

# State Budgetary Resources and Agricultural Development in Gujarat

Rajeshree A. Dutta

AGRO ECONOMIC RESEARCH CENTRE  
SARDAR PATEL UNIVERSITY  
VALLABH VIDYANAGAR – 388 120.  
GUJARAT  
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## CONTENTS

CHAPTER	No.	TITLE	Page
		FOREWORD	
CHAPTER -	1	INTRODUCTION .....	1
CHAPTER -	2	TRENDS AND PATTERN OF BUDGETARY EXPENDITURE ON AGRICULTURE .....	22
CHAPTER -	3	AGRICULTURAL DEVELOPMENT SCHEMES .....	38
CHAPTER -	4	NEXUS BETWEEN STATE INTERVENTION AND AGRICULTURE DEVELOPMENT .....	52
CHAPTER -	5	SUMMARY AND CONCLUSION .....	57

## **FOREWARD**

Agriculture plays an important role in Gujarat economy. It contributes around 21 percent of the gross domestic product (GDP). About 60 percent of the State's rural population depends on agriculture for their livelihood. Enhancing growth of the agriculture sector is vital for ensuring the food security, poverty eradication, price stability, overall growth and sustainability of growth of the overall economy. Though the plan outlay for agriculture in absolute term has been increasing continuously over the years in Gujarat, the relative share of agriculture outlay in budget is found to be decreasing. This shrinkage has significant effects on the development of agricultural sector. Besides, the fluctuations in expenditure in agriculture, investment in irrigation facilities, technology breakthrough, infrastructure development etc. are also factors affecting agricultural production in the state.

Above all, adequate and timely rainfall is the most important factor for agriculture in Gujarat because around 70 percent of its agriculture is rainfed. Despite various constraints, Gujarat has achieved significant development in agricultural sector over the years.

The present study has been undertaken for Gujarat to examine the budgetary allocation for the agriculture sector as a whole and its allocation among various sub sectors of the agricultural sector in the state and to document the agriculture related schemes.

My special thanks to Prof. R. S. Deshpande, Director, Institute for Social and Economic Change, Bangalore for the guidance and support in preparing this report. I am thankful to the officials of Directorate of Economics and Statistics and Directorate of Agriculture, Government of Gujarat for providing required data. I am grateful to Dr. Mahesh Pathak, Honorary Advisor, for going through the draft and providing useful suggestions.

Dr. (Mrs.) Rajeshree A. Dutta, who shouldered the overall responsibility of the entire project, deserves appreciation for bringing out this report. Ms. Kalpana Kapadia, R. A. has done tabulation and computer work of the project. Shri Pinal Patel has finalized computerization of the report.

It is hoped that the results presented in the report will be useful to policy makers, planners and researchers.

H. P. Trivedi  
(Hon. Director)

Date: 20<sup>th</sup> December 2009  
Vallabh Vidyanagar

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Introduction**

Agriculture is the largest sector of economic activity in India. Agriculture which is considered as the backbone of India, not only provides food and raw materials but also employment to a very large proportion of population. Although the share of agriculture in overall GDP has declined over the years from around 50 percent in 1950-51 to 40 percent in 1980-81 to less than 20 percent in 2006-07, it continues to play an important role in the Indian economy. Similar trend was found in Gujarat economy as share agriculture in GSDP declined to 21 percent in 2005-06 as compared to 30 percent in 1985-86. However investment has increased continually over the five year plan periods from Rs. 17crore in second five year plan to Rs.4169 crore in the 10<sup>th</sup> five year plan.

### **1.2 Profile of the State.**

Gujarat is situated in the west coast of India. The state is bound by the Arabian sea on the west, Pakistan and Rajasthan in the north and northeast respectively. Madhya Pradesh in the south-east and Maharashtra in the south. The state covers an area of 196024 sq.km, which is nearly 6 percent of India. The state of Gujarat comprises of 26 districts and 225 talukas.

### **Agro-Climatic zones**

Gujarat is spread over seven agro-climatic zones, based on geography, climate average rainfall and the nature of soil.<sup>1</sup>

- 1) South Hills: This consists of districts of Dangs and Valsad with average rainfall of 1800mm/annum and deep black soil. The major crops are rice, sugarcane, mango and chikoo. Certain parts of the districts are heavily populated by tribal population.
- 2) Southern Gujarat: This comprises of districts of Surat, Vapi, Bharuch and Narmada with average rainfall of 970mm/annum, the soil is deep black, coastal alluvium and major crops are rice, tur, sugarcane and vegetables. Certain parts of these districts are dominated by tribal population.
- 3) Central Gujarat: This has districts of Vadodara, Anand, Kheda, Dahod and Panchmahals, the major crops are cotton, tobacco, maize sugarcane, rice, banana

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<sup>1</sup> Dr. Shelat Kirti N. "What ails our agriculture? The Gujarat experience 2007".

and vegetables. Anand, Kheda and Vadodara are agricultural developed districts. Areas of Dahod and Panchmahal are most backward areas.

- 4) North Gujarat: This consists of districts of Ahmedabad, Gandhinagar, Mehsana, Patan, Banaskantha and Sabarkantha with average rainfall of 735mm and soil is gray brown, coastal alluvium. The major crops are wheat, bajra, jowar, castor, mustard, cotton, vegetables and spices.
- 5) North Saurashtra: This comprises of districts of Amreli, Jamnagar, Bhavnagar, Rajkot and Surendranagar. The average rainfall is about 500mm. The soil is medium, black and shallow calcareous. The major crops include groundnut, cotton, tur, gram, udad, bajra and jowar.
- 6) South Saurashtra: The districts of Junagadh and Porbandar with average rainfall of 85mm fall under this zone. Soil is medium black and coastal alluvium. The crops grown are gram, cotton, bajra and mangoes.
- 7) North West area: This zone has district of Kutch with average rainfall of 300mm. The region experiences recurrent droughts. Crops grown are bajra, jowar, groundnut, cotton and date palm.

### **Demographic Characteristic**

According to the population census 2001, the population of Gujarat was 5.07 crores. The decadal growth rate has increased from 21.19(1981-91) to 22.66(1991-2001). The population of SC and ST in the state was 7.09 percent and 14.76 percent respectively during 2001. The density of state population was 258 persons per sq km in Gujarat as against 324 persons per sq km for the country as a whole. The sex ratio of Gujarat has reduced significantly from 934(1991) to 920(2001), which is lower than of the all India ratio of 933.

Nearly, 37.36 percent population of Gujarat resides in urban area. Classification of population by economic activity for the year 2001 reveals that out of the total population, 33.60 percent were main workers, 8.35 percent were marginal workers and 58.05 percent were non workers. About 45.58 percent working population was engaged in agriculture (i.e. cultivator and agricultural labours). This proportion was of 67.84 percent in rural areas.

Gujarat is one of the India's leading state as far as development is concerned. Availability of infrastructures like power, rail and road networks, communication etc is a pre-requisite for rapid economic development in fairly well developed, is Gujarat

Due to a number of measures on power sector reform, the per capital consumption of electricity in the state was 908kwh which was much higher than the national average of

411kwh during 2004-05. The length of road per '00 sq.km in the state (March 2002) was 70 kms which was lower than 76 kms at the national level. The state has about 1600 km long coastline, representing a third of the nation's water front. The state has 41 minor ports and 1 major port. In order to accelerate the development of ports, Gujarat. Maritime Board has been constituted in 1982.

The production of petroleum oil (crude) and nature gas is one of the key factors for triggering a massive expansion of petrochemicals and chemical industries.

Agriculture in Gujarat largely depends on south-west monsoon. The wide variations in rainfall received by different parts of the state, i.e., 300 mm in the western half of Kutch to 2100 mm in the southern part of Valsad district and the Dangs, has been the characteristic feature of monsoon. Only 34.39 percent of NSA was irrigated in 2005-06. Agriculture is an important sector in Gujarat economy but its contribution in GSDP has come down from 30 percent in 1985-86 to 21 percent in 2005-06. Agriculture sector has shown continuous growth however, there were wide fluctuations from year to year.

### **1.3 Agriculture and Public Finance.**

Agriculture in the state till today, depends to a great extent upon the vagaries of monsoon. Even then, agricultural development in the state is remarkable. The plan outlay and expenditure for agriculture and allied activities of Gujarat from the second plan to eleventh plan is given in appendix 1.1.

Appendix 1.1 clearly shows that over the five year plan periods, there is a continued increase in investments and outlays. The expenditure on agriculture and allied activities increased to Rs. 2427 crores in 10<sup>th</sup> five year plan from Rs. 17 crores in 2<sup>nd</sup> five year plan as against total outlays of agriculture and allied activities of Rs. 4169 crores and Rs. 17 crores in the 10<sup>th</sup> and 2<sup>nd</sup> plan periods respectively.

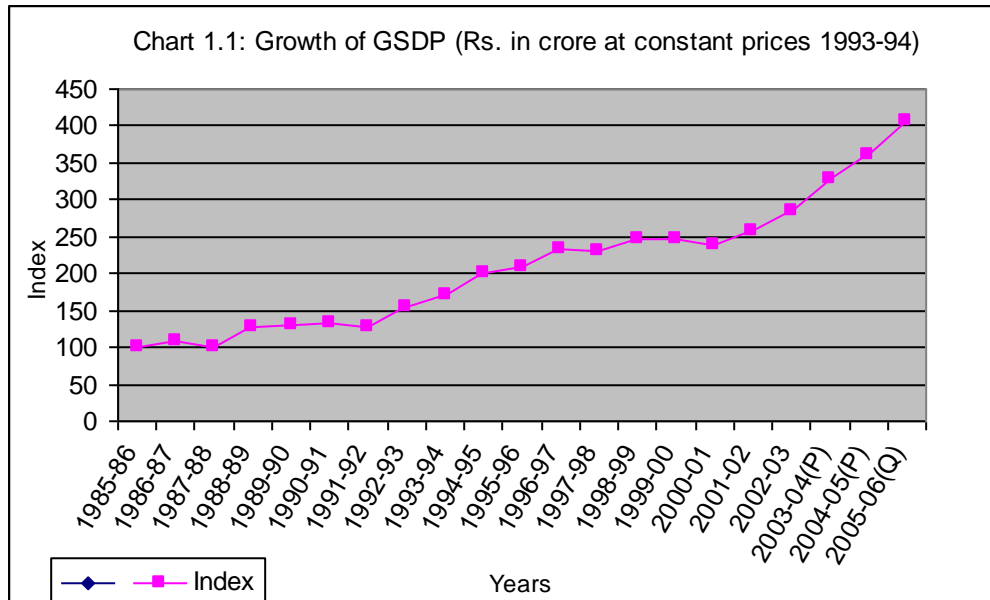
However, when one analyses the state's plan allocation in agriculture and allied activities vis-à-vis actual expenditure, it is observed that if only plan periods analyzed than actual expenditure was not much less than outlays in the plan periods, 3<sup>rd</sup> and 4<sup>th</sup>, while in 5<sup>th</sup> and 10<sup>th</sup> plan periods, expenditure was quite less than outlays. It was more in the remaining plan periods (except 2<sup>nd</sup> plan, outlay and expenditure same). It is encouraging that most amounts sanctioned have been utilized for agriculture and allied activities in many plan periods.

Table 1.1 gives growth of Gross State Domestic Product during the study period.

Table 1.1 : Growth of GSDP : Gujarat (constant prices 1993-94 base)  
(Rs. In Crore)

Year	GSDP(constant prices)
1985-86	28782
1986-87	31164
1987-88	28766
1988-89	36340
1989-90	37147
1990-91	37986
1991-92	36510
1992-93	44206
1993-94	49194
1994-95	58059
1995-96	60256
1996-97	66956
1997-98	66707
1998-99	71345
1999-00	70986
2000-01	68315
2001-02	74010
2002-03	81690
2003-04(P)	94099
2004-05(P)	103589
2005-06(Q)	116677

Source : An Analytical Summary of Budget Statistics Gujarat State 1960-61 to 2005-06  
Directorate of Economics and Statistics, Government of Gujarat, Gandhinagar





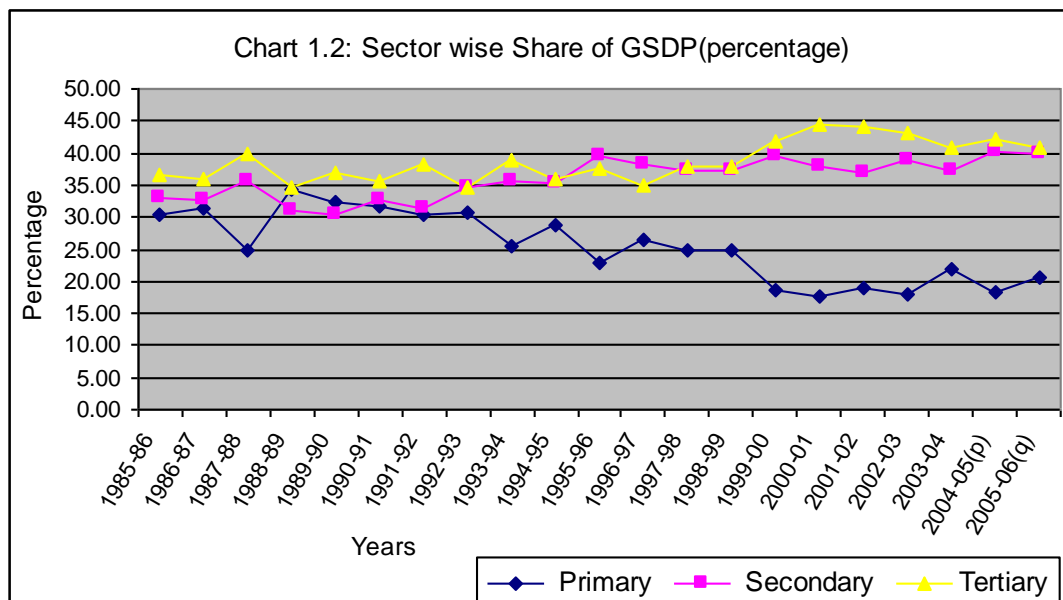
Gross State Domestic Product (GSDP) at constant (1993-94) prices in 2005 has been estimated Rs.116677crores as against Rs.28782crores in 1985-86, i.e., increase by around 300 percent. Overall GSDP grew at the rate of 6.89 percent during the study period. However, average annual growth rate of GSDP was higher (8.05%) during reform period as compared to pre reform period (4.73%).

Table 1.2 provides shares of different sectors in GSDP

Table 1.2: Sector wise share of GSDP in Gujarat (at constant prices 1993-94)

Year	Primary		Secondary		Tertiary		GSDP (Rs. in crore)
	Share (Rs. in crore)	Per cent share of Primary Sector (%)	Share (Rs. in crore)	Per cent share of Secondary Sector (%)	Share (Rs. in crore)	Per cent share of Tertiary Sector (%)	
1985-86	8735	30.35	9506	33.03	10539	36.62	28782
1986-87	9761	31.32	10204	32.74	11197	35.93	31164
1987-88	7113	24.73	10215	35.51	11437	39.76	28766
1988-89	12478	34.34	11312	31.13	12548	34.53	36340
1989-90	12051	32.44	11319	30.47	13775	37.08	37147
1990-91	12015	31.63	12380	32.59	13590	35.78	37986
1991-92	11050	30.27	11498	31.49	13959	38.23	36510
1992-93	13586	30.73	15275	34.55	15343	34.71	44206
1993-94	12525	25.46	17595	35.77	19074	38.77	49194
1994-95	16717	28.79	20516	35.34	20825	35.87	58059
1995-96	13842	22.97	23795	39.49	22619	37.54	60256
1996-97	17800	26.59	25647	38.31	23508	35.11	66956
1997-98	16647	24.96	24794	37.17	25266	37.88	66707
1998-99	17711	24.82	26609	37.30	27024	37.88	71345
1999-00	13327	18.77	27960	39.39	29699	41.84	70986
2000-01	12026	17.60	25896	37.91	30392	44.49	68315
2001-02	14127	19.09	27336	36.94	32548	43.98	74010
2002-03	14583	17.85	31758	38.88	35349	43.27	81690
2003-04	20635	21.93	34983	37.18	38481	40.89	94099
2004-05(p)	19038	18.38	41729	40.28	43537	42.03	103589
2005-06(q)	24143	20.69	46388	39.76	47663	40.85	116677

Source: State Domestic Product of Gujarat state 2004-05, Directorate of Economics and Statistics, Govt. of Gujarat, Gandhinagar. Note: P - Provisional and Q - Quick Estimates



The economy of Gujarat has undergone structural transformation during recent decades. The share of primary sector in the state domestic product declined from 30.35 percent in 1985-86 to 20.69 percent in 2005-06. It was all the time low around 17 to 21 percent during 1999-2000 to 2005-06.

The share of secondary and tertiary sectors remained around 41 percent in GSDP during 2005-06. This share was 33 percent for secondary and 37 percent for tertiary sector during 1985-86.

Absolute size of the agriculture sector has increased in Gujarat as in the country. The fact remain that a majority of the workforce continue to depend on agriculture even though its share in GSDP has declined.

### 1.5 Agricultural Productivity Growth and Stagnation across Crops.

#### Area, Production and productivity of Different crops: Gujarat

Table 1.3 and 1.3(a) give production and productivity of different crops and appendix 1.2 gives area under crops in Gujarat.

