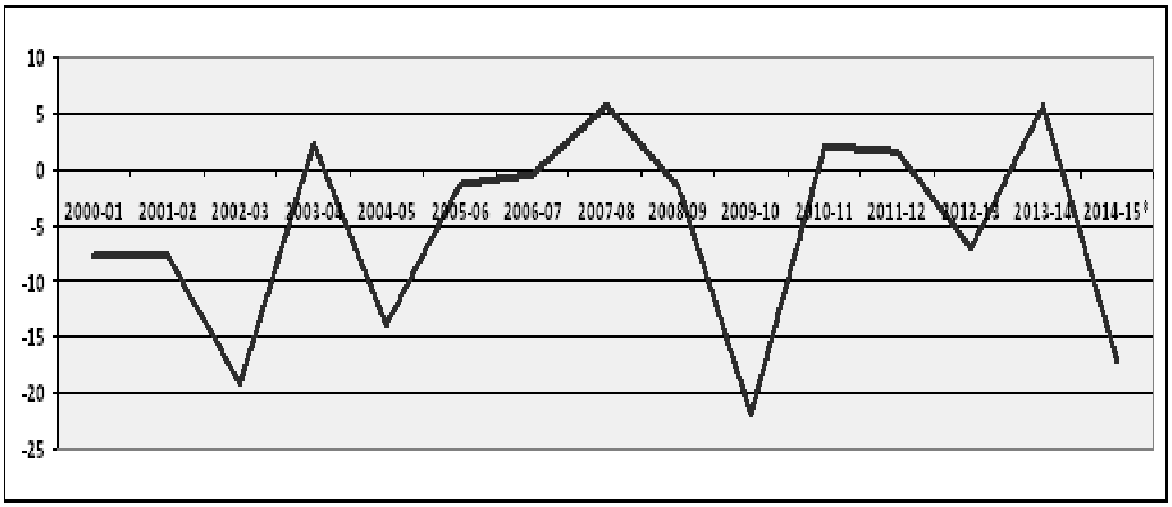
Source: PHD Research Bureau, compiled from CMIE, NA: Not Available
Note: ^Data represents cumulative seasonal rainfall for the country as a whole during July 2014

4.1 Trend in South west monsoon since FY2001

The southwest monsoon (June-Sep) has exhibited volatile trend over the years. The monsoon has remained in deficit at (-) 7.8% in FY2001 and scaled up to (-) 19.2% in FY2003. However, during FY2004 the monsoon took a turnaround by registering rainfall above normal at 2.3%. Subsequently the monsoon again sipped in the deficient trajectory at about (-) 14% in FY2005, (-) 1.3% in FY2006 and (-) 0.4% in FY2007.

During FY2008 the rainfall was above normal at about 6%, followed by deficit of about (-) 2% in FY2009 and (-) 22% in FY2010. Significantly the monsoon revolved with rainfall above normal at about 2% in FY2011 and FY2012 each. Thereafter monsoon slipped to a deficit of (-) 7.1% in FY2013 and rainfall was above normal at 5.6% in FY2014.

Graph 4.1 Southwest monsoon since FY2001-Trend in rainfall departure (%)



Source: PHD Research Bureau compiled from India Meteorological Department (IMD),Government of India
Note: * Data represents rainfall departure from normal level for the period 1st June 2014 to 11th August 2014

4.2 South west monsoon 2014

The seasonal rainfall during this year's monsoon for the country as a whole has been 17% below the normal. The actual rainfall received for the period 1st June 2014 to 11th August 2014 stands at about 456 mm as against the normal rainfall of around 553 mm. The seasonal rainfall for the same period was below the normal across all regions namely Northwest by (-) 29%, East & Northeast by (-) 24%, South Peninsula by (-) 15% and Central by (-) 7%.

Table 4.2 Seasonal Rainfall (in mm) from 1st June to 11th August, 2014

Region	Actual	Normal	% Departure from Long Period Average
All India	455.9	552.6	-17%
East & Northeast India	689.3	913.0	-24%
Northwest India	266.7	373.5	-29%
Central India	563.8	608.5	-7%
South Peninsula	378.0	444.7	-15%

Source: PHD Research Bureau compiled from India Meteorological Department (IMD), Government of India
Note: mm stands for millimeter

