

White Paper on
**“Agribusiness and Marine Sector in India
and Orissa”**

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1. EXECUTIVE SUMMARY

India is poised to see a big leap in the area of agribusiness and allied industries on account of the public and private sector focus on developing the industry with a holistic approach. The central and the state government has realised the need for an action in the area. Apart from traditional businesses, new areas like food processing, processed food and various types of consumer-centred products seem to be the trend in the industry.

We need to exploit the current traditional agribusinesses and then promote new industries for long term sustenance in the global market. The market size for processed foods during 2003-04, at the current prices is estimated to be at Rs 5300 billion, which is about 60% of total food consumption. The Indian agrochemicals industry has grown from a mere Rs 4 billion in the 1970s to Rs 60 billion in 2005 with the addition of a variety of new pesticides each year. The Fertilizer production in India in 2004-05 is around 34.06m tonnes and in terms of consumption India is amongst the lowest in the world. The industry has been polarized with six major players producing 64% of nitrogenous fertilizers and two companies producing 44% of phosphatic fertilizers, with a large number of companies accounting for the balance. India's contribution to the total world seed market is 3.06% (US\$920m or Rs41.4 billion). Out of this Rs.40.5 billion is accounted for domestic sales and only Rs 0.9 billion for the export market.

Orissa being an agriculture based state has many focus areas. Agribusiness is one of the areas where the government is giving a lot of support through its various incentive and subsidy schemes. The processed food in Orissa is yet to catch the Indian growth pace. Orissa has a meagre presence of processing industries. During the next 5 years, the use of chemical fertilizers has been targeted to be increased to 100 kgs per hectare. The appropriate ratio in the use of chemical fertilizer (NPK) is maintained along with the increased use. The consumption of major fertilizer materials in Orissa is 1.87m tonnes in 2004-05 while the pesticide consumption of technical grade stood at 1244 MT. Major crop seeds were sold in the state valuing Rs. 6.8m in 2004-05. The marine sector being one of the most important sectors in Orissa is performing quiet well in the last few years. The state produced around 0.3m tonnes in 2004-05 and ranked 8th in India. For all these sectors to perform well the state government is providing forward and backward linkages in the state at even the village level. This included the development of market yard, transport facilities, financial support schemes at the production level, cooperatives and societies formation in the state.

The Government of Orissa agrees to take all required steps to promote Rural Business Hubs through Public-Private-Panchayat Partnerships. The Union Ministry of Panchayati Raj and the Confederation of Indian Industry offers to support the development of Rural Business Hubs through Panchayats, so as to upgrade local skills and products and find markets for them.

2. AGRIBUSINESS AND MARINE SECTOR IN INDIA

Agriculture being the most important sector that the country's population is dependent upon has been growing at a faster rate. The commercial aspect of agriculture called agribusiness has been given importance over the years to match global growth. In all aspects of agribusiness, industries like food processing, fertilizer, agrochemicals and seeds are the major stake holders. Allied sectors like fisheries including inland and marine fisheries are booming in global exports.

2.1 Agribusiness

2.1.1 Food processing industry

Food processing is a sunrise industry in India. A lot of emphasis is being given by the government to promote the industry. India's total food consumption for 2003-04 is estimated to be approximately Rs8600 billion at the current price (Rs760 billion at 1993-94 prices). The market size for processed foods for year 2003-04, at the current prices is estimated to be at Rs 5300 billion, which is about 60% of total food consumption. However, primary processed products (which necessarily need to be processed in most cases for consumption) constitute as much as 63% of processed foods consumed, with value-added products being the balance 37%.

The Government has framed and implemented a Plan Scheme for technology upgradation, establishment and modernisation of food processing industries. The financial assistance of Rs 90.77m was extended to Maharashtra followed by Uttar Pradesh Rs57.02m, Tamil Nadu Rs49.82m and Andhra Pradesh Rs44.10m during 2005-06. Orissa has got the lowest financial assistance of Rs 0.39m followed by Chhattisgarh with Rs 0.64m.

2.1.2 Pesticide Industry

The Indian agrochemicals industry has grown from a mere Rs 4 billion in the 1970s to Rs 60 billion in 2005. The industry is the third largest manufacturer of agrochemicals in Asia and fourth largest in the world after USA, Japan and China. Of the 189 technical grade pesticides and their formulations registered in India, 60% are manufactured locally.

2.1.3 Fertilizer Industry

The Fertilizer consumption per hectare of arable land in India is amongst the lowest in the world. This is linked to low levels of productivity of Indian agriculture. The average yield of paddy is around 2890 kgs/ha as compared to the world average of 6059 kgs/ha. The fertilizer industry continues to be a price-regulated industry in India. It is expected to grow faster than the global fertilizer industry, largely due to high, unrealized domestic demand. The industry has been polarized with six players producing 64% of nitrogenous fertilizers and two companies producing 44% of phosphatic fertilizers, with a large number of companies accounting for the balance. The industry expects the total fertilizer demand to grow at 4% in India in the tenth plan period (2002-07) as compared to global growth of around 2%.