Table 1.3: Growth in Production, crop-wise - Gujarat

(production in '00metric tonnes)

Year	Rice	Jowar	Bajra	Wheat	Maize	Ragi	Barley	Total Cereals	Gram	Tur	Other Pulses	Total Pulses	Total Food grains	Seasum	Groundnut	Rapeseed and Mustard	Castor	Total Oilseeds	Cotton	Sugarcane	Chillies	Potatoes	Tobacco
1985-86	5499	4201	7131	8873	1092	315	107	27618	448	2638	764	3850	31468	254	4732	2451	2154	9641	21223	7145	440	2676	2043
1986-87	5335	3392	11618	7218	4757	248	96	33013	324	1457	1919	3700	36713	124	13292	2853	1207	17476	11569	8994	202	2952	2023
1987-88	3963	1922	5551	5430	1130	180	72	18643	235	1268	525	2028	20671	39	1666	2299	1980	6003	4153	8840	183	2648	1861
1988-89	9539	4347	16491	15205	4840	348	108	51306	641	2966	2384	5991	57297	930	28727	4246	3888	37883	15583	9238	352	3108	2129
1989-90	8632	4175	14645	10611	5471	334	98	44380	552	3216	1951	5719	50099	688	16696	3867	4441	25795	18944	10519	381	3377	2191
1990-91	9905	3873	10907	12959	5150	314	130	43593	799	3650	1786	6235	49828	681	9833	3491	6299	20437	15309	12072	276	4167	2440
1991-92	8135	2038	8716	11078	3612	242	131	34202	469	2571	1151	4191	38393	407	7111	3894	4995	16505	12027	12122	308	4835	2516
1992-93	9960	3860	18626	13769	5878	244	150	52853	668	3531	2358	6557	59410	1689	21996	3858	5607	33322	20606	13727	380	3900	2153
1993-94	9605	2979	8415	10434	3928	306	129	36024	511	3712	1264	5487	41511	382	5963	3125	5941	15498	17489	14824	308	4538	2535
1994-95	11196	2710	13558	20446	3612	233	159	52150	1131	2385	1937	5453	57603	951	23050	4939	7806	36842	25217	16868	334	4529	2541
1995-96	10931	3044	11722	12322	4278	257	122	42874	536	2777	1550	4863	47737	894	10319	3836	6995	22115	24075	20599	303	5241	2162
1996-97	12576	3936	15364	15018	6659	254	217	54253	840	3849	1949	6638	60891	1461	23678	4548	8236	38021	28186	16650	420	7908	2475
1997-98	12243	2975	16237	15753	7153	211	172	54957	975	2722	2478	6175	61132	1771	24936	3135	8716	38659	34170	14667	299	6280	2260
1998-99	13795	2776	14272	14989	7498	252	201	53985	1059	3521	1817	6397	60382	1372	24645	4190	8492	38811	40037	17341	327	7699	2477
1999-00	10433	2432	9815	10771	5868	278	142	39920	388	2973	1096	4457	44377	849	7334	2710	7242	18263	21456	18668	283	6965	2602
2000-01	4727	980	8238	6490	2885	140	21	23481	86	1072	1345	1897	25378	984	6882	2806	6388	16560	11614	12695	105	7161	1486
2001-02	10287	1693	12623	11447	8846	215	33	45144	272	1872	3526	3798	48942	2266	26466	2921	4651	36304	17027	12465	121	8020	1453
2002-03	5964	1217	9070	8566	7926	159	26	32928	289	1971	2983	3272	36210	1232	10945	1723	2831	16731	16845	14071	105	7800	1147
2003-04	12770	1736	15999	20365	8319	241	58	59488	1323	2580	6219	6219	65707	2408	44776	3955	5411	56550	40269	12669	84	7388	1249
2004-05	11966	1344	10890	18055	4125	258	79	46717	985	2360	1465	4810	51527	1171	18120	4049	5648	28988	55435	14570	57	10887	1139
2005-06	12836	1570	12058	23192	7224	232	257	57369	1263	2760	2055	6078	63447	1425	33581	4918	6650	46574	68716	17786	68	12383	1015

Source: Directorate of Agriculture, Gov. of Gujarat, Gandhinagar.

Note: Cotton production in bales in 170kgs each lint, sugarcane production in gur.

Table 1.3: Growth in Production, crop-wise - Gujarat

(production in '00metric tonnes)

Year	Rice	Jowar	Bajra	Wheat	Maize	Ragi	Barley	Total Cereals	Gram	Tur	Other Pulses	Total Pulses	Total Food grains	Seasum	Groundnut	Rapeseed and Mustard	Castor	Total Oilseeds	Cotton	Sugarcane	Chillies	Potatoes	Tobacco
1985-86	940	370	473	1750	353	689	955	656	511	733	181	442	619	175	253	1113	872	387	249	5809	2000	18845	1581
1986-87	960	301	778	1912	1404	541	1067	815	568	396	478	448	753	97	727	1306	599	736	149	7552	944	22534	1735
1987-88	798	250	458	1661	330	419	758	565	504	315	208	289	516	39	122	996	1272	323	93	7348	1317	19471	1535
1988-89	1613	608	1024	2408	1363	923	1137	1274	632	723	552	635	1153	551	1575	1380	1597	1480	232	7492	1370	19923	1621
1989-90	1390	621	985	1845	1536	910	961	1159	623	776	446	608	1050	364	819	1182	1468	898	266	7093	1416	19749	1588
1990-91	1590	556	782	2129	1406	915	1083	1147	617	851	458	657	1049	287	538	1001	1637	725	250	7169	1340	23811	1723
1991-92	1211	368	615	2173	942	756	1083	942	584	602	307	475	850	194	360	1165	1544	576	176	7023	1262	25995	1809
1992-93	1465	600	1253	2184	1535	824	1027	1347	636	835	543	682	1216	558	1170	1086	1591	1142	285	7626	1199	21311	1574
1993-94	1396	488	603	1962	1012	1048	949	971	572	907	331	624	904	142	293	904	1669	512	252	7434	1203	23153	1792
1994-95	1556	501	980	2576	912	803	1019	1328	816	632	466	585	1186	370	1204	1886	1819	1236	327	7615	1136	23345	1806
1995-96	1505	622	883	2081	1030	935	917	1180	598	717	387	555	1058	357	552	1113	1627	760	270	8213	1139	21219	1612
1996-97	1710	878	1169	2316	1591	934	1632	1489	747	939	496	725	1336	507	1313	1397	1988	1334	311	7186	1484	27175	1791
1997-98	1619	769	1267	2258	1660	938	1421	1518	807	718	612	682	1351	581	1356	1030	2091	1340	364	6513	1087	22349	1677
1998-99	1892	850	1146	2366	1695	1041	1467	1567	833	951	470	723	1394	459	1310	1390	2000	1326	407	7127	1176	32485	1779
1999-00	1450	800	851	2079	1317	1112	1279	1245	505	807	316	563	1110	284	397	998	1724	645	226	7312	959	22911	1834
2000-01	810	600	833	2268	753	714	189	964	521	337	421	299	827	276	394	1504	1393	603	122	7144	755	21832	1692
2001-02	1549	928	1343	2435	1995	1024	234	1651	554	563	518	520	1412	597	1402	1182	1526	1288	115	7090	890	24830	1699
2002-03	1240	780	965	1966	1706	646	191	1309	503	630	466	469	1127	358	539	1072	1169	604	175	6935	868	21788	1727
2003-04	1891	1006	1494	2681	1717	1148	339	1858	884	870	1648	755	1629	598	2235	1469	1864	1907	417	7182	923	23832	1831
2004-05	1761	1103	1190	2482	898	1062	341	1583	803	928	440	678	1408	315	913	1390	1709	973	494	7407	891	27702	1597
2005-06	1908	1216	1275	2701	1581	1069	760	1839	1006	1047	612	838	1650	391	1729	1564	1947	1572	581	8342	907	27765	1559

<sup>2</sup>Gujarat has all the odds in the field of agriculture, 70 percent of its agriculture is rainfed, 50 percent of its districts are drought prone areas, and 20 percent of its area is tribal, surrounded by undulating terrain where despite good rains, crops get ruined and washed away. It has recurrent droughts where almost three years in every decade are drought years. Besides rainfall is uneven and erratic. The state is surrounded by sea on three sides. The salinity ingress is on the rise, affecting the productivity of crops.

Despite all these constraints, the production of foodgrains has increased from 31.47 lakh tonnes in 1985-86 to 63.45 lakh tonnes in 2004-05.

The production of oilseeds, cotton and sugarcane also increased significantly during this period. However, year to year wide fluctuations were reported in the production of crops over the study period.

Table 1.3(a) shows growth in productivity of crops in Gujarat. There was an increase in productivity of all crops with fluctuations over the years during the study period. The productivity of foodgrains increased from 619 kg/hectare in 1985-86 to 1650 kg/hectare in 2004-05. Similarly yield increased from 387 kg/hectare and 249 kg/hectare in 1985-86 to 1572 kg/hectare and 581 kg/hectare in 2005-06 for oilseeds and cotton respectively.

### **Growth Rates of Area, Production and Productivity of Crops.**

Growth rates of area, production and productivity are given in appendix 1.3, 1.4 and 1.5. Foodgrains production during the entire period had average growth of 3.40 percent annually, contributed by productivity (4.78%) alone as growth rate of area was negative at 1.32.

Among the foodgrains, rice and wheat reported increase in production at the growth rates of 4.12 percent and 4.68 percent respectively, while maize production grew at the rate of 9.41 percent during the entire study period. Production of rice and maize increased mainly due to increase in productivity. However, for wheat production, both average growth of 2.54 percent in area and 2.09 percent in productivity were responsible for growth in wheat production. Other crops showing high growth in production during the reference period include gram, other pulses, total oilseeds, cotton and sugarcane. For all these crops, increase in their yield was the main contributor in increasing production, as growth rates of area were very less or negative for these crops during study period.

### **Growth rate during the pre and post reform period.**

When the entire period is divided into two sub periods pre-reform (1985-86 to 1990-91) and reform period (1991-92 to 2005-06) growth is uneven. However, due to difference in the number of years during both periods, growth rates are not exactly comparable. The average annual growth rate of production of the total foodgrains was quite high in pre reform period (7.96%) as compared to reform period (3.41%). Among the cereal crops, rice, bajra and maize reported significant high growth rates in production during pre-reform period. The overall, growth in production of rice, bajra and maize was due to increase in productivity of these crops. Wheat

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<sup>2</sup> Shelat Kirit N "what ails our agriculture?" the Gujarat experience.

production increased at the rate of 6.52 percent and 5.05 percent during pre reform and reform period respectively. In wheat production both area and productivity contributed in the growth rate of production during pre-reform period but area was the main contributor in increase in wheat production in reform period.

All other crops reported higher growth rate in production during pre-reform period as compared to reform period. It was significantly higher for pluses (8.37%), total oilseeds (13.34%) and sugarcane (9.13%). Since growth rates of area were negative for these crops, only increases in yield was responsible for higher growth of production of these crops.

### **Land Use Pattern**

As per table 1.4, out of the total reporting area of 188.68 lakh hectares in the state, 98.52 lakh hectares (52.22%) was net sown area and 113.04 lakh hectares (59.91%) was gross cropped area in 2005-06. This table indicated not much change in the land use pattern in state during the last 21 years. Area under forest has been around 9 to 10 percent, area under non agricultural uses between 5 to 6 percent, barren and uncultivable land between 13 to 14 percent and current fallow (except 87-88) between 3 to 5 percent of the total reporting area.

### **Cropping Pattern**

Details on cropping pattern in Gujarat are given table 1.5. Cropping pattern has changed over the years. Foodgrain crops have declined and there is an increase in commercial crops like cotton, oilseeds etc. The area under foodgrains declined to 34.04 percent of GCA in 2005-06 from 48.69 percent in 1985-86.

Area under rice had remained around 5 to 8 percent of GCA over the period, while area under wheat increased from around 5 to 8 percent of GCA over the study period. The share of bajra and jowar in the cultivated area reduced drastically. The area under total pulses was around 8 to 9 percent up to 1998-99 but than decreased to 6 percent during 2005-06. Among the non food crops cotton and oilseeds had shown a rise.

Table 1.4: Land Use Statistics: Gujarat

(Area in 00'hect)

Year	Total Reported Area	Forest	Area put to Non-Agricultural uses	Barren & Un-Cultivable land	Permanent Pastures and other Grazing Land	Land under Misc.- Tree Crops & Grooves	Cultivable Waste Land	Fallow Land Other than Current Fellow	Current Fellows	Net Area Sown	Area Sown More than once	Total Cropped Area
1985-86	188249	18777	10891	26757	8463	42	19501	426	9373	94020	10370	104390
1986-87	188211	18834	10977	26774	8449	41	19318	435	12761	91138	8629	99767
1987-88	188210	18826	10964	26781	8488	41	19356	421	30979	72848	7527	80375
1988-89	188210	18884	11048	26672	8488	41	19197	596	10393	92891	13591	107038
1989-90	188209	18845	11160	26093	8457	40	19794	528	8575	94716	12114	106830
1990-91	188219	18847	11221	26090	8457	40	19702	521	10379	92962	12844	105806
1991-92	188221	18846	11208	26085	8481	41	19828	353	10465	92914	12104	105018
1992-93	188221	18860	11227	26069	8479	40	19825	327	7561	95833	14201	110034
1993-94	188221	19393	11253	26063	8485	40	19813	327	9472	94470	12819	107289
1994-95	188221	18872	11271	26050	8485	40	19769	275	7372	96653	15798	112451
1995-96	188118	19412	11372	26008	8484	40	19671	275	7485	96545	13285	109955
1996-97	188118	18070	11384	26030	8490	40	19736	241	7590	96670	14013	110560
1997-98	188118	18590	11401	26043	8490	40	19802	255	6756	96741	14834	112130
1998-99	188118	18647	11408	26034	8489	40	19727	244	6855	97229	14772	112001
1999-00	188118	18648	11414	26038	8491	40	19818	131	9109	94989	12028	107017
2000-01	188118	18653	11419	25497	8507	40	19849	131	9189	94896	10074	104970
2001-02	188118	18655	11439	25951	8503	40	19875	113	7325	96779	11131	107910
2002-03	188118	18535	11446	26084	8502	40	19848	112	9300	94814	11493	106307
2003-04	188118	18536	11453	26074	8503	40	19767	112	5681	98515	15695	114210
2004-05	18868	1854	1145	2607	850	4	1977	11	568	9852	1158	11009
2005-06	18868	1854	1145	2607	850	4	1977	11	568	9852	1453	11304

Source: Agriculture Statistic Gujarat, Dir. Of Economics and Statistic, Gov. of Gujarat, Gandhinager 1996

Annual Seasonal Crop Reports Krishibhavan, Gov. of Gujarat, Gandhinagar.

Note: 2004-05 and 2005-06 data thousand hectare.

Table 1.5: Percentage Change in the Cropping pattern: Gujarat

(Area as a percent to GCA)

Year	Rice	Jowar	Bajra	Wheat	Maize	Ragi	Barley	Total Cereals	Gram	Tur	Other Pulses	Total Pulses	Total Foodgrain	Seasum	Groundnut	Rapeseed and Mustard	Castor	Total Oilseed	Cotton	Sugarcane	Chillies	Potatoes	Tobacco	Total % of GCA*
1985-86	5.61	10.87	14.43	4.86	2.96	0.44	0.11	40.36	0.84	3.45	4.05	8.34	48.69	1.39	17.90	2.11	2.37	23.87	13.90	1.18	0.21	0.14	1.24	89.22
1986-87	5.57	11.29	14.97	3.78	3.40	0.46	0.09	40.59	0.57	3.69	4.02	8.29	48.88	1.29	18.32	2.19	2.02	23.81	13.25	1.19	0.21	0.13	1.17	88.65
1987-88	6.18	9.56	15.09	4.07	4.26	0.53	0.12	41.07	0.58	5.01	3.14	8.73	49.79	1.25	16.95	2.87	1.94	23.10	9.48	1.50	0.17	0.17	1.51	85.72
1988-89	5.52	6.68	15.05	5.90	3.32	0.35	0.09	37.64	0.95	3.83	4.03	8.81	46.45	1.58	17.04	2.87	2.27	23.91	10.67	1.15	0.24	0.15	1.23	83.79
1989-90	5.81	6.29	13.91	5.38	3.34	0.34	0.10	35.85	0.83	3.88	4.10	8.80	44.65	1.77	19.08	3.06	2.83	26.89	11.35	1.39	0.25	0.16	1.29	85.99
1990-91	5.89	6.59	13.18	5.75	3.46	0.32	0.11	35.91	1.22	4.05	3.69	8.97	44.88	2.24	17.26	3.29	3.64	26.63	9.84	1.59	0.19	0.17	1.34	84.65
1991-92	6.39	5.28	13.49	4.86	3.65	0.30	0.12	34.58	0.76	4.07	3.57	8.41	42.99	2.00	18.82	3.18	3.08	27.28	11.09	1.64	0.23	0.18	1.32	84.73
1992-93	6.18	5.84	13.51	5.73	3.48	0.27	0.13	35.67	0.96	3.84	3.94	8.74	44.41	2.75	17.09	3.23	3.20	26.52	11.16	1.64	0.29	0.17	1.24	85.43
1993-94	6.41	5.69	13.01	4.96	3.62	0.27	0.13	34.59	0.83	3.81	3.55	8.20	42.79	2.51	18.97	3.22	3.32	28.22	10.98	1.86	0.24	0.18	1.32	85.58
1994-95	6.40	4.81	12.30	7.06	3.52	0.26	0.14	34.91	1.23	3.36	3.70	8.29	43.20	2.29	17.02	2.33	3.82	26.51	11.67	1.97	0.26	0.17	1.25	85.04
1995-96	6.61	4.45	12.08	5.38	3.78	0.25	0.12	33.05	0.82	3.52	3.64	7.98	41.03	2.28	17.01	3.14	3.91	26.48	13.80	2.28	0.24	0.22	1.22	85.27
1996-97	6.65	4.05	11.89	5.87	3.79	0.25	0.12	32.96	1.02	3.71	3.55	8.28	41.22	2.60	16.31	2.94	3.75	25.78	13.95	2.10	0.26	0.26	1.25	84.83
1997-98	6.74	3.45	11.43	6.22	3.84	0.20	0.11	32.28	1.08	3.38	3.61	8.07	40.35	2.72	16.40	2.72	3.72	25.72	14.25	2.01	0.25	0.25	1.20	84.03
1998-99	6.51	2.92	11.12	5.66	3.95	0.22	0.12	30.77	1.14	3.30	3.45	7.89	38.66	2.67	16.80	2.69	3.79	26.13	14.93	2.17	0.25	0.21	1.24	83.60
1999-00	6.73	2.84	10.78	4.84	4.16	0.23	0.10	29.97	0.72	3.44	3.24	7.40	37.37	2.79	17.27	2.54	3.92	26.48	15.05	2.39	0.28	0.28	1.33	83.17
2000-01	5.56	1.55	9.42	2.73	3.65	0.19	0.11	23.20	0.16	3.03	3.05	6.05	29.25	3.40	16.62	1.78	4.37	26.17	15.39	1.69	0.13	0.31	0.84	73.78
2001-02	6.15	1.69	8.71	4.36	4.11	0.19	0.13	25.34	0.46	3.08	6.31	6.77	32.11	3.52	17.49	2.29	2.82	26.12	16.22	1.63	0.13	0.30	0.79	77.30
2002-03	4.52	1.47	8.84	4.10	4.37	0.23	0.13	23.66	0.54	2.94	6.02	6.56	30.22	3.24	19.09	1.51	2.28	26.07	15.38	1.91	0.11	0.34	0.62	74.66
2003-04	5.91	1.51	9.38	6.65	4.24	0.18	0.15	28.03	1.31	2.60	3.30	7.21	35.32	3.52	17.54	2.36	2.54	25.96	14.37	1.54	0.08	0.27	0.60	78.07
2004-05	6.17	1.11	8.31	6.61	4.17	0.22	0.21	26.80	1.11	2.31	3.02	6.45	33.25	3.38	18.03	2.65	3.00	27.06	17.32	1.79	0.06	0.36	0.65	80.47
2005-06	5.95	1.14	8.37	7.60	4.04	0.19	0.30	27.59	1.11	2.33	2.97	6.42	34.01	3.22	17.18	2.78	3.02	26.20	17.79	1.89	0.07	0.39	0.58	80.92

Source: Directorate of Agri., Gov.of Gujarat, Gandhinagar. GCA-CMIE data (Centre for Monitoring Indian Economy Pvt. Ltd.)Mumbai 1987-77 to 2003-04.

\*Total = Total Foodgrain + Total Oilseed + Cotton + Sugarcane + Chillies + Potatoes + Tobacco



Table below gives compound growth rates of GSDP and agricultural and allied activities during 1985-86 to 1990-91(perform period) and 1991-92 to 2005-06(reform period).

Table 1.6: Compound Growth Rates of GSDP by Sector of Origin at Constant price (1993-94)

Sr. No.	Particulars	Pre reform period (1985-86 to 1990-91)	Reform period (1991-92 to 2005-06)	Total (1985-86 to 2005-06)
1	Agriculture and Allied Activities	5.09	4.69	4.44
2	Crop Husbandry	5.41	4.97	4.63
3	Forestry	-1.84	-2.27	-1.71
4	Fishing	8.29	4.78	6.09
5	GSDP	4.73	8.05	6.89
6	Primary Sector	5.46	5.35	4.96
7	Secondary Sector	4.50	9.75	7.84
8	Tertiary Sector	4.33	8.53	7.45

Source: State Domestic Product Gujarat State 1997-98 2004-05 and 2005-06. Dir. Of Economics and Statistics, Government of Gujarat, Gandhinagar.

The growth rate of GSDP was higher (6.89%) than the growth rate of agriculture and allied activities (4.44%). The growth rates of secondary and tertiary sector were higher i.e., 7.84 percent and 7.45 percent respectively, which were more than overall GSDP growth rate, indicating lower GSDP compound growth rate due to lower growth rate of agriculture and allied activities.

Another interesting aspect was that growth rates of agricultural and allied activities in GSDP had not witnessed much change during pre reform and reform period. It has been around 5 percent during both the periods. However, growth rates of secondary and tertiary sectors were almost doubled during reform period as compared to pre reform period. This is also reflected in appendix 1.7 which shows that share of agriculture and allied activities in GSDP has reduced from 26.90 percent in 1991-92 to 16.75 percent in 2005-06 during reform period. While during pre reform period this share has been around 27 to 31 percent (except 1987-88-21%). Growth rates of forestry in GSDP were negative for both periods while for fishing, it was quite high during pre-reform period.

## 1.6: Objectives

Agriculture comes under the state's list as per the constitution of India. The resources for agricultural development are allocated by the state in addition to the plan resources given from the central pool. Agriculture plays an important role in the state's economy but over the years in some of the states budget resource allocation to agriculture sector had declined. This shrinkage has a telling effect on agricultural growth and development of resources in the sector. Beside the allocation of resources from the central pool may cause differential impact across the states and this may lead to imbalance in growth.

In order to analyse the allocation of budgetary resources as well as the balance between central and the state schemes in Gujarat, Directorate of Economics and Statistics, Ministry of Agriculture, Government of India entrusted this project to Agro-Economic Research Center, Vallabh Vidyanagar with the following objectives:

- To analyses the trends in budgetary allocation of resources to the agricultural sector as a whole and the sub sectors of agriculture.
- To document and analyses schemes under operation in state contributing to the development of the agricultural sector.
- To enlist and analyse the impact of central sector schemes operating in the agricultural sector of the states.

### **1.7: Methodology**

This study is based purely on secondary data collected from the offices of the Directorate of Economics and Statistics and State Department of Agriculture, Government of Gujarat, Gandhinagar. Time series data from 1985-86 to 2005-06 are used for analysis. Time period from 1985-86 to 1990-91 is taken as pre reform period and from 1991-92 to 2005-06 as reform period. Trends of expenditure on agriculture and expenditure on agriculture as percentage of GSDP have been studied at constant prices of 1993-94, using the GDP Deflator Method. CMIE Data have been used for the calculation of per hectare expenditure on agriculture and sub sectors.

#### **Compound growth rate:**

Looking to the trend of data. The annual compound growth rates (CAGR) calculated using the following formula:

$$CGR = \left[ \left\{ \frac{p_n}{p_o} \right\}^{1/n} - 1 \right] \times 100$$

Where,

$P_n$  = value of current period

$P_o$  = value of base period

n = number of years

### **1.8: Organization of the Study**

The study is organized into five sections as follows.

Chapter-1: Introduction

Chapter-2: Trends and pattern of budgetary expenditure on agriculture.

Chapter-3: Agricultural Development Schemes.

Chapter-4: Nexus between State Intervention and Agricultural Development.

Chapter-5: Summary and Conclusion.

Appendix 1.1: Five Year Plans Outlay and Expenditure on Agriculture and Allied Activities

(Rs. in Crore)

Plan	Year	Total Plan		Agriculture & Allied Activities		Outlay in Agr. & Allied Services as % of total outlay	Exp. In Agr. & Allied Services as % of total expenditure
		Outlay	Expenditure	Outlay	Expenditure		
2nd Plan	1956-61	145	150	17	17	11.72	11.33
3rd Plan	1961-66	236	240	38	33	16.10	13.75
Annual Plan	1966-67	49	59	14	13	28.57	22.03
Annual Plan	1967-68	72	72	13	15	18.06	20.83
Annual Plan	1968-69	82	84	13	14	15.85	16.67
4th Plan	1969-74	455	545	70	63	15.38	11.56
5th Plan	1974-78	1170	1005	177	116	15.13	11.54
Annual Plan	1978-79	335	374	50	49	14.93	13.10
Annual Plan	1979-80	392	456	59	66	15.05	14.47
6th Plan	1980-85	3760	3849	367	408	9.76	10.60
7th Plan	1985-90	6000	5534	386	406	6.43	7.34
Annual Plan	1990-91	1451	1562	93	95	6.41	6.08
Annual Plan	1991-92	1750	1821	117	118	6.69	6.48
8th Plan	1992-97	11500	11756	732	788	6.37	6.70
9th Plan	1997-02	28000	27072	2009	2076	7.18	7.67
10th Plan	2002-07	47000	49415	4169	2427	8.87	4.91
Annual Plan	2002-03	6000	5403	391	262	6.52	4.85
Annual Plan	2003-04	6740	8455	464	421	6.88	4.98
Annual Plan	2004-05	8609	9738	524	525	6.09	5.39
Annual Plan	2005-06	11000	11434	538	502	4.89	0.44
Annual Plan	2006-07	12503	14384	483	715	3.86	4.97
11th Plan	2007-12	111111	-	8315	-	7.48	-

Source: Gujarat Statistical Abstract of Gujarat 2007 Dir. Of Economics and Statistics, Gov.of Gujarat, Gandhinagar.

Appendix 1.2: Crop wise Area: Gujarat

(Area in 00' hect)

Year	Rice	Jowar	Bajra	Wheat	Maize	Ragi	Barley	Total Cereals	Gram	Tur	Other Pulses	Total Pulses	Total Foodgrains	Seasum	Groundnut	Rapeseed and Mustard	Castor	Total Oilseeds	Cotton	Sugarcane	Chillies	Potatoes	Tobacco	GCA (00' hect.)
1985-86	5853	11343	15064	5070	3094	457	112	42130	877	3598	4226	8701	50831	1449	18681	2202	2470	24916	14507	1230	220	142	1292	104390
1986-87	5558	11266	14934	3776	3389	458	90	40498	570	3682	4014	8266	48764	1284	18274	2184	2015	23757	13218	1191	214	131	1166	99767
1987-88	4964	7682	12130	3270	3420	430	95	33009	466	4024	2523	7013	40022	1008	13622	2309	1557	18565	7622	1203	139	136	1212	80375
1988-89	5913	7155	16104	6315	3550	377	95	40284	1014	4102	4315	9431	49715	1688	18234	3076	2434	25593	11421	1233	257	156	1313	107038
1989-90	6212	6723	14863	5752	3563	367	102	38297	886	4142	4378	9406	47703	1890	20381	3271	3026	28731	12128	1483	269	171	1380	106830
1990-91	6230	6972	13943	6087	3662	343	120	37998	1295	4289	3903	9487	47485	2370	18261	3486	3849	28180	10416	1684	206	175	1416	105806
1991-92	6715	5540	14167	5099	3834	320	121	36319	803	4272	3752	8827	45146	2102	19761	3343	3236	28645	11643	1726	244	186	1391	105018
1992-93	6798	6429	14864	6304	3829	296	146	39250	1051	4227	4339	9617	48867	3027	18801	3552	3525	29186	12281	1800	317	183	1368	110034
1993-94	6879	6105	13960	5317	3883	292	136	37110	893	4091	3813	8797	45907	2698	20354	3456	3559	30275	11776	1994	256	196	1415	107289
1994-95	7196	5409	13832	7938	3960	290	156	39260	1386	3775	4157	9318	48578	2571	19137	2619	4291	29810	13126	2215	294	194	1407	112451
1995-96	7264	4895	13282	5920	4154	275	133	36341	897	3871	4001	8769	45110	2504	18705	3448	4299	29117	15174	2508	266	247	1341	109955
1996-97	7354	4483	13148	6485	4185	272	133	36442	1124	4099	3928	9151	45573	2880	18030	3255	4143	28498	15419	2317	283	291	1382	110560
1997-98	7560	3867	12812	6975	4308	225	121	36198	1208	3791	4051	9050	45248	3046	18387	3045	4169	28845	15977	2252	275	281	1348	112130
1998-99	7292	3265	12454	6336	4424	242	137	34460	1272	3701	3869	8842	43302	2987	18811	3015	4247	29270	16721	2433	278	237	1392	112001
1999-00	7197	3040	11537	5181	4456	250	111	32072	769	3686	3465	7920	39992	2989	18485	2716	4200	28336	16109	2553	295	304	1419	107017
2000-01	5835	1632	9892	2861	3829	196	111	24356	165	3179	3198	6346	30702	3569	17448	1866	4586	27469	16154	1777	139	328	878	104970
2001-02	6640	1824	9398	4701	4435	210	141	27349	491	3323	6813	7304	34653	3796	18877	2471	3047	28191	17498	1758	136	323	855	107910
2002-03	4808	1561	9402	4356	4645	246	136	25154	575	3130	6402	6977	32131	3441	20294	1608	2422	27715	16348	2029	121	358	664	106307
2003-04	6753	1726	10712	7595	4845	210	171	32012	1496	2967	3773	8236	40338	4024	20034	2693	2903	29654	16410	1764	91	310	682	114210
2004-05	6794	1218	9151	7274	4595	243	232	29507	1227	2544	3327	7098	36605	3719	19850	2912	3305	29786	19063	1967	64	393	713	110090
2005-06	6729	1291	9460	8588	4569	217	338	31192	1256	2637	3360	7253	38445	3640	19420	3144	3416	29620	20108	2132	75	446	651	113040

Note: Cotton production in Bales in 170 kgs. each lint, sugarcane production in Gur.

Source: Dire. Of Agriculture, Gov. of Gujarat, Gandhinagar.

Appendix 1.3 : Compound growth rates of production, crop wise

Crops	Pre reform period (1985-86 to 1990-91)	Reform period (1991-92 to 2005-06)	Overall (1985-86 to 2005-06)
Rice	10.30	3.09	4.12
Jowar	-1.35	-1.72	-4.58
Bajra	7.34	2.19	2.53
Wheat	6.52	5.05	4.68
Maize	29.50	4.73	9.41
Ragi	-0.05	-0.28	-1.45
Barley	3.30	4.59	4.26
Total Cereals	7.90	3.51	3.54
Gram	10.12	6.83	5.06
Tur	5.56	0.47	0.22
Other Pulses	15.20	3.94	4.82
Total Pulses	8.37	2.51	2.20
Total Foodgrains	7.96	3.41	3.40
Seasmum	17.87	8.71	8.56
Groundnut	12.96	10.90	9.78
Rapeseed and Musterd	6.07	1.57	3.37
Caster	19.58	1.93	5.51
Total Oilseeds	13.34	7.16	7.79
Cotton	-5.30	12.32	5.75
Sugarcane	9.13	2.59	4.44
Chillies	-7.48	-9.58	-8.51
Potatoes	7.66	6.47	7.57
Tobacco	3.00	-5.87	-3.28

Appendix 1.4: Compound growth rates of area, cropwise

Crops	Pre reform period (1985-86 to 1990-91)	Reform period (1991-92 to 2005-06)	Overall (1985-86 to 2005-06)
Rice	1.05	0.01	0.67
Jowar	-7.79	-9.25	-9.83
Bajra	-1.28	-2.66	-2.19
Wheat	3.09	3.54	2.54
Maize	2.85	1.18	1.87
Ragi	-4.67	-2.56	-3.48
Barley	1.16	7.09	5.40
Total Cereals	-1.71	-1.01	-1.42
Gram	6.71	3.03	1.73
Tur	2.97	-3.17	-1.47
Other Pulses	-1.32	-0.73	-1.09
Total Pulses	1.45	-1.30	-0.86
Total Foodgrains	-1.13	-1.07	-1.32
Seasmum	8.55	3.73	4.48
Groundnut	-0.38	-0.12	0.18
Rapeseed and Mustard	7.96	-0.41	1.71
Caster	7.67	0.36	1.56
Total Oilseeds	2.07	0.22	0.83
Cotton	-5.37	3.71	1.57
Sugarcane	5.38	1.42	2.65
Chillies	-1.09	-7.56	-5.00
Potatoes	3.54	6.00	5.60
Tobacco	1.54	-4.94	-3.21

Appendix 1.5: Compound growth rates of productivity, cropwise

Crops	Pre reform period (1985-86 to 1990-91)	Reform period (1991-92 to 2005-06)	Overall (1985-86 to 2005-06)
Rice	9.16	3.07	3.43
Jowar	6.99	8.30	5.82
Bajra	8.73	4.98	4.83
Wheat	3.32	1.46	2.09
Maize	25.91	3.51	7.40
Ragi	4.84	2.33	2.11
Barley	2.12	-2.33	-1.08
Total Cereals	9.78	4.56	5.04
Gram	3.20	3.69	3.28
Tur	2.51	3.76	1.71
Other Pulses	16.74	4.71	5.98
Total Pulses	6.82	3.86	3.09
Total Foodgrains	9.19	4.52	4.78
Seasumum	8.59	4.81	3.90
Groundnut	13.39	11.03	9.58
Rapeseed and Musterd	-1.75	1.99	1.63
Caster	11.06	1.56	3.90
Total Oilseeds	11.04	6.92	6.90
Cotton	0.07	8.29	4.12
Sugarcane	3.57	1.15	1.74
Chillies	-6.46	-2.18	-3.70
Potatoes	3.98	0.44	1.86
Tobacco	1.44	-0.99	-0.07

## Appendix 1.6 : Land Use Statistics : Gujarat

(percentage)

