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Analysis gap between target and achievement of production of major crops of India

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Abstract

Agriculture is an exceptional sector of Indian economy. On an average, about 57 per cent of the households and 10 per cent of the urban population is depended on agriculture as their source of livelihood. The country faced a problem of rapidly growth in population and lower growth in food grains. The government of India decides target for major crops production in India. Some time production remains under target and sometime achieves the target. The study was undertaken with the objective to analyse the gap between target and achievement of production of major crops of India. The secondary data was used for study and analyzed by simple tabular method. Find out the target was under achievement (minimum) 77.23 per cent in 2002-03 while the achievement was 104.60 per cent more than target of production of rice in 1999-2000. The target was under achievement (minimum) 84.31 per cent in 2002-03 while the achievement was 112.95 per cent more than target of production of wheat in 2011-12. The target was under achievement (minimum) 77.84 per cent in 2009-10 while the achievement was 110.59 per cent more than target of production of coarse cereals in 2003-04. The target was under achievement (minimum) 69.56 per cent in 2002-03 while the achievement was 110.55 per cent more than target of production of pulses in 2010-11. The target was under achievement (minimum) 65.86 per cent in 2000-01 while the achievement was 105.65 per cent more than target of production of oil seed in 2013-14. The target (minimum) was under achievement 73.08 per cent in 2003-04 while the achievement was 131.67 per cent more that target of production of sugarcane in 2006-07.

Keywords: target, rice, wheat, course cereals, pulses, oilseed, sugarcane and cotton

Introduction

Agriculture is indispensable for the sustenance and growth of the Indian economy. On an average, about 57 per cent of the households and 10 per cent of the urban population is depended on agriculture as their source of livelihood. Total geographical area of India is 328.37 million hectares of which 305.27 million hectare is the reporting area. As of 2018, total sown area of *khariif* crops in India reached 105.78 million hectares. India ranks second worldwide in farm outputs. Indian yields per hectare of crops are generally low compare to international standards. The major crops of India are Rice, Wheat, Coarse cereals, Pulses, Oilseeds, Sugarcane, Cotton, Jute & Mesta etc. The economic contribution of agriculture to India's GDP is regularly declining with the country's broad-based economic growth. Still, agriculture is demographically the broadest economic sector and plays a very important role in the overall socio-economic fabric of India.

India is one of the largest producers of agricultural production in the world. It is the second largest producer in the wheat and rice. Total cropped area in 2017-18 was 140.1 million hectare, in which total cropped area under rice was 437.891 lakh hectares, followed by wheat (295.76), coarse cereals (242.05), pulses (299.93), food grains (1275.63), oil seeds (246.45), sugarcane (47.32) and cotton (124.29) lakh hectare in 2017-18. Total cereals crops production in 2017-18 was 279.51 million tonnes in which rice production were 112.91 million tonne, followed by wheat (99.70), coarse cereals (46.99), pulses (25.23), food grain (284.83), oilseeds (31.31), sugarcane (376.90) and cotton 34.89 million tonne in 2017-18. Total yield of rice is 2578 kilogram per hectare in 2017-18 followed by wheat (3371), coarse cereals (1941), pulses (841), food grains (2233), oilseeds (1270) sugarcane (79650) and cotton (477) kilogram per hectare in 2017-18.

All time sequence data is characterized by a unique cycle. Despite its ascertainable uniqueness from conditions that lead to boom times to triggers that result in reversals, historical narratives (Brockwell & Davis, 2009) suggest that most cycles display common features. Boom times are related with periods of credit expansion and persistent increases in asset prices often followed

