



An overview on ‘Agricultural Development in developing India’

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Abstract: *India being an agricultural country the Improvements in agricultural productivity creates 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 to enhance the productivity. This makes their communities economically stronger and more stable. Over the past hundreds of years, nearly every part of the developed world has seen an agricultural transformation. As methods of farming improved, so did incomes, health, and economies. During the Green Revolution, which took place from the 1960s to the 1980s, improvements in staple crops like maize, wheat, and rice helped double the amount of food produced, survived 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 environmental problems, which we need to take into account. 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 sector. Day to day rising in prices of food and feeding growing population are prompting major private organizations and government organization to understand the importance and urgency of this sector.*

Keywords: *Productivity, health, double, hunger, attention, agriculture*

I. INTRODUCTION

In the developing India 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 under poverty. In the early 1960s, India introduced "Green Revolution" technologies consisting high-yielding grain varieties, pesticides, fertilizer and irrigation. India was self-sufficient in food-grain production by early 1990s. But it was not sufficient for each person access to the food produced, and India is still lacking in food grain production and it is the country with the poorest people on our globe. It is globally accepted that agricultural growth and human development goes hand in hand (in the fields of education, health and women's issues) and are major factors for rural development. The World Bank, the International Fund for Agricultural Development, the Food and Agriculture Organization of the United Nations, as well as bilateral development agencies agree that investment in agricultural sector's growth contribute lot to reduce poverty and provide the platform for development to the rural poors. In 2001 India's 1028 million people of which around 300 million people were classified as "poor people".

The agricultural sector has great potential to build economic growth in rural areas. It creates employment opportunities in adding value as in the food processing industry, providing agricultural products to the consumers as marketing activities, and in providing support like infrastructure, information, quality control and training etc. Rising population is alarming situation in our country and has enhanced demand for food grains. Improved standards of living across the glob expecting demand for quality food like more meat, dairy products and organic food. To meet this demand the national farming output must be rised, and farmers must produce different types of products to suit the varying demand. The people living in rural areas or remote rural areas should have enough access to necessary food to meet their basic requirements.

II. WHY AGRICULTURAL PRODUCTS NEED REFORM IN ITS PRODUCTIVITY?

According to global hunger Index 2013 every year around a billion of people are affected due to poverty and sever hunger. Worldwide, the Global Hunger Index 2013 has a value of 13.8, which indicates a serious food and nutrition security situation. Yet, in 1990 the global GHI was 20.8, which means a decrease of almost 34 percent in the last years.



According to the 2013 GHI, Hunger is still most prevalent in South Asia: with 20.7 the situation here is "alarming". Following suit with 19.2 is Sub-Saharan Africa. This means that for the first time, Sub-Saharan Africa has stayed under the mark of 20 points and its situation is now ranked in the better category "serious". In Eastern Europe, the Commonwealth of Independent States, and Latin America and the Caribbean the situation is considerably better: with value of 2.7 and 4.8 hunger is not very prevalent in these regions. 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 this population. Rising incomes, increasingly scarce resources, and a changing climate are putting additional strains on agricultural productivity.

The following table presents the twenty most important agricultural products in India, by its 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 incomes.

TABLE 1
Agriculture in India, largest crops by economