

As on 31.07.2008



**STATUS
OF
AGRICULTURE
IN
ORISSA**

**DIRECTORATE OF AGRICULTURE & FOOD PRODUCTION:
ORISSA: BHUBANESWAR**

C O N T E N T S

<u>Sl.No</u>	<u>S u b j e c t</u>	<u>Page</u> <u>No.</u>
1.	Introduction	1
2.	Land and Climate	1
	- <i>Soil and Topography</i>	2
	- <i>Climate & Rainfall</i>	2
3.	Population	4
	- <i>Poverty Line</i>	5
4.	Land holding	5
5.	Irrigation	6
6.	Status of Agri-input use	7
	- <i>Seeds</i>	7
	- <i>Fertilizer</i>	10
	- <i>Plant Protection</i>	10
	- <i>Power Consumption</i>	11
	- <i>Farm Mechanisation</i>	12
	- <i>Farm Credit</i>	13
7.	Crop Insurance	14
8.	The Developmental Approach	15
	- <i>Implementation of different schemes</i>	17
13.	Crop coverage & crop production	19
14.	Seed Rate and Seed Replacement Rate	29
15.	Minimum Support Price	30
16.	Crop Diversification & Mixed Cropping	31
17.	Agroclimatic Zone Wise Districts	33
18.	Administrative Set-up (Orissa)	34

STATUS OF AGRICULTURE IN ORISSA

Agriculture is the mainstay of State's economy and substance of life for the people. The State Orissa is an agrarian state with Agriculture and Animal Husbandry Sector contributing more than 22.46 % to the Net State Domestic Product (NSDP) in 2006-07 at 1999-2000 prices and providing employment, directly or indirectly to 65 % of the total work force. The share of Gross State Domestic Product (GSDP) from Agriculture during 2004-05 at constant price (1993-94) and at current price (2004-05) was 21.4% & 26.4% respectively. Evidently, Agriculture plays a critical role in the economy of the state and the livelihood of majority of its populace.

2. Land and Climate

Land use in the State

The State has a cultivated area of 61.80 lakh ha. out of which 29.14 lakh ha. is high land, 17.55 lakh ha. medium land and 15.11 lakh ha. low land. The Paddy area during Kharif is about 41.18 lakhs & during Rabi 3.29 lakh ha. The land use statistics of the State is indicated below.

Year 2007-08

(Area in lakh hectares)

Sl.No.	Items	Area
1.	Forest	58.13
2.	Miscellaneous Trees & Groves	3.42
3.	Permanent Pasture	4.94
4.	Culturable waste	3.75
5.	Land Put to Non-Agriculture	12.98
6.	Barren & un-culturable land	8.40
7.	Current fallow	5.56
8.	Other fallow	2.29
9.	Net Area Sown	56.24
Total Geographical Area		155.71
Gross cropped area		90.09
Cropping Intensity (%)		160

(Area in lakh hectares)

	Cultivated Area		Kharif Paddy Area
1.	High	29.14	10.37
2.	Medium	17.55	15.99
3.	Low	15.11	14.82
Total:		61.80	41.18

Soil and Topography

The State is broadly divided into 4 Physiographic zones namely, Coastal Plains, Central Tableland, Northern Plateau and Eastern Ghats. These are further subdivided into 10 agroclimatic zones, viz. are, North-western plateau, North-central Plateau, North-Eastern coastal plain, East and South-Eastern coastal plain, North-Eastern Ghat, Eastern Ghat high land, South-Eastern Ghat, Western undulating zone, Western-Central table land and Mid-Central table land. The State has different soil types ranging from fertile alluvial deltaic soils in the coastal plains, mixed red and black soils in Central tableland, red and yellow soils with low fertility in the Northern Plateau to red, black & brown forest soils in Eastern Ghat region. The soil types differ widely from highly acidic to slightly alkaline and from light sandy to stiff clays. The soils are mainly acidic with the degree of acidity varying widely. Further about 4 lakh ha. are exposed to saline inundation, 3.54 lakh ha. to flooding and 0.75 lakh ha. to water-logging, particularly in the deltaic areas.

Climate & Rainfall

The State has tropical climate, characterised by high temperature, high humidity, medium to high rainfall and short and mild winters. The normal rainfall of the State is 1451.2 mm. The month wise normal rainfall is indicated below.

Month	Normal Rainfall (mm)
January	11.4
February	22.9
March	25.5
April	33.1
May	63.3
June	216.5
July	339.9

Month	Normal Rainfall (mm)
August	356.0
September	231.9
October	114.7
November	31.5
December	4.5
State Average	1451.2

The actual rainfall received, vary from district to district. About 84% of rainfall is received during the period from June to September. Even though the quantum of rainfall is quite high, its distribution during the monsoon period is highly uneven and erratic. Flood, drought and cyclone visit regularly with varying intensity. Due to frequent occurrence of these natural calamities there is always reduction in the yield of Kharif rice, the major crop of the State. Similarly, in drought years, there is considerable loss in production of Pulses and Oilseeds both during Kharif and Rabi. The following table indicates the frequency of natural calamities over the years.

Sl.No.	Year	Normal Rainfall mms	Actual rainfall mms	Kharif Rice Production (in lakh Mts.)	Remarks
1	2	3	4	5	6
1.	1961	1502.5	1262.8	36.99	
2.	1962	1502.5	1169.9	36.32	
3.	1963	1502.5	1467.0	42.47	
4.	1964	1502.5	1414.1	43.59	
5.	1965	1502.5	997.1	31.89	Severe drought
6.	1966	1502.5	1134.9	35.37	Drought
7.	1967	1502.5	1326.7	34.43	Cyclone & Flood
8.	1968	1502.5	1296.1	38.48	Cyclone & Flood
9.	1969	1502.5	1802.1	38.39	Flood
10	1970	1502.5	1660.2	39.13	Flood
11.	1971	1502.5	1791.5	33.76	Flood, Severe Cyclone
12.	1972	1502.5	1177.1	37.35	Drought, flood
13.	1973	1502.5	1360.1	41.91	Flood
14.	1974	1502.5	951.2	29.67	Flood, severe drought
15.	1975	1502.5	1325.6	42.74	Flood
16.	1976	1502.5	1012.5	29.58	Severe drought
17.	1977	1502.5	1326.9	40.50	Flood
18.	1978	1502.5	1261.3	41.89	Tornados, hail storm
19.	1979	1502.5	950.7	27.34	Severe drought
20.	1980	1502.5	1321.7	40.31	Flood, drought
21.	1981	1502.5	1187.4	36.63	Flood, drought, Tornado

1	2	3	4	5	6
22.	1982	1502.5	1179.9	27.07	Severe flood, drought, cyclone
23.	1983	1502.5	1374.1	47.63	
24.	1984	1502.5	1302.8	38.50	Drought
25.	1985	1502.5	1606.8	48.80	Flood
26.	1986	1502.5	1566.1	44.56	
27.	1987	1502.5	1040.8	31.03	Severe drought
28.	1988	1502.5	1270.5	48.96	
29.	1989	1502.5	1283.9	58.40	
30.	1990	1502.5	1865.8	48.42	Flood
31.	1991	1502.5	1465.7	60.30	
32.	1992	1502.5	1344.1	49.76	Flood, drought
33.	1993	1502.5	1421.6	61.02	
34.	1994	1502.5	1700.2	58.31	
35.	1995	1502.5	1588.0	56.48	
36.	1996	1502.5	990.1	38.27	Severe drought
37.	1997	1502.5	1493.0	57.51	
38.	1998	1502.5	1277.5	48.85	Severe drought
39.	1999	1502.5	1435.7	42.75	Severe Cyclone
40.	2000	1502.5	1035.1	41.72	Drought & Flood
41.	2001	1482.2	1616.2	65.71	Flood
42.	2002	1482.2	1007.8	28.26	Severe drought
43.	2003	1482.2	1663.5	61.99	Flood
44.	2004	1482.2	1256.7	58.84	Moisture stress
45.	2005	1451.2	1497.7	62.49	Moisture stress
46.	2006	1451.2	1682.8	61.96	Moisture stress/Flood
47.	2007	1451.2	1583.2	68.26	Flood

3. Population

The population of Orissa has started registering a declining growth rate, as can be seen from the figures given below.