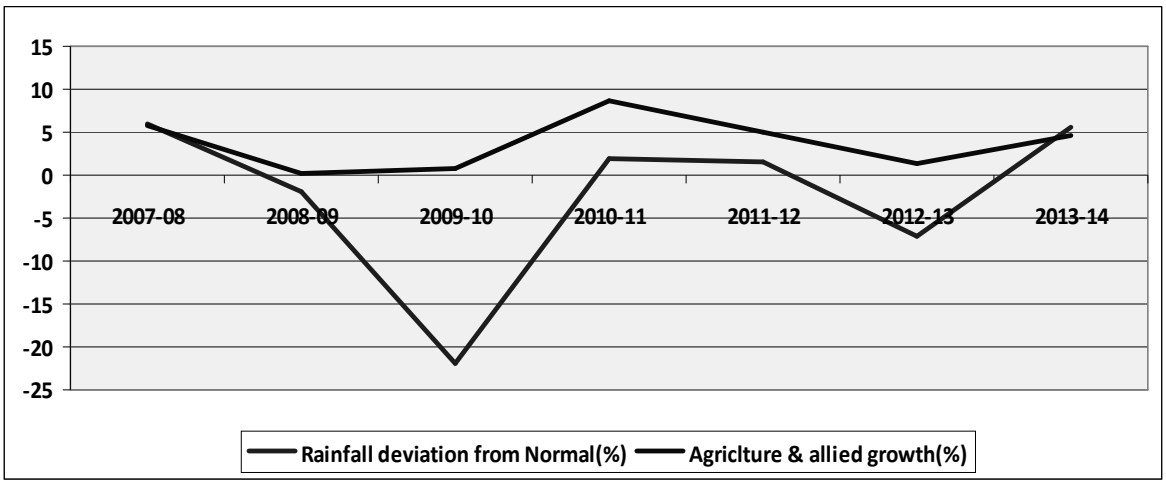
5. Monsoon vital for robust agriculture growth

Monsoon in India continue to influence crop production and productivity in a substantial way as merely 45% of India's net cropped area is irrigated[2]. The south-west (SW) monsoon (from June to September) accounts for nearly 75% of total annual rainfall[3] in India and thus substantially affects agricultural performance. Nearly 60% of total foodgrains and oilseeds produced being grown in the kharif season, and with about 35% of total arable area being irrigated, Indian agriculture is still heavily dependent on rainfall. Monsoon plays critical role in promoting agriculture growth, which is evident from robust agriculture growth in times of normal monsoon as against the period of scanty rainfall.

Empirical evidence reveals that monsoon plays significant role for agricultural production. During the year with good rainfall (marginal departure at (-)8% from normal rainfall in 2001-02), the growth in agriculture sector was robust at around 6%. However, during 2002-03, significant departure of rainfall from normal at (-) 19%, the agriculture sector growth slipped drastically to about (-) 7%.

During 2009-10, with considerable departure of rainfall from normal level at (-) 22%, the agriculture and allied activities growth was sluggish at 0.8%. Further, during 2013-14 with good monsoon behaviour (about 6% rainfall above normal level) the agriculture growth picked up to about 5% as against rainfall deficit of (-) 7.1% in 2012-13 with agriculture growth of 1.4%

Graph 5.1 Monsoon vis-à-vis agriculture growth (%)



Source: PHD Research Bureau, compiled from India Meteorological Department (IMD) and MOSPI, Government of India

[2] Economic Survey 2013-14
[3] IBID

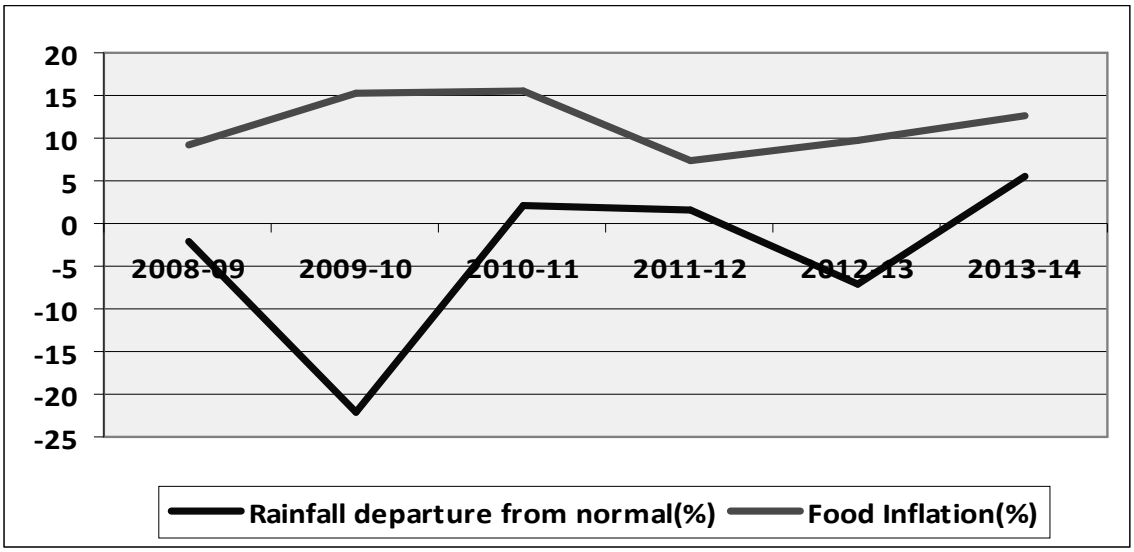
6. Monsoon vis-à-vis food inflation

The food inflation over the recent years has remained high despite higher crop production vis-à-vis good rainfall, which contributes to the fact that the consumption patterns have undergone major shift during the recent times. During 2009-10, the rainfall was (-) 22% below normal, the food inflation was above 15%.

