Research Paper Management

An Economic Analysis of Trends in Agriculture Growth and Production in Gujarat

Bansi Patel | Assistant Professor, SJPI

Dr.Narayan Baser | Associate Professor, SJPI

ABSTRACT

The present paper examines the performance of Trends of Agriculture growth and production in Gujarat. The paper has shown the variation in the agriculture growth rate in Gujarat and production of various crops during the last three decades and also highlight the performance of the Gujarat agriculture over the period of time. The present paper mainly focused on the secondary sources with help of the statistical tools such as mean, standard deviation, covariance, CGR has been used for study purpose.

KEYWORDS

1.1 Introduction

Agriculture is the backbone of Indian Economy. Agriculture development is essential part for the overall development of the economy. Agriculture provides rewarding employment and livelihood for majority of the population in India. At the time of Independence about 72% of working population was engaged in agriculture activity in India[1] and the share of Agriculture and allied activities was 51.45% to total GDP of India.[2] According to 2011 census 68.8% of working population still engaged in agriculture activity and the share of agriculture and allied activity was only 14% to total GDP.[3]

As Mahatma Gandhi said, "India lives in villages and agriculture is the soul of Indian economy" before six decade ago. As we entered in the new millennium, the situation remains the same; however the concern now is declining agriculture growth. In terms of growth, the performance of agriculture in the post-Independence era has been impressive as compared to the pre-Independence period. Small landholding, low agriculture productivity, lack of knowledge and information absence of access to credit markets or imperfect credit markets, poor human resource base, inadequate irrigation system, less use of technology, imperfect markets for inputs, changes in the climate, low level of formal education and skill are general issues of the farmers in India.[4]

1.2 Objectives and Methodology

In this background, the present study is to analyse the trends and pattern of agriculture growth and Production in Gujarat. The Present Study is based on secondary sources. Secondary data is collected from various Government of India Reports, RBI reports, Directors of economics and statistics Gujarat reports, Ministry of Agriculture reports, books, articles, and Economic Survey of India.

1.3 Agriculture in Gujarat

The State has an international boundary and has a common border with the Pakistan at the north-western fringe. The two deserts, one north of Kachchh and the other between Kachchh and the mainland Gujarat are saline wastes. The State has a long coast-line of about 1600 kms and is the longest among all States of country. As per 2001 population census, Gujarat State comprised 25 districts, sub-divided into 225 talukas, having 18066 inhabited villages and 242 towns. Gujarat has geographical area of 1.96 lakh sq. kms and accounts for 6.19 percent of the total area of the country. At present state comprise 26 districts. Gujarat has reached 6.03 crore population as per 2011 census. The Urban population of the state is 42.6% and the rural population of the state is 57.4%.[5]

Gujarat has diversified cropping pattern include the food grains and pulses, cash crops and oil seeds. Gujarat is the largest producer of cotton, groundnut, and onion. In 2013 Gujarat received total food grain production award by the president of India.[6]

1.3 Major Agriculture and Horticulture crops of Gujarat

Particular	Name of Crops
Major Kharif crops	Cotton, Groundnut, seas mum, Castor, Paddy, Bajara, Maize, Tur, Green Gram
Major Ravi(Summer) Crops	Wheat, Rice, Maize, Mustard, Gram, Ground nut, Bajara, Sugarcane
Major Vegetable	Onion, potato, Brinjal, tomato, okra, Cabbage, Cauliflower
Major Spices	Cumin, Fennel Garlic, Chilly, Coriander, Ginger, Turmeric, Fenugreek, Ajawan and Suva
Major fruits	Banana, mango, papaya, chiku, lemon, Citrus ,Ber, Guava ,Pomegranate,
Major flowers	Rose, marigold, Mogra, lily

(SOURCE: DIRECTORATE OF ECONOMICS AND STATISTICS, GUJARAT)

1.4 Agriculture Growth in Gujarat

The agricultural growth rate in Gujarat raised from 3.3 per cent in the 1990s to 11.1 per cent during the decade 2001-2002 to 2011-2012. In fact, the production of cotton, wheat, fruit crops and milk have played a vital role in sustaining the agricultural growth in the State economy.

Although, the farmers of Gujarat have shown a move towards cash crops, fruits and vegetables and oil seeds, it is a matter of pride that the total production of food grains crossed 100 lakh MT for the first time in the history of the State in 2010-2011. Agriculture continues to contribute 15 per cent of Gujarat's Gross State Domestic Product (GSDP) and provides employment to almost 51.58 per cent of our workforce.

According to CARE Ratings the State contributes more than 7 per cent to India's GDP; in particular, it for 13 per cent of manufactured and 11 per cent of primary sector output (mainly agriculture) of the country.[7] During the 11th five year plan period (2007-12) the average agriculture growth rate of Gujarat was 5.49 percent per annum as compared to all India average growth rate of 4.06 percent per annum. As against 21.64 percent growth in 2010-11 and 5.02 percent growth in 2011-12, Gujarat has registered -6.96 percent growths in

2012-13, which is the first year of 12th Five Year Plan, stated the CAG report.[8]

The year wise agriculture growth rate of Gujarat from 2001 to 2013 has shown in table 1.

Table 1: Agriculture growth Rate in Gujarat

Year	Agriculture growth of Gujarat
2001-02	-11.52%
2002-03	30.64%
2003-04	-6.83%
2004-05	39.89%
2005-06	-6.76%
2006-07	23.10%
2007-08	7.48%
2008-09	-7.41%
2009-10	-0.50%
2010-11	18.12%
2011-12	5.70%
2012-13	-6.96%

(Source: Data Table of Planning commission, Govt. Of India)

1.5 Crop Production

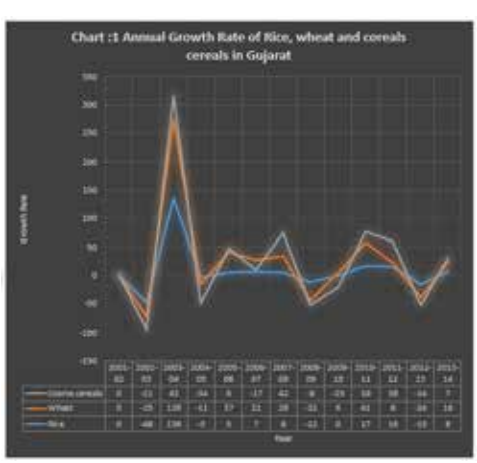
Crop production will become more difficult with climate change, resource scarcity (e.g. land, water, energy, and nutrients) and environmental degradation (e.g. declining soil quality and surface water eutrophication). To pursue the fastest and most practical route to improved yield, the near-term strategy is application and extension of existing agricultural technologies.[9] Agricultural productivity is measured as the ratio of agricultural outputs to agricultural inputs so it is called efficiency of farm. The productivity of a region's farms is important for food sufficiency, growth prospects, income distribution, etc. An increase in a region's agricultural productivity implies a more efficient utilization of scarce resources, which leads to higher incomes from low cost. As farms become more prolific, the wages earned by workers in agriculture also increases and at the same time, food supplies become more stable.

Table 2: Year Wise Production of Major Crops in Gujarat (2001-2013) (In thousand tonnes/bales)

Year	Rice	Wheat	Coarse cereals	Pulses	Food-grains	Oilseeds	Cotton (Lint)
2001-02	1040.0	1144.7	2341.0	379.8	4905.6	3635.5	1702.7
2002-03	541.7	856.6	1840.8	327.2	3566.3	1683.1	1684.6
2003-04	1277.0	2036.5	2635.4	622.4	6571.3	5665.0	4026.9
2004-05	1238.2	1805.5	1734.5	479.3	5257.5	2986.9	4724.8
2005-06	1298.0	2473.0	1836.0	547.0	6154.0	4682.0	6772.0
2006-07	1390.0	3000.0	1516.0	593.0	6499.0	2569.0	8787.0
2007-08	1474.0	3838.0	2151.0	743.0	8206.0	4725.0	8276.0
2008-09	1303.0	2593.0	1976.0	609.0	6481.0	4015.9	7013.8
2009-10	1300.0	2739.0	1473.0	552.0	6064.0	2990.0	7875.0
2010-11	1523.0	3854.1	1755.2	720.0	7852.3	3911.9	10500.0
2011-12	1764.0	4100.0	2419.0	783.0	9066.0	4931.0	12000.0
2012-13	1503.0	3135.0	2073.0	613.0	7324.0	2893.0	8725.0
2013-14	1616.0	3651.4	2208.0	739.0	8214.4	6837.9	10950.0
Mean	1328.3	2709.75	1996.84	592.90	6627.80	3963.55	7156.75
SD	300.14	1036.50	349.05	138.56	1520.34	1399.25	3310.07
CV	22.60	38.25	17.48	23.37	22.94	35.30	46.25
CAGR	3.74	10.15	-0.49	5.70	4.39	5.41	16.78

(Source: Reserve Bank of India)

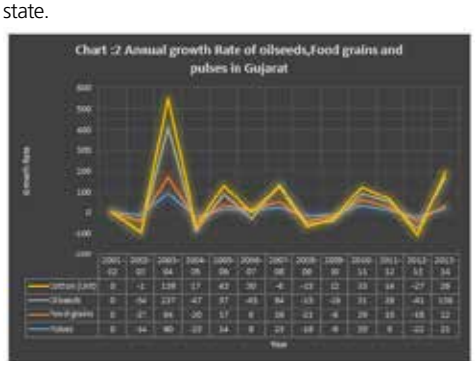
Average production of cotton is highest (7156.75 thousand tons) and it is followed by food grain (6627.80 thousand tons) in the state. Average production of the pulses (592.90 thousand tons) is lowest and it is followed by rice (1328.30 thousand tons) in the Gujarat state. The annual growth rate of rice, wheat and cereals has shown in chart 1



(Source: As per data table 1)

The rice has the highest growth rate by 136% in 2003-04 and the lowest negative growth rate in 2002-03 by 48%. The Wheat has the highest growth rate by 138% in 2003-04 and the lowest negative growth rate in 2008-09 by 48%. The coarse cereals has the highest growth rate by 43% in 2003-04 and the lowest negative growth rate in 2004-05 by 34%.

Cotton and Wheat have grown at CAGR 10.15% and 16.78% respectively. While rice, pulses, Food grain and oilseeds have grown at CAGR at 3.70%, 5.74%, 4.39% and 5.41% respectively in the state.



(Source: As per data table 1)

The Pulses has the highest growth rate by 90% in 2003-04 and the lowest negative growth rate in 2002-03 by 54%. The Food grain has the highest growth rate by 84% in 2003-04 and the lowest negative growth rate in 2002-03 by 27%.

The oilseeds has the highest growth rate by 237% in 2002-03 and the lowest negative growth rate in 2004-05 by 54%. The cotton has the highest growth rate by 139% in 2002-03 and the lowest negative growth rate in 2012-13 by 27%.Crop wise highest and lowest production is shown in table 4.3

Table 4.3 Crop wise Highest and Lowest production (2001 to 2014)

Name of Crop	Highest production		Lowest Production	
	Year	Production	Year	Production
Rice	2013-14	1616	2002-03	541.7
Wheat	2011-12	4100	2002-03	856.6
Coarse cereals	2003-04	2635.4	2009-10	1473
Pulses	2011-12	783	2002-03	327.2
Food-grains	2011-12	9966	2002-03	3566.3
Oilseeds	2013-14	6837.9	2002-03	1683.1
Cotton (Lint)	2011-12	12000	2002-03	1684.6

The majority of the crop had the highest production in the Year 2011-12 and the lowest production in the year 2002-03.

Conclusion

From the above evidence we can conclude that overall performance of the Gujarat agriculture growth and production has shown the significant change in the last three decades. It reveals that the agriculture major crops has increase over the period of time. An average of 6627.20 million tonnes of food grain is produced annually which is higher than production of rice, Wheat, Coarse cereals, Pulses and oilseeds taken individually. However, it is less than annually average production of all Cotton (7156.75 million tonnes). Nonetheless, the variation in annual production of all food grains is significant standard Deviation value obtained of cotton, Food grain, oilseeds and wheat have increased comparatively over the last few years. (Endnotes)-

REFERENCES

Amarnath tripathi & A.R.Prasad, (2009). Agricultural Development in India since Independence: A Study on Progress, Performance, and Determinants . Journal of Emerging Knowledge on Emerging Markets , 64-92 || open govt.data platform. (2013, may 13). Retrieved January 15, 2015, from data govt web site: http://data.gov.in/catalog/gdp-india-and-major-sectors-economy-share-each-sector-gdp-and-growth-rate-gdp-and-other#web_catalog_tabs_block_1 | | planning commission. (2013, April 1). Retrieved January 15, 2015, from Govt of india website: http://planningcommission.gov.in/hackathon/index.php?sector=Agriculture_and_Rural_Development || Dev, S. (June 2012). Small Farmers in India:Challenges and Opportunities. Indira gandhi institute of development and research , 1-35. || (n.d.). Retrieved April 1, 2015, from Government of gujarat website: www.gujaratindia.com/state-profile/demography.htm || (2013, January 16). Retrieved April 2, 2015, from Narendra modi web site: http://www.narendramodi.in/gujarat-receives-total-food-grain-production-award-by-the-president-of-india/ | | kumar, m. (2014, September 8). niticentral. Retrieved April 8, 2015, from http://www.niticentral.com/2014/09/08/gujarat-agricultural-growth-role-model-india-237420.html | | (2015, april 1). Retrieved april 8, 2015, from zee news website: http://zeenews.india.com/business/news/economy/gujarat-registered-negative-growth-in-agriculture-in-2012-13-cag_122430.html || 9mingsheng fan, j. s. (2011, December 22). journal of experimental botany. Retrieved March 4, 2015, from oxford website: http://jxb.oxfordjournals.org/content/early/2011/09/30/jxb.err248.full |||