(Figures in crores)

	CENSUS			
	1971	1981	1991	2001
Population	2.19	2.64	3.17	3.68
Rural	2.01	2.33	2.75	3.13
Urban	0.18	0.31	0.42	0.55
Agril. Workers	0.53	0.64	0.76	0.55
Cultivators	0.34	0.40	0.46	0.34
Agril. Labourers	0.19	0.24	0.30	0.21
% of Rural population	91.6	88.3	86.6	85.0
Decennial population growth rate.	25.1	20.2	20.1	16.25

Poverty Line

The figures relating to the people below the poverty line in Orissa is indicated below.

% of people below poverty line

Year	Orissa			India
	Rural	Urban	Total	
1973-74	67.28	55.62	66.18	54.88
1977-78	72.38	50.92	70.07	51.32
1983-84	67.53	49.15	65.29	44.48
1987-88	57.64	41.53	55.58	38.36
1993-94	49.72	41.64	48.56	35.97
1999-00	48.01	42.83	47.15	26.10

4. Land holding

The per capita availability of cultivated land was 0.39 hectares in 1950-51, which has declined to 0.13 hectares in 2006-07. During 2000-01 there were 40.67 lakh operational holdings in the state out of which marginal and small holdings account for 83.8 %, medium 15.9% and large, less than 1% of the operational area. The average size of holding is only 1.25 ha. The size of operational holdings along with poverty of people poses a big problem in the agricultural growth of the State. The details are given below. :-

Category of farmers	No of Holdings (Lakh nos.)	Area (lakh ha.)
Marginal (< 1.0 ha.)	22.95	11.55
Small (1 – 2 ha.)	11.14	15.44
Semi-medium (2– 4 ha.)	5.00	13.44
Medium (4 – 10 ha.)	1.45	8.17
Large (> 10 ha.)	0.13	2.21
Total	40.67	50.81

In the present agriculture scenario, the marginal farmers, constituting more than 50 % of the farmers, either own or rent a piece of land for cultivation. Because of the endemic poverty, they generally cultivate their crops with little inputs and hence crop production is low. In this backdrop, besides enhancing their capacity, increase in productivity per unit land area and cropping intensity hold the key to agricultural development.

5. Irrigation

Out of the cultivated area of 61.80 lakh ha., about 33% is under irrigated conditions and 67% is under un irrigated during Kharif. The source wise irrigation potential created so far (up to 2007-08) is indicated below.

(Area in lakh ha.)

Sl.No.	Sources	Kharif	Rabi
1.	Major & Medium	12.61	5.63
2.	Minor (Flow)	5.29	0.71
3.	Minor (Lift)	4.42	2.34
4.	Other Sources	5.31	4.50
	Total	27.63	13.18

The total irrigation potential created so far from all sources is about 40.81 lakh ha. (Kharif 27.63 lakh ha. & Rabi 13.18 lakh ha.). The gross irrigated cropped area is 33.08 lakh ha., which is about 81% of the potential created. There is a constant endeavour being put in to enhance the water use efficiency through adoption of proper water management practices.

Year wise and season wise irrigation potential utilized (Lakh ha.)

Year	Kharif	Rabi	Total
1990-91	15.13	8.01	23.14
1991-92	16.14	9.15	25.29
1992-93	15.82	8.94	24.76
1993-94	16.43	8.67	25.10
1994-95	16.27	8.41	24.68
1995-96	16.90	9.39	26.29
1996-97	15.59	7.04	22.63
1997-98	15.99	7.19	23.18
1998-99	16.50	7.08	23.58
1999-00	16.83	8.29	25.12
2000-01	15.90	5.36	21.26
2001-02	17.52	7.94	25.46
2002-03	12.47	4.65	17.12
2003-04	17.37	7.81	25.18
2004-05	18.46	8.45	26.91
2005-06	19.23	10.43	29.66
2006-07	20.02	11.47	31.49
2007-08	20.27	12.81	33.08

Besides, private irrigation sources are being developed with funds available under the New Agriculture Policy and **Jalnidhi** scheme. The number of shallow tube wells, bore wells, dug wells and surface lifts installed since 1996-97 (till 2007-08) is indicated below.

Items	Nos. installed
Shallow Tube Well	69211
Bore Well	8026
Dug well	1643
Surface lift	898
Total	79778

6. Status of Agri-Input use

(i) Seeds

The use of certified / quality seed alone can raise productivity of the crops by about 15-20%. Hence, due importance has been given in the State Agriculture Policy to increase the Seed Replacement Rate (SRR) and production of certified seeds on mass scale. Quality seed multiplication is organized through the Agricultural farms of the Department, Orissa State Seeds Corporation & Registered Seed Growers. The Agricultural farms in the state produce both foundation & certified seeds. Under the seed village scheme, registered seed growers are supplied foundation seeds and the seed produced in their fields are certified by the Orissa State Seed Certification Agency. Certified seeds are also produced by the State Seeds Corporation (OSSC). The year wise seed supply position is indicated below.

(Figures in qtls.)

Year	Distribution of Certified/ Quality Seeds		
	Paddy	Non-Paddy	Total
1	2	3	4
1973-74	17968	16060	34028
1974-75	16431	19772	36203
1975-76	49338	15144	64482
1976-77	16466	14212	30678
1977-78	18386	12208	30594

1	2	3	4
1978-79	26762	11742	38504
1979-80	26536	11987	38523
1980-81	103324	25844	129168
1981-82	48998	27982	76980
1982-83	40500	21743	62243
1983-84	51223	17177	68400
1984-85	34717	38659	73376
1985-86	34333	43297	77630
1986-87	37542	11052	48594
1987-88	65362	23493	88855
1988-89	52119	16258	68377
1989-90	48310	54460	102770
1990-91	44770	55230	100000
1991-92	76920	79290	156210
1992-93	55420	46200	101620
1993-94	49910	18860	68770
1994-95	66446	37604	104050
1995-96	113274	29426	142700
1996-97	120717	71146	191863
1997-98	199976	89210	289186
1998-99	231636	84922	316558
1999-00	230251	92627	322878
2000-01	220135	71814	291949
2001-02	254886	74874	329760
2002-03	138096	61128	199224
2003-04	145085	76881	221966
2004-05	127427	37765	165192
2005-06	160223	71664	231887
2006-07	169464	99889	269353
2007-08	291850	108309	400159

Popularisation of High Yielding Varieties of Paddy

Rice is the predominant crop and in order to increase productivity, supply of quality seeds of suitable varieties specific to the agro-climatic situation is inevitable. The scientists of the OUAT and CRRI are constantly in the look out for evolving such promising high yielding and hybrid varieties through breeding

programmes. Some new varieties of High Yielding Varieties of Paddy have been developed by OUAT and CRRI for upland, medium land & low land which have been listed below.