2.1.4 Seed Industry

The global commercial seed market is estimated of worth US\$30 billion. Apart from the grain seed this includes the planting materials too. India's contribution to the total world market is 3.06% (US \$920m or Rs41.4 billion). Out of this Rs.40.5 billion is accounted for domestic sales and only Rs 0.9 billion for the export market. India ranks around 23rd in the world in earning value from export of agriculture and horticulture seeds. But if we see the trend of exports of floriculture, fruit and vegetable seeds over a period of 10 years since 1993-94, it has increased

from Rs 0.43 billion to Rs 2.66 billion in 2002-03 with an impressive Compound Annual Growth Rate (CAGR) of 19.93%.

2.2 Fish Industry

India has over 8,000 km of coastline with an exclusive economic zone of 2m square kilometers. Other water bodies include 29,000 km of rivers and canals, 1.45m ha of reservoirs and 0.75m ha of tanks and ponds. The Indian fishing fleet consists of 200,000 traditional craft, 47,000 mechanized boats, and 180 deep-sea trawlers. While traditional crafts and some mechanized craft operate throughout the Indian coast; a majority of the mechanized fishing vessels operate from five major fishing harbours, 28 minor fishing harbours and 114 landing centers in the country.

Prawn production in Orissa has increased to 1m metric tonnes (MT) from 0.08m MT., but 50% of the production comes from large farms owned by power full business groups. Jagatsinghpur is the largest fish-producing district in Orissa.

2.3 Other horticultural crops

Cashew plantation is in the adjoining areas of the coast of Orissa. The farms are owned by big landowners who sell the produce to the traders of Puri, Cuttack, Paradeep and Calcutta. Coconut and mango are major horticultural crops. Each tree gives 5-6.5 kg per year. In an acre there will be 25 trees and the nuts sold for Rs.25-30 per kg. The value of the harvest can be anything from Rs.3125-4800. The villages of Balikuda and Erasama are well suited for coconut plantations. Apart from the kernel, coconut generates coir and input for broom making. Coconut cultivation is a valuable livelihood option. Each tree yields Rs.250/- worth of coir and Rs.200/- worth of brooms.

3. STATE ISSUES

Orissa though is enriched in agricultural and horticultural crops the growth in agribusiness industry is slow. Some of the identified constraints in various fronts of production, processing and marketing are discussed below.

3.1 Agribusiness

The Orissa government has given agriculture a status of industry in order to encourage private sector investments and export promotion. Agriculture is the predominant subsistence for peasants with cash crop farming, providing employment to nearly 63% of the total working population. Caught between the vicious circles of drought and official apathy, the state agriculture has remained largely neglected; as a result, the agricultural production is declining over the years. With the announcement of agricultural policy, agribusiness corporations are now lobbying the state government to amend the Land Reforms Act in order to allow large land holdings on which large-scale commercial cultivation can take place. Efforts to launch contract farming in Orissa is on the way under which the agribusiness corporations provide all inputs to farmers and, in return, the farmers sell their produce to the company. Some of the identified areas of the industry with some of their issues are as follows.

3.1.1 Processed foods

Agriculture has largely been over the years for subsistence and not market-driven. This has yielded inadequate surpluses for processing, coupled with the low yields of crops, this has become a bottleneck. The lack of awareness and the non-availability of suitable, processable varieties of raw materials, in terms of type, size, colour, texture, etc. has contributed to the absence of large volumes of processable varieties and therefore to the economies of scale. The small and unorganized sector accounts for 75% of the total food processing industry. There are only a few organized large industrial houses that make their presence felt in the food-processing arena in India. The tax levels on processed foods in India are among the highest in the world. Few, if any, other countries in the world impose excise duty on locally processed food. There is also a distinction between branded and un-branded products for taxation in India. Poor infrastructure such as lack of integrated cold chains, roads, power, etc. has also retarded the growth of the food processing industry.

3.1.2 Fertilizers

The fertilizer industry in the state is just sustaining itself in the market. The various subsidies given to the units are not sufficient to run them in a profitable manner. Further, the strict price control from the government is also a hindrance to this industry. Moreover, the units are not able to run in their full capacity due to non-availability of raw materials and their related high prices. The units are facing strict control orders from the pollution board. The high import cost of raw material and the subsequent excise duties are again a setback in the industry.

3.1.3 Pesticides

The pesticide industry in the state is also in a state of concern. The average use of pesticides in the state though low but due to repeated use of traditional pesticide it has caused serious pest resurgence problems in many crops like cotton, rice and oilseeds. The use of organophosphorous compounds and synthetic pyrethroids in the crop field has contaminated the soil, resulting in ultimately affecting crop production. Though the productivity levels are low but the use of high levels of pesticides has also not increased the yield of the major crops as compared to the other competitive states. The pesticide companies are facing a problem of marketing the right kind of pesticides as major brands are not able to show their efficacy for a longer period. Thus the

industry needs some support from the government to research and to attain optimum pesticide utilization ratio.

3.1.4 Seeds

The seed industry in Orissa has been an old one. The major cereal crop is rice that forms the majority of the size in terms of volume. But in terms of value the crops of vegetables and oilseeds are important. The private seed players are having a good market share in such crops though it varies from season to season. Other than natural calamities like floods and cyclone, the industry fares well in other seasons. The industry has a good coverage of some of the MNCs in supplying good hybrids and varieties in the state and the government is also taking sufficient efforts to market the seeds.

