

# Agricultural Development in India - An Overview

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**Abstract:** *Improvements in agricultural productivity create social and economic ripple effects. With increased incomes, small farmers can better feed their families, send their children to school, provide for their health, and invest in their farms. This makes their communities economically stronger and more stable. Over the past 200 years, nearly every part of the developed world has seen an agricultural transformation. As farming improved, so did incomes, health, and economies. More recently, we've seen amazing progress in parts of the developing world. During the Green Revolution, which took place from the 1960s to the 1980s, improvements in staple crops such as maize, wheat, and rice helped double the amount of food produced, saved hundreds of millions of lives, and drove broader development throughout much of Asia and Latin America. There were also some serious unintended consequences—particularly regarding the environment—that left us with important lessons for today. But the efforts demonstrated that large-scale progress against hunger and poverty is possible. In the last several years, the global community has begun to refocus its attention on agriculture. Rising food prices and concerns about feeding a growing population are prompting more and more organizations and governments to understand the urgency of supporting agricultural development.*

**Keywords:** Agricultural development, Need, objectives, Conclusion.

## 1. Introduction

The Indian government's commitment to agriculture is a global success story. Since Independence in 1947, India has succeeded in significantly reducing the number of people living in poverty. In the early 1960s, India introduced "Green Revolution" technologies: high-yielding grain varieties, fertilizer, pesticides and irrigation. By the early 1990s, India was self-sufficient in food-grain production. But not everyone has enough access to the food produced, and India is still the country with the poorest people on our globe: of India's 1028 million people (in 2001), around 300 million people were classified as "poor".

A pathway out of poverty for India's rural poor these live in rural areas. India's ability to reduce poverty. Most people in rural India depend directly or indirectly on farming for their livelihood. Despite this, not enough attention has been given to agriculture to overcome poverty. *The importance of agriculture to stimulate rural growth is generally accepted*, but politicians have failed to establish the necessary frame conditions for rural economic growth.

It is widely accepted that agricultural growth and human development (in the fields of education, health and women's issues) are key factors for rural development. The World Bank, the Food and Agriculture Organization of the United Nations, the International Fund for Agricultural Development, as well as bilateral development agencies agree that investment in agricultural growth helps reduce poverty and ensure pro-poor growth more than any other form of intervention.

The agricultural sector has potential to create economic growth in rural areas. It generates job opportunities in adding value (as in the food processing industry), in bringing agricultural products to the consumer (market linkages), and in providing support (infrastructure, information, quality control and training).

Rising populations mean more demand for food. Improved standards of living in much of the world also mean greater

demand for quality food (more meat, dairy products and organic food). If these demands are to be met, national farm outputs must rise, and farmers must produce different types of products. In addition, access to food must be improved for those who still cannot meet their basic needs, wherever they live – in remote rural areas, marginal areas or urban slums.

## 2. The Need to Improve Agricultural Productivity

- Severe hunger and poverty affects nearly 1 billion people around the world.
- By 2050, it's estimated that the earth's population will reach 9 billion. Global food production will need to jump by 70 percent to 100 percent to feed these people. Rising incomes, increasingly scarce resources, and a changing climate are putting additional strains on agricultural productivity.
- Two billion people in the developing world are malnourished. Malnutrition continues to be the world's most serious health problem and the single biggest contributor to child mortality.
- The power of investing in agriculture is clear: Agricultural development is two to four times more effective at reducing hunger and poverty than any other sector

The following table presents the twenty most important agricultural products in India, by economic value, in 2009. Included in the table is the average productivity of India's farms for each produce. For context and comparison, included is the average of the most productive farms in the world and name of country where the most productive farms existed in 2010. The table suggests India has large potential for further accomplishments from productivity increases, in increased agricultural output and agricultural incomes.

**Table-1**

Agriculture in India, largest crops by economic value						
Rank	Product	Economic value	Unit price	Average yield, India -2010	World's most productive farms -2010	
		(2009 prices, US\$)	(US\$/kilogram)	(tonnes per hectare)	(tonnes per hectare)	Country
1	Rice	\$38.42 billion	0.27	3.3	10.8	Australia
2	Buffalo milk	\$24.86 billion	0.4	1.7	1.9	Pakistan
3	Cow milk	\$17.13 billion	0.31	1.2	10.3	Israel
4	Wheat	\$12.14 billion	0.15	2.8	8.9	Netherlands
5	Mangoes	\$9 billion	0.6	6.3	40.6	Cape Verde
6	Sugar cane	\$8.92 billion	0.03	66	125	Peru
7	Bananas	\$8.38 billion	0.28	37.8	59.3	Indonesia
8	Cotton	\$8.13 billion	1.43	1.6	4.6	Israel
9	Fresh Vegetables	\$5.97 billion	0.19	13.4	76.8	USA
10	Potatoes	\$5.67 billion	0.15	19.9	44.3	USA
11	Tomatoes	\$4.59 billion	0.37	19.3	524.9	Belgium
12	Buffalo meat	\$4 billion	2.69	0.138	0.424	Thailand
13	Soyabean	\$3.33 billion	0.26	1.1	3.7	Turkey
14	Onions	\$3.17 billion	0.21	16.6	67.3	Ireland
15	Chicken Meat	\$3.12 billion	0.64	10.6	20.2	Cyprus
16	Chick peas	\$3.11 billion	0.4	0.9	2.8	China
17	Okra	\$3.07 billion	0.35	7.6	23.9	Israel
18	Cattle	\$2.93 billion	0.83	13.8	24.7	Jordan
19	Eggs	\$2.80 billion	2.7	0.1	0.42	Japan
20	Beans	\$2.57 billion	0.42	1.1	5.5	Nicaragua