Name of the Paddy variety	Duration (days)
(A) For Up land	
Parijat	95
Pathara	95
Khandagiri	95
Ghanteswari	95
Udaygiri	95
Dhala Heera	80-85
Jogesh	90
Sidhanta	95
Satabadi	100
Khandagiri-III	85
Vandana	95
(B) For Medium Lands	
Sarathi	120
Lalat	130
Jajati	135
Birupa	135
Bhanja	140
Samanta	140
Meher	140
Konark	125
Surendra	135
Gajapati	130
Kharavela	125
MTU -1001	125-130
MTU-1010	120
RGL-2538	130
Navin	120
Tapaswini	135
Geetanjali	135

Name of the Paddy variety	Duration (days)
(C) For Low Land	
Kanchan	160
Ramachandi	155
Mahanadi	150
Indravati	150
Jagabandhu	150
CR-1014	160
Pratikhya	145
BPT-5204	150
Ketakijoha	150
Pooja	150
Sonamani	155
CR-1017	150
Sarala	160
Durga	160
RGL-2537	160
Barshadhan	160
Upahar	160
MTU-7029	140
CR-1009	155
CR-1018	160

The farmers are being motivated by the agriculture extension machinery to cultivate their land, with above suggested varieties and following recommended package of practices to harvest better yields.

(ii) Fertiliser

The fertilizer consumption in the state has taken great strides from a meager 0.76 kg/ ha during 1961-62 to 53.2 kg/ ha. during 2007-08. Still the consumption is much below the National average and thus can be raised to a higher level with availability of the materials in required quantities at affordable price. Fertiliser consumption of the state from 1961-62 up to 2007-08 is indicated below.

Year	Consumption Kg/Hect
1961-62	0.76
1971-72	7.25
1981-82	9.68
1991-92	19.96
2001-02	41.00
2002-03	39.00
2003-04	39.00
2004-05	43.00
2005-06	46.00
2006-07	47.00
2007-08	53.20

(iii) Plant Protection

Adoption of integrated pest management (IPM), emphasizing conservation and augmentation of natural enemies of pest such as parasites, predators and pathogens for control of harmful insects and diseases of crops, is being given due thrust for increasing the crop productivity. IPM is organized by the use of pest resistant varieties, seed treatment, crop sanitation, use of bio-control agents and conservation of beneficial insects & pathogens. The Bio-control Laboratory is the center of rearing, multiplication and supply of locally adopted parasites and pathogens to the farmers. There are nine Bio-control Laboratories in the State in addition to the one established by Govt. of India. IPM demonstration-*cum*-training

for crops like rice, maize, cotton etc are also taken up to popularize the practice of IPM under Central & Centrally Sponsored schemes. Annually around 4500 lakh bio control agents are produced covering 9500 hectares of different crops under biological control. The increased emphasis on IPM methodologies had lead to a stagnant scenario in case of pesticide consumption in the state. The consumption of technical grades of pesticides has almost slowed down a bit with 148 g a.i./ha. during 2006-07.

(Technical Grade in MT)

Year	Total Pesticides consumed		Total	Per hectares consumption (gms of a.i.)
	Chemical	Bio-pesticides		
2000-01	780.55	225.00	1005.55	157.00
2001-02	757.00	261.00	1018.00	159.00
2002-03	748.00	280.00	1028.00	139.00
2003-04	710.90	317.60	1028.50	138.00
2004-05	669.00	318.00	987.00	148.68
2005-06	720.00	319.00	1039.00	138.53
2006-07	812.00	343.00	1155.00	148.94
2007-08	744.25	345.00	1089.25	143.28

(iv) Power consumption

The power consumption for Irrigation in Agriculture is in declining trend. Minor irrigation programme cannot be successful without large-scale rural electrification. However, as per the incentives announced under Hon'ble Chief Ministers package and New Agriculture Policy, energy use in Agriculture Sector is expected to increase. The share of power consumption for Agriculture Purpose since 1992-93 is indicated below.

Year	Share of power consumption for Agriculture Purpose	
	In million units	In %
1	2	3
1992-93	305.00	5.6
1993-94	341.00	5.6
1994-95	426.00	6.6
1995-96	491.00	6.5
1996-97	150.00	2.8
1997-98	201.00	3.6
1998-99	258.00	4.8
1999-00	217.00	3.9

1	2	3
2000-01	186.00	3.1
2001-02	164.00	2.8
2002-03	139.00	2.1
2003-04	124.00	1.8
2004-05	147.00	1.9
2005-06	137.00	1.7
2006-07	131.00	1.4

(v) Farm Mechanization

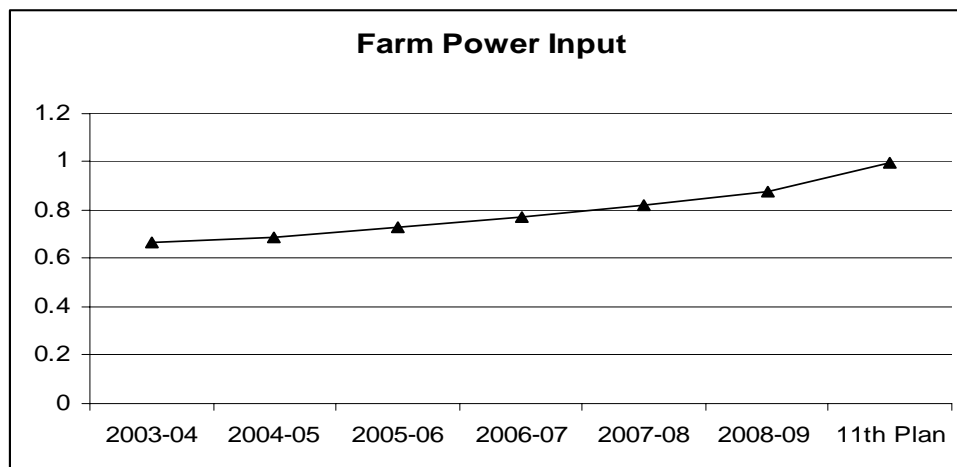
Farm mechanization has become utterly essential for timely operation of agricultural activities for increasing production and productivity besides reducing drudgery of labour associated with farm activities. It also enables efficient utilisation of agricultural inputs and reduces the cost of production. The Government has been encouraging the farmers to adopt improved farm machinery & equipments by providing financial assistance in form of subsidies and credit facility. Besides, the Agriculture Directorate is equipped with a prototype Development Center (Implement Factory, Bhubaneswar) which designs, and manufactures popular implements for supply to farmers. It also indulges in training, testing and modifying the equipments as per the farmers requirement.

Because, of the awareness generation programme taken up by the Department through demonstration and farmers awareness trainings, mechanization has picked up in the State and there is a great demand for tractor, power tiller, paddy reaper, and other power driven/ self propelled equipments. Similarly, small manually operated/ bullock drawn implements are also being increasingly used by the farmers of hilly and tribal areas. The farm power input touched 0.82 KWH/ hect. by the end of 2007-08 and it has been targeted to increase **1.00** KWH/ha by the end of 11th Plan period.

Farm Power Input

(Unit: KWH/hect.)

2003-04	2004-05	2005-06	2006-07	2007-08	2008-09 (Target)	11 th Plan (Target)
0.67	0.69	0.73	0.77	0.82	0.88	1.00



Sale of tractor, power tillers since 1992-93 to 2007-08 is indicated below.

Year	Nos supplied	
	Tractor	Power tillers
1992-93	76	--
1993-94	152	--
1994-95	273	--
1995-96	103	76
1996-97	512	345
1997-98	774	393
1998-99	303	748
1999-00	143	783
2000-01	168	775
2001-02	102	822
2002-03	251	1242
2003-04	585	1734
2004-05	788	2125
2005-06	800	1631
2006-07	1247	2974
2007-08	705	3364

(vi) Farm Credit

Since modern agriculture is capital intensive, farmer's access to farm credit is crucial in enhancing crop productivity, especially in Orissa's context. The field functionaries of Agriculture Directorate coordinate with the financial institutions in collecting loan applications from the farmers for providing credit to them. The crop loan disbursed to farmers is in increasing trend and needs to be greatly increased. The year wise position of crop loan disbursed is indicated below.