However, during 2010-11 and 2011-12, when rainfall was above 2% and 1.6% from normal levels respectively, the food inflation still hovers in higher trajectory of more than 15% and 7% respectively. This could be attributed to the fact that, despite good monsoon and higher crop production, the country is constrained by supply side bottlenecks hindering the process of distribution and creating scarcity. Another reason may be attributed to increased demand for protein based items such as milk, egg, fish, meat, etc and other perishables.

During 2012-13, the rainfall was (-) 7% below normal, the food inflation stood at about 10%. However, with improving rainfall behaviour which was 5.6% above normal level, food inflation still hovers in the higher trajectory at about 13%.

Graph 6.1 Monsoon vis-à-vis food inflation (%)



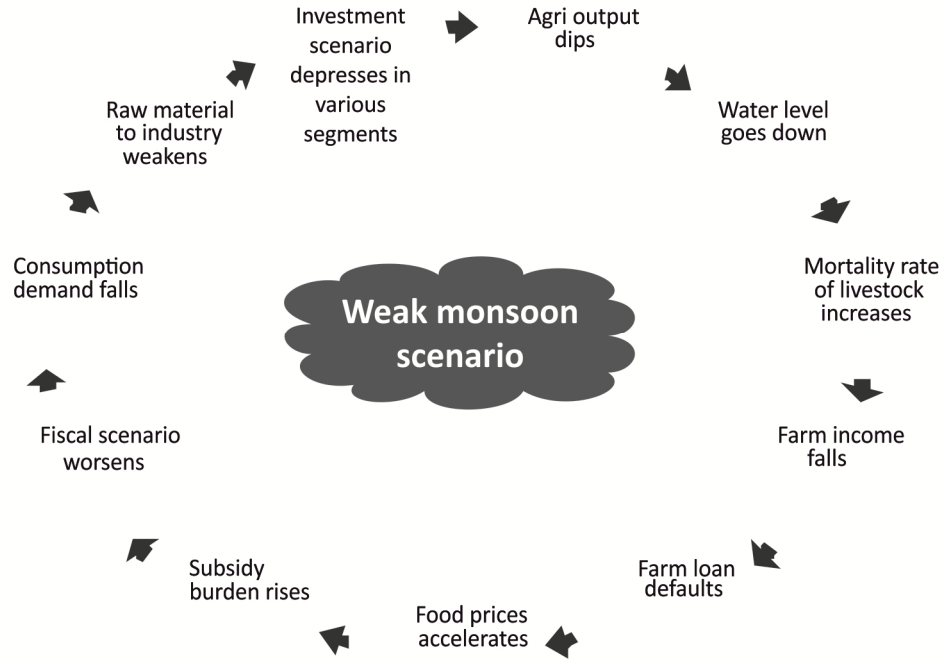
Source: PHD Research Bureau, compiled from IMD and MOSPI, Government of India

Weak monsoon impacts various segments of the economy

Weak monsoon performance impacts the economic scenario of the country through various demand and supply dynamics. Our country is still considered as agrarian economy and is largely dependent on the amount of monsoon rains as a substantial part of the agricultural produce comes from the monsoon fed crops. However, weak or bad monsoon is always considered as a big set back to India's economy and always results in registering lower agriculture output.

As the agricultural output dips, water levels also goes down and the mortality rate of livestock and wildlife goes up significantly. The economy takes a hit as farm incomes falls, farm loan defaults, food prices accelerate, subsidies burden widens, fiscal scenario worsens, consumption demand declines, raw material to industry weakens and investments scenario depresses in various segments.

In a nutshell, the impact of monsoon in the farm economy in particular and overall economy in general is far reached. This fact draws from the large dependency in terms of livelihood generation at one end, raw material requirement for industries on the other and above all the total consumption demand in the economy.



7. Key announcements for agriculture sector in Union Budget 2014-15

Agriculture in India has been a way of life and continues to be the single most important source of livelihood for the masses with more than 70% of the population depends on it directly or indirectly. Farming as an activity contributes nearly 1/6th to our National GDP.