3.2 Marine sector

The production of marine fish in Orissa which was 38.70 thousand tonnes in 1980-81 increased significantly to a tune of 53.58 thousand tonnes in 1985-86, 78.19 thousand tonnes in 1990-91 and 133.46 thousand tonnes in 1996-97. It declined to 121.08 thousand tonnes in 2000-2001 and maritime districts like Balasore, Cuttack, Puri and Ganjam contribute respectively 34.01%, 41.58%, 19.91% and 4.50% of the total marine fish landings in the State during 1996-97. 40% of the total marine catch of the state is consumed inside the state itself.

4. PRODUCTS AVAILABLE

The agribusiness and marine sectors have always been an industry of attraction due to the varied nature of products available under its disposal. The wide variety of products available in the processed food segment meeting the needs of the urban consumer has driven the industry. The westernized product that suits a fast lifestyle is gaining grounds in urban areas. Some of the products available in the agribusiness segment are given below.

4.1 India

The products available in India in agribusiness and marine sector vary in nature. As the products can be categorized in to perishables and non-perishables, both the categories need to be disposed at the right time. Though the perishable goods have got a smaller life cycle, such products need to be considered first.

4.1.1 Agribusiness

The products that fall under this category can be classified into processed food products, fertilizers, pesticides and seeds. Taking in to account their end use like for consumption or field use these products are available for purchase by the common man.

4.1.1.1 Processed foods produced in India

The day to day use of the products for consumption fall under this category as the industry offers varied nature of products for all age-group people. There are strict laws like FPO order, APMC Act, Food Adulteration Act that govern the industry. Some of the common products available in the industry are given below.

Common products available in the food processing industry

Category	Products
Food products	Bread and Biscuits Semi-processed / cooked ready to eat Culinary products / Snack food Processed Fruits and vegetables, Pulps, Sauce/Ketchups Spices and Masalas Processed Meat and Chicken
Milk and Dairy products	Milk powder, Milk based sweets, Ghee, Butter, Cheese, Curd and curd products, Ice-cream
Sugar and Confectionary products	Sugar confectionary Chocolates
Beverages	Non-Alcoholic Tea, Coffee, Health beverages / malted foods, Soft drinks (Carbonated beverages and Juices) Alcoholic Beer, Wine/ Spirits/ Country liquors

4.1.1.2 Fertilizers produced in India

Fertilizers have been the need of the farmers since many years and its profile has not changed over the years. The basic need of the fertilizers is met by formulating them under known categories like Urea, DAP, MOP etc. These products contain fixed percentage of nutrients like Nitrogen, Phosphorous and Potassium. There are mixed forms of fertilizer available in the market that is used as per their need for specific crops. These forms of fertilizers are common across the country for their use in agriculture. Based on the capability of individual companies they can manufacture any of these after getting government approvals.

Product category of fertilizers

Sl. No.	Name of the products	percentage nutrient	
		Nitrogen (N)	Phosphate (P)
1	Urea	46	-
2	Ammonia Sulphate(A/S)	21	-
3	Calcium Ammonium Nitrate (CAN)	25	-
4	Ammonium Chloride (A/C)	25	-
5	DiaAmmonium Phosphate (DAP)	18	46
6	Single Super Phosphate (SSP)	-	16
7	16:20	16	20
8	20:20	20	20
9	23:23	23	23
10	28:28:00	28	28
11	10:26:26	10	26
12	12:32:16	12	32
13	14:35:14	14	35
14	15:15:15	15	15
15	17:17:17	17	17
16	19:19:19	19	19
17	20:8:20:8	20.8	20.8

4.1.1.3 List of pesticides produced in India

The pesticides produced in India are varying in nature and act on various pests and insects. Any pesticide molecule that has to be manufactured needs an approval from the Govt. of India. Pesticides of all kinds cannot be produced as there are certain pesticides banned for production in India. Some of the commonly used pesticides in India have been given below.

Pesticide product category

Category	Most used in India
Insecticides	Malathion, Parathion (Methyl), Dimethoate, DDVP, Quinalphos, Monocrotophos, Phosпамidon, Phorate, Ethion, Endosulphan, Fenvalarate, Cypermethrin, Anilophos, Acephate, Chlorpyrifos, Phosalone, Metasystox, Abate, Fenthion, Trizaphos, Lindane, Temphos, Deltamethrin, Alphamethrin
Fungicide	Captain and Captafol, Carbandazim, Copperoxychloride, Ziram, Calixn, Mancozeb
Herbicides	2,4-D, Butachlor
Weedicides	Isoproturon, Basalin, Glyphosphate, Paraquat, Diuron, Afrazin, Fluchlorine

4.1.1.4. Seeds of major crops

The seed industry is the lead for agribusiness and is an important industry in terms of its seasonal dependence. Some of the important high value crops are season dependant while the rest of the seeds like cereals and pulses can be stored for a year. Some of the commonly used seeds are as follows.