(In crore Rupees)

Year	Crop loan disbursed
1995-96	252.00
1996-97	275.00
1997-98	326.00
1998-99	463.00
1999-00	595.00
2000-01	611.00
2001-02	754.00
2002-03	869.00
2003-04	1107.00
2004-05	1481.00
2005-06	2111.00
2006-07	2494.00
2007-08 (up to Dec.'07)	1942.00

7. Crop Insurance

Rashtriya Krishi Bima Yajana (RKBY) was introduced in the state from Rabi 1999-2000. Both Loanee & Non-loanee farmers have been covered under this scheme. It is compulsory for loanee farmers and optional for non-loanee farmers.

The crops covered under this scheme are Paddy, Maize, Groundnut, Jute, Niger, Arhar, Cotton during Kharif season & Paddy, Groundnut, Mustard, Potato, during Rabi season.

The year wise achievements made under crop insurance are given below.

Year	Farmers covered (in lakhs)	Farmers paid compensation (lakh nos)	Sum insured Rs.in crores	Premium collected Rs in crores	Compensation paid Rs in crores
99-00 (Rabi)	2.32	0.17	131	2.28	0.002
2000-01 Kharif Rabi	6.82 1.24	3.41 0.26	482 91	11.23 1.86	105.47 1.50
2001-02 Kharif Rabi	6.28 2.13	0.09 0.18	400 166	10.22 3.32	2.34 1.08
2002-03 Kharif Rabi	12.05 1.43	8.39 0.17	1066 130	31.69 2.54	244.03 1.17
2003-04 Kharif Rabi	6.38 2.03	0.38 0.01	540 190	13.82 3.37	18.18 0.10
2004-05 Kharif Rabi	8.73 2.11	0.46 0.07	898 230	25.49 4.99	14.69 0.36

Year	Farmers covered (in lakhs)	Farmers paid compensation (lakh nos)	Sum insured Rs.in crores	Premium collected Rs in crores	Compen- sation paid Rs in crores
2005-06					
(Kharif)	9.00	0.19	963	24	3.74
Rabi	2.30	0.07	276	6	2.21
2006-07					
Kharif	6.80	0.68	1071	27.50	27.48
Rabi	2.00	0.13	269	5.26	0.46
2007-08					
Kharif	8.41	0.66	1118	28.24	24.02
Rabi	0.77	NA	17	22.23	NA

During Kharif 2008, Pilot Weather Based Crop Insurance Scheme (WBCIS) is being implemented in 8 blocks of 3 districts of the State namely Nuapada (*Nuapada, Komna, Khariar, Boden & Sinapalli*), Bolangir (*Titilagarh & Banagamunda*) and Baragarh (*Padmapur*) for Non-Loanee farmers on optional basis for paddy crop.

8. The Developmental Approach

Agriculture is the main stay of State's economy & providing livelihood support to a large section of population. Thus, development in agriculture holds the key to socioeconomic development of the state. With a view to attain self sufficiency in food grain production scenario through various Government sponsored developmental programmes in the fields of infrastructure, technology intervention and capacity building etc, the Directorate of Agriculture in Orissa was established in 1945 and is constantly at its job since then. The major goals of the agriculture sector have been food safety, food security, food quality, increase in production & productivity, conservation of environment and economic stability.

Orissa has been the pioneer state in formulating a historical Agriculture Policy in the year 1996 conferring the status of Industry to the Agriculture. In the realm of changing global scenario, especially in the post-WTO regime, it was increasingly felt for bringing in an quantum change in the agriculture policy. The State Government have announced the New Agriculture Policy in 2008 for the development of Agriculture Sector. The main objectives of the policy are -

- To bring in a shift from the present level of subsistence agriculture to a profitable commercial agriculture so that people would accept agriculture as a vocation;
- To promote sustainable agricultural development;
- To enhance productivity of important crops at least to match with national average (enhancing seed replacement, availability of quality planting materials, INM, IPM, water management, farm mechanization and technology transfer) ;
- To encourage crop diversification particularly in uplands and medium lands (e.g. paddy to non-paddy crops);
- To focus on horticultural crops including dry-land horticulture;
- To encourage modern farming system approach;
- To enhance water use efficiency through peoples' participation;
- To facilitate increased long term investment in agricultural sectors (on farm as well as off farm) both by private sector, public sector and private & public partnership (PPP), particularly for post harvest management, marketing, agro processing and value addition, etc;
- To encourage contract as well as compact farming;
- To increase access to credit for small and marginal farmers;
- To facilitate appropriate market linkages for agricultural produces with respect to which the state has competitive advantages;
- To implement integrated watershed development programmes in watershed areas for Natural Resource Management (NRM), increased crop production as well as on-farm and non-farm income;
- To create appropriate institutions / facilities to undertake regulatory, enforcement and quality assurance activities matching to the emergent needs.
- To redefine the roles and responsibilities of the agricultural extension machinery by suitably restructuring the field extension set up.

Implementation of Schemes

The Department of Agriculture is always in search of new interventions/ innovations, such as; introduction of new varieties of HYV / Hybrid seeds, increase in seed replacement ratio, fertilizer consumption, Integrated Nutrient Management, Integrated Pest Management, Farm Mechanisation, Water management, post harvest management of agri-produce etc for maximization of production and productivity of different crops there by enhance farm income through implementation of different schemes Under State Plan, Central Plan and Centrally Sponsored Plan. Some of them are listed below –

A. State Plan Schemes

- (1) Jalanidhi
- (2) Stengthening / Infrastructure Development
- (3) Management of Acid Soils
- (4) Input Subsidy
- (5) Popularisation of Agriculture Implements

B. Centrally Sponsored Plan Schemes

- (1) Work Plan (Macro management Mode)
 - Rice Development
 - Ragi Development
 - Sugarcane Development
 - Farm Mechanisation
 - Balanced & Integrated use of fertilizer
- (2) Integrated Cotton Development Programme
- (3) Jute Technology Mission
- (4) ISOPOM (Integrated schemes of Oilseed, Pulse, Maize & Oil Palm)
- (5) Support to State Extension for Extension Reforms

- (6) National Food Security Mission (NFSM)
 - NFSM (Rice)
 - NFSM (Pulses)
- (7) Rashtriya Krishi Vikash Yojana.
 - System of Rice Intensification
 - Popularisation of Agriculture equipments
 - Promotion of Organic Farming
 - Establishment of BGA production units (one in each District)
 - Biofertilizer application in Pulses & Oilseeds
 - Establishment of Seed Processing Units
 - Modernisation of Agriculture Information Wing
 - Strengthening of Soil Testing Services
 - Acid Soil Management
 - Integrated Pest Management
 - Capacity Building of Extension Personnel
 - Strengthening of Implement Factory
 - Construction of Seed Storage Godown
 - Infrastructure Development & Strengthening of Training Institutes

C. Central Plan Schemes

- (1) Promotion & Strengthening of Agriculture mechanization through training, Testing and Demonstration.
- (2) AGRISNET Project
- (3) Development & strengthening of Infrastructure for Production and Distribution of quality seeds.
- (4) National Project on promotion of Organic Farming.

These schemes are implemented through the departmental field staff posted at grass root level to top level in coordination with the Panchayati Raj Institutions.

9. Crop coverage & crop production

(a) Food grains

Food grains consist of cereals and pulses. Rice, maize, ragi, wheat, jowar, bajra & small millets crops come under cereals and arhar, mung, biri, kulthi, cowpea, fieldpea, gram, lentil crops under Pulses. The crops of wheat, bajra, jowar, small millets are grown to lesser extent. Mung, biri and kulthi crops are mostly grown during Rabi season in the rice fallows with residual moisture. If there is a good rainfall during last part of October, the coverage under pulse crops & production are higher. The area, production & yield rate of food grains since 1950-51 to till date is indicated below.