Year	Total Reported Area	Forest	Area put to Non-Agricultural uses	Barren & Un-Cultivable land	Permanent Pastures and other Grazing Land	Land under Misc.-Tree Crops & Grooves	Cultivable Waste Land	Fallow Land Other than Current Fellow	Current Fellows	Net Area Sown	Area Sown More than once	Total Cropped Area
1985-86	188249	9.97	5.79	14.21	4.50	0.02	10.36	0.23	4.98	49.94	5.51	55.45
1986-87	188211	10.01	5.83	14.23	4.49	0.02	10.26	0.23	6.78	48.42	4.58	53.01
1987-88	188210	10.00	5.83	14.23	4.51	0.02	10.28	0.22	16.46	38.71	4.00	42.70
1988-89	188210	10.03	5.87	14.17	4.51	0.02	10.20	0.32	5.52	49.35	7.22	56.87
1989-90	188209	10.01	5.93	13.86	4.49	0.02	10.52	0.28	4.56	50.32	6.44	56.76
1990-91	188219	10.01	5.96	13.86	4.49	0.02	10.47	0.28	5.51	49.39	6.82	56.21
1991-92	188221	10.01	5.95	13.86	4.51	0.02	10.53	0.19	5.56	49.36	6.43	55.80
1992-93	188221	10.02	5.96	13.85	4.50	0.02	10.53	0.17	4.02	50.92	7.54	58.46
1993-94	188221	10.30	5.98	13.85	4.51	0.02	10.53	0.17	5.03	50.19	6.81	57.00
1994-95	188221	10.03	5.99	13.84	4.51	0.02	10.50	0.15	3.92	51.35	8.39	59.74
1995-96	188118	10.32	6.05	13.83	4.51	0.02	10.46	0.15	3.98	51.32	7.06	58.45
1996-97	188118	9.61	6.05	13.84	4.51	0.02	10.49	0.13	4.03	51.39	7.45	58.77
1997-98	188118	9.88	6.06	13.84	4.51	0.02	10.53	0.14	3.59	51.43	7.89	59.61
1998-99	188118	9.91	6.06	13.84	4.51	0.02	10.49	0.13	3.64	51.69	7.85	59.54
1999-00	188118	9.91	6.07	13.84	4.51	0.02	10.53	0.07	4.84	50.49	6.39	56.89
2000-01	188118	9.92	6.07	13.55	4.52	0.02	10.55	0.07	4.88	50.44	5.36	55.80
2001-02	188118	9.92	6.08	13.80	4.52	0.02	10.57	0.06	3.89	51.45	5.92	57.36
2002-03	188118	9.85	6.08	13.87	4.52	0.02	10.55	0.06	4.94	50.40	6.11	56.51
2003-04	188118	9.85	6.09	13.86	4.52	0.02	10.51	0.06	3.02	52.37	8.34	60.71
2004-05	18868	9.83	6.07	13.82	4.50	0.02	10.48	0.06	3.01	52.22	6.14	58.35
2005-06	18868	9.83	6.07	13.82	4.50	0.02	10.48	0.06	3.01	52.22	7.70	59.91

Appendix 1.7: Percentage of share of Agriculture and Allied Activities in GSDP.

Year	Agriculture and Allied Activities	Crop Husbandry	Forestry	Fishing
1985-86	27.28	24.21	1.94	1.12
1986-87	28.14	24.81	2.13	1.20
1987-88	20.91	18.14	1.47	1.29
1988-89	31.24	28.78	1.45	1.01
1989-90	28.88	26.16	1.64	1.07
1990-91	27.85	25.15	1.32	1.37
1991-92	26.90	23.87	1.50	1.52
1992-93	27.79	25.56	0.74	1.48
1993-94	22.39	19.91	0.88	1.60
1994-95	26.25	23.77	0.88	1.60
1995-96	20.61	18.77	0.50	1.34
1996-97	24.41	22.52	0.74	1.15
1997-98	22.82	21.10	0.42	1.30
1998-99	22.97	21.40	0.38	1.19
1999-00	16.73	15.11	0.36	1.26
2000-01	14.91	13.59	0.23	1.09
2001-02	16.55	15.14	0.23	1.18
2002-03	14.19	12.66	0.38	1.15
2003-04	18.38	17.19	0.33	0.87
2004-05(P)	14.98	13.84	0.36	0.79
2005-06(Q)	16.75	15.45	0.33	0.96



## CHPATER 2

### TRENDS AND PATTERN OF BUDGETARY EXPENDITURE ON AGRICULTURE

#### 2.1 Introduction

##### Trends and pattern of Budgetary Expenditure on Agriculture

Agriculture is still primary and the most important sector in Indian economy. Even though share of agriculture and allied activities in GSDP and in budget has declined over the years, majority of people find both self and wage employment from it. Still the growth of economy depends on the development of agriculture. However, agriculture was accorded low priority in the planning process is reflected in the falling share of the sector in the total paln outlay of state. Agriculture's share in the total annual plan outlay of 53 states and Union Territories has declined from 5.2 percent in 2002-03 to 4.7 percent in 2006-07<sup>3</sup>.

#### 2.2 Trends of Budgetary Agricultural Expenditure.

In this section a detailed analysis is made on budgetary allocation for agriculture expenditure on revenue account in Gujarat.

##### (a) Growth of budgetary expenditure on agriculture at constant price.

Table 2.1 below gives trends in expenditure on agriculture on revenue account at constant prices and appendix 2.1 gives same at current prices.

Table 2.1: Trends in Expenditure on Agriculture: Gujarat (Constant prices 1993-94 base)

(Rs.in Crore)

Year	Total Budget			Economic Services			Expenditure on Agriculture & Allied Activities		
	Revenue Account	Capital Account	Total	Revenue Account	Capital Account	Total	Revenue Account	Capital Account	Total
1985-86	4058.42	1732.61	5791.03	1260.86	721.73	1982.59	502.49	88.19	590.68
1986-87	4757.69	2566.44	7324.12	1750.92	926.38	2677.30	247.19	114.49	361.68
1987-88	5445.55	2451.04	7896.58	2086.81	958.68	3045.49	363.40	77.61	441.00
1988-89	5467.32	2831.07	8298.39	1925.01	963.85	2888.86	448.39	87.79	536.18
1989-90	5588.23	1876.13	7464.36	1839.15	1115.16	2954.30	301.32	81.62	382.94
1990-91	5538.56	2212.92	7751.48	1727.65	1337.33	3064.98	336.93	87.60	424.53
1991-92	6243.38	3036.09	9279.48	2247.34	1389.98	3637.32	313.03	82.55	395.58
1992-93	6810.20	2716.36	9526.56	2647.64	1186.22	3833.86	295.01	83.20	378.21
1993-94	6933.79	2364.35	9298.14	2642.04	770.45	3412.49	455.05	63.51	518.56
1994-95	6896.00	1890.75	8786.75	2381.05	1006.23	3387.29	336.96	81.64	418.59
1995-96	7347.94	1713.74	9061.68	2522.41	1162.36	3684.78	322.73	89.82	412.56
1996-97	8002.68	2157.93	10160.61	2733.56	1195.27	3928.83	333.43	104.55	437.98
1997-98	8883.06	2182.32	11065.38	3067.75	1398.91	4466.66	334.46	133.33	467.78
1998-99	10573.28	2472.78	13046.06	3636.83	1609.22	5246.05	385.18	135.47	520.64
1999-00	11419.23	3280.99	14700.22	3603.52	1601.66	5205.18	438.85	147.67	586.51
2000-01	13879.61	5732.63	19612.24	5164.72	1656.06	6820.78	446.24	131.59	577.83
2001-02	13835.32	12482.55	26317.87	4756.46	549.57	5306.02	545.60	78.22	623.82
2002-03	12538.09	12135.89	24673.98	3841.27	866.77	4708.05	368.73	52.15	420.88
2003-04	12466.85	10330.91	22797.77	3182.56	1365.19	4547.75	423.90	104.08	527.98
2004-05	13614.45	7690.39	21304.84	3559.41	1614.47	5173.88	524.46	63.41	587.87
2005-06	13892.79	4796.12	18688.91	3205.78	3013.71	6219.49	500.40	87.85	588.25

<sup>3</sup> Economic Time 10<sup>th</sup> May 2007.

Source: An Analytical Summary of Budget Statistics Gujarat State (1960-61 to 2005-06)  
Directorate of Economics and Statistics Government of Gujarat, Gandhinagar.

It can be observed from table 2.1 that the expenditure on agriculture and allied activities on revenue account at constant prices was Rs. 502 crores in 1985-86 which declined to Rs. 337 crores at the end of pre-reform years 1990-91. The expenditure was Rs. 313 crores in 1991-92 and it increased to Rs. 500 crores during 2005-06. The growth rates on expenditure on agriculture and allied activities were 3.18 percent during reform period and negative 6.44 percent during pre-reform period. Overall it was negative 0.02 percent during the entire study period.

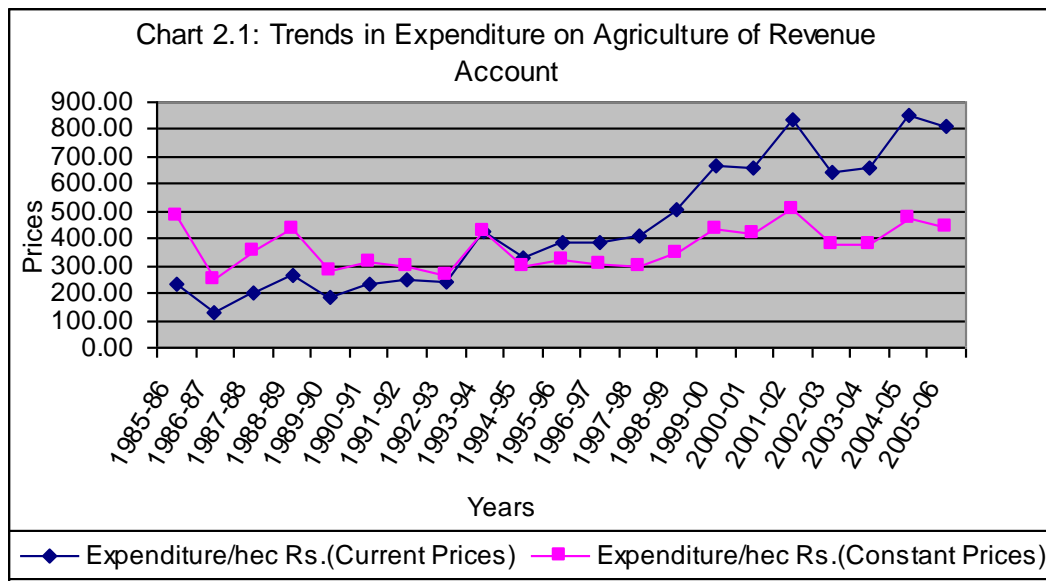
**(b) Growth of per hectare expenditure on agriculture.**

It can be observed from Table 2.2 that per hectare expenditure on agriculture on revenue account fluctuated significantly between the years during the both periods i.e., pre-reform and reform period.

Table 2.2: Trends in Expenditure on Agriculture of Revenue Account: Gujarat  
(Current and constant prices per hectare)

Year	Expenditure/hect Rs.(Current Prices)	Expenditure/hect Rs.(Constant Prices)
1985-86	233.94	481.36
1986-87	128.60	247.78
1987-88	198.78	349.96
1988-89	265.56	431.81
1989-90	188.13	282.05
1990-91	232.44	315.39
1991-92	250.08	298.06
1992-93	244.52	268.12
1993-94	426.40	426.40
1994-95	329.49	301.18
1995-96	381.89	320.11
1996-97	388.56	303.09
1997-98	409.79	299.77
1998-99	510.16	345.64
1999-00	663.11	432.28
2000-01	662.89	417.44
2001-02	834.62	508.29
2002-03	639.54	374.00
2003-04	659.97	374.77
2004-05	850.36	476.39
2005-06	811.43	442.68

Source: An Analytical Summary of Budget Statistics Gujarat State (1960-61 to 2005-06)  
Directorate of Economics and Statistics Government of Gujarat, Gandhinagar.  
GCA – CMIE data (1987-88 to 2003-04) and 1985-87 and 2004-06 data land use statistics.



The per hectare expenditure on agriculture and allied activities on revenue account at constant prices was the highest at Rs.481.36 during 1985-86 and the lowest at Rs.247.78 during 1986-87 in pre-reform period. This was the highest at Rs.508/hect (2001-02) and the lowest at Rs.268/hect in 1992-93 during reform period.

Table 2.2(a): Growth rate on per hectare expenditure on agriculture revenue account.

Sr. No.	Particular	Total (1985-86 to 2005-06)
1.	Expenditure/hec Rs.(Current Prices)	6.10
2.	Expenditure/hec Rs.(Constant Prices)	-0.40

**(c) Expenditure on Agriculture and allied activities as a share of the Total Budget**

Table 2.3 and 2.3 (a) gives details on agriculture expenditure as a share of the total budget and as a share of expenditure on economic services during pre-reform, reform and overall study period.

Table 2.3: Expenditure on Agriculture on Revenue Account as a share of the Total Budget and as a share of Economic Services

Year	As a Share of Total Budget (%)	As a Share of Economic Services (%)
1985-86	8.68	25.35
1986-87	3.37	9.23
1987-88	4.60	11.93
1988-89	5.40	15.52
1989-90	4.04	10.20
1990-91	4.35	10.99
1991-92	3.37	8.61
1992-93	3.10	7.69
1993-94	4.89	13.33
1994-95	3.83	9.95
1995-96	3.56	8.76
1996-97	3.28	8.49
1997-98	3.02	7.49
1998-99	2.95	7.34
1999-00	2.99	8.43
2000-01	2.28	6.54
2001-02	2.07	10.28
2002-03	1.49	7.83
2003-04	1.86	9.32
2004-05	2.46	10.14
2005-06	2.68	8.05

Source: An Analytical Summary of Budget Statistics Gujarat State (1960-61 to 2005-06) Directorate of Economics and Statistics Government of Gujarat, Gandhinagar.

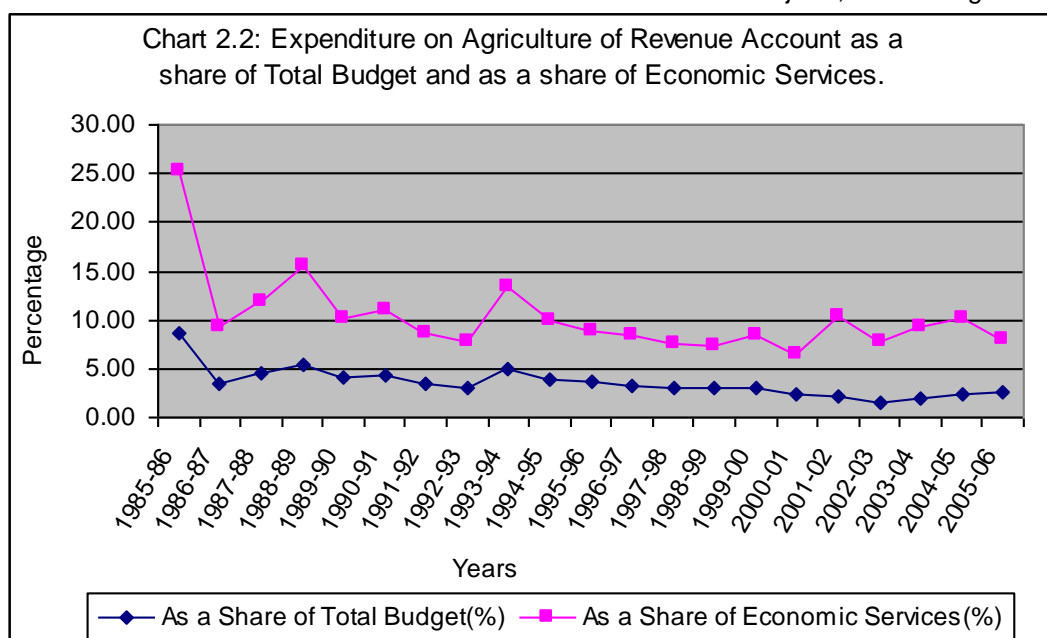


Table 2.3 indicates that percentage share of expenditure on agriculture and allied activities on revenue account in the total budget showed a declining trend over the years. The most sharp reduction in expenditure on agriculture was noted from 8.68 percent in the

total budget in 1985-86 to 3.37 percent in 1986-87. This share remained between 3 to 5 percent of the total budget between 1986-87 to 1999-2000. After 1999-2000, the importance of expenditure on agriculture and allied activities in the total budget witnessed sharp reduction as it was only 1.49 percent of the total budget in 2002-03 and it increased to only 2.68 percent in 2005-06.

Table 2.3(a): Expenditure on Agriculture during Pre and Post reform period.

Year	Expenditure on Agriculture (Revenue Account)				Total Expenditure on Agriculture (Revenue+Capital)	
	As a share of the Total Budget		As a share of Economic Services		% of Total Budget	% of Total Economic Services
	% Total Revenue Account of Budget	% Total Budget	% Total Revenue Account of Economic Services	% Total Economic Services		
1985-86 to 1990-91	6.97	4.85	20.24	12.92	6.04	16.09
1991-92 to 2005-06	3.81	2.52	12.16	8.60	3.11	10.61
1985-86 to 2005-06	4.05	2.69	12.84	8.99	3.32	11.11

Analysis of the expenditure on agriculture and allied activities on revenue account during pre-reform and reform period brought out that the share of agriculture expenditure in the total budget was double (4.85%) during pre-reform period as compared to reform period (2.52%). Looking in to the expenditure on agriculture on revenue account in absolute term in the total budget and its contribution in percentage term, it is clear that importance of agriculture and allied activities in the budget has reduced drastically over the study period in Gujarat.

**(d) Expenditure on agriculture as a share of total expenditure on economic services.**

Table 2.3 and table 2.3(a) give details on share of expenditure on agriculture and allied activities on economic services.

The trend observed was similar to the share of agriculture in the total budget. Agriculture and allied activities claimed 25 percent of the total expenditure on economic services in 1985-86 which was reduced to 9.23 percent in 1986-87.

This expenditure varied between the highest 15.52 percent in 1988-89 (except 1985-86) to the lowest 6.54 percent in 2000-01 during the entire study period.

The share of agriculture expenditure was higher in the economic services during pre-reform period (12.92%) than reform period (8.60%). Overall on an average expenditure on

agriculture and allied activities on revenue account constituted 8.99 percent of the total expenditure on economic services during entire study period.

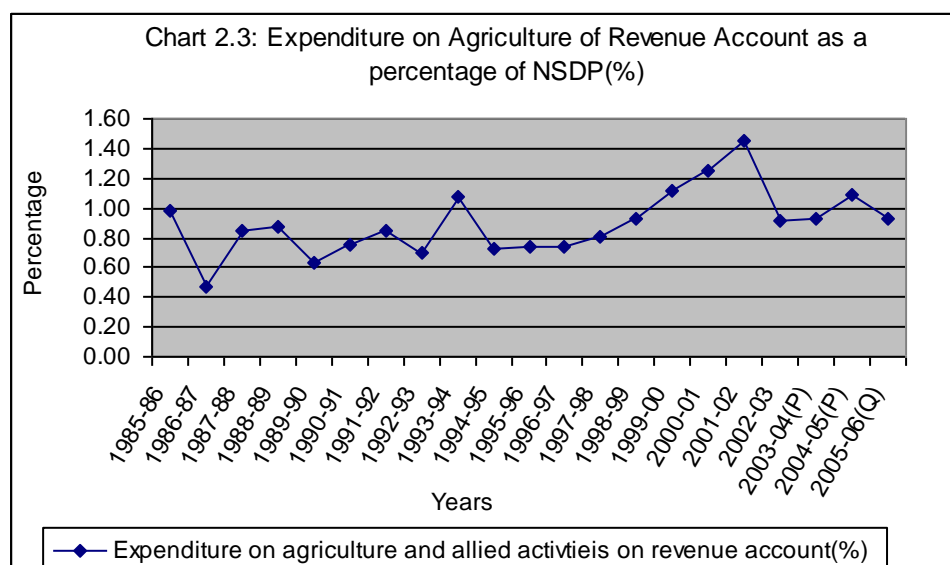
**(e) Expenditure on agriculture as a percentage of NSDP**

**Table 2.4: Expenditure on Agriculture on Revenue Account as a percentage of NSDP**

Year	NSDP (constant price 1993-94) (Rs. in crore)	Share of expenditure on agriculture and allied activities in NSDP (%)
1985-86	24903	0.98
1986-87	27017	0.47
1987-88	24484	0.84
1988-89	31701	0.87
1989-90	32121	0.63
1990-91	32807	0.76
1991-92	31070	0.85
1992-93	38396	0.70
1993-94	42560	1.07
1994-95	51191	0.72
1995-96	51749	0.74
1996-97	57865	0.74
1997-98	56522	0.81
1998-99	60847	0.93
1999-00	60156	1.12
2000-01	56598	1.25
2001-02	61549	1.46
2002-03	68655	0.92
2003-04(P)	80032	0.93
2004-05(P)	85443	1.10
2005-06(Q)	98348	0.93

Source: State Domestic Product of Gujarat State 1960-61 2004-05 and 2005-06.

Note: P-Provisional and Q-Quick estimates



It can be observed from table 2.4 that amount spent on agriculture and allied activities on revenue account during the study period was the highest at 1.46 percent of NSDP in 2001-02 and the lowest at 0.47 percent in 1986-87. Generally, it has moved around 1 percent of NSDP of the state.

### 2.3: Sap and Changing nature of Expenditure on Agriculture.

Table 2.5: Compound Growth Rates of Expenditure on Agriculture and Activities on Revenue Account (constant prices 1993-94)

Sr. No.	Particulars	Pre-reform Period (1985-86 to 1990-91)	Reform Period (1991-92 to 2005-06)	Total (1985-86 to 2005-06)
A	Agriculture and Allied Activities(expenditure)	-6.44	3.18	-0.02
B	GSDP	4.73	8.05	6.89
(i)	Agriculture and Allied Activities	5.09	4.69	4.44
(ii)	Crop Husbandry	5.41	4.97	4.63
(iii)	Forestry	-1.84	-2.27	-1.71
(iv)	Fishing	8.29	4.78	6.09
C	NSDP	4.70	7.98	6.76
D	Total Budget on Revenue Account	5.32	5.48	6.03

The growth rates of NSDP and GSDP were around 8 percent during the reform period and around 5 percent during the pre-reform period. The growth rate of GSDP in agriculture and allied activities was 5.09 percent during pre-reform period and 4.69 percent during post reform period. Thus, there was not much change in growth rate of agriculture during both periods.

On an average annual growth rate of agriculture expenditure was negative at 0.02 during entire study period. It was negative (6.44%) during pre-reform period and modest (3.18%) during reform period.

Table 2.6: Plan Outlay on Agriculture

Sr. No.	Plan		Agriculture (Rs. in Lakh)
1	Second Plan	1956-61	1709
2	Third Plan	1961-66	3775
3	Annual Plans	1966-69	4130
4	Fourth Plan	1969-74	7022
5	Fifth Plan	1974-79	22798
6	Annual Plans	1979-80	5928
7	Sixth Plan	1980-85	36773
8	Seventh Plan	1985-90	38640
9	Annual Plan	1990-91	9350
10	Annual Plan	1991-92	11738
11	Eight Plan	1992-97	73200
12	Ninth Plan	1997-02	200970
13	Tenth Plan	2002-07	416900

Source: Statistical Abstract of Gujarat 2008, Dir.of Economics and Statistics, Gov. of Gujarat, Gandhiagar.

## 2.4: Conclusions

It is obvious that for quite some time to come, agriculture will retain its importance in Gujarat's economy. It is a fact that share of agriculture in overall GSDP has declined over the years. Simultaneously the share of agriculture expenditure in the annual budgets has also declined yet agriculture will continue to play an important role in Gujarat economy.

It is also true that development of agriculture in Gujarat has been remarkable even though its importance has reduced in the total budgets. This development may be due to several initiatives such as development of infrastructure, especially provision of roads and communication, power, conservation and management of water and intensive extension effort through Krishi Mahotsav. Enterprising and hard working farmers have also played a major role in this development.



Appendix 2.1: Trend in Expenditure on Agriculture and Allied Activities: Current Price  
(Rs.in Crore)

Year	Total Budget			Economic Services			Expenditure on Agriculture & Allied Activities		
	Revenue Account	Capital Account	Total	Revenue Account	Capital Account	Total	Revenue Account	Capital Account	Total
1985-86	1972.39	842.05	2814.44	612.78	350.76	963.54	244.21	42.86	287.07
1986-87	2469.24	1331.98	3801.22	908.73	480.79	1389.52	128.29	59.42	187.71
1987-88	3093.07	1392.19	4485.26	1185.31	544.53	1729.84	206.41	44.08	250.49
1988-89	3362.40	1741.11	5103.51	1183.88	592.77	1776.65	275.76	53.99	329.75
1989-90	3727.35	1251.38	4978.73	1226.71	743.81	1970.52	200.98	54.44	255.42
1990-91	4081.92	1630.92	5712.84	1273.28	985.61	2258.89	248.32	64.56	312.88
1991-92	5238.20	2547.28	7785.48	1885.52	1166.19	3051.71	262.63	69.26	331.89
1992-93	6210.90	2477.32	8688.22	2414.65	1081.83	3496.48	269.05	75.88	344.93
1993-94	6933.79	2364.35	9298.14	2642.04	770.45	3412.49	455.05	63.51	518.56
1994-95	7544.22	2068.48	9612.70	2604.87	1100.82	3705.69	368.63	89.31	457.94
1995-96	8766.09	2044.49	10810.58	3009.24	1386.70	4395.94	385.02	107.16	492.18
1996-97	10259.44	2766.46	13025.90	3504.43	1532.33	5036.76	427.46	134.03	561.49
1997-98	12143.14	2983.23	15126.37	4193.61	1912.31	6105.92	457.20	182.26	639.46
1998-99	15606.16	3649.83	19255.99	5367.96	2375.21	7743.17	568.52	199.95	768.47
1999-00	17517.10	5033.04	22550.14	5527.80	2456.94	7984.74	673.19	226.52	899.71
2000-01	22040.82	9103.42	31144.24	8201.57	2629.83	10831.40	708.63	208.96	917.59
2001-02	22717.60	20496.35	43213.95	7810.10	902.39	8712.49	895.88	128.43	1024.31
2002-03	21440.13	20752.38	42192.51	6568.58	1482.18	8050.76	630.52	89.18	719.70
2003-04	21954.13	18192.74	40146.87	5604.49	2404.10	8008.59	746.49	183.28	929.77
2004-05	24301.80	13727.34	38029.14	6353.54	2881.83	9235.37	936.16	113.18	1049.34
2005-06	25465.49	8791.28	34256.77	5876.19	5524.13	11400.32	917.24	161.03	1078.27

Source: An Analytical Summary of Budget Statistics Gujarat State (1960-61 to 2005-06)  
Directorate of Economics and Statistics Government of Gujarat, Gandhinagar.

**CHAPTER – 3**  
**AGRICULTURAL DEVELOPMENT SCHEMES**

**3.1: Introduction**

This chapter contains details on two types of agriculture development schemes (A) centrally sponsored schemes and (B) state sector schemes being implemented by the state for the benefit of farmers:

**3.2: Crop Husbandry**

The strategies and approaches adopted to achieve projected target of area and production of different crops are as below.

1. The entire production programme has been designed to ensure food security and increasing farmers' net income through emphasis on demand and market driven agricultural crops.
2. Crop plan will be prepared according to various Agro Climatic Zones.
3. Different strategy for irrigated and rainfed farming.
4. To increase area under HYV crops, to ensure the availability and optimize use of main inputs.
5. Crop diversification, Krushi Mahotsav, extending the extension system beyond crop husbandry, Agro Climatic Zonal approach, IPM approach in plant protection.
6. An integrated approach for large scale irrigation.
7. Special focused programmes for poor/small and marginal farmers for reducing technological gap and raise their income.
8. Use of IT in extension.
9. Risk management schemes for the protection of farmers' economy.
10. Public-Private Partnership for the development of the agriculture.

**Main goal**

Planning for development in agriculture aims at increasing prosperity of the cultivators along with the people of whole state with emphasis on increasing net income of farmers.

**Main programmes/ schemes under Crop Husbandry.**

An amount of Rs. 33798 lakh has been provided for the year 2008-09 for ten major programmes.

The schemes under Minor Irrigation head are also merged in crop husbandry from 2008-09 for reducing number of schemes and for easy implementation of them.

The details of the programmes/schemes are given below.

#### **AGR-1 Direction, Administration, Extension and Infrastructure.**

An outlay of Rs. 1774.88 lakh has been provided for the year 2008-09, which will be utilized for recruitment of required staff, strengthening of farmer training centres, intensive extension through Krushi Mahotsav, purchase of implements and other technologies, which are innovative by farmers, providing vehicle facilities, infrastructure development in newly construct divisional office at Bhuj.

#### **AGR-2 Agriculture Support Programme for other than SC/ST farmers.**

An outlay of Rs. 1890.50 lakh has been provided for the annual plan 2008-09 for this programme, particularly for small and marginal farmers. The objectives of the programmes are soil health and organic farming, integrated pest management and quality control, seed multiplication (cotton and groundnut) and subsidy for high yielding varieties, farm mechanization and irrigation facilities/other agricultural assets.

#### **AGR-3 Agriculture Support Programme in Tribal Area Sub Plan and Dispersed Tribes (TASP)**

The target group of this programme includes 4.39 lakh land holders belonging to scheduled tribe who operate 9.11 lakh hectares of land. An outlay of Rs. 3622 lakh has been provided for 2008-09. This scheme includes recommended input required in crop production which gives flexibility as per their local situation and requirement of farmers. Major input/component are improved seed, fertilizer kits, organic manure, gypsum, bio-fertilizer, plant protection equipment, extension services, tarpoliline, improved implements etc. This scheme also grant subsidy to cultivators for construction of new wells, installation of oil engine motors, pump set etc.

#### **AGR-4 Agriculture Support Programme for SC Farmers (SCSP)**

The main aim of this programme is to up lift the living standard of scheduled cast farmers by increasing agricultural production and ultimately increasing their income. As per scheme AGR-3, this also includes recommended input required in crop production. An outlay of Rs.2467 lakh has been provided for 2008-09 for SCSP scheme under crop husbandry sector.

#### **Centrally Sponsored Scheme**

This programme comprises mainly the financial outlay as matching share for the centrally sponsored schemes for increasing production of specific crops in specific area. The centrally sponsored schemes, i.e., Oilseeds Production Programme, National Pulses Development Project and Technology Mission on Maize Development merged into one scheme. i.e., ISOPOM as per Government of India's guideline. An outlay of Rs.1845 lakh as

state share and Rs. 5989 lakh as central share has been provided for shared based scheme for the year 2008-09. Rs.141.37 lakh has been provided for the fully centrally schemes.

### **Sharing based centrally Sponsored Schemes**

#### **AGR-5 Technology Mission on Cotton (75:25)**

The Mini Mission-II under the TMC is implemented by the department of agriculture to increase the yield. The funds share is 75:25, central and state respectively. An amount of Rs.510 lakh and Rs.1530 lakh as state and central share has been provided respectively for the year 2008-09

#### **AGR-6 Technology Mission on Oilseeds, Pulses and Maize (ISOPOM) (75:25)**

This mission on oilseeds, pulses and maize production is implemented on 75:25 central/state basis. An amount of Rs.930 lakh and Rs.2790 lakh as state and central share has been provided respectively for the year 2008-09.

#### **AGR-8 Agricultural Technology Management Agency (ATMA)**

During 10<sup>th</sup> five year plan, Government of India launched a new scheme "ATMA" for support to state extension programmes for extension reforms scheme on the base of Macro management of which 90 percent share is from GOI and 10 percent share is from state government. The main objectives of the scheme are changes in public extension system, Public-Private Partnership, wide use of I.T in agriculture extension, to promote partnership of farm women in agriculture and allied activities, involve farmers in extension system to strengthen research extension farmers linkage, etc. An outlay of Rs. 220 lakh was state share for 2008-09. Central share is provided directly to ATMA.

#### **AGR-9 Work Plan – Macro Management**

Centrally sponsored scheme to strengthen staff's efforts through work plan under macro management is implemented with following objectives:

1. Reflection of local needs/crop/regions specific/priorities etc.
2. Providing flexibility and autonomy of states.
3. Optimum utilization of scarce financial resource.
4. Maximization of return.
5. Removal of regional imbalances.

An outlay of Rs. 185 lakh and Rs. 1665 lakh as state and central share has been provided respectively for the year 2008-09.

Following four sub-groups have been provided during the year 2008-09 under workplan.

- Crop production programme

- Farm mechanization
- Balanced and integrated use of fertilizer
- Extension and other new initiatives.

### **Fully Centrally Sponsored Scheme (100% CSS)**

#### **AGR-7 Crop Statistics – (100%CSS)**

Improvement of Crop Statistics and Timely Reporting of estimated area and production of principal crops are provided in 2007-08. This scheme includes payment of salaries and other allowances for staff on 50:50 sharing basis. From 2007-08, this scheme is declared as Central Sector Scheme. So no provision is made under state plan.

An outlay of Rs. 77.87 lakh as central share has been provided for the year 2008-09.

#### **AGR-16 Scheme of Crop Estimation Survey on Fruits, Vegetables and Minor Crops (FVM)**

Crop Estimation Survey of Fruits, Vegetables and Minor crops is 100% css as per GOI guide lines. This scheme includes only payment of salaries and other allowances for staff.

An outlay of Rs. 35.50 lakh as Central share (100%) has been provided for the scheme of crop estimation survey on fruits, vegetables and minor crops in the year 2008-09.

#### **AGR-17 National Project on Organic Farming**

National project on organic farming is launched by Central Government which is fully centrally sponsored scheme from 2004-05. An outlay of Rs. 10 lakh as Central share (100%) has been provided for the scheme for 2008-09.

#### **AGR-18 AGRISNET**

GOI launched national project for computer net working to provide better service, knowledge upgradation of farmers, market situation, current price and other agricultural information to farmers.

An outlay of Rs. 15 lakh as Central share (100%) has been provided for the scheme for 2008-09.

#### **Rastriya Krushi Vikash Yojna (RKVY)**

RKVY is launched by GOI in the eleventh plan from 2007-08 with an aim to achieve 4 percent agricultural growth rate.

Besides there are scheme like development and strengthening of infrastructure facilities for production and distribution of quality seeds and strengthening of farm mechanization through training, testing and demonstration

### **AGR-10 Special Focused Programme for Poor Farmers (Free Agricultural Input kit distribution)**

Gujarat agro vision 2010 envisages improving the quality of life of the rural population, including those who are resource poor, by widening their employment opportunities and increasing their income.

There is a need to support poor farmer for adopting new technology in agriculture. This will help increasing crop production and support sustainable agriculture.

In this scheme, 5 farmers are selected from each village. Department provides inputs and farm implements to individual selected farmers who are selected in GRAM SABHA, for transparency. All the villages included in this programme are benefited. During a massive Kharif campaign, - Krushi Mahotsav-2005, 2006 and 2007, the department had distributed input kits to the five poorest farmers from a village, selected by the Gram Sabha.

An outlay of Rs. 2000 lakh has been provided for the year 2008-09.

### **AGR-11 Risk Management in Agricultural Sector.**

Three schemes of Ninth Plan Viz. National Crop Insurance Scheme, Farmers Accident Insurance Scheme and Price Stabilization Fund are merged into one scheme. Risk factors such as drought, flood, fire, insect and pest attack are covered in crop insurance scheme where farmers are insured against accident that may occur while doing agricultural operation. When the prices of agricultural products fall down, than through the Market Support Price, the farmers may be protected from the monetary losses. Funds are also provided for the artificial rainfall experiments during the year of scarcity.

An outlay of Rs. 16597.39 lakh has been provided for following sub schemes for the year 2008-09.

- Crop Insurance (Rs. 14823.36 lakh)
- Farmer Accident Insurance (Rs. 1016 lakh + Rs. 500 lakh new item)
- Price Stabilization/Reserve Fund (Rs. 250 lakh)
- Artificial Rainfall Experiment (Rs. 8 lakh)

In Farmer Accident Insurance Scheme, an amount of Rs. 500 lakh has been proposed for to cover the risk of one heir of land holder as a new item.

### **AGR-12 & 13 Grant in Aid to Corporation**

This programme includes the scheme for giving revolving fund, share capital and grant in aid to corporations which are working for agricultural development work of seed production, its storage and value addition in agricultural produce.

An outlay of Rs. 666.30 lakh has been provided for corporation for following items.  
Grant in aid to Gujarat State Seed Corporation.

- Rs. 50 lakh provided for grant in aid to Gujarat Agro Industries Corporation for New Agro Industrial Policy, Rs.100 lakh each for implementation of Agri Export Zones (AEZ) as a new item and strengthening export of agricultural and horticultural product through value chain as a new item.
- Rs. 50 lakh provided each for creation of one stop solution agri business and agricultural hub for farmers in rural areas with public private partnerships as a new item and for promotional activities and strengthening of organization. Rs.16.30 lakh provided for global gap certification as a new item.

### **AGR-14 Tribal Area Sub Plan**

An outlay of Rs. 2495.00 lakh has been earmarked for TASP for 2008-09 as per new Gujarat pattern.

### **AGR-15 IT (Information Technology) & Training (Knowledge Updating)**

An outlay of Rs. 418 lakh has been provided for IT sector and Rs. 2 lakh for expenditure to train the existing staff for knowledge updating for the year 2008-09.

Appendices 3.1 and 3.2 give details on these schemes.

### **3.3: Horticulture**

Government of India launched National Horticulture Board (NHM) for the overall development of horticulture sector in 2005-06. Government of Gujarat has established NHM and GOI allotted Rs.75 crores for this purpose to GOG during 2007-08. The districts covered under this mission are Valsad, Navsari, Surat, Bhavnagar, Vadodara, Anand, Junagadh, Amreli, Mehsana, Sabarkantha, Kutch, Banaskantha, Ahmedabad, Kheda and Bharuch.

## **National Horticulture Board Schemes**

Main aims of NHB are:

1. Development of commercial horticulture through production and post harvest management. Back ended subsidy varies from 20 percent of the project cost with a maximum of Rs. 20 lakh.
2. Capital investment subsidy for cold storage and other storage for horticulture produce. This is carried out in collaboration with NABARD and NCDC projects as per conditions defined in NHB.
3. Technology development and transfer. It has 100 percent financial assistance up to Rs. 10 lakh/project for production and Rs.25 lakh for R & D.
4. Establishment of nutritional gardens in rural areas. Distribution of fruit plant and vegetable seeds in minikits. Rs. 250 is fee per minikit per family.
5. Market information service for horticulture crop with 100 percent financial assistance.
6. Horticulture promotion service, techno-economic feasibility studies etc with 100 percent financial assistance for studies through professional consultant.

### **Schemes**

#### **AGR-24 Scheme for Integrated Horticulture Development Programmes in Tribal Areas**

1. It is suggested to provide input kit for horticulture crop to below poverty level farmers with a view to uplift them. The input kits of Rs. 1000 will be provided to each of this beneficiary for 5 persons per village.
2. Programme to provide input subsidy for horticulture activities in tribal area. Under this programme subsidy is provided for the area expansion of fruit crop, sorting grading equipment, power tillage/mini tractor, area covered under organic farming, plant protection equipment, border plantation for fruit grafts, entire horticultural farming village development concept etc.
3. Programme for financial assistance for hi-technology, post harvest management, marketing, export and infrastructure development. Subsidy is given on purchase of different harvesting equipments and processing machineries.
4. Programme for establishment and strengthening of nursery, establishment of fruit nurseries at taluka seed farm and strengthening of old fruit nurseries in tribal area.

#### **AGR-25 Scheme for Horticulture Development Programme under S.C.P for Scheduled Cast Cultivator.**

1. Programme for below poverty line SC farmers. It is similar to as mentioned earlier for tribal area.



2. Programme to provide input subsidy for horticultural activities for SC farmers in the line of tribal area.

3. Programme for financial assistance for hi-technology, post harvest management, marketing export and infrastructure development in horticultural for SC farmers.

This programme includes pakka structure for cucurbit vegetable crops and subsidy on purchase of harvesting equipments etc.

#### **AGR-26 Scheme for Fruit and Vegetable Preservation and Training.**

Under this scheme, housewives are to be trained to prepare and preserve fruits and vegetable products.

#### **AGR-29 Scheme for Development of Horticultural and Medicinal/Aromatic Plants.**

Assistance under this scheme is given to area covered under floriculture and medicinal and aromatic plants, development of betel vine i.e., construction of conservatory, demonstration plot, irrigation and pp equipment. Also subsidy is given in electricity tariff for green house cultivation of flowers and tissue culture laboratories.

#### **AGR-23 Scheme for Integrated Horticulture Development Programme**

This scheme includes all the programmes as mentioned earlier for tribal area and SC farmers.

### **Centrally Sponsored Schemes in Horticulture**

1. Oil Palm development programme input subsidy.

This programme includes assistance for planting material, cultivation cost, diesel pump sets, development of waste land and drip irrigation. It also includes extension activities like training, extension and publicity, establishment of staff, demonstration etc.

2. Coconut development programme input subsidy.

Under this programme, assistance is provided for expansion of area under coconut, establishment of coconut nurseries (govt. approved/private) and regional coconut nurseries, integrated farming in coconut holding productivity improvement.

Appendix 3.3 gives details on these schemes.

### **3.4: Animal Husbandry and Dairy Development.**

Animal husbandry and dairying play a vital role in the rural economy by generating substantial income to rural population where employment is scare.

The state government provides animal health care up to the village level through a net work of the veterinary institutions. Besides, there are 12 Intensive Cattle Development

Projects (ICDP) in the state. The basic objective of ICDP is to improve the breed of cattle and buffaloes for improving milk production. There are in all 749 centers under this project.

### **Schemes for Fodder Development**

In order to increase fodder production and encourage farmers for growing improved high yielding varieties of fodder, the State Animal Husbandry Department is implementing different schemes for fodder development.

➤ **Distribution of fodder minikits**

Fodder minikits are distributed to farmers, which will also serve a demonstration purpose leading to better acceptability of new varieties by the neighboring farmers. Beneficiaries of the general and tribal people categories are also covered under this programme. Implementing agencies are district pachayat and intensive cattle development project.

➤ **Popularizing the use of hand operated chaff cutter and round wheel chaff cutter.**

➤ **Establishment of village fodder production farms and fodder seed production farm.**

There are seven village level fodder production farms and two fodder seed production farms established in the state.

➤ **Feeding truff**

Feeding truff is given to schedule caste beneficiaries with maximum 50 percent subsidy of cost value or Rs. 1000 which ever is less.

➤ **Cattle shed for scheduled cast and general people**

A subsidy of Rs. 10000 for cattle shed is given to SC people for cattle shed while Rs. 15000 subsidy is given to general people which include shed, feeding truff, water tank and seven litre bucket.

➤ **Poultry Development**

There are 12 Intensive Poultry Development Projects (IPDP), 5 District Poultry Extension Centers, 85 Poultry Service Centers are functioning for the poultry development and extension activities. Subsidy schemes are being implemented by the government in order to popularized the poultry framing. Subsidy schemes include medication programme, stipend scheme etc. Other programmes and schemes are feed compounding unit, regional poultry breeding farms, district poultry farms, poultry disease diagnostic laboratories, poultry vaccine production unit and pullorum testing unit.

## **Dairy Development**

Dairy industry is well established in Gujarat state. There are milk enhancement programmes for milch animals in the state. Also there are special programmes for schedule caste people like free health package, supply consisting, F.M.D Vaccine etc. The scheme of preservation of milch animal is being implemented to control the illegal export outside the state.

Details are given in appendix 3.4

## **3.5: Fisheries**

Gujarat has a long coastal line of 1600kms. The area available for fishing activities extends from Lakhpat in Kutch district in north to Umargaon in Valsad district in south. Schemes implemented for fisheries development in the state are as below.

### **Centrally Sponsored Schemes**

#### **Scheme for Development of fishery harbour at Jakhau (Kutch district)**

This is a centrally sponsored scheme to commission full fledged fishing harbour with estimated cost of Rs.33 crores.

#### **Scheme for fishermen welfare – Accident Insurance.**

Those fishermen holding the membership of Fishermen Co-operative Society are eligible for this coverage.

#### **Scheme for housing to the fishermen.**

The objective of the scheme is to provide pakka shelter to fisherman.

#### **Scheme for providing landing and berthing facilities**

This is a departmental operational scheme for the development of pre identified fish landing centers with 50 per cent centrally sponsored scheme.

### **State Schemes**

- Scheme for providing dredging facility at minor ports. Identified harbor are dredged out for providing smooth passage to the fishing vessels.
- Scheme for construction of break water walls at fishery harbor. This scheme is for safeguard of incoming/outgoing and anchored vessels at Veravla and Mangrol harbours.
- Scheme for fishery terminal: - Fisheries Terminal Divisions are established at Veraval, Mangrol and Porbandar.
- Scheme for Strengthening of Fisheries Cooperative (NCDC sponsored):- Any fisheries cooperative society of the state is eligible under this scheme.

- Scheme for providing water supply to Jakhau Fishery Harbour (Kutch district):- This is for any fishing board, the purpose is to provide water supply for keeping the fish catch in hygienic condition.
- Scheme for bracking water fisheries: - Any fish farmer undertaking agriculture in bricksh area is eligible. Beneficiaries will be small farmers having land holding of 2 hectare or less.
- Scheme for extension and training programme: - The purpose of the scheme is to inform about fisheries activities through various media, to train the department personnel with modern technology and to train the fisher youth and promote them for fisheries activities. Assistance is given for all these purposes by the state government.

Details are provided in Appendix 3.5.

### **3.6: Forests**

The main objectives of the forestry programmes are maintenance of environmental stability through preservation and restoration of ecological balance, to strengthen adequately the protection of forests and protected areas, to check the process of degradation and to increase availability of forest produce particularly to rural and tribal communities by increasing tree coverage etc. Gujarat Forest Department has launched a “Social Forestry Programme” for planting trees on non forest lands. Due to geographical location of the districts i.e., Kutch and Banaskatha, Border Area Development Programme (BADP) is implemented for greening these lands and to generate employment. A programme of management and development of sanctuaries and national parks is introduced as a new scheme during the 11<sup>th</sup> Five Year Plan.

### **Water Resources Development**

Water resource development of the state is aimed at providing water efficiently in equitable and sustainable manner.

A water conservation scheme called “Sardar Patel Water Conservation Scheme” is implemented by the state government. The pattern of sharing is 80:20 for the entire state. The 80 percent share is of state government and 20 percent of beneficiaries. During the year 2007-08, more than 4823 check dams were constructed and 3230 ponds were deepened by the Water Resource Department.

**Sujalam Sufalam Yojana:** - The state has launched Sujalam Sufalam Yojana. The works of 332 km. long canal has been near completion passing through seven districts. To utilize the flood water of Narmada and to fill reservoirs and enroute ponds of north Gujarat, works of eight life irrigation pipe lines under Sujalam Sufalam Yojana are completed. It is planned to divert flood water of Narmada to 17 rivers by constructing 107 check dams in surendranagar district.

**Participatory irrigation management:** - The government has decided to cover maximum possible command area under Participatory Irrigation Management. Under this schemes so far 2.12 lakh hectares of command area is transferred to Farmers' Cooperative Societies and Water Users Associations.

## Appendix 3.1: Agriculture Schemes: Gujarat

## State Sector Schemes on Agriculture

(Rs. in lakh)

Name of the Scheme		Implemented Year	Allocation Grant released	Target outlay for Year 2007-08	Achievement up to Feb.08	
Cr. No.	1	2	3	4	5	
	<b>CROP HUSBANDARY</b>					
1	AGR-1	Administration & infrastructure facilities for Agricultural development	2007-08	1296.86	1633.00	1445.30
2	AGR-2	Organic farming	2007-08	595.32	800.00	348.02
3	AGR-3	Agriculture Support Program in TASP	2007-08	1426.58	1655.00	1278.39
4	AGR-4	Promotional incentives to SC farmer for agriculture production	2007-08	167.50	250.00	147.26
5	AGR-5	Technology mission for cotton development	2007-08	287.13	350.00	310.33
6	AGR-6	Oilseed production, pulses development and accelerated maize development programme	2007-08	237.16	635.00	401.09
7	AGR-7	Improvement of crop statistics (ICS)	2007-08	42.00	42.00	0.00
8	AGR-8	ATMA Project	2007-08	23.00	43.00	23.00
9	AGR-9	Scheme to strengthen state's efforts through workplan under macro managent	2007-08	59.82	120.00	63.48
10	AGR-10	BPL Kits	2007-08	1214.43	1400.00	1214.43
11	AGR-11	Risk management in Agriculture sector	2007-08	25328.46	23385.00	24631.46
12	AGR-12	Share capital and revolving fund for Gujarat State Seed Corporation	2007-08	10.00	50.00	50.00
13	AGR-13	Grant in aid to GAIC for Agri. Policy	2007-08	0.00	403.00	
14	AGR-14	Ear mark to TASP	2007-08	0.00	800.00	800.00
15	AGR-15	Ear mark to It	2007-08	0.00	380.00	380.00
GRAND TOTAL ( Crop Husbandry – Agri)				30688.26	31946.00	31092.76

Centrally Sponsored Schemes on Agriculture (Rs. in lakh)

Name of the Scheme			Implemented Year	Allocation Grant released	Target outlay for year 2007-08	Achievement up to Feb.08
1			2	3	4	5
<b>CENTRALLY SPONSORED SCHEME</b>						
1	AGR-5	Technology mission for cotton development	2007-08	861.38	1050.00	1032.58
2	AGR-6	Oilseed production, pulses development and accelerated maize development programme	2007-08	778.01	1905.00	1203.24
3	AGR-7	Improvement of crop statistics (ICS)	2007-08	42.40	41.85	77.31
4	AGR-8	ATMA Project	2007-08	0.00	387.00	0.00
5	AGR-9	Scheme to strengthen state's efforts through workplan under macro management	2007-08	567.95	1080.00	571.38
GRAND TOTAL				2249.74	4463.85	2884.51

Source: Directorate of Agriculture, Govt. of Gujarat

Appendix 3.2: Scheme wise Outlay and Expenditure

(Rs. lakh)

Sr. No	Scheme No.	Major Head/Minor Head of Development(scheme wise)	Implementing Agency	Annual Plan 2007-08 Actual Expenditure			Annual Plan 2008-09					
				Total	Continuing Scheme	New Scheme	Agreed Outlay			Anticipated Expenditure		
							Total	Continuing Scheme	New Scheme	Total	Continuing Scheme	New Scheme
<b>A</b>	<b>CROP HUSBANDRY</b>											
1	AGR-1	Direction, Administration, Extension & infrastructure facilities for agricultural development Agriculture support programme for other than SC/ST farmers	State Govt.	1365.39	1271.96	93.43	1744.84	1318.84	426.00	1744.84	1318.84	426.00
2	AGR-2	Agriculture support programme for other than SC/ST farmer's Agriculture support programme for Tribal & outside tribal	State Govt.	690.32	498.65	191.67	1890.50	1890.50	0.00	1890.50	1890.50	0.00
3	AGR-3	Agriculture support programme in Tribal Area Sub Plan & outside tribal Agriculture support programme for Sc farmers	State Govt.	1475.00	1475.00	0.00	3622.00	3034.50	587.50	3622.00	3034.50	587.50
4	AGR-4	Promotional incentives to Sc farmers for agriculture production Centrally Sponsored Scheme(shared base)	State Govt.	222.10	222.10	0.00	2467.00	370.00	2097.00	2467.00	370.00	2097.00
5	AGR-5	Technology Mission for Cotton Development	State Govt.	375.37	375.37	0.00	510.00	510.00	0.00	510.00	510.00	0.00
6	AGR-6	Oilseed production, pulses development and accelerated maize development programme	State Govt.	331.43	331.43	0.00	930.00	930.00	0.00	930.00	930.00	0.00
7	AGR-8	Agricultural Technology Management Agency(ATMA) New CSS scheme from 2005-06	State Govt.	40.00	40.00	0.00	219.00	219.00	0.00	219.00	219.00	0.00