by rapid reversals. These commonalities definite by different observed work (Bordo, Eichengreen, Klingebiel & Martinez-Peria, 2001). Rice and wheat are the staple food for a large percentage of population in India. India is one of the top two producers of rice and wheat. Most of the rice and wheat produced is consumed domestically. In Indian agriculture rice and wheat holds a special place. It is well suited to soil and climate of the country and is intertwined with different religious observations, festivals, customs and traditions. Moreover being a labor intensive crop it absorbs a large section of rural labor force and is a effective source of employment in the country (Ghosh & Neogi, 1995; Ghosh, 2002; Ghosh & Ray Chaudhury (2007) [5]. Above all, several studies have demonstrated India's competitive advantage in rice and under the given conditions the prospect of rice exports. True to this assumption rice has emerged as an important export item with the initiation of economic reforms. Until recently, export in India was a residual in nature so the demand projections will enable us to determine the export potentiality of some commodities (Ghosh, 2002; Ghosh & Ray Chaudhuri (2007) [5]. Research in this direction requires high number of inputs resulting in intensive costs. Therefore, keeping the above facts in view the present study was conducted with the objective to analyse of gap between target and achievement of production of major crops of India.

Research Methodology

The study was based on secondary data. The secondary data were collected from the website of Ministry of Agriculture and Farmers' Welfare, Government of India and Agricultural

Statistics at a Glance, Directorate of Economics and Statistics, and Food and Agriculture Organization (FAO). The secondary data on area, production and productivity from 1998-99 to 2017-18 was used for analysis. The secondary time series data on area, production and productivity of major crops of India were used to analysis.

The collected data was tabulated in the view of the cited objectives and was interrelated by using suitable statistical measures. Simple tabular method used for analysis.

Result and Discussion

Gap between target & achievement of production of major crops of India during last 20 years (1998-99 to 2017-18)

Target and achievement of rice production in India

The target and achievement of production of rice in India during 1998-99 to 2017-18 are presented in table 1. Where in production target was decide minimum 86 MT and achievement was got 86.08 MT in 1998-99 while maximum production target was decide to 108.50 MT and achievement was got 112.91 MT. The under achievement target year of production of rice were find to be in 2000-01, 2002-03, 2003-04, 2004-05, 2009-10, 2010-11, 2014-15 and 2015-16 while other side more achievement were find to be in 1998-99, 1999-2000, 2001-02, 2005-06, 2006-07, 2007-08, 2008-09, 2011-12, 2013-14, 2014-15, 2016-17 and 2017-18. The target was under achievement (minimum) 77.23% in 2002-03 while the achievement was 104.60% more than target of production of rice in 1999-2000.

Table 1: Target and achievement of wheat and rice production of India (Million tonnes)

Year	Wheat			Rice		
	Target	Achievement	Achievement % to target	Target	Achievement	Achievement % to target
1998-99	74	71.29	96.34	86	86.08	100.09
1999-2000	74	76.37	103.20	86	89.96	104.60
2000-01	74	69.68	94.16	90	84.98	94.42
2001-02	78	72.77	93.29	92	93.34	101.46
2002-03	78	65.76	84.31	93	71.82	77.23
2003-04	78	72.15	92.50	93	88.53	95.19
2004-05	79.50	68.64	86.34	93.50	83.13	88.91
2005-06	75.53	69.35	91.82	87.80	91.79	104.54
2006-07	75.53	75.81	100.37	92.80	93.35	100.59
2007-08	75.50	78.57	104.07	93	96.69	103.97
2008-09	78.50	80.68	102.78	97	99.18	102.25
2009-10	79	80.80	102.28	100.50	89.09	88.65
2010-11	82	86.87	105.94	102	95.98	94.10
2011-12	84	94.88	112.95	102	105.30	103.24
2012-13	88	93.51	106.26	104	105.24	101.19
2013-14	92.50	95.85	103.62	105	106.65	101.57
2014-15	94	86.53	92.05	106	105.48	99.51
2015-16	94.75	92.29	97.40	106.10	104.41	98.41
2016-17	96.50	98.51	102.08	108.50	109.70	101.11
2017-18	97.50	99.70	102.26	108.50	112.91	104.06

Target and achievement of wheat production of India

The target and achievement of production of wheat in India during 1998-99 to 2017-18 are presented in table 1. After green revaluation wheat production was increase significantly, where minimum production target was decide minimum 74 MT and achievement was got 71.29 MT in 1998-99 while maximum production target was decide to 97.50 MT and achievement was got 99.70 MT in 2017-18. The under achievement target year of production of wheat were find to be in 1998-99, 2000-01, 2001-02, 2002-03, 2004-

05, 2005-06, 2014-15 and 2015-16 while other side more achievement were find to be in 1999-2000, 2003-04, 2006-07, 2007-08, 2008-09, 2010-11, 2011-12, 2013-14, 2014-15, 2016-17 and 2017-18. The target was under achievement (minimum) 84.31% in 2002-03 while the achievement was 112.95% more than target of production of wheat in 2011-12.

Target and achievement of coarse cereals production of India: The target and achievement of production of coarse cereals in India during 1998-99 to 2017-18 are presented in

table 2. Coarse cereals production target was decide minimum 34.50 MT for both 1998-99 and 1999-2000 and achievement was got respectively 31.33 and 30.34 MT in 1998-99 while maximum production target was decide to 45.65 MT and achievement was got 46.99 MT in 2017-18. The under achievement target year of production of coarse cereals were find to be in 1998-99, 1999-2000, 2000-2001, 2002-03, 2004-05, 2005-06, 2006-07, 2008-09, 2009-10, 2010-11, 2012-12, 2015-16 and 2016-17 while other side more achievement were find to be in 2001-02, 2003-04, 2007-08, 2011-12, 2013-14, 2014-15 and 2017-18. The target was under achievement (minimum) 77.84% in 2009-10 while the achievement was 110.59% more than target of production of coarse cereals in 2003-04.

Target and achievement of total pulses production of India: The target and achievement of production of total pulses in India during 1998-99 to 2017-18 are presented in table 2. Total pulses production target was decide minimum 15 MT for both 2000-01 and 2003-04 and achievement was got respectively 11.07 and 14.91 MT while maximum production target was decide to 22.90 MT and achievement was got 25.23 MT in 2017-18. The under achievement target year of production of total pulses were find to be in 1998-99,

1999-2000, 2000-2001, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2014-15 and 2015-16 while other side more achievement were find to be in 2010-11, 2011-12, 2012-13, 2013-14, 2016-17 and 2017-18. The target was under achievement (minimum) 69.56% in 2002-03 while the achievement was 110.55% more than target of production of total pulses in 2010-11.

Target and achievement of total oilseeds production of India: The target and achievement of production of oil seeds in India during 1998-99 to 2017-18 are presented in table 3. Oil seeds production target was decide minimum 27 MT for 1998-99, 1999-2000 and 2002-03 and while maximum production target was decide to 35.50 MT in 2017-18. The under achievement target year of production of oil seed were find to be in 1998-99, 1999-2000, 2000-2001, 2001-02, 2002-03, 2004-05, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11, 2011-12, 2012-13, 2014-15, 2015-16, 2016-17 and 2017-18 while other side more achievement were find to be in 2003-04, 2005-06 and 2013-14. The target was under achievement (minimum) 65.86% in 2000-01 while the achievement was 105.65% more than target of production of oil seed in 2013-14.