I. A sustainable growth of 4% in Agriculture will be achieved
II. Government to establish two more Agricultural Research Institute of excellence in Assam and Jharkhand with an initial sum of Rs. 100 crore
III. An amount of Rs. 100 crores set aside for Agri-tech Infrastructure Fund
IV. A sum of Rs. 200 crore allocated to open Agriculture Universities in Andhra Pradesh and Rajasthan and Horticulture Universities in Telangana and Haryana
V. An amount of Rs. 100 crore has been earmarked to launch a scheme to provide every farmer a soil health card in a Mission mode and additional Rs. 56 crores has been allocated to set up 100 mobile soil testing laboratories across the country
VI. To meet the vagaries of climate change a National Adaptation Fund with an initial amount of Rs. 100 crore will be set up
VII. Technology driven second green revolution with focus on higher productivity and including protein revolution will be area of major focus
VIII. To mitigate the risk of price volatility in the agriculture produce, a sum of Rs. 500 crore is provided for establishing a Price Stabilization Fund
IX. Central Government to work closely with the State Governments to re-orient their respective APMC Acts
X. A sum of Rs. 50 crores provided for the development of indigenous cattle breeds and an equal amount for starting a blue revolution in inland fisheries
XI. Transformation plan to invigorate the warehousing sector and significantly improve post-harvest lending to farmers
XII. New Urea Policy would be formulated
XIII. A sum of Rs. 100 crore provided for development of organic farming in North Eastern States.

Agriculture Credit

I. To provide institutional finance to landless farmers, it is proposed to provide finance to 5 lakh joint farming groups of Bhoomi Heen Kisan through NABARD .
II. A target of Rs. 8 lakh crore has been set for agriculture credit during 2014-15.
III. Corpus of Rural Infrastructure Development Fund (RIDF) raised by an additional Rs. 5000 crores from the target given in the Interim Budget to Rs. 25000 crores .
IV. Allocation of Rs. 5,000 crore provided for the Warehouse Infrastructure Fund**.**

V. Long Term Rural Credit Fund to set up for the purpose of providing refinance support to Cooperative Banks and Regional Rural Banks with an initial corpus of Rs. 5,000 crore.
VI. An amount of Rs. 50,000 crore allocated for Short Term Cooperative Rural Credit
VII. A sum of Rs. 200 crore for NABARD's Producers Development and Upliftment Corpus (PRODUCE) for building 2,000 producers organizations over the next two years.

Food Security

I. Restructuring FCI, reducing transportation and distribution losses and efficacy of PDS (Public Distribution System) to be taken up on priority
II. Government committed to provide wheat and rice at reasonable prices to the weaker sections of the society
III. Government when required will undertake open market sales to keep prices under control.

Irrigation

IV. A sum of Rs. 1000 crore provided for "Pradhan Mantri Krishi Sinchayee Yojna" for assured irrigation.

Impact of announcements in the Union Budget 2014-15 on agriculture

Sector	Announcement	Impact
Agriculture	Rs 1000 crore provided for "Pradhan Mantri Krishi Sinchayee Yojana" for assured irrigation	The proposal will benefit suppliers and manufacturers of irrigation systems and development would go a long way to enhance gross irrigation area in the country
	A scheme to provide every farmer a soil health card in a Mission mode will be launched	The creation of soil card will enable farmers to take informed decisions about their crop
	A sum of Rs 500 crore is provided for establishing a "Price Stabilisation Fund"	The creation of fund will help farmers to get better remuneration and help in addressing inflation
	Proposal to undertake open market sales to keep prices under control	A national market for agriculture would ease out supply concerns as it would increase both buyers access to markets and increase farmers realisation

Source: PHD Research Bureau

8. Recent developments in the agriculture sector

The following are some of the major initiatives taken by the Government of India:

Foreign Direct Investment (FDI) -- The government has allowed 100% FDI under automatic route in storage and warehousing, including cold storages. 100% FDI is also permitted for development of seeds under the automatic route.

Agricultural exports grows at around 16%-- India has exported agriculture products worth Rs 2,68,469 crores for the period Apr-Feb FY2014 as against Rs 2,32,041 crores 2012-13 with a growth of around 16%.

Minimum Support Prices for Kharif crops for 2014-15 season -- The Cabinet Committee on Economic Affairs (CCEA) approved revised Minimum Support Prices (MSPs) for Kharif crops for the 2014-15 season on the recommendations of the Commission for Agricultural Costs and Prices (CACP). The MSP was raised from Rs 1310 per quintal in the 2013-14 season to Rs 1360 in 2014-15 for paddy (common) and from Rs 1345 per quintal to Rs 1400 in the case for paddy (grade A). The MSP remains Rs 1250 per quintal for bajra, Rs 1310 per quintal for maize, and Rs 4000 for groundnut-in-shell. It was raised from Rs 1500 per quintal to Rs 1550 for ragi, from Rs 4300 to Rs 4350 for tur (arhar), from Rs 4500 to Rs 4600 for moong, and from Rs 4300 to Rs 4350 for tur (arhar), from Rs 4500 to Rs 4600 for moong, and from Rs 4300 to Rs 4350 for urad.

NFSM General council approves Rs. 2100 Crore for the Scheme in 2014-15 -- The General Council of the National Food Security Mission (NFSM), approved action plans of different States for Rs. 2100 crore for 2014-15. This will help farmers in making informed decisions on inputs to be applied, resulting in better productivity and cost effectiveness. The Council also approved taking up pulses under NFSM programme in Himachal Pradesh, Jammu & Kashmir and Uttarakhand. The Council also approved taking up demonstrations of inter-cropping of food grains with oilseeds which was not part of the Mission activities till now, focusing on increasing production of oilseeds.

Setting up of National Fisheries Development Board -- Government of India has set up a National Fisheries Development Board (NFDB). The objectives and functions of the Board are to bring major activities relating to fisheries and aquaculture for focused attention and professional management; to coordinate activities pertaining to fisheries undertaken by different Ministries/Departments in the Central Government and also coordinate with the State/Union Territory Governments; to improve production processing, storage, transport and marketing of the products of capture and culture fisheries; to achieve sustainable management and conservation of natural aquatic resources including the fish stocks; to provide modern infrastructure mechanisms for fisheries and ensure their effective

management and optimum utilization; to enhance contribution of fish towards food and nutritional security.

Cotton Development Programme as a Sub Scheme Under NFSM -- Government of India has approved Cotton Development Programme as a Sub-scheme under the National Food Security Mission (NFSM) by adopting cropping system approach, during the year 2014-15. Under the above Sub-scheme, assistance is provided for Front Line Demonstrations on High Density Planting System (HDPS), Intercropping, Extra Long Staple (ELS)/Desi Cotton, besides programme on Insecticides Resistance Management (IRM) and Online Pest Monitoring and Advisory Services (OPMAS). To extend technical assistance and benefits to farmers, the Programme is implemented through State Departments of Agriculture, Indian Council of Agricultural Research (ICAR), State Agricultural Universities (SAUs), Krishi Vigyan Kendras (KVKs) etc.

The Government of India has approved following interventions in the eventuality of drought /deficit rainfall situation in some parts of the country:

- Implementation of Diesel Subsidy Scheme for protective irrigation of crops with an allocation of Rs. 100 crore -- In view of deficit rainfall in various parts of the country during south west monsoon 2014 and its likely impact on Agriculture Operations during the on-going Kharif season, it has been decided to provide diesel subsidy to the farmers to enable them to provide supplementary irrigation through diesel pump sets in the deficit rainfall affected areas to protect the standing crops.

- Enhancement of ceiling on seed subsidy to partially recompense the farmer for the additional expenditure incurred in re-sowing and/or purchasing appropriate varieties of seeds.

- Implementation of drought mitigating interventions on perennial horticulture crops with an additional allocation of Rs. 700 crore under Mission for Integrated Development of Horticulture (MIDH).

- Implementation of Additional Fodder Development Programme (AFDP) as a sub-scheme of Rashtriya Krishi Vikas Yojana (RKVY).

- Waiver of duty on import of de-oiled soya extract, groundnut oil cake, sunflower oil cake, canola oil meal, mustard oil cake, rice bran and palm kernel cake to increase availability of feed ingredients.

Schemes to enhance production and productivity of agricultural production

The Department of Agriculture & Cooperation has recently restructured schemes for development of agriculture and welfare of farmers in the country.

I. Centrally Sponsored Missions includes the following:

1. National Food Security Mission (NFSM) -- NFSM aims to increase the production of rice, wheat, pulses and Coarse Cereals through area expansion and productivity enhancement; restoring soil fertility and productivity; creating employment opportunities; and enhancing farm level economy.

2. National Mission on Sustainable Agriculture (NMSA) -- NMSA has been formulated to make agriculture more productive, sustainable, remunerative and climate resilient by promoting location specific integrated/Composite Farming Systems; conserve natural resources through appropriate soil and moisture conservation measures; adopt comprehensive soil health management practices; optimize utilization of water resources through efficient water management to expand coverage for achieving more crop per drop; develop capacity of farmers & stakeholders, in conjunction with other on-going Missions and pilot models in select blocks for improving productivity of rainfed farming by mainstreaming rainfed technologies.

3. National Mission on Oil seeds and Oil Palm (NMOOP) -- The Mission aims to expand area under oilseeds, harness the potential in the area/ districts of low productivity, strengthening inputs delivery mechanism, strengthening of post harvest services besides a focus on tribal areas for tree borne oilseeds.

4. National Mission on Agricultural Extension & Technology (NMAET) -- The Mission aims to disseminate information and knowledge to the farming community in local language/ dialect in respect of agricultural schemes.

5. Mission of Integrated Development of Horticulture (MIDH) -- The Mission aims to promote holistic growth of horticulture sector, including bamboo and coconut through area based regionally differentiated strategies, which include research, technology promotion, extension, post harvest management, processing and marketing, in consonance with comparative advantage of each State/region and its diverse agro-climatic features; encourage aggregation of farmers into farmer groups to bring economy of scale and scope; enhance horticulture production, augment farmers, income and strengthen nutritional security and improve productivity by way of quality germplasm, planting material and water use efficiency through Micro Irrigation.

II. Central Sector Schemes includes National Crop Insurance Scheme (NCIP), Integrated Scheme on Agriculture Cooperation (ISAC), Integrated Scheme on Agriculture Marketing (ISAM), Integrated Scheme on Agriculture Census, Economics and Statistics (ISACE&S), Secretariat Economic Service (SES).

III. State Plan Scheme includes Rashtriya Krishi Vikas Yojana (RKVY) -- The Scheme aims to incentivize the States to increase investment in Agriculture and allied sectors.

9. Challenges & Suggestions

Agriculture has been a way of life and continues to be the single most important livelihood of the masses. However, the sector in India is at crossroads with rising demand for food items and relatively slower supply response in many commodities resulting in frequent spikes in food inflation. In the absence of appropriate actions for addressing supply bottlenecks, especially in food and infrastructure, ability of the economy to sustain the current growth rate without significant inflationary pressures is challenged. Following are the key areas which demands utmost attention to revive and hold sustainable growth of the agriculture sector in the coming times.

- **Productivity--**Growth rates of productivity are far below global standards; productivity levels of rice and wheat have declined after the green revolution of the 1980s. Hence there is a need to ensure a 4% agriculture growth (YoY) on sustainable basis factoring monsoon behaviour with improved yield/productivity along with expanded irrigation facilities and fertilizer availability. Setting up agro food processing clusters with high value, export-quality and vacuum packed food processing facilities, etc will provide better income to farmers. Further there is a need to diversify the rice and wheat cultivations beyond the grain production to agro-food processing. The policy focus should shift from food grains to superior foods, whose demand has surged due to rise in incomes at the bottom rungs of the society.

- **Yield--**Although India is one of the leading producers in the world of many major crops like paddy, wheat, pulses, sugarcane, spices, and plantation crops, the comparison in terms of yield levels is not creditable with it achieving a much lower rank in many of these crops. Hence, agriculture production can be considerably increased if yield gap is reduced by adopting technological and policy interventions. Improvement in yields holds the key for India to remain self-sufficient in foodgrains and also make a place for itself in many agricultural crops and products in the international market.

- **Soil degradation—**Decline in fertilizer-use efficiency is one of the grey area which demands attention. Hence, there is need to lay emphasis on the recommendation of Task Force for Direct Transfer of Subsidy which states that urea needs to be brought under the purview of the nutrient-based subsidy (NBS) policy for phased shifting to direct transfer of fertilizer subsidy to farmers.

- **Land and water degradation--**Land and water degradation due to soil erosion, soil salinity, water logging and excessive application of nutrients are key concern areas

which demands attention. Hence, better management practices for rehabilitation of degraded land and water resources hold the key to overcome such issues. Measures must be taken to promote use of quality seeds, cultivation of drought resistant varieties of crops, judicious use of available water, balanced use of fertilizers, farm mechanization to improve efficiency levels and wider use of irrigation facilities.

- **Climate change--**Climate change and extreme weather scenario also hold implications for our agriculture sector and create greater instability in food production. Thus farmers' livelihood system also needs to be further refined in order to cater to the unavoidable climatic conditions or pest epidemics.

- **Agricultural Marketing--**The agriculture sector is grappled with several issues at the front of domestic and international marketing. Farmers' access to markets is hampered by poor roads, rudimentary market infrastructure and excessive regulation. Many agricultural crops are perishable in nature and post-harvest handling issues and marketing problems affect the farm incomes. Hence removing market distortions will create greater competition in markets, promote efficiency and growth, and facilitate the creation of a national agriculture market. Further reform the Agricultural Produce Marketing Committees (APMC) Act for liberating the farmers from the shackles of state mandated middlemen.