**Table 2: Production of major crops during the recent years (million tonnes/bales)**

Crop	Season	2007-08	2008-09	2009-10	2010-11	2011-12 Final Estimates	2012-13 2 <sup>nd</sup> Advance Estimates
Rice	Kharif	82.66	84.91	75.92	80.65	92.75	90.69
	Rabi	14.03	14.27	13.18	15.33	12.56	11.11
	Total	96.69	99.18	89.10	95.98	105.31	101.80
Wheat	Rabi	78.57	80.68	80.80	86.87	94.88	92.30
Coarse Cereals	Kharif	31.89	28.54	23.83	33.08	32.46	28.51
	Rabi	8.86	11.49	9.72	10.32	9.58	9.96
	Total	40.75	40.03	33.55	43.40	42.04	38.47
Total Cereals	Kharif	114.55	113.45	99.75	113.73	125.21	119.19
	Rabi	101.46	106.45	103.70	112.52	117.02	113.37
	Total	216.01	219.90	203.45	226.25	242.23	232.56
Pulses	Kharif	6.40	4.69	4.20	7.12	6.06	5.48
	Rabi	8.36	9.88	10.46	11.12	11.03	12.09
	Total	14.76	14.57	14.66	18.24	17.09	17.57
Food grains	Kharif	120.96	118.14	103.95	120.85	131.27	124.68
	Rabi	109.82	116.33	114.15	123.64	128.05	125.47
	Total	230.78	234.47	218.10	244.49	259.32	250.15
Oil seeds	Kharif	20.71	17.81	15.73	21.92	20.69	19.45
	Rabi	9.04	9.91	9.15	10.56	9.11	10.01
	Total	29.75	27.72	24.88	32.48	29.80	29.46
Sugarcane		348.19	285.03	292.30	342.38	361.04	334.54
Cotton*		25.88	22.28	24.02	33.00	35.20	33.80
Jute & Mesta**		11.21	10.37	11.82	10.62	11.40	11.13

\*(million bales of 170 kg each),\*\*(million bales of 180 kg each)

Source: Directorate of Economics & Statistics, Ministry of Agriculture.

**Table 3: Distribution of Number of Holdings and Area Operated in India as per Agriculture Census 2010-11**

Sl. No	Size Group	Number of holdings (in million)	Area operated (in million ha.)	Average operated area per holdings (ha.)	Percentage of holdings to total holdings	Percentage of area operated to total area
1	Marginal (Below1.00ha.)	92.4	35.4	0.38	67.04	22.25
2	Small (1.00-2.00ha.)	24.7	35.1	1.42	17.93	22.07
3	Semi-Medium(2.00-4.00 ha.)	13.8	37.5	2.71	10.05	23.59
4	Medium (4.00-10.00 ha.)	5.9	33.7	5.76	4.25	21.18
5	Large (Above10.00 ha.)	1.0	17.4	17.38	0.73	10.92
All holdings		137.8	159.2	1.16	100.00	100.00

Source: Directorate of Economics & Statistics, Ministry of Agriculture.

**Table 4: Cropping Pattern in India (Area in Million Hectares)**

Years	1990-91	2003-04	2009-10(p)
Total Area Under Crops	185.74	189.67	192.20
Net Area Sown	143.00	140.71	140.02
Cropping Intensity (percent)	129.89	134.80	137.26
Area under Food Crops	141.03	142.12	141.06
Area under Non-Food Crops	44.71	47.55	51.1
Net Irrigated area	48.02	57.05	63.26
Total AL/Gross Irrigated Area	63.20	78.04	86.42

Source: Agriculture Census 2010-11

### 3. Conclusion

Indian farming is at a cross-roads and climate change is one more factor adding to the existing agrarian and agriculture crisis in the country, that requires a decisive direction shift at the policy level; Fundamental changes have to come from the acknowledgement and realization that unilateral, top-down, prescriptive “knowledge generation and transmission” models of agriculture development adopted in the country so far have in fact resulted in an ecological, economic and social crisis in the farming sector of the country within 40 years of adoption and that climate change is one more imperative for drastic change to address the situation.

A change is already a reality for Indian farmers and that conventional models of agricultural research and extension will fail to address the need of the hour unless some fundamental recasting is done. The immediate need for interventionist action precludes traditional models of research and support systems and requires alternative but urgent programmatic interventions, led by farmers' institutions and their local resources, knowledge and innovations. Existing mainstream models of farming are not conducive to adaptation either given their high external-input dependency – models which increase the risk of vulnerable farmers. Sustainable agriculture, on the other hand, holds immense mitigation and adaptation potential, specifically in the context of climate change even as it improves rural livelihoods and addresses the ecological crisis in Indian farming (genetic erosion, land degradation, water depletion and contamination etc.)

As the International Assessment of Agricultural Science & Technology for Development (IAASTD) concluded, business as usual is not an option any more. In fact, this paper concludes that there are no options in front of the Indian government and Indian farmers but to establish, promote and adopt sustainable agriculture for all of India.

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