8	AGR-9	Scheme to strengthen state's efforts through work plan under macro management	State Govt.	120.00	120.00	0.00	185.00	185.00	0.00	185.00	185.00	0.00
9	AGR-10	Special Focused programme for poor Farmer's Risk Management in Agriculture Sector	State Govt.	1214.43	1214.43	0.00	2000.00	2000.00	0.00	2000.00	2000.00	0.00
10	AGR-11	Risk management in Agriculture sector	State Govt.	2580.49	25380.49	0.00	16597.36	16097.00	500.00	16597.36	16097.00	500.00
11	AGR	National Agriculture Insurance Scheme Fund Corpus Fund Grant in aid to corporation	State Govt.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	AGR-12	Share capital and revolving fund for seed corporation	State Govt.	50.00	50.00	0.00	50.00	50.00	0.00	50.00	50.00	0.00
13	AGR-13	Financial assistance to Agro Industries for new Agricultural Industries Policy	State Govt.	300.00	0.00	300.00	666.30	350.00	316.30	666.30	350.00	316.30
14	AGR-43	Rastriy Krushi Vikas Yojana(RKVY)	State Govt.	0.00	0.00	0.00	14962.00	14962.00	0.00	14962.00	14962.00	0.00
15	AGR	Gujarat state Organic Product Certification Agency	State Govt.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	AGR-14	Earmark to TASP	State Govt.	800.00	800.00	0.00	2495.00	2495.00	0.00	2495.00	2495.00	0.00
17	AGR-15	Earmark to IT	State Govt.	380.00	380.00	0.00	420.00	418.00	2.00	420.00	418.00	2.00

### Appendix 3.3: Schemes wise Outlay and Expenditure

B	HORTICULTURE											
1	AGR-22	Scheme for Infrastructure facilities at State, Division, District & Taluka level	State Govt.	419.79	419.79	0.00	500.01	500.01	0.00	413.76	413.76	0.00
2	AGR-23	Scheme for integrated Horticulture Development	State Govt.	1954.49	1951.99	2.50	2400.00	1900.00	500.00	2316.02	1896.59	419.43
3	AGR-24	Scheme for Horticulture Development Programme in Tribal Area(TASP)	State Govt.	808.36	808.36	0.00	725.00	725.00	0.00	720.44	720.44	0.00
4	AGR-25	Scheme for Horticulture Dev. Under S.C.S.P. for Scheduled Cast Cultivator	State Govt.	348.66	348.66	0.00	450.00	450.00	0.00	402.24	402.24	0.00

5	AGR-26	Scheme for fruit & vegetable preservation & training	State Govt.	35.42	35.42	0.00	35.00	35.00	0.00	26.44	26.44	0.00
6	AGR-27	Scheme for Centrally Sponsored Programme for Horticulture Development(Oil Palm Development)	State Govt.	15.03	15.03	0.00	25.00	25.00	0.00	20.06	20.06	0.00
7	AGR-29	Scheme for Dev. For Floriculture & Medicinal/Aromatic Plants	State Govt.	105.19	105.19	0.00	125.00	100.00	25.00	115.39	115.05	0.34
8	AGR-31	Scheme for Centrally Sponsored Programme for Horticulture Development(Coconut Development)	State Govt.	6.35	6.35	0.00	5.00	5.00	0.00	5.41	5.41	0.00
9	AGR-32	Scheme for Centrally Sponsored Programme for Horticulture Development(Gujarat Horticulture Mission)	State Govt.	546.06	0.00	546.06	1200.00	1200.00	0.00	576.53	576.53	0.00
10	AGR	Ear mark Provison for IT	State Govt.	0.00	0.00	0.00	24.99	24.99	0.00	0.00	0.00	0.00
11	AGR	Ear mark Provison for TASP(Gujarat pattern)	State Govt.	0.00	0.00	0.00	500.00	500.00	0.00	0.00	0.00	0.00
12	AGR	Head office Renovation	State Govt.	0.00	0.00	0.00	10.00	10.00	0.00	0.00	0.00	0.00
13	AGR	Construction Work of Nurseries(Kodinar Dis. Junagadh)	State Govt.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

#### Appendix 3.4: Schemes wise Outlay and Expenditure

C	ANIMAL HUSBANDRY											
1	ANH-1	Expansion of Directorate of Animal Husbandry	State Govt./Public Sector	95.57	95.57	0.00	164.30	138.70	25.60	164.30	138.70	25.60
2	ANH-2	Improvement of Veterinary aid	State Govt./Public Sector	1925.64	1061.46	864.18	2974.39	2371.79	602.60	2974.39	2371.79	602.60
3	ANH-3	Diseases control programme	State Govt./Public Sector	307.80	307.80	0.00	699.45	548.72	150.73	699.45	548.72	150.73

4	ANH-4	Strengthening of Statistical wing	State Govt./Public Sector	45.11	45.11	0.00	47.50	47.50	0.00	47.50	47.50	0.00
5	ANH-5	Cross breeding programme	State Govt./Public Sector	200.88	200.88	0.00	400.48	400.48	0.00	400.48	400.48	0.00
6	ANH-6	Intensive Cattle Development Programme	State Govt./Public Sector	773.79	427.10	346.69	1509.99	771.04	738.95	1509.99	771.04	738.95
7	ANH-7	Cattle breeding farms	State Govt./Public Sector	672.00	106.00	566.00	1121.01	406.01	715.00	1121.01	406.01	715.00
8	ANH-8	Supply of milch animal to SC people	State Govt./Public Sector	50.90	50.90	0.00	85.00	85.00	0.00	85.00	85.00	0.00
9	ANH-9	Feed and Fodder Development Programme	State Govt./Public Sector	130.78	117.00	13.78	262.42	162.42	100.00	262.42	162.42	100.00
10	ANH-10	Coordinated poultry breeding programme	State Govt./Public Sector	24.13	24.13	0.00	40.43	40.43	0.00	40.43	40.43	0.00
11	ANH-11	Intensive Poultry Development programme	State Govt./Public Sector	44.63	44.63	0.00	345.02	53.48	291.54	345.02	53.48	291.54
12	ANH-12	Intensive Sheep Development Programme	State Govt./Public Sector	147.92	147.92	0.00	176.32	176.32	0.00	176.32	176.32	0.00
13	ANH-13	Establishment of Sheep breeding farm	State Govt./Public Sector	420.17	20.17	400.00	464.48	418.80	45.68	464.48	418.80	45.68
14	ANH-14	Expansion of exhibition unit	State Govt./Public Sector	1.40	1.40	0.00	9.60	4.60	5.00	9.60	4.60	5.00
15	ANH-15	Expansion of Existing Horse breeding farm	State Govt./Public Sector	25.56	25.56	0.00	210.46	204.46	6.00	210.46	204.46	6.00
16	ANH-16	VI Nucleus Budget		1.00	1.00	0.00	1.15	1.15	0.00	1.15	1.15	0.00
17	ANH-17	VII Earmark for TASP		500.00	500.00	0.00	575.00	575.00	0.00	575.00	575.00	0.00

18	ANH-18	VIII Information and Technology		130.00	130.00	0.00	100.00	100.00	0.00	100.00	100.00	0.00
19	ANH-14	Cattle and Buffalo Development Milk Yield Competition	State Govt.	289.00	289.00	0.00	289.00	289.00	0.00	289.00	289.00	0.00

### Appendix 3.5: Schemes wise Outlay and Expenditure

D	FISHERIES											
1	FSH-1	Introduction of database management by computerization	State Govt.	19.16	19.16	0.00	34.00	34.00	0.00	34.00	34.00	0.00
2	FSH	Commissioner & District officers	State Govt.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	FSH-2	Fish seed Production(SCSP, TASP)	State Govt.	373.01	371.88	1.13	1050.00	368.00	682.00	1050.00	368.00	682.00
4	FSH-4	Development of Fish through Fish Farmer's Development Agencies(PCSS)	State Govt.	151.45	151.45	0.00	120.00	120.00	0.00	120.00	120.00	0.00
5	FSH-5	Establishment of Coastal Aquaculture Units(PCSS)	State Govt.	13.02	13.02	0.00	90.00	55.00	35.00	90.00	55.00	35.00
6	FSH-6	Development of Fisheries Harbours(PCSS)	State Govt.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	FSH-7	Providing Navigation Aids & Other infrastructure facilities	State Govt.	1515.12	1515.12	0.00	3119.00	284.00	2835.00	3119.00	283.00	2835.00
8	FSH-8	Mechanisation of Fishing Crafts(PCSS)	State Govt.	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
9	FSH-9	Improving Marketing supports	State Govt.	0.00	0.00	0.00	50.00	25.00	25.00	50.00	25.00	25.00
10	FSH-10	Strengthening of Extension service in fisheries sector	State Govt.	61.45	61.45	0.00	70.00	70.00	0.00	70.00	70.00	0.00
11	FSH-11	Group Accisent Insurance for fishermen member of Cooperative societies(PCSS)	State Govt.	35.79	35.79	0.00	40.00	40.00	0.00	40.00	40.00	0.00
12	FSH-12	Construction of office Building & Staff Quarter	State Govt.	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
13	FSH-13	National Welfare Fund Programme	State Govt.	78.00	78.00	0.00	80.00	80.00	0.00	80.00	80.00	0.00
14	FSH-16	Salestex subsidy on HSD to Mechanized fishing veseles below 20 meter length	State Govt.	0.00	0.00	0.00	225.00	225.00	0.00	225.00	225.00	0.00

Source: Development Programme 2009-10. Gov. of Gujarat, General administration Department, Planning Division, Sachivalaya, Gandhinagar.

## CHAPTER – 4

### **NEXUS BETWEEN STATE INTERVENTION AND AGRICULTURAL DEVELOPMENT**

#### **4.1 Introductions**

Gujarat state has a population of 5.05 crore, as per the 2001 census. Agriculture continues to be the primary occupation in the state where two third of population is engaged in agriculture and earn livelihood directly from this occupation. The prosperity and well being of people in Gujarat are closely linked with agriculture and allied activities. However the percentage share of expenditure on the agriculture and allied activities on the revenue account in the total budget of state has declined over the years from 8.68 percent in 1985-86 to 3.37 percent in 1986-87 and declined to as low as 1.49 percent in 2002-03 and increased slightly to 2.68 percent 2005-06. Similarly, the share of agriculture in overall GSDP has declined over the years.

#### **4.2 Impact of agriculture expenditure on Production, GSDP and Poverty.**

Agriculture provides not only food and raw materials but also employment to a very large proportion of population. Enhancing growth of the agriculture sector is vital for food security, poverty alleviation, price stability, overall industrial growth and sustainability of growth of the overall economy. Following table gives overall idea on growth rates of crops, NSDP, expenditure on agriculture, its share in budget etc.

Table 4.1 Compound Growth Rates during Pre-reform and Reform Period

Sr. No.	Particulars	Growth Rates (percentage)		
		Pre reform period (1985-86 to 1990-91)	Reform period (1991-92 to 2005-06)	Total period (1985-86 to 2005-06)
1	Crops			
(i)	Total Cereals			
	Area	-1.71	-1.01	-1.42
	Production	7.90	3.51	3.54
	Productivity	9.78	4.56	5.04
(ii)	Total Pulses			
	Area	1.45	-1.30	-0.86
	Production	8.37	2.51	2.20
	Productivity	6.82	3.86	3.09
(iii)	Total Foodgrains			
	Area	-1.13	-1.07	-1.32

	Production	7.96	3.41	3.40
	Productivity	9.19	4.52	4.78
(iv)	Total Oilseeds			
	Area	2.07	0.22	0.83
	Production	13.34	7.16	7.79
	Productivity	11.04	6.92	6.90
2	NSDP (constant price)	4.70	7.98	6.76
3	GSDP (constant price)	4.73	8.05	6.89
(a)	Primary Sector	5.46	5.35	4.96
(b)	Secondary Sector	4.50	9.75	7.84
(c)	Tertiary Sector	4.33	8.53	7.45
(a)	Primary Sector	5.46	5.35	4.96
(i)	Crop Husbandry	5.41	4.97	4.63
(ii)	Forestry	-1.84	-2.27	-1.71
(iii)	Fisheries	8.29	4.78	6.09
4	Growth rate of expenditure of Total Budget			
(i)	Agriculture and allied activities(revenue account)	-6.44	3.18	-0.02
5	% share in Budget(revenue+capital)	6.04	3.11	3.32
6	% share in Economic Services(revenue+capital)	16.09	10.61	11.11

As mentioned earlier, agriculture in Gujarat is mainly rainfed and depends largely on the vagaries of the monsoon. The overall growth rate of expenditure on the agriculture and allied activities in the budget during 1985-2006 was negative at 0.02 percent. However, foodgrain production increased at the average rate of 3.40 percent and oilseeds at the rate of 7.79 percent per year.

Thus, even though growth rate is negative for expenditure on agriculture and allied activities on revenue account, the actual expenditure has increased from Rs.244 crores in Rs.1985-86 to Rs.917 crores in 2005-06.

Because of the importance of agriculture in the state economy, the marked fluctuations in the agricultural sector affected the growth rate of GSDP but the impact was much reduced and reversed by opposite movement of secondary and tertiary sectors. The growth rate of primary sector in GSDP has been stagnant or has declined during the study period. The growth of GSDP has been sustained by secondary and tertiary sectors.

## Impact on poverty

On impact of agriculture on poverty, the world bank report “ world Development Report 2008” has rightly mentioned that “while the worlds of agriculture are vast, varied and rapidly changing, with the right polices and supportive investment at local, national and global levels, today’s agriculture offers new opportunities to hundreds of millions of rural poor to move out of poverty”.

In the 21<sup>st</sup> century, agriculture continues to be a fundamental investment for sustainable development and poverty reduction. Agriculture alone will not be enough to massively reduce poverty but it has proven to be uniquely powerful for that task.

As regards income poverty, Gujarat is above the all India average. Table below gives the poverty rates in Gujarat and India.

Table 4.2: Poverty Rates in Gujarat and India: (percent)

Region	1972-73	1977-78	1983-84	1987-88	1993-94	2004-05
<b>India</b>	<b>54.9</b>	<b>51.8</b>	<b>44.8</b>	<b>39.3</b>	<b>33.5</b>	<b>27.5</b>
Rural	56.4	53.1	45.6	39.1	33.4	28.3
Urban	49.2	47.4	42.2	40.1	33.7	25.7
<b>Gujarat</b>	<b>47.21</b>	<b>42.17</b>	<b>33.27</b>	<b>32.33</b>	<b>23.92</b>	<b>16.80</b>
Rural	46.35	41.76	29.80	28.67	22.18	19.10
urban	41.21	43.13	40.63	39.63	39.63	13.00

Source: (i) Sharma S.S.P, Raju K.V. and Sarkar Sabyasachi, “Growing Rural-Urban disparity in Gujarat” IRMA, 2009.

(ii) Agricultural Statistics-2008, MOA, GOI.

This table indicates that overall and rural urban poverty rates in Gujarat are lower than the same rates of India.

Urban poverty is relatively higher in the state due to the decline in textile industry, migration from rural area etc. The decline in rural poverty could be due to sectoral diversification in rural areas of the state, which can be observed from establishment of non-household based manufacturing and other non-farm activities.

### Incidence of Poverty across Regions in Gujarat

A region wise view of poverty shows that the environmentally degraded regions i.e., the eastern tribal belt and the northern plain had highest incidence of poverty in 1993-94.

Table: Incidence of Rural and Urban Poverty in Gujarat

Regions	1987-88			1993-94		
	Total	Rural	Urban	Total	Rural	Urban
Gujarat Eastern	34.49	34.19	39.32	25.06	24.12	34.33
Northern Plains	29.03	25.87	34.23	24.58	20.52	30.05
Southern Plains	25.85	22.85	30.89	22.45	23.51	20.89
Guj. Dry Regions	40.20	46.95	53.88	23.30	22.52	27.03
Saurashtra	28.18	18.95	53.77	18.80	10.03	34.04

Source: Same as table 4.2 above

### 4.3: Impact of agricultural expenditure on farm sector distress

Besides reduction in expenditure on agriculture, farm sector growth suffered due to government policy and recurring droughts.

Table 4.3 below gives data on expenditure on agricultural budget, GSDP and agriculture production.

Table 4.3: Expenditure on agricultural budget, GSDP and agriculture production

Year	Expenditure on Agriculture and allied activities (current price) (Crore Rs.) (revenue account)	GSDP (current price) (Crore Rs.)	Foodgrain production (00'metric tones)	Oilseed production (00'metric tones)
1985-86	244.21	13988	31468	9641
1986-87	128.29	16174	36713	17476
1987-88	206.41	16339	20671	6003
1988-89	275.76	22349	57297	37883
1989-90	200.98	24777	50099	25795
1990-91	248.32	27996	49828	20437
1991-92	262.63	30632	38393	16505
1992-93	269.05	40316	59410	33322
1993-94	455.05	49194	41511	15498
1994-95	368.63	63516	57603	36842
1995-96	385.02	71886	47737	22115
1996-97	427.46	85837	60891	38021
1997-98	457.20	91188	61132	38659
1998-99	568.52	105305	60382	38811
1999-00	673.19	108892	44377	18263
2000-01	708.63	108484	25378	16560



2001-02	895.88	121525	48942	36304
2002-03	630.52	139690	36210	16731
2003-04	746.49	165708	65707	56550
2004-05	936.16	184907	51527	28988
2005-06	917.24	213869	63447	46574

There is no trend reported in the annual expenditure on agriculture and allied activities over the study period. It has fluctuated significantly from year to year.

However, if expenditure on agricultural in budget and foodgrain and other crops production are compared, it was observed that increase in expenditure on agriculture does not necessarily mean increase in agriculture production in the state. There are years, when expenditure on agriculture has increased but production has declined.