Category	Most used in India
Cereals	Paddy, Maize, Jowar, Bajra, Ragi, Kodo
Pulses	Urad, Moong, Arhar, Cowpea, Moth, Rajma
Oilseeds	Groundnut, Til, Sunflower, Soyabean, Castor, Niger
Fibre crops	Cotton, Jute, Mesta
Vegetables	Tomato, onion, Potato, Brinjal, Bhendi, Gourds, Cauliflower, Cabbage, Carrot, Radish etc

4.1.2 Fishery products (group-wise)

Some of the products of fishery available in India are;

Category	Most used in India
Sea food	Fish products (Fresh and frozen), Prawns / Shrimps, Lobster, Other products.

4.2 Orissa

4.2.1 Agribusiness

Orissa's main agriculture products are rice, pulse, oil seeds, vegetables, groundnut, cotton, jute, coconut, spices, potato, sugarcane, fruits etc. There is a vast scope for agro based industries such as: rice milling, Dal milling, edible oil milling, dehydration of vegetables, maize milling, cattle poultry, cotton oil, potato chips, coconut oil, sugar mills, mushroom cultivation, non-edible oils and many others. The processed food industry in Orissa has similar products that are available across India. The pesticide and seed industry is also similar as the crops cultivated in Orissa are all commonly cultivated crops.

4.2.1.1 Fertilizers produced in Orissa

There are four big fertilizer plants in Orissa. The first plant located at Rourkela in Sundergarh District is a Public Sector Undertaking. This plant utilizes the by products and surplus gas from the Rourkela Steel Plant. The second fertilizer plant - The Orissa Fertilizer and Chemical Limited is located near Kalunga. The capacity of this fertilizer plant is 45,000 tonnes per annum. The third fertilizer plant is located at Talcher in Dhenkanal District. It produces 495,000 tonnes of Urea and 228,000 tonnes of Nitrogen. The fourth fertilizer plant - The Indian Farmers and Fertilizers Corporation Ltd. is located at Baragarh. It produces mixed fertilizer.

A new phosphate fertilizer complex at Paradeep, a joint venture of Island Republic of Nauru and Government of India has been built. It produces Di-Ammonium Phosphate with a capacity of 2,400 tonnes per day in the first phase. Its second phase has also started and produces Phosphoric Acid and Phosphorus Pentaoxide.

4.2.2 Fishery products

Orissa being one of the major producers and consumer of fish has got all the products in its consumption basket that are consumed across the country. However, some products are exclusively exported based on their export demand. The common marine fishes like Pomfret, Hilsa, Bhakti, Khanga, Paniakhia, Prawn, Kani, Kantia, Kokali, Borei and Small Shrimps are fished for their consumption in Orissa.

5. PRODUCTION STATUS

The production level of all the products of agribusiness and marine have been increasing over the years but its growth rate has been fluctuating over the years.

5.1 India

In India, the products of agribusiness like processed foods, pesticides, fertilizers and seeds are in good demand while production and consumption is proportionate excepting for a few that compensate for the imports and exports.

5.1.1 Agribusiness

Given below are some of the products with their production levels in the last few years.

5.1.1.1 Production of processed foods in India

The consumption level per capita clearly indicates the increasing level of consumption which is favourable to the industry. It is clear from the table that the most commonly consumed product is bread followed by edible oils. There are other new products like pasta, breakfast cereals catching up in the market.

Estimated consumption of packaged and processed foods in India (grams per capita)

Products	1997-98	2002-03	CAGR (%)	2003-04*	2004-05*
Canned meat and meat products	0.20	0.24	4.88	0.25	0.27
Canned fish / Seafood	NA	0.10	NA	NA	NA
Canned vegetables	0.30	0.32	1.39	0.32	0.33
Chips/crisps	5.60	9.96	15.48	11.50	13.28
Extruded snacks	5.60	7.57	7.82	8.16	8.80
Nuts	1.66	2.58	11.71	2.88	3.22
Butter	39.10	50.61	6.66	53.98	57.57
Cakes	41.50	57.18	8.34	61.95	67.12
Bread	1355.60	1656.54	5.14	1741.69	1831.21
Breakfast cereals	2.20	3.38	11.35	3.77	4.19
Baby food	12.40	14.63	4.23	15.25	15.90
Biscuits	351.10	440.00	5.80	465.54	492.56
Chocolate confectionery	19.30	25.94	7.67	27.93	30.07
Dried food	283.50	407.87	9.52	446.70	489.22
Frozen food	12.40	20.46	13.34	23.19	26.28
Ice cream (ml./person)	29.80	47.55	12.39	53.44	60.06
Noodles	20.00	20.09	0.11	20.11	20.13
Oils	575.50	620.16	1.89	631.86	643.77
Other sweet and savoury snacks	17.10	23.27	8.00	25.13	27.14
Other fats	477.70	523.46	2.31	535.57	547.96
Pasta	0.40	0.71	15.22	0.81	0.94
Sugar confectionery	58.30	78.15	7.60	84.08	90.47
Sauces, dressings and condiments	64.10	93.21	9.81	102.36	112.41
Soup	1.00	1.43	9.26	1.56	1.70
Spreads	14.00	15.67	2.86	16.12	16.58
Sweet and savoury Snacks	29.90	43.28	9.68	47.47	52.07
Yoghurt	1.40	1.93	8.40	2.10	2.27

Source: Agriculture and Food, Canada and Cygnus Research, *Note: Estimated figures

5.1.1.2 Fertilizers production in India

The production levels of fertilizers in the country show that all the major types of fertilizers are available for utilization and the trend is moving from traditional to various fertilizer mixtures available in the market.

Fertiliser Production in India (000' MTs)

Fertilisers	2005-06			2004-05		
	Quantity	N	P	Quantity	N	P
UREA	20,081.2	9,237.4	0	20,263.1	9321	0
A/S	573.3	120.4	0	615.6	129.3	0
CAN	172.8	43.2	0	184.6	46.1	0
A/C	80	20	0	75.2	18.8	0
DAP	4,627.8	833	2,128.8	5,184.5	933.2	2,384.9
28:28:00	414.2	116	116	341.6	95.6	95.6
14:28:14	0	0	0	0	0	0
14:35:14	315.6	44.2	110.5	393.6	55.1	137.7
20:20	1840	368	368	1501.9	300.4	300.4
17:17:17	205.3	34.9	34.9	292.7	49.8	49.8
19:19:19	332.8	63.2	63.2	280.2	53.2	53.2
16:20	180.8	28.9	36.2	116.4	18.6	23.3
15:15:15	443	66.5	66.5	352.3	52.8	52.8
20.8:20.8	222.6	46.3	46.3	223	46.4	46.4
23:23	54.2	12.5	12.5	89.6	20.6	20.6
10:26:26	1255	125.5	326.3	780.2	78	202.8
12:32:16	1,500.8	180.1	480.2	991.9	119	317.4
SSP	2,362.8	0	378.1	2368.4	0	378.9
20:00:10	1.5	0.3	0	3.5	0.7	0
Total	34,663.7	11,340.4	4,167.5	34,058.3	11,338.6	4,063.8

Source: Dept. of Fertilisers, Ministry of Fertilisers and Chemicals

5.1.1.3 Pesticides production in India

The pesticides production in India has been increasing over the years due to an increasing nature of the cropped area and production levels. Per hectare of pesticide consumption though low when compared to western countries, has been increasing at impressive rates.

Pesticide Situation in India

FY	2000	2001	2002	2003	2004
Installed Capacity					
Insecticides	96.6	NA	103.35	99.9	112.1
Fungicides	12.5	NA	14.09	16.1	16
Herbicides/Weedicides	16.14	NA	16.59	18.54	13.2
Others	3.65	NA	3.61	3.65	3.7
Total	128.89		137.64	138.19	145
Production					
Insecticides	70.2	69.7	59.44	49.89	49.4
Fungicides	12.6	12.09	13.59	12.27	12.1
Herbicides/Weedicides	10	7.25	6.1	3.44	4.9
Others	2.54	3.22	2.67	2.37	1.6
Total	95.33	92.27	81.8	67.97	68

Source: ICRA

5.1.1.4 Seeds of major crops

Major seeds required in Indian agriculture are given below. There is also the movement of seeds of vegetables and fruits saplings but in less quantities.

Crop-wise Requirement and Availability of Certified/ Quality Seed (Kharif) in India in 2006 (000'MT)

Crops	Requirement	Availability
Cereal	324.9	368.0
Pulses	31.5	35.7
Oilseed	216.0	240.1
Fibre	27.9	29.4
Others	2.0	3.3
Grand Total	602.3	676.6

Source: Dept. of Agriculture, GOI

5.1.2 Marine sector (Major 10 fishing states)

India is one of the major fish producers in the world. The Western, Southern and Eastern states of India are under the coastal belt which gives large scope for marine fisheries. The top 10 states of India in marine fisheries is given below.

Marine fish production in India (000'MT)

States/UTs	2000-01	2001-02	2002-03	2003-04	2004-05
Kerala	567	594	603	609	623
Gujarat	620	651	744	609	609
Maharashtra	403	414	387	420	420
Tamil Nadu	368	371	372	373	373
Andhra Pradesh	183	205	248	264	298
Karnataka	176	128	180	187	191
West Bengal	181	184	182	182	182
Orissa	121	114	115	117	117
Goa	67	67	72	84	84
Pondicherry	39	40	40	43	44
Andaman and Nicobar Islands	28	27	28	31	32

Source: Dept. of Animal Husbandry and Dairying, GOI

Fish Production in Marine and Inland India (in lakh tonnes)

Year	Marine	Inland	Total
1991-92	24.47	17.1	41.57
1992-93	25.76	17.89	43.65
1993-94	26.49	19.95	46.44
1994-95	26.92	20.97	47.89
1995-96	27.07	22.42	49.49
1996-97	29.67	23.81	53.48
1997-98	29.5	24.38	53.88
1998-99	26.96	26.02	52.98
1999-00	28.52	28.23	56.75
2000-01	28.11	28.45	56.56
2001-02	28.3	31.2	59.56
2002-03	29.9	32.1	62