Table 2: Target and achievement of coarse cereals and total pulses production of India (Million tonnes)

Year	Coarse Cereals			Pulses		
	Target	Achievement	Achievement % to target	Target	Achievement	Achievement % to target
1998-99	34.50	31.33	90.81	15.50	14.91	96.19
1999-2000	34.50	30.34	87.94	15.50	13.41	86.52
2000-01	35	31.08	88.80	15	11.07	73.80
2001-02	33	33.37	101.12	16	13.97	87.31
2002-03	33	26.07	79.00	16	11.13	69.56
2003-04	34	37.60	110.59	15	14.91	99.40
2004-05	36.80	33.46	90.92	15.30	13.13	85.82
2005-06	36.52	34.06	93.26	15.15	13.39	88.38
2006-07	36.52	33.92	92.88	15.15	14.20	93.73
2007-08	37.50	40.76	108.69	15.50	14.76	95.23
2008-09	42	40.03	95.31	15.50	14.57	94.00
2009-10	43.10	33.55	77.84	16.50	14.66	88.85
2010-11	44	43.68	99.27	16.50	18.24	110.55
2011-12	42	42.01	100.02	17	17.09	100.53
2012-13	44	40.04	91.00	18.24	18.34	100.55
2013-14	42.50	43.29	101.86	19	19.25	101.32
2014-15	41.50	42.86	103.28	19.50	17.15	87.95
2015-16	43.20	38.52	89.17	20.05	16.32	81.40
2016-17	44.35	43.17	97.34	20.75	23.13	111.47
2017-18	45.65	46.99	102.94	22.90	25.23	110.17

Target and achievement of sugarcane production of India

The target and achievement of production of sugarcane in India during 1998-99 to 2017-18 are presented in table 3. Sugarcane production target was decide minimum 237.50 MT for 2005-06 and while maximum production target was decide to 355 MT for 2015-16, 2016-17 and 2017-18. The under achievement target year of production of sugarcane were find to be in 1998-99, 1999-2000, 2000-2001, 2001-02, 2002-03,

2003-04, 2004-05, 2008-09, 2009-10, 2012-13, 2015-16 and 2016-17 while other side more achievement were find to be in 2005-06 2006-07, 2007-08, 2010-11, 2011-12, 2013-14, 2014-15 and 2017-18. The target (minimum) was under achievement 73.08% in 2003-04 while the achievement was 131.67% more that target of production of sugarcane in 2006-07.

Table 3: Target and achievement of total oilseeds and sugarcane production of India (Million tonnes)

Year	Oilseeds			Sugarcane		
	Target	Achievement	Achievement % to target	Target	Achievement	Achievement % to target
1998-99	27	24.75	91.67	300	288.72	96.24
1999-2000	27	20.71	76.70	305	299.32	98.14
2000-01	28	18.44	65.86	325	295.96	91.06
2001-02	28	20.66	73.79	325	297.20	91.45
2002-03	27	14.84	54.96	320	287.38	89.81
2003-04	24.70	25.19	101.98	320	233.86	73.08
2004-05	26.20	24.35	92.94	270	237.09	87.81
2005-06	26.58	27.98	105.27	237.50	281.17	118.39
2006-07	29.40	24.29	82.62	270	355.52	131.67
2007-08	30	29.76	99.20	310	348.19	112.32
2008-09	31.75	27.72	87.31	340	285.03	83.83
2009-10	31.60	24.88	78.73	340	292.30	85.97
2010-11	33.20	32.48	97.83	315	342.38	108.69
2011-12	33.60	30.01	89.32	350	361.04	103.15
2012-13	33.50	30.94	92.36	352	341.20	96.93
2013-14	31	32.75	105.65	340	352.14	103.57
2014-15	33	27.51	83.36	345	362.33	105.02
2015-16	33	25.25	76.52	355	348.45	98.15
2016-17	35	31.28	89.37	355	306.07	86.22
2017-18	35.50	31.31	88.20	355	376.90	106.17

Conclusion

The present study concluded that the analysis the gap between target and achievement of production of major crops of India. The government and leading agricultural institutes decide target production of agricultural production. In present study

we concluded that target production of major crops are achieved the good climatic condition for particular crop. Sometime production remains lower than target but mainly production achieve more than the target production.

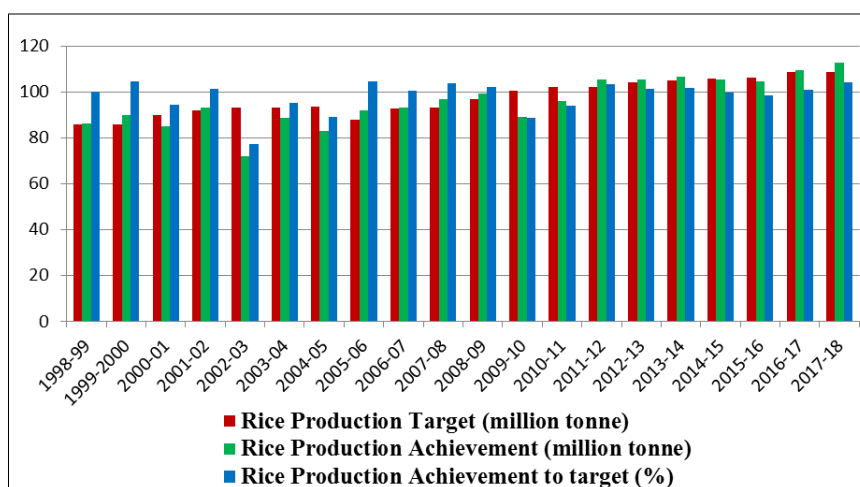


Fig 1: Target and achievement of rice production of India

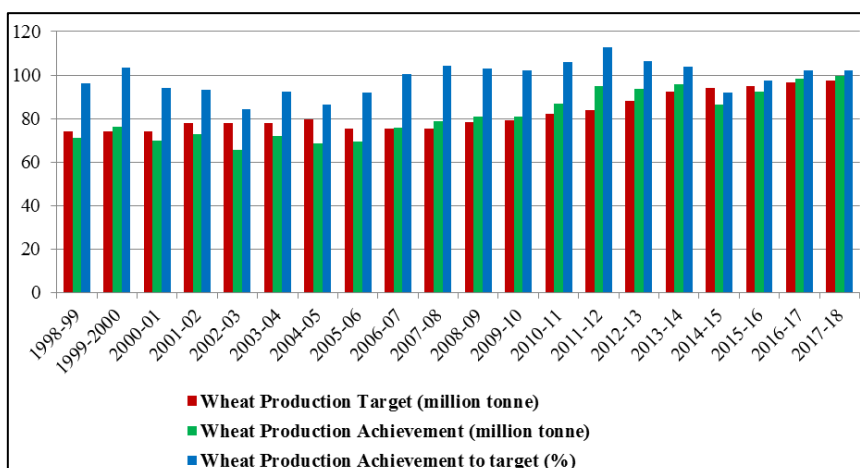


Fig 2: Target and achievement of wheat production of India

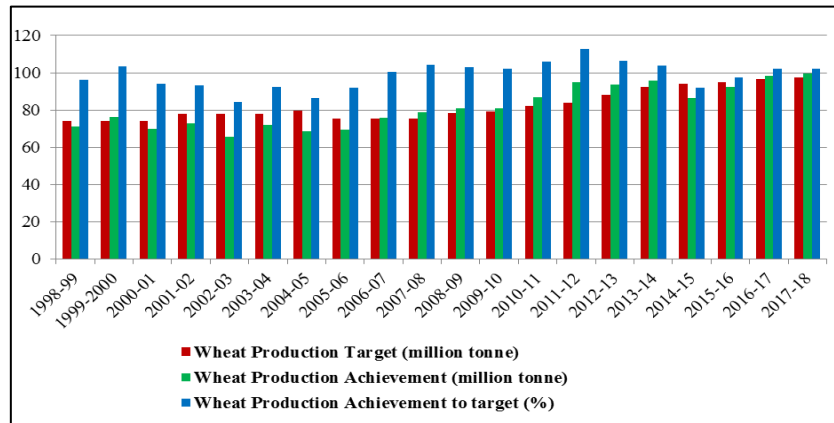


Fig 3: Target and achievement of coarse cereals production of India

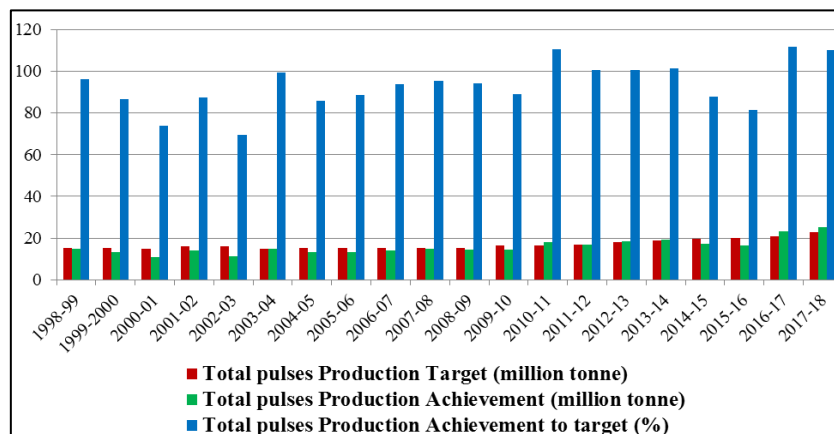