- **Infrastructure--** Agricultural sector offers backward linkage to agro-based industries and services which is a key to the creation of demand in other sectors and carries significant impact on the overall economic growth and vital in maintaining price stability in the economy. In this regard it is necessary to focus on overall farm-to-fork value chain, comprising farming, wholesaling, warehousing, logistics, processing and retailing including exports. The government policy focus on creation of modern enabling infrastructure and efficient processing facilities such as mega food parks, cold chain, value addition and preservation infrastructure, new and modernization of existing abattoirs is encouraging. The strong agricultural infrastructure will boost private sector investments in the supply chain and enhance investments activity in the sector.

- **Farm research**--Expenditure on agricultural research also needs to be stepped up substantially. Further there is also a need to heavily invest in farm research, rural infrastructure, providing better access to high value markets, better credit facilities and input use to attain high and sustainable growth in the agriculture sector.

- **Policies for rural women--**With 10% of total households in rural areas being headed by a woman[4], hence it is essential to formulate policies and package technologies and services keeping in view the productive role played by women in all facets of the agri sector.

- **Agricultural statistics--** Strengthening agricultural statistics with reliable and timely availability of forecasts of agricultural crops is also an immediate need as the gaps in agricultural statistics will hamper agricultural development planning and policymaking.

- **Reduce wastages--**Minimise the wastages from the current 25-30% less than 10% with augmenting storage capacities, modernizing/ upgrading the godowns is the need of the hour.

- **Credit--**Ensure credit availability to small & marginal farmers to adopt modern farm techniques and implement a farm insurance scheme to take care of crop loss due to unforeseen natural calamities.

- **Public & Private investments--**Increase public investments in agriculture sector to improve agriculture infrastructure from farm gate to agricultural markets. Private sector participation in food processing to enhance capacity building in the value chain and to promote technological innovations

[4] Census 2011

10. Conclusions

Global demand for agricultural products will increase steadily over the next decade although at a slower pace than in the past ten years, according to the latest Agricultural Outlook 2014-2023 produced by the Organisation for Economic Co-operation and Development (OECD) and the Food and Agriculture Organization (FAO) of the United Nations.

The role of the agriculture sector remains critical to the Indian economy as it accounts for about 55% of employment in the country. The agriculture sector in India met with a major turning point in the 1960s, post the implementation of Green Revolution due to which during 1970s and 1980s, India achieved self sufficiency in the food grains production and tremendous growth in rural economy. However, the green breakthrough achieved in the 1970s and 1980s is gradually disappearing. Since 1990, agricultural sector experienced poor performance and has become major cause of concern for food security, rural poverty and unprecedented rise in prices.

The growth of agriculture and allied sector is still a critical factor in the overall performance of the Indian economy. It is evident with the fact that when agriculture and allied sector growth rate decelerated to 5% in 2011-12 from 8.6% in 2010-11, India's real GDP growth also scaled down to 6.7% from 8.9% during the same period. Further, the sector's growth rate slipped to 1.4% in 2012-13 and the same trend was witnessed in India's real GDP growth rate reaching at 4.5% for the same period. However, with the pick up in the growth of agriculture and allied sector at 4.7% in 2013-14, India's real GDP growth also scaled to 4.7% in 2013-14.

Monsoon in India continue to influence crop production and productivity in a substantial way as merely 45% of India's net cropped area is irrigated. The south-west (SW) monsoon (from June to September) accounts for nearly 75% of total annual rainfall in India and thus substantially affects agricultural performance. The seasonal rainfall during this year's monsoon for the country as a whole has been 17% below the normal (for the period 1st June to 11th August 2014). The actual rainfall received for the period 1st June 2014 to 11th August 2014 stands at about 456 mm as against the normal rainfall of around 553 mm.

Considerable progress in foodgrains production has been recorded in 2013-14 with total foodgrains production estimated a level of 264 million tonnes as against 257 million tonnes production recorded in 2012-13. As per latest information available on sowing of crops, around 67% of the normal area under kharif crops has been sown upto 1st Aug 2014. Area sown under all kharif crops taken together has been reported to be about 706 lakh hectares at all India level as compared to around 820 lakh hectares in the corresponding period of last year.

As growth rates of productivity are far below global standards; productivity levels of rice and wheat have declined after the green revolution of the 1980s, there is a need to ensure a 4% agriculture growth (YoY) on sustainable basis factoring monsoon behaviour with improved yield/productivity along with expanded irrigation facilities and fertilizer availability. Setting up agro food processing clusters with high value, export-quality and vacuum packed food processing facilities, etc will provide better income to farmers. The policy focus should shift from food grains to superior foods, whose demand has surged due to rise in incomes at the bottom rungs of the society.

Agronomics 2014: Impact on economic growth & inflation

Although India is one of the leading producers in the world of many major crops like paddy, wheat, pulses, sugarcane, spices, and plantation crops, the comparison in terms of yield levels is not creditable with it achieving a much lower rank in many of these crops. Hence, agriculture production can be considerably increased if yield gap is reduced by adopting technological and policy interventions. Decline in fertilizer-use efficiency is one of the grey area which demands attention.