Year	Area (in lakh ha.)			Production (in lakh MT)			Productivity (kgs./ ha.)		
	Cereals	Pulses	Total	Cereals	Pulses	Total	Cereals	Pulses	Total
1950-51	40	4	44	21	2	24	510	520	546
1960-61	40	5	45	38	2	40	943	443	906
1970-71	49	8	57	44	5	49	898	552	847
1980-81	52	17	69	51	9	60	982	514	865
1990-91	50	21	71	59	11	70	1181	551	992
1998-99	49	16	65	58	6	64	1180	391	989
1999-00	51	16	67	56	7	63	1108	403	937
2000-01	49	14	63	50	5	55	1032	365	884
2001-02	49	17	66	75	7	82	1526	400	1232
2002-03	47	13	60	36	4	40	767	349	675
2003-04	49	16	65	71	6	77	1444	379	1178
2004-05	49	17	66	70	6	76	1414	378	1154
2005-06	49	19	68	74	8	82	1513	422	1211
2006-07	49	19	68	74	9	83	1520	444	1213
2007-08	49	20	69	83	9	92	1695	458	1339

In the year when there are no natural calamities the food grain production increased.

Rice

Rice is the principal food crop in the state occupying about 44.47 lakh ha. (41.18 lakh ha. during Kharif season + 3.29 lakh ha. during Rabi season). The Kharif Paddy area is 41.18 lakh ha. consists of 10.37 lakh ha. of high land 15.99 lakh ha. of medium land and 14.82 lakh ha. of low land. Medium & Low lands are better suitable where as high lands are least suitable for paddy cultivation. The entire Rabi area is irrigated & covered by HY Paddy where as Kharif Paddy area covered under about 36% irrigation. The yield rate of rice is 1.7 tonnes/ ha. as against national average of 2.1 tonnes/ha. The Kharif rice production is 68.26 lakh Tones (2007). The year wise position is indicated below.

Year	Area (in lakh ha.)			Production (in lakh MTs)			Productivity (kgs./ ha.)		
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total
1950-51	38.5	0.1	38.6	20.0	0.1	20.1	520	600	520
1960-61	37.7	0.3	38.0	37.2	0.2	37.4	988	697	986
1970-71	43.3	1.4	44.7	39.1	1.9	41.0	902	1387	917
1980-81	40.2	1.7	41.9	40.3	2.7	43.0	1003	1571	1026
1990-91	41.9	2.1	44.0	48.4	4.3	52.7	1156	2019	1198
1998-99	41.8	2.7	44.5	48.9	5.0	53.9	1169	1889	1212
1999-00	42.2	3.8	46.0	42.8	9.1	51.9	1013	2389	1127
2000-01	42.3	2.0	44.3	41.7	4.4	46.1	987	2136	1041
2001-02	42.3	2.7	45.0	65.7	5.8	71.5	1554	2127	1589
2002-03	40.9	1.8	42.7	28.2	4.2	32.4	690	2352	759
2003-04	42.5	2.5	45.0	62.0	5.3	67.3	1459	2112	1496
2004-05	42.0	2.9	44.9	58.8	6.5	65.3	1401	2230	1455
2005-06	41.54	3.25	44.79	62.49	7.14	69.63	1504	2193	1554
2006-07	41.36	3.14	44.50	61.96	7.32	69.28	1498	2328	1557
2007-08	41.18	3.29	44.47	68.26	7.88	76.14	1658	2393	1712

The rice production reached the record level of 76.14 lakh tones during 2007-08. The scope for increasing Rabi rice area is very limited as it depends upon irrigation.

The problems faced in increasing Kharif rice productivity and the steps taken to overcome them are as follows.

- i) More & more Kharif rice area is being brought under irrigation.
- ii) Kharif rice is grown in all types of land, even on sub-marginal lands, with the hope of getting some yield if the rainfall is normal. Due to weak economic condition, especially the tribal farmers in hilly areas, they cultivate rice with least/ no agri-inputs and obtain low yield as a result, particularly from high lands. In these areas, growing short duration paddy varieties of 70-90 days and mixed cropping are being advocated as an insurance against crop failure. Steps are being taken to divert 2 lakh ha. of paddy land especially high land paddy area to more remunerative crops like cereals, pulses, oilseeds, vegetables, spices, fruit trees, fibres, flowers etc.
- iii) A good number of High Yielding varieties have come up for high & medium land, choice for low, water logged and saline inunadated lands is limited. Late varieties like Panidhan, Tulasi, Kanchan, Rambha, Lunisree have been developed by CRRI & OUAT for these lands.
- iv) Pest built up due to continuous cloudy weather in Kharif season & loss of nutrients due to leaching have become serious risks, the poor farmer of the state can hardly afford. This is one of the reasons for low fertilizer consumption.
- v) The operational units are small & fragmented. Small, marginal & tribal farmers are economically too weak to adopt new technology. Since the situation is changing, a large number of farmers are being brought into the fold of institutional finance for getting credit for crop production.

To increase production and productivity of Rice a Centrally Sponsored Programme "Work Plan - Rice Development" is in operation in the State since 2001-02. Under this scheme Farmers Field School, exposure visit of farmers (out side and inside state), supply of certified seeds, farm implements, power tillers, tractors at a subsidized rates are being taken up. Besides, from 2007-08 such developmental activities for enhancement of rice production and productivity is being taken up under the National Food Security Mission - Rice in 15 low productivity districts in a mission mode.

Other cereals

Maize & Ragi are the important coarse cereals. Jowar, Bajra & Small millets are also grown in the state to a lesser extent. These crops are mostly grown in tribal districts during Kharif in un-irrigated uplands with poor management practices and more as subsistence crop. The Area, Production & Yield rate of Ragi & Maize during last few years are given below.

A= Area in lakh hec
P= Production in lakh MTs
Y= Yield rate in Kgs/hect

Year	Ragi			Maize		
	A	P	Y	A	P	Y
1950-51	1.21	0.28	235	0.23	0.09	390
1960-61	0.67	0.29	431	0.22	0.09	417
1970-71	1.56	1.41	901	0.72	0.59	821
1980-81	3.36	2.65	786	1.81	1.75	964
1990-91	2.48	2.54	1023	1.67	2.07	1238
1998-99	1.98	1.44	725	1.64	1.83	1117
1999-00	2.09	1.54	735	1.74	2.17	1248
2000-01	1.89	1.52	801	1.76	2.17	1235
2001-02	1.96	1.45	738	1.64	1.85	1128
2002-03	1.87	1.27	783	1.58	1.77	1123
2003-04	1.90	1.40	737	1.75	1.96	1116
2004-05	1.94	1.42	731	1.85	2.44	1322
2005-06	1.90	1.42	747	1.87	2.80	1496
2006-07	1.90	1.44	760	1.99	3.19	1602
2007-08	1.87	1.65	883	2.15	4.82	2245

The area under Ragi crop is showing a declining trend due to diversion of traditionally ragi growing areas to cotton, vegetables & pulses. So, improved & high yielding varieties of Ragi have been introduced in the state and Ragi development is being promoted though incorporating the scheme under work plan for enhancing the production & productivity.

Similarly in Maize crop, to increase the production and productivity a centrally sponsored scheme known as ISOPOM (Maize) is in operation in the state since 2004-05. Under the scheme interventions like minikit demonstration, IPM demonstration, block demonstration farmers training etc are being taken up besides supply of certified seeds, PP equipments, HDPE pipes and farm implements at subsidized rates.