#### 4.4: Conclusion

Thus percentage share of agricultural expenditure in the total budget and share of primary sector in GSDP declined and it is fact that any deceleration in the agriculture sector is translated into lower overall GSDP growth. It also reduces income and employment at farm level.

Expenditure on agriculture and allied activities in absolute term has increased remarkably during 2004-05 and 2005-06. Beside, wide fluctuations were reported in the expenditure in between the years.

It is also a fact that per capital income from primary sector is highly fluctuating. it varied from Rs. 792 in 1980-81 to Rs. 729 in 1990-91 to Rs. 896 in 1994-95 and Rs.491 in 2000-01. The per capital income has decreased by 38 percent in case of primary sector where as in case of secondary and tertiary sector, it has increased by 131 percent and 113 percent respectively<sup>4</sup>.

Rural poverty has declined over the years in Gujarat. This is due to the establishment of non-household based manufacturing and other non-farm activities. Beside, there are anti-poverty programmes being successfully implemented by government and people of rural area are migrating to urban areas where they are able to get work in tertiary sector.

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<sup>4</sup> Sharma S.S.P, K.V.Raju and Sarkar Sabyasachi "Growing Rural-Urban disparity in Gujarat" IRMA-2009.

## **CHAPTER 5**

### **SUMMARY AND CONCLUSION**

Agriculture plays an important role in Gujarat economy. Although the share of agriculture in GSDP has declined over a period of time, its impact on the state economy has been quite high as it provides income to about 60 percent of the rural population of state. Besides it is a source of raw material to vast section of industries like textile, oil processing dairy and other agro processing industries.

#### **5.1 Profile of the State**

Gujarat is spread over seven agro climatic zones based on geography, climate, average rainfall and nature of soil. The zones are South hills, Southern Gujarat, Central Gujarat, North Gujarat, North Saurashtra, South Saurashtra and North West Area.

The population of Gujarat as per 2001 census was 5.07 crores of which 7.09 percent were SC and 14.76 percent were ST. Nearly 37.36 percent population of the state resides in urban area. Overall 45.58 percent working population was engaged in agriculture and this proportion was 67.84 percent in rural areas. Gujarat has very well developed net work of road, rail, power and communication. Agriculture in Gujarat largely depends on south-west monsoon which is quite erratic and irregular.

#### **5.2 Agriculture and Public Finance**

Even though agriculture depends upon the vagaries of monsoon, development of agriculture is remarkable in Gujarat. There is a continuous increase in outlays and expenditure on agriculture in the five year plans. The outlay was Rs.4169 crores and Rs.17 crores for agriculture and allied activities during 10<sup>th</sup> and 2<sup>nd</sup> plan respectively. As again this, expenditure was Rs.2427 crores and Rs.17 crores during the same plan period. The expenditure on agriculture was more or slightly less than the outlays in all the five year plans (except 5<sup>th</sup> and 10<sup>th</sup>) which is encouraging.

Overall GSDP grew at the rate of 6.89 percent during the study period. However, average annual growth rate of GSDP was higher (8.05%) during reform period as compared to pre-reform period (4.73%). The economy of Gujarat has undergone structural transformation during the recent decades, with share of primary sector in GSDP declining from 30.35 percent in 1985-86 to 20.69 percent in 2005-06.

#### **5.3 Area, Production and Productivity of Different Crops**

Agriculture in Gujarat has adverse agro climatic conditions with 70 percent of its area under crops being rainfed and subject to uncertain monsoons. Despite this, the foodgrains production increased from 31.47 lakh tonnes in 1985-86 to 63.45 lakh tonne in 2005-06.

Production of oilseeds witnessed significant growth in its production from 9.64 lakh tonnes in 1985-86 to 46.57 lakh tonnes in 2005-06. Growth in cotton is phenomenal.

Following table gives growth rates of different crops during pre-reform, reform period and overall during study period.

Table 5.1: Growth rates of Area, Production and Productivity of different crops.

Crops	Pre-reform Period (1985-86 to 1990-91)			Reform Period (1991-92 to 2005-06)			Overall Period (1985-86 to 2005-06)		
	A	P	Y	A	P	Y	A	P	Y
Rice	1.05	10.30	9.16	0.01	3.09	3.07	0.67	4.12	3.43
Bajra	-1.28	7.34	8.73	-2.66	2.19	4.98	-2.19	2.53	4.83
Wheat	3.09	6.52	3.32	3.54	5.05	1.46	2.54	4.68	2.09
Total Cereals	-1.71	7.90	9.78	-1.01	3.51	4.56	-1.42	3.54	5.04
Total Pulses	1.45	8.37	6.82	-1.30	2.51	3.86	-0.86	2.20	3.09
Total Foodgrains	-1.13	7.96	9.19	-1.07	3.41	4.52	-1.32	3.40	4.78
Groundnut	-0.38	12.96	13.39	-0.12	10.90	11.03	0.18	9.78	9.58
Total Oilseeds	2.07	13.34	11.04	0.22	7.16	6.92	0.83	7.79	6.90
Cotton	-5.37	-5.30	0.07	3.71	12.32	8.29	1.57	5.75	4.12

The average annual growth rates of production of foodgrains and oilseeds were higher in pre reform than reform period. The sole contributor to increase in foodgrains production during both the periods was increase in yield as growth rate of area was negative for foodgrains during these periods. Growth rate of yield had contributed more to growth rate of production of oilseeds than growth rate of area in these periods.

### Cropping Pattern

Following table indicates the changes in cropping pattern over the study period.

Table 5.2: cropping pattern (% to GCA)

Year	Rice	Bajra	Wheat	Total Cereals	Total Pulses	Total Foodgrain	Groundnut	Total Oilseeds	Cotton
1985-86	5.61	14.43	4.86	40.36	8.34	48.69	17.90	23.87	13.90
1990-91	5.89	13.18	5.75	35.91	8.97	44.88	17.26	26.63	9.84
1995-96	6.61	12.08	5.38	33.05	7.98	41.23	17.01	26.48	13.80
2000-01	5.56	9.42	2.73	23.20	6.05	29.25	16.62	26.17	15.39
2005-06	5.95	8.37	7.60	27.59	6.42	34.01	17.18	26.20	17.79

Changes have taken place over a period of time in the cropping pattern. Share of foodgrain crops in GCA have declined and there is increase in commercial crop like cotton.

#### 5.4: Growth Rates of GSDP and Agriculture.

Table below gives the compound growth rates of GSDP and agriculture and allied activities.

Table 5.3: Compound Growth Rates of GSDP by Sector of Origin (constant price 1993-94)

Sr. No.	Particulars	Pre reform period (1985-86 to 1990-91)	Reform period (1991-92 to 2005-06)	Total (1985-86 to 2005-06)
1	GSDP	4.73	8.05	6.89
(i)	Agriculture and Allied Activities	5.09	4.69	4.44
(ii)	Crop Husbandry	5.41	4.97	4.63
(iii)	Forestry	-1.84	-2.27	-1.71
(iv)	Fishing	8.29	4.78	6.09
6	Primary Sector	5.46	5.35	4.96
7	Secondary Sector	4.50	9.75	7.84
8	Tertiary Sector	4.33	8.53	7.45

The growth rate of GSDP was higher than the growth rate of agriculture and allied activities during the study period.

The share of agriculture and allied activities in GSDP has declined from 27.28 percent in 1985-86 to 16.75 percent in 2005-06.

#### 5.5: Objectives

Agriculture comes under the state's list as per the constitution of India. The resources for agricultural development are allocated by the state in addition to the plan resources given from the central pool. Agriculture plays an important role in the state's economy but over the years in some of the states budget resource allocation to agriculture sector had declined. This shrinkage has a telling effect on agricultural growth and development of resources in the sector. Beside the allocation of resources from the central pool may cause differential impact across the states and this may lead to imbalance in growth.

In order to analyses the allocation of budgetary resources as well as the balance between central and the state schemes in Gujarat, Directorate of Economics and Statistics, Ministry of Agriculture, Government of India entrusted this project to Agro-Economic Research Center, Vallabh Vidyanagar with the following objectives:

- To analyse the trends in budgetary allocation of resources to the agricultural sector as a whole and the sub sectors of agriculture.
- To document and analyse schemes under operation in state contributing to the development of the agricultural sector.
- To enlist and analyse the impact of central sector schemes operating in the agricultural sector of the state.

### 5.6: Methodology

This study is based purely on secondary data collected from the offices of the Directorate of Economics and Statistics and State Department of Agriculture, Government of Gujarat, Gandhinagar. Time series data from 1985-86 to 2005-06 are used for analysis. Time period from 1985-86 to 1990-91 is taken as pre reform period and from 1991-92 to 2005-06 as reform period. Trends of expenditure on agriculture and expenditure on agriculture as percentage of GSDP have been studied at constant prices of 1993-94, using the GDP Deflator Method. CMIE Data have been used for the calculation of per hectare expenditure on agriculture and sub sectors.

### 5.7: Trends and Pattern of Budgetary Expenditure on Agriculture

In Gujarat, during the study period, agriculture's share in the total budget has declined from 8.68 percent in 1985-86 to 2.68 percent in 2005-06. In actual terms, allocation to agriculture and allied activities increased only by Rs.791 crores whereas the total budget outlay increased by Rs.31442 crores between 1985-86 and 2005-06. Only expenditure on agriculture on revenue account is considered for analysis purpose. Following table gives trends in expenditure on agriculture and allied activities on revenue account and per hectare expenditure in the budget.

Table 5.4: Trends in Expenditure on Agriculture of Revenue Account: Gujarat

Year	Expenditure on Agriculture (crore Rs.) (Constant price 1993-94)	Expenditure/hect Rs. (Constant Price)	As a Share of Total Budget (%)
1985-86	502.49	481.36	8.68
1986-87	247.19	247.78	3.37
1987-88	363.40	349.96	4.60
1988-89	448.39	431.81	5.40
1989-90	301.32	282.05	4.04
1990-91	336.93	315.39	4.35
1991-92	313.03	298.06	3.37
1992-93	295.01	268.12	3.10

1993-94	455.05	426.40	4.89
1994-95	336.96	301.18	3.83
1995-96	322.73	320.11	3.56
1996-97	333.43	303.09	3.28
1997-98	334.46	299.77	3.02
1998-99	385.18	345.64	2.95
1999-00	438.85	432.28	2.99
2000-01	446.24	417.44	2.28
2001-02	545.60	508.29	2.07
2002-03	368.73	374.00	1.49
2003-04	423.90	374.77	1.86
2004-05	524.46	476.39	2.46
2005-06	500.40	442.68	2.68

It is revealed from the above table that expenditure on agriculture and allied activities on revenue account at constant price decreased significantly during pre-reform period. There was no trend reported in the expenditure pattern on agriculture during reform period either. It was Rs.313 crores in 1991-92 and then fluctuated remarkably and it was Rs.500 crores in 2005-06.

No trend was reported on per hectare expenditure on revenue account in the budget during both periods.

The importance of agriculture expenditure on revenue account in the budget has reduced in reform period as compared to pre reform period. On an average only 2.52 percent of the total budget was allotted to agriculture and allied activities on revenue account during reform period which was 4.85 percent in pre-reform period. On an average only around 3 percent was the expenditure on agriculture and allied activities in the budget during entire study period. The expenditure on agriculture and allied activities on revenue account in budgets of different years of study period has moved around 1 percent of NSDP in the state(except 1986-87). On an average annual growth rate of expenditure on agriculture and allied activities on revenue account was negative at 0.02 percent during the study period. It was negative 6.44 percent during pre-reform and 3.18 percent during reform period.

## **5.9: Agricultural Development Schemes**

A brief account on the schemes implemented in the state is as below

### **Crop Husbandry**

Main goal of the crop husbandry schemes is planning for economic development in the field of agriculture with an aim to increase the prosperity of the cultivators.

1. The state funded schemes are agriculture support programmes for SC/ST farmers and for tribal areas. Under these programmes, subsidy is provided for high yielding varieties, construction of wells, inputs etc.
2. Sharing based centrally sponsored schemes are Technology Mission on Cotton, Agricultural Technology Management Agency (ATMA) and Macro Management which includes increase yield of cotton, support for the state extension programmes and crop production programme, farm mechanization and proper use of fertilizer.
3. Major fully centrally sponsored schemes are schemes of crop estimation survey on fruits, vegetables and minor crop, national project on organic farming, Rastriya Krushi Vikash Yojana, special focused programme for poor farmers and risk management in agriculture sector.

### **Horticulture**

Under National Horticulture Board Schemes, the districts covered are Valsad, Navsari, Surat, Bhavnagar, Vadodara, Anand, Junagadh, Amerli, Mehsana, Sabarkantha, Kutch, Banaskantha, Ahmedabad, Kheda and Bharuch.

1. Scheme for Integrated Horticulture Development Programme in tribal areas and for SC cultivators: - This scheme provides input kit for horticulture crop to below poverty level farmers.
2. Scheme for development of horticultural and medicinal/aromatic plants: Assistance and subsidy are given under this scheme to cultivators.
3. Oil palm and coconut development programmes are centrally sponsored schemes.

### **Animal Husbandry and Dairy Development**

The state government provides animal health care up to village level through a network of the veterinary institutions.

There are schemes for fodder development and poultry development in the state.

### **Fisheries**

There are various state and centrally sponsored schemes for the fisheries development in the state.

## **Forests**

Gujarat Forest Development has launched schemes like Border Area Development Programme, Social Forestry Programme and programmes for management and development of sanctuaries and for National Park Water Resources Development.

## **Water Conservation Scheme**

A water conservation scheme called “Sardar Patel Water Conservation Scheme” is implemented by the state government. Besides, state has launched Sujalam Sufalam Yojana. The Sardar Sarovar Project is a multipurpose project.

## **5.10 Nexus between State Intervention and Agricultural Development**

Agriculture provides not only food and raw materials but also employment to a very large proportion of population. Enhancing growth of the agriculture sector is vital for food security, poverty alleviation, price stability, overall industry growth and sustainability of growth of the overall economy.

Agriculture in Gujarat is mainly rainfed and depends on the vagaries of the monsoon. The overall growth rate of expenditure on the agriculture and allied activities in the budget was negative at 0.02 percent, but the growth rates of production of foodgrain and oilseeds was 3.40 percent and 7.79 percent respectively. Usually because of the importance of agriculture in the state economy, the marked fluctuations in the agricultural sector affected the growth rate of GSDP but in Gujarat, even though the growth rate of primary sector in GSDP has been stagnant or declined during the study period, the growth of GSDP has been sustained by secondary and tertiary sectors.

Overall poverty level is low in the state as compared to the national level. Rural poverty has declined over the years due to the establishment of non household based manufacturing and other non farm activities. There are anti poverty programmes being successfully implemented by government and people of rural area are migrating to urban areas where they are able to get work in tertiary sector. Besides improvement in yield and growth in important crops, income from dairy sector was a major factor in reducing rural poverty as state has very well developed network of dairy cooperatives.



### **5.11: Suggestions**

- The share of agriculture and allied activities in the GSDP and in the budget allocation has declined in the state. The growth rate of GSDP has been maintained due to higher growth rates of other sectors, still the importance of growth of agriculture can not be minimized. Agriculture continues to be very important due to its high share in employment and livelihood creation. It is necessary to increase expenditure on agriculture sector in the budget to maintain growth rate of agriculture which in turn make sustainable higher rate of economic growth possible.
- Even though, share of agriculture and allied activities in the total expenditure of budget has declined, the production of foodgrains and oilseeds has increased significantly in the state. But this does not minimize the need for higher growth of agriculture sector.
- Gujarat has achieved sustainable agricultural growth in recent years. This development may be due to several initiatives such as development of infrastructure, especially provision of roads and communication, power, conservation and management of water and intensive extension effort through Krishi Mahotsav. Enterprising and hard working farmers have also played a major role in this development. A massive programme of construction of check dams, village ponds and farm ponds was taken up across the state. Besides new extension approach for integrated agricultural development to remove poverty is also initiated and implemented effectively. Still more remain to be done to stabilize agriculture and remove poverty, especially of SC/ST, small/marginal farmers.

## **Appendix 1.1**

### **Comments**

#### **State Budgetary Resources and Agricultural Development in Gujarat**

1. Chapter – I Table 1.2 sector wise share of GSDP figures should be in 1993-94 constant prices also.
2. Two point of time: Method used in calculation of CGAR is not appropriate and estimates are not reliable. Please use the log linear regression technique.
3. Bring the growth rate tables on production and productivity from appendix to main table and put area and production tables in to appendix.
4. Please check the all units of measurement: use common measurement for example area in 000' hectares and production in lakh tones. There are many such errors in the report.
5. Check the values in last column of table 1.5 GCA should be in absolute number in ha.
6. Table 2.2; add the growth rate on per hectare expenditure on agriculture.
7. In chapter 2, please add two more tables – 1.Changes in composition of expenditure on agriculture and allied on revenue account, 2.Changes in composition of per hectare expenditure on agriculture and allied on revenue account.

## **Appendix 1.2**

### **Action Taken**

1. Action has been taken in accordance with the comment.
2. At this stage, to work out CGR using log linear method is time consuming and will cause delay in submission of report. However, CGR worked out gives broadly fair picture of development. Therefore, after verifying again the estimated CGR has been kept as it is.
3. Tables are arranged as per tabulation scheme provided by the coordinator centre.
- 4, 5, 6. Action has been taken in accordance with the comment.
7. Data on composition of expenditure on agriculture and allied on revenue account are not available.