Fig 4: Target and achievement of total pulses production of India

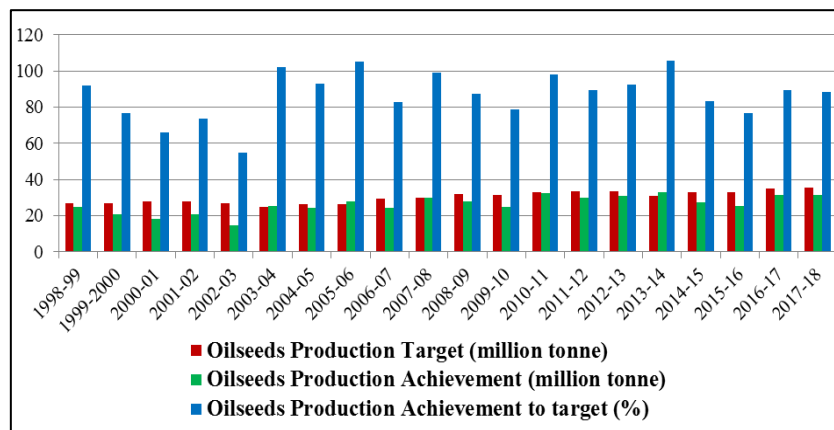


Fig 5: Target and achievement of oilseeds production of India

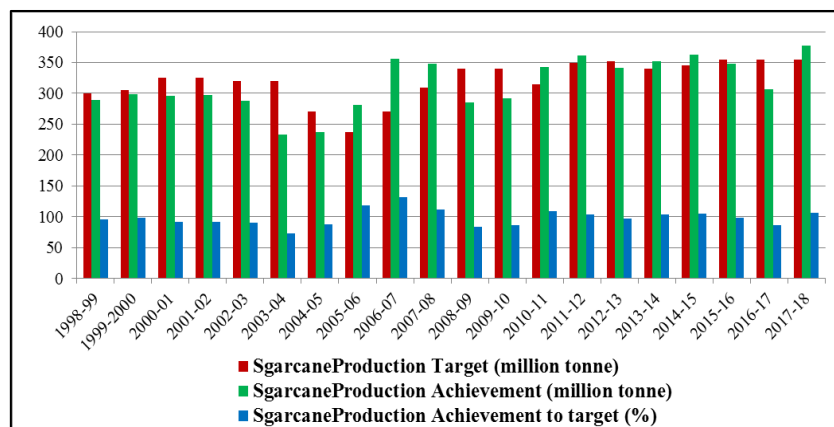


Fig 6: Target and achievement of sugarcane production of India

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