Pulses

Arhar, mung, biri, kulthi, gram, fieldpea, cowpea, lentil are the pulse crops grown in the State. The major crops are arhar, mung, biri and kulthi. Pulses are grown mainly in uplands during Kharif season predominantly in inland districts & in rice fallows during Rabi season, mostly in coastal districts under available moisture condition. Mung & biri are also grown as third crop in summer under irrigated condition. Post monsoon rains, mostly govern the Rabi coverage of pulses in rice fallows. The area, production & productivity of pulses crops of last few years is indicated below.

Year	Area (in lakh ha.)			Production (in lakh MT)			Productivity (kgs./ha.)		
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total
1970-71	1.7	6.7	8.4	1.0	3.6	4.6	600	542	552
1980-81	3.2	14.1	17.3	1.6	7.3	8.9	490	520	514
1990-91	6.7	14.6	21.3	4.1	7.6	11.7	614	523	551
1998-99	5.0	10.6	15.6	2.0	4.1	6.1	399	387	391
1999-00	5.1	11.2	16.3	2.2	4.3	6.5	437	387	403
2000-01	5.4	8.5	13.9	2.3	2.8	5.1	426	326	365
2001-02	5.5	11.9	17.4	2.4	4.5	6.9	444	379	400
2002-03	4.6	8.5	13.1	1.6	3.0	4.6	356	345	349
2003-04	6.1	10.3	16.4	2.5	3.7	6.2	406	363	379
2004-05	5.9	10.6	16.5	2.4	3.8	6.2	408	362	378
2005-06	6.9	11.9	18.8	2.9	5.0	7.9	429	419	422
2006-07	7.1	12.4	19.5	3.4	5.2	8.6	482	422	444
2007-08	7.2	12.6	19.8	3.64	5.44	9.08	507	431	458

Area, production and productivity figures show an increasing trend in general from 2002-03 onwards, with the exception of the all time high achieved during 90-91. The reason for low productivity of pulses is untimely rains and unfavorable weather conditions. The other reason for low productivity is non-availability of suitable high yielding varieties of mung & biri grown in rice fallows in pre-Rabi & Rabi seasons. Besides, they are grown under poor management practices. Pulse crops are comparatively less remunerative when grown without fertilizer broadcasted under residual moisture. Further, the area under pulses is encroached by high value crops like vegetables. Thus, attempts are being made

to bring more area under pulses crops through adoption of mixed cropping, crop rotation, Paddy bund plantation and introducing appropriate varieties suitable for cultivation in the State.

National Pulses Development Programme now ISOPOM (Pulses), a Centrally Sponsored Scheme, is in operation in the State since 1990-96 with objectives of expanding the area & increasing the productivity by provision of subsidy for different seed & non seed components. Some of its important components are production of foundation seeds, production of certified seeds through seed village scheme, distribution of certified seeds, minikits, bio-fertilisers, farm Implements, sprinkler sets, P.P.equipments, P.P.Chemicals, NPV at subsidized rates, organizing farmers training and block demonstrations etc.

Year wise Surplus/Deficit of Foodgrain Production & Consumption:

Year	Projected population (in lakhs)	Adult population @88% (in lakhs)	Total Requirement (in MTs.)	Total Production (in MTs.)	Surplus / Deficit (in MTs.)
1998-99	350.85	308.75	73.54	63.78	- 9.76
1999-00	357.91	314.96	75.02	62.65	- 12.37
2000-01	365.10	321.28	76.53	55.35	- 21.18
2001-02	371.03	326.51	77.77	82.33	4.56
2002-03	377.06	331.81	79.04	40.44	- 38.60
2003-04	383.19	337.21	80.32	77.37	- 2.95
2004-05	389.41	342.68	81.62	75.89	- 5.73
2005-06	395.74	348.25	82.95	82.21	- 0.74
2006-07	402.16	353.90	84.29	82.98	- 1.31
2007-08	408.70	359.66	85.67	92.13	6.46

(b) Oilseeds

Groundnut, til, castor, mustard, niger, sunflower, safflower, soybean, linseed are the Oilseed crops grown in the State. . Out of these, groundnut, til, mustard and niger are major oilseeds crops grown. Now sunflower is gaining popularity in the state. These crops are grown in upland during Kharif season and in riverbeds & rice fallows during Rabi season. The area, production and productivity during past few years are indicated below.

Year	Area (in lakh hecets)			Production (in lakh MTs)			Productivity (kgs./ hecets)		
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total
1970-71	1.3	2.0	3.3	1.0	1.2	2.2	788	567	652
1980-81	2.0	5.3	7.3	1.5	3.4	4.9	712	637	658
1990-91	5.5	6.0	11.5	4.2	5.3	9.5	766	871	821
1998-99	4.7	3.9	8.6	2.3	2.2	4.5	487	570	525
1999-00	4.3	4.2	8.5	2.1	3.6	5.7	490	853	668
2000-01	3.8	3.2	7.0	1.7	2.0	3.7	436	642	531
2001-02	4.2	4.2	8.4	1.9	3.5	5.4	444	826	635
2002-03	2.8	3.0	5.8	1.1	2.1	3.2	392	697	550
2003-04	4.0	3.9	7.9	1.6	3.3	4.9	408	851	626
2004-05	4.5	3.9	8.4	1.9	3.3	5.2	431	854	627
2005-06	4.5	3.7	8.2	2.1	3.4	5.5	471	908	668
2006-07	4.4	4.0	8.4	2.1	3.9	6.0	490	972	719
2007-08	4.3	4.1	8.4	2.6	4.2	6.8	597	1019	804

Coverage under oilseeds has been fairly constant hovering around 8.5 Lakh ha. But the fluctuating trend in production and productivity has largely settled down to an increasing trend 2002-03 onwards, in spite of aberrant weather conditions taking its toll.

Besides inadequate use of chemical fertilizer, problems in marketing and non-remunerative prices in the offing for oilseeds like groundnut, sunflower and niger, do dishearten farmers to some extent.

Efforts are being made to increase the productivity through compact area and location specific approach by providing minikits, conducting demonstrations, supply of seed treating chemicals, rhizobium culture, gypsum, micronutrients, farm implements, sprinkler sets at subsidised costs to boost growers' morale.

(c) Jute & Mesta

Among the fiber crops Jute & mesta are the most important crops. Jute is mainly cultivated in the coastal districts of Balasore, Cuttack & Anandpur subdivision of Keonjhar. Mesta is mostly grown in the districts of Ganjam, Mayurbhanj, Keonjhar & Koraput. The area, production & yield rate of jute and mesta are given below.

Area in '000 hectcs
Production in '000 bales
Yield in Kgs/hect

Year	Jute			Mesta		
	Area	Production	Yield	Area	Production	Yield
1960-61	40	264	1180	8	40	889
1970-71	44	328	1348	28	152	959
1980-81	44	310	1275	42	209	897
1990-91	36	472	2372	34	223	1189
1998-99	13	110	1485	29	110	693
1999-00	14	92	1189	30	129	768
2000-01	14	107	1386	24	103	773
2001-02	14	92	1199	26	109	746
2002-03	14	85	1115	25	97	688
2003-04	9	53	1064	27	109	738
2004-05	9	83	1620	25	105	751
2005-06	10	91	1665	23	97	761
2006-07	12	115	1741	22	95	783
2007-08	13	126	1769	22	101	826

The area under jute & mesta is shrinking fast mainly due to invasion of polythene & synthetic fibers as a cheaper & convenient substitute in addition to the inadequate marketing support. Jute Development was being taken up under work plan, a Centally Sponsored Programme in the state since 2001-02 and being followed up under the Jute Technology Mission from 2007-08 for improving production, productivity and the quality of fiber in the jute and mesta growing districts. Emphasis is being laid on supply of certified jute & mesta seeds, timely distribution of critical inputs, demonstration on improved production technologies, organization of farmers field school, exposure visit of farmers (both in side & out side state), retting technology demonstration for improving the quality of the fiber etc. Owing to the rise in public awareness on environmental concerns the jute & mesta crop is gaining its ground both in area & production terms.

(d) Cotton

Cotton is mostly grown in KBK districts (un divided Koraput, Kalahandi, Bolangir) and Ganjam. This crop is gaining more importance in the State. The year wise position is indicated below.

Year	Area (‘000 hecets)	Production (‘000 bales)	Yield (Lint) (in kgs/hecets)
1950-51	10	2	33
1960-61	8	2	51
1970-71	0.3	0.5	295
1980-81	4	4	170
1990-91	6	8	215
1998-99	29	53	306
1999-00	38	61	272
2000-01	39	65	283
2001-02	63	55	147
2002-03	29	50	287
2003-04	37	88	408
2004-05	46	111	412
2005-06	57	145	435
2006-07	60	108	307
2007-08	50	125	423

The present aim is to raise the area under cotton to 75,000 ha. by substituting the crop in high land where non-remunerative non-paddy & paddy crops are grown.

A Centrally Sponsored Scheme Intensive Cotton Development Programme (ICDP) is in operation for increasing production & productivity of cotton through providing seed subsidy, organizing demonstration, training and assistance to farmers like P.P.Equipments, sprinkler sets, PP chemicals etc at subsidized rates.

Steps are being taken to make available quality hybrid & high yielding seeds to cotton growers in the state and providing those seeds locally. Besides, technical assistance for raising the crop is being rendered through the extension personnel of the department.

(e) Sugarcane

Sugarcane is mostly cultivated in undivided districts of Puri, Cuttack, Ganjam, Koraput, Dhenkanal, Bolangir, Kalahandi & Sambalpur districts. The year wise Area, Production & Productivity is indicated below.

Year	Area (‘000 hecets)	Production (‘000 MTs)	Yield (in kgs/hecets)
1950-51	25	1107	44284
1960-61	25	744	29179
1970-71	30	1627	53907
1980-81	49	3060	62449
1990-91	49	3549	72429
1998-99	47	3060	64917
1999-00	31	1827	58990
2000-01	31	2103	66951
2001-02	30	1890	63728
2002-03	25	1516	60150
2003-04	29	1810	62908
2004-05	34	2321	68600
2005-06	37	2543	69286
2006-07	41	2836	70008
2007-08	38	2679	70360

There are seven sugar mills in the state, out of which 6 mills are in operation & one at Kalahandi is not functioning for which area and production of sugarcane crop has registered a decline during 2007-08.

Steps are being taken to revive the above sugarcane mill. Besides this, to improve the productivity, steps are also being taken to provide quality seed materials, conduct farmer field schools, for up gradation of technical skill of farmers, supply of agricultural implements at subsidized rates and demonstration for ratoon management under centrally sponsored plan scheme Sugarcane Development (Work Plan).

10. Seed Replacement Rate

The Seed Replacement Rate (SRR) of different crops from 2004-05 to 2007-08 is indicated below.

(SRR in %)

Name of the crop	2004-05			2005-06		
	Kharif	Rabi	Total	Kharif	Rabi	Total
Paddy	4.66	5.63	4.73	5.81	7.87	5.96
Maize	0.76	1.01	0.77	1.02	0.11	1.15
Wheat		19.57	19.57		20.66	
Moong	0.61	0.72	0.69	0.79	0.94	2.77
Urd	0.70	1.32	1.05	0.94	0.34	0.61
Gram		26.42	26.42		21.53	
Arhar	0.64		0.64	1.40		2.68
F.Pea		5.16	5.16		5.60	
G.Nut	1.66	9.15	6.18	5.58	25.16	6.67
Mustard		27.86	27.86		13.23	
Sunflower	80.00	23.18	30.28	100.00	22.44	33.34
Castor	2.73		1.67	2.96	0.00	1.90
Jute	43.48		43.48	40.70		40.70
Cotton	6.32		6.32	16.72		16.72

(SRR in %)

Name of the crop	2006-07			2007-08		
	Kharif	Rabi	Total	Kharif	Rabi	Total
Paddy	5.87	14.16	6.35	11.25	21.83	12.04
Maize	1.15	4.90	1.39	2.01	3.00	2.05
Wheat		20.66	20.66		25.85	25.85
Moong	2.77	1.89	2.15	1.20	1.43	1.36
Urd	0.61	3.76	2.42	1.07	1.98	1.57
Gram		13.05	13.05		20.46	20.46
Arhar	2.68	5.29	2.68	1.98		1.98
F.Pea		8.44	8.44		3.10	3.10
G.Nut	6.67	32.28	22.89	7.57	29.89	22.19
Mustard		14.45	14.45		12.20	12.20
Sunflower	100.00	49.87	60.71	100.00	10.83	19.09
Castor	10.99		5.74	14.90		7.37
Jute	42.86		42.86	46.47		46.47
Cotton	3.85		3.85	1.75		1.75

11. Minimum Support Price

The minimum support price of different Agricultural Products for the year from 2000-01 to 2007-08 fixed by Govt. of India on the recommendation of Commission for Agriculture Costs and Prices (CACP) for all the States is indicated below.

(Rs. Per Qtls for FAQ)

Crops	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08
Paddy <i>Common</i> <i>Grade A</i>	510 540	530 560	530 560	550 580	560 590	570 600	580 610	645 * 675 *
Jowar	445	485	485	505	515	525	540	620
Bajra	445	485	485	505	515	525	540	600
Ragi	445	485	485	505	515	525	540	600
Maize	445	485	485	505	525	540	540	620
Wheat	610	620	620	630	640	650	750	1000
Gram	1100	1200	1220	1400	1425	1435	1445	1600
Arhar	1200	1320	1320	1360	1390	1400	1410	1550 **
Mung	1200	1320	1330	1370	1410	1520	1520	1700 **
Biri	1200	1320	1330	1370	1410	1520	1520	1700 **
S.Cane	59.50	62.05	69.50	73.00	74.50	79.50	80.25	81.18
Cotton <i>F-414/ H-</i> <i>777/J-34</i> <i>H-4</i>	1625 1825	1675 1875	1675 1875	1725 1925	1760 1960	1760 1980	1770 1990	1800 2030
G.Nut (In shell)	1220	1340	1355	1400	1500	1520	1520	1550
Jute (<i>Tossa</i>) (<i>White</i>)	785 --	810 --	850 --	850 --	890 --	910 --	1000 --	1092 1042
Mustard	1200	1300	1330	1600	1700	1715	1715	1800
Sunflower (seed)	1170	1185	1195	1250	1340	1500	1500	1510
Soyabean <i>Black</i> <i>Yellow</i>	775 865	795 885	795 885	840 930	900 1000	900 1010	900 1020	910 1050
Safflower	1200	1300	1300	1500	1550	1565	1585	1650
Sesamum	1300	1400	1450	1485	1500	1550	1560	1580
Niger	1025	1100	1120	1155	1180	1200	1220	1240
Lentil	1200	1300	1300	1500	1525	1535	1545	1700

N.B.:

- (a) * An incentive bonus of Rs.100/- per quintal be given over and above the MSP.
** An incentive bonus of Rs.40/- per quintal be given over and above the MSP.
- (b) *The MSP of Paddy for Common Variety is fixed at Rs.850/- & Grade 'A' variety at Rs.880/- per quintal for 2008-09.*

12. Crop Diversification & Mixed Cropping

In Orissa, Kharif Paddy is grown on all types of lands irrespective of its suitability. Paddy grown on high lands under rainfed conditions is most vulnerable to moisture stress, leading to drastic yield reduction in years of poor rainfall. It is therefore necessary to diversify this area. The extent of high land paddy in the state is about 10.37 lakh ha. It was programmed to divert 4.89 lakh ha. of this high land paddy to non- paddy crops like pulses, oilseeds, cotton and vegetables during Kharif season. The diversion is programmed mostly in the inland districts. Since most of the small and marginal farmers who cultivate the high lands prefer to grow paddy for reasons of food security, partial substitution of paddy with alley cropping (Mixed cropping) is considered to be more appropriate measure to achieve the crop diversification. Mixed cropping of different combinations of crops is therefore being popularised. Steps are also being taken to cover some of these lands by very early and early varieties of paddy. The crop diversification programme of Orissa during 2007-08 is as follows:

In Lakh hecets

Sl No	Items	2007-08
1	Diversion from High land paddy	2.00
2	Drought affected Medium land paddy	1.80
3	Rice fallow land (with Pulses, Oilseeds)	3.87
4	Minor Millet Area (Niger, Mesta)	0.16
5	Aromatic Rice	1.60
6	Rice Fish culture	0.20
7	Sand dune	0.30
8	Saline inunadated area	0.34
	Total	10.27

These crops are being encouraged by way of supplying minikits of different new varieties of certified seeds and conducting block demonstrations under different centrally sponsored scheme like ISOPOM and ICDP (Cotton). Price Support Scheme should continue to ensure marketing of oilseeds.

The Rice area diverted to non Paddy crops during 2005, 2006 & 2007 Kharif is indicated below.

(unit in hecets)

Sl. No	Name of the Crops	Area diverted during		
		2005	2006	2007
1.	Cereals	16693	18188	18206
2.	Pulses	31698	35741	56585
3.	Oilseeds	15093	9105	25423
4.	Fibres	14282	6687	3036
5.	Sugarcane	12792	4244	5836
6.	Vegetables	19109	15005	33577
7.	Spices	3124	2504	2533
8.	Horticultural crops	4518	2816	1210
	Total	1,17,309	94,290	1,46,406

Mixed Cropping

The year wise mixed cropping area since 2000 to 2007 is indicated below.

Area in hect.

Sl. No	Mixed Crop	2000	2001	2002	2003	2004	2005	2006	2007
1	2	3	4	5	6	7	8	9	10
1	Paddy + Arhar	31232	29690	30529	32343	26190	28225	29048	28785
2	Paddy + Mung/Biri	--	--	96	208	297	300	315	723
3	Paddy + Mest	12	20		90	101	60	62	44
4	Paddy + Jowar	152	382	467	150	323	325	328	--
5	Paddy + Maize	274	252	269	105	275	455	545	--
6	Maize + Arhar	1507	1921	2262	2141	2205	2810	2942	1844
7	Maize + Cowpea	977	906	1270	1172	1529	1435	1545	3040
8	Maize + Bean	280	300	340	167	194	235	241	--
9	Maize + Mesta	1525	232		73	144			--
10	Maize + Jowar	465							--
11	Maize + Castor					12	15	15	240
12	Maize + Cotton					7	12	22	--
13	Maize + Bailo	34	37	44	30	140	120	120	--
14	Maize + Biri	120	125	115	145	221	145	156	--
15	Ragi + Biri	62	65	55	75	140	150	160	--

1	2	3	4	5	6	7	8	9	10
16	Ragi + Jowar	10	10	5	10	50	50	52	--
17	Ragi + Bailo	200	200	213	260	230	180	182	--
18	Ragi + Arhar	2408	2551	2614	3133	3135	3252	3343	672
19	Ragi + Cowpea	60	80	120	130	140	210	222	20
20	Arhar + Mesta		36	5					30
21	Arhar + Groundnut	15122	14278	12831	13299	14770	14815	14923	13340
22	Arhar + Til				190	307	345		17108
23	Arhar + Mung/ Biri	15336	16180	17286	16031	14317	18825	19321	973
24	Arhar + Ragi/Jowar	190	242	200	160	50	65	73	--
25	Arhar + Jowar	46	25	161	24	24			1000
26	Arhar + Cotton	1271	1502	337	570	425	355	365	--
27	Arhar + Vegetable	33	20	57	40		65	70	--
28	Arhar + Cowpea	11	8	16	52		60	66	104
29	Cotton + Mung/Biri	10	12	5	30	20	52	56	00
30	Cotton + Vegetable			15			110	115	00
31	Cotton + Groundnut						122	138	869
32	Groundnut + Mung/Biri			180	184	310	430	445	274
33	Groundnut + Mesta	253	283	62	385	399	402	405	--
34	Sugarcane + Mung		50			20	51	52	72045
35	Others	--	--	--	--	--	--	--	2979
	Total	71590	69407	69554	71197	65975	73676	75327	72045

13. Agroclimatic Zone Wise Districts

Sl.No.	Name of the Agro-climatic zone	Name of the districts
1.	North – Western Plateau	Sundargarh, Deogarh
2.	North Central Plateau	Mayurbhanj, Keonjhar
3.	North Eastern Coastal Plain	Balasore, Bhadrak, Jajpur
4.	East and South Eastern Coastal Plain	Cuttack, Jagatsingpur, Kendrapada, Puri, Khurdha, Nayagarh
5.	North Eastern Ghat	Ganjam, Gajapati, Rayagada, Phulbani
6.	Eastern Ghat High Land	Koraput, Nowragpur
7.	South Eastern Ghat	Malkangiri
8.	Western Undulating Zone	Kalahandi, Nuapada
9.	Western Central Table Land	Bolangir, Sonapur, Boudh, Sambalpur, Baragarh, Jharsuguda
10.	Mid Central Table Land	Dhenkanal, Angul

14. Administrative Set-up (orissa)

Sl. No.	District	No of							
		Block	GP	Village	Sub-Division	Taha-sils	Municipality/ Municipal Corp.	NAC	Assembly Constituencies
1	Balasore	12	289	2952	2	7	1	3	7
2	Bhadrak	7	193	1311	1	6	1	1	5
3	Balangir	14	285	1794	3	6	1	3	6
4	Sonepur	6	96	959	2	4	1	2	3
5	Cuttack	14	342	1950	3	11	2	2	10
6	Jagatsingpur	8	194	1288	1	4	1	1	4
7	Jajpur	10	280	1778	1	6	2		6
8	Kendrapara	9	230	1540	1	7	1	1	6
9	Dhenkanal	8	199	1215	3	6	1	2	4
10	Angul	8	209	1910	4	5	1	2	4
11	Ganjam	22	475	3212	3	14	1	17	12
12	Gajapati	7	129	1619	1	3	1	1	3
13	Kalahandi	13	273	2236	2	7	1	2	6
14	Nawapara	5	109	663	1	2		2	2
15	Keonjhar	13	286	2122	3	8	3	1	6
16	Koraput	14	226	2028	2	7	1	3	4
17	Malkangiri	7	108	1045	1	3		2	2
18	Nawarangpur	10	169	901	1	4	1	1	4
19	Rayagada	11	171	2667	2	4	1	2	4
20	Mayurbhanj	26	382	3950	4	9	1	3	10
21	Phulbani	12	153	2546	2	4		2	3
22	Boudh	3	63	1186	1	2		1	1
23	Puri	11	230	1715	1	7	1	3	6
24	Khurda	10	168	1551	2	7	3	2	6
25	Nayagarh	8	179	1695	1	4		2	4
26	Sambalpur	9	148	1322	3	4	1	4	3
27	Bargarh	12	248	1207	2	8	1	2	5
28	Deogarh	3	60	875	1	1	1		1
29	Jharsuguda	5	78	348	1	2	2	1	3
30	Sundargarh	17	262	1764	3	9	4		7
	ORISSA	314	6234	51349	58	171	35	68	147