Land and water degradation due to soil erosion, soil salinity, water logging and excessive application of nutrients are key concern areas which demands attention. Hence, better management practices for rehabilitation of degraded land and water resources hold the key to overcome such issues. Climate change and extreme weather scenario also hold implications for our agriculture sector and create greater instability in food production. Thus farmers' livelihood system also needs to be further refined in order to cater to the unavoidable climatic conditions or pest epidemics.

The agriculture sector is grappled with several issues at the front of domestic and international marketing. Farmers' access to markets is hampered by poor roads, rudimentary market infrastructure and excessive regulation. Many agricultural crops are perishable in nature and post-harvest handling issues and marketing problems affect the farm incomes. Hence removing market distortions will create greater competition in markets, promote efficiency and growth, and facilitate the creation of a national agriculture market. Further reform the Agricultural Produce Marketing Committees (APMC) Act for liberating the farmers from the shackles of state mandated middlemen.

Expenditure on agricultural research also needs to be stepped up substantially. Further there is also a need to heavily invest in rural infrastructure, providing better access to high value markets, better credit facilities and input use to attain high and sustainable growth in the agriculture sector. Strengthening agricultural statistics with reliable and timely availability of forecasts of agricultural crops is also an immediate need as the gaps in agricultural statistics will hamper agricultural development planning and policymaking. Minimise the wastages from the current 25-30% less than 10% with augmenting storage capacities, modernizing/ upgrading the godowns is the need of the hour.

Increase public investments in agriculture sector to improve agriculture infrastructure from farm gate to agricultural markets. Private sector participation in food processing is needed to enhance capacity building in the value chain and to promote technological innovations.

In a nutshell, India has every potential to emerge as fastest moving world economy and a leading investment destination in the coming times, however, it requires urgent policy actions to remove bottlenecks to growth. The most important and the immediate challenge to resume the high growth momentum are to address the structural supply side bottlenecks. Inflation has been posing a major challenge to India’s growth story. High levels of prices, especially vegetables, fruits, milk; eggs and fuels etc have been reflected in double digit rates of inflation. Structural supply side reforms are a must if growth is going to pick up and if double-digit growth is ever to materialize, going ahead.

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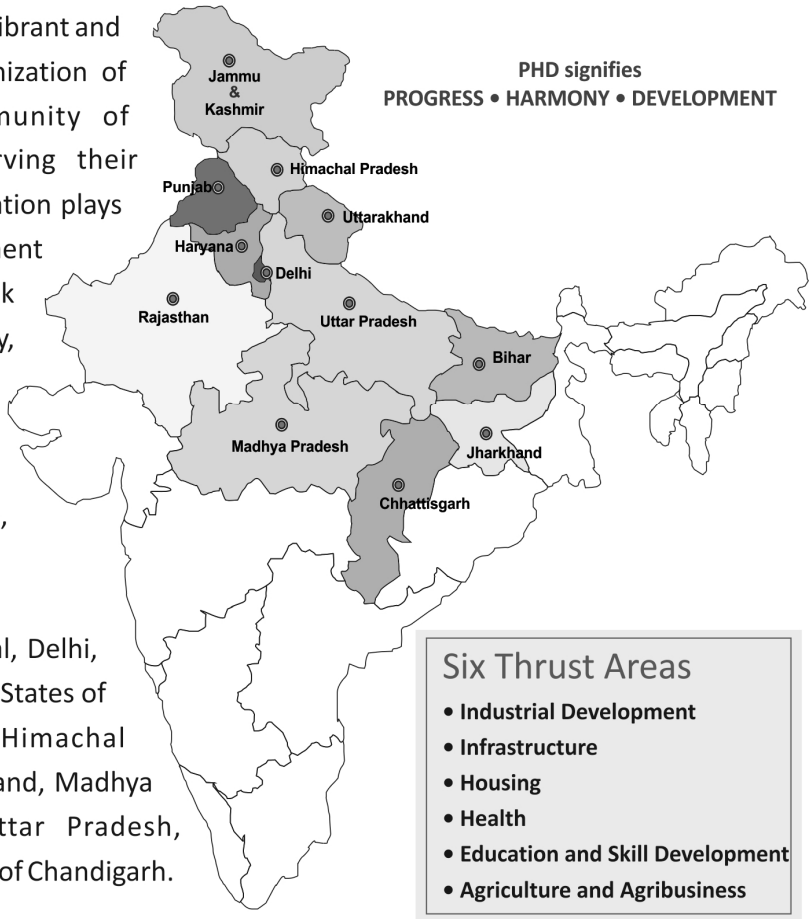

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Notes

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