Year	Marine	Inland	Total
2003-04 (P)	29.41	34.58	63.99
2004-05 (A)	30.1	35	65.1

Source: Dept. of Animal Husbandry and Dairying, GOI

State-wise summary of the list of approved Units to EU

Maritime State	PP/	PPa	A	Total
Gujarat		18	0	18
Maharashtra		18	0	18
Karnataka	6	1	0	7
Kerala	42	13	18	73
Tamil Nadu	2	18	0	20
Andhra Pradesh		28	1	29
Orissa		6	0	6
West Bengal		5	1	6
Total	50	107	20	177

Source: MPEDA

PP-Processing Plant

PPa -Processing Plant engaged in processing fully or partially farm raised materials

CS-Exclusive Cold Storage facility for F&FP

Infrastructure available in various states related to the fisheries sector

Name of the State	No. of Exporters	No. of Process Plants	Freezing Capacity (Ton.p/d)	No. of Cold Storages	Storage Capacity	No. of Fishing Vessels
Kerala	287	124	1,585.77	169	23,086.5	2,963
Tamil Nadu	286	48	524.55	67	5,900	1,562
Karnataka	43	14	186.4	26	3,540	3,226
Andhra Pradesh	95	52	779.5	53	7,200	717
Goa	9	7	104	9	1,275	420
Gujarat	64	55	2,216.03	57	22,925	426
Orissa	30	21	220	20	2,460	414
Maharashtra	268	41	1,327.11	39	19,372	2,932
West Bengal	99	37	340	30	3,500	0
Delhi (UT)	92	--	0	1	15	0

Source: MPEDA

5.2 Orissa

5.2.1 Agribusiness

Paddy is the main crop of the State and is cultivated annually in 4.5m hectares of land. The seed replacement rate now stands at 2% of the requirement. In the coming years it has been targeted to take this to 20%. According to this strategy, the Orissa University of Agriculture and Technology will be entrusted with the production of Breeder seeds. The Government Farms as well as Orissa State Seeds Corporation will produce the foundation seeds; and the Orissa State Seeds Corporation will get Foundation seeds Converted to certified seeds involving registered seed growers.

5.2.1.1 Production of processed foods in Orissa

The processed food in Orissa is yet to catch the Indian growth pace. Orissa has meagre presence of processing industries. The state being major cultivator of Rice and other cereal grains the prominent processing sector like fruits and vegetables presence is less. However it has cashewnut as a major crop in the coastal belt and is performing well in the industry.

5.2.1.2 Fertilizers production in Orissa

To increase agricultural production, it is necessary that chemical fertilizers as well as organic manures are used adequately but in a balanced manner. During the next 5 years, use of chemical fertilizer has been targeted to be increased to 100 kgs per hectare. The appropriate ratio in the use of chemical fertilizer (NPK) is maintained along with the increased use. Supply of chemical fertilizer and target for consumption per hectare has been kept at nominal level. For distribution of fertilizers the State Co-operative institutions use their capacity and the private agencies are fully encouraged to improve the availability of fertilizers.

Consumption of Fertiliser Materials in Orissa, 2004-05

Fertilizers	Urea	DAP	MOP	SSP
Consumption (000'MT)	366.3	683.5	805.6	13.4

Source: Fertiliser Association of India

5.2.1.3 Pesticides consumption in Orissa

The consumption of pesticides in Orissa has been lower when compared to other states. Over the years it has increased marginally as shown in the table below.

Consumption of Pesticides in Orissa

Pesticide	2000-01	2001-02	2002-03	2003-04	2004-05
Consumption (in MT Technical Grade)	1006	1018	1134	1188	1244

Source: Directorate of plant protection quarantine and storage (P.P.Q.S), Faridabad

5.2.1.4 Seeds of major crops produced in Orissa

The seed sale in Orissa has reduced in the last few years in the govt. sector due to introduction of private players in the industry. There is also a shift from traditional crops to cash crops in the recent years that impacted the industry.

Sale of Seeds in Orissa

Seeds Sale	Qty (quintals)	Value (Rs. million)
2000-01	7,015	12.6
2001-02	5,879	12.8
2002-03	2,801	6.1
2003-04	2,688	5.7
2004-05	3,110	6.8

5.2.2 Marine sector

A general statistics on fishery industry in Orissa shows that it ranks 8th in India in terms of production in 2004-05. There is more emphasis on inland cultivation than marine and there is a need to enhance production from the marine source.

Production of Fish in Orissa, 2004-05

	Total Inland	Marine water	Grand Total
Production (000'MT)	190.17	117.02	307.19

Some of the important activities which deserve mention to show the priorities of the State Government are as under:

- In the inland sector, production of quality fish seed continues to be one of the most important activity
- Polyculture with fresh water prawn is gaining momentum.
- World Bank Assisted Shrimp culture Project over 445 ha. in the non-forest Government land at Jagatjore-Banapara in Kendrapara district covering 411 beneficiaries and 11 entrepreneurs is nearing completion.
- World Bank assisted reservoir fisheries development project has so far taken up 52 reservoirs out of the targeted 79 reservoirs.
- The hardest pressing problem in the post super cyclone period has been restoration of fishing activity through the rehabilitation of fishermen both in the marine and inland sectors. Resources available under the Calamity Relief, assistance available from the DFID and other NGOs are being mobilized in addition to the regular governmental schematic finance to rehabilitate the fishing communities.
- Implementation of more fishermen welfare oriented schemes including construction of low cost housing, coverage of more fishermen under schemes like accident insurance and saving-cum-relief for overall socio-economic development of fishermen.

Motorization of more existing crafts to ensure safety and higher income of the fishermen

- No. of processing plants and EU approved plants
- Freezing capacity (tonnes per day)
- No. of cold storages
- Storage capacity
- No. of fishing vessels

Employment Generation and Welfare Schemes in Fishery Sector

Employment Generation Schemes:

- Fish Farmers Development Agency (FFDA)
- Swarna Jayanti Gramya Swarojgar Yojana (SGSY)
- Prime Minister Rojgar Yojana (PMRY)
- Circular Hatchery
- Normal Brackish Water Scheme

Welfare Schemes:

- Saving-cum-Relief Scheme
- Accident Insurance Scheme
- Assistance for Mechanization Programme
- National Welfare fund for Construction of Low Cost Houses for fishermen:-
- CED Reimbursement on HSD
- Reservoir Development Programme under Revised Long Term Action Plan (RLTAP) for KBK districts
- Janashree Bima Yojana Policy

6. MARKET LINKAGES

6.1 Market Linkages in Orissa

The backward and forward linkages in agribusiness and marine sector are an essential component in the development of the industry. Efforts are being taken by the government to improve the performance at all levels for which it has taken initiatives at the district, tehsil and village level. Some of their initiatives are given below.

6.1.1 Backward linkages – Agribusiness

Activity	Zilla Parishad	Panchayat Samiti	Gram Panchayat
Credit	1. Prepare credit plan 2. Ensure timely credit availability and linkage between agriculture development and credit institutions and credit mobilisation.	1. Assist in preparing credit plan. 2. Ensure timely credit from formal institutions. 3. Minor credit delivery system.	1. Assist in assessing credit needs of various groups of farmers and crops 2. Exercise social control and regulate interest areas and recovery of loans from formal and informal credit institutions. 3. Help in formation of self help groups.
Risk Management		1. Assist in providing benefits from crop insurance schemes. 2. Prepare and operate contingency agricultural plan.	1. Motivate and help in identifying farmers to take up crop insurance schemes. 2. Assist in the implementation of contingency plans.

6.1.2 Forward Linkages – Agribusiness

Activity	Zilla Parishad	Panchayat Samiti	Gram Panchayat
Identification of location and development of market yards	Identify locations for marketing rural products and formulating projects	1. Develop and maintain places for fairs and weekly markets. 2. Construct market complexes for providing marketing linkages to products of Swarojagaris.	Own and manage village market. Construct market complex within the GP. Settle markets on lease basis. Collect rent from shops. Maintain village markets and shopping complexes.
Regulating wholesale and retail markets, supervision and monitoring of marketing activities	Supervise and monitor marketing activities.	1. Enforce fair trade practices and maintain quality of commodities. 2. Assist in the maintenance of statistics on prices and commodity traded. 3. Maintain statistics on prices and commodities transacted within the district.	

6.1.3 Backward Linkages – Fisheries

Activity	Zilla Parishad	Panchayat Samiti	Gram Panchayat
Developing of inland fisheries	<ol style="list-style-type: none"> 1. Formulate projects for fisheries development 2. Technically appraise and approve projects for development of inland water bodies for fisheries 3. Promote and encourage fish seed production farms 4. Arrange training of fishermen in modern management techniques for fish production 5. Procure and supply fishing equipment for distribution among selected fishermen's co-operatives and beneficiaries 	<ol style="list-style-type: none"> 1. Select beneficiaries for fisheries training 2. Organize fishermen's cooperatives 3. Monitor, supervise and report progress 4. Long term and short term credit plan 	<ol style="list-style-type: none"> 1. Develop village pond for fisheries 2. Identify beneficiaries for assistance under various programmes and assist the min organizing fishermen's co-operatives 3. Assist Panchayat Secretaries in the distribution of boats, nets and other equipment 4. Supervise and report progress to PSs 5. Execute fishpond and tank improvement projects 6. Lease village ponds to fishermen's co-operatives, SHGs, and eligible bidders. 7. Utilization of irrigation/drainage canal/dead river for pisciculture.
Development of Marine Fisheries	<ol style="list-style-type: none"> 1. Procure and supply motorized and modern Develop brackish water fisheries 	<ol style="list-style-type: none"> 1. Select sites for marine aquaculture and brackish water fishing 2. Organize fishermen's cooperatives 3. Monitor impact of marine aquaculture on environment 4. Monitor the impact of marine aquaculture on village Environment, initiate and impart mitigation measures. 5. Assisting operation of early warning system. 	<ol style="list-style-type: none"> 1. Identify beneficiaries and assist them in organising into fishermen's co-operatives 2. Select beneficiaries for assistance 3. Create awareness for and adopt safety measures during rough weather

6.1.4 Forward Linkages- Fisheries

Activity	Zilla Parishad	Panchayat Samiti	Gram Panchayat
Development of marketing processing infrastructure	1. Encourage private entrepreneurs to establish processing, packaging and storage facilities 2. Assist in establishing other marketing Infrastructure	1. Organize and train fishermen in processing, packaging and preservation of fish and fish products. 2. Develop tie-up arrangements between fishermen and processing units	
Welfare Measures	Promote group insurance schemes for Fishermen		1. Encourage fishermen to take up insurance schemes

7. RURAL BUSINESS HUBS (RBH) INITIATIVES IN INDIA

Enormous possibilities exist for the promotion of a partnership between the private sector and the panchayats in every corner of India. If the private sector has hitherto been somewhat hesitant about venturing into remote rural areas, this is primarily because they need local partners. And if panchayats have not approached the private sector for participation in rural development, that is largely because panchayat leaders hardly know where to go to establish contact with potential private sector entrepreneurs.

In order to ensure inclusive and equitable growth, there is a need to knit and integrate rural areas into the modern economic processes that are rapidly transforming our country. There is the need to establish Rural Business Hubs.

Initiatives in agriculture and rural infrastructure and emphasis on empowering grassroots democracy through panchayats will, open up a vast array of opportunities –opportunities for business to expand into rural areas in a way not possible in the past and opportunities for our countrymen in rural areas to log onto a virtuous growth cycle intended to generate. There are a number of possibilities that exist for a constructive partnership between panchayats and industry. In agriculture there is scope for taking advantage of the panchayats to assess and meet local needs for supplying inputs, for meeting storage and post-harvest needs, for engaging in contract farming and direct procurement, for marketing agri-produce and for agro-processing.

Agro-industry and Rural Industry are still untapped areas in the context of the enormous potential they hold for transforming the rural economy. Poultry, fishery, animal husbandry, handlooms, handicrafts and a host of non-farm occupations offer a plethora of business opportunities and panchayat-industry partnerships. Some firms like ITC and Hindustan Lever have already shown the way through innovative initiatives. There is much more to be done and it is for business to spot this opportunity.

7.1 Initiatives for RBHs

- Sixty percent of our population comprises rural households and depend in one way or another on agriculture for their livelihood. They need to harness modern instruments for a build up in their businesses.
- Rural business covers much more than agribusiness. Hundreds of raw materials produced in rural areas could be harnessed.
- Several financial instruments are now available to agribusiness. These include:
 - Agribusiness consortium in the form of venture capital fund;
 - Agricultural credit that has doubled in three years;
 - Increased availability of rural infrastructure financing; and
 - Emergence of profitable rural banks.
- Communication flows are vital to business and the induction of telecom facilities in rural areas in a big way expected to spearhead this.
- Government has to take the initiative in providing IT services in rural areas, including court records, or copies of government orders, through kiosks.
- Micro-finance has become a tool for increased agribusiness. Average borrowing of self-help groups has also increased. Micro-finance should increase further, and its role should be adequately recognized and regulated. Commercial banks could also play a role in this form of finance.

7.2 Initiatives in Orissa

The Government of Orissa agrees to take all required steps to promote Rural Business Hubs through Public-Private-Panchayat Partnerships. The Union Ministry of Panchayati Raj and the Confederation of Indian Industry offers to support the development of Rural Business Hubs through Panchayats, so as to upgrade local skills and products and find markets for them. The Fifth Schedule Areas of the State of Orissa would be a primary focus of attention in this regard.

8. EXPORT STATUS

8.1 India

Indian exports of agribusiness and marine products are given below. There is no fertilizer export in the industry.

8.1.1 Indian Pesticide exports

The industry recorded an impressive growth of over 25% in exports, whereas it was around 12% in the domestic market. The industry derives about 50% of its revenue from exports. In fact, exports by the industry, including inputs, intermediates and pesticides formulations, would grow by over 16% to Rs. 3,500 crore in the current year. Exports by frontline players are likely to grow much higher, given their increased global tie-ups and contract manufacturing R&D with global companies.

8.1.2 Indian export of marine products

The marine products exports in India are growing though with fluctuations. The value terms of the export is growing at a faster rate. The detail of marine products export in the last five years is given below.

Marine products exports

Year	Quantity in 000'MT	Value in Rs. billion
2001-02	424.47	59.57
2002-03	467.29	68.81
2003-04	412.01	60.91
2004-05	461.32	66.46
2005-06	512.16	72.45
<i>Source: MPEDA</i>		

8.2 Orissa

The export of processed foods, pesticide and seeds are very limited in the state and there are no fertilizer exports. Primarily aimed at exports, Orissa has attracted a number of aquaculture investments from private sector and Trans National Companies (TNCs). As these farms started creating environmental degradation through land and water pollution, a strong public campaign in the state, coupled with favourable judgment from the Supreme Court, have forced the Orissa government to reconsider its policy of inviting corporate investments in aquaculture.

9. OUTLOOK

There is need for the state to focus more on the production and export of agribusiness and marine products. The government is supporting the industry and now it is time for the private entrepreneurs to enter the state at a faster level and encash the business opportunity available. There are various industry friendly schemes and policies available in the state for agribusiness and marine related industries. Apart from the traditional agribusiness opportunities, there are sectors like food and marine processing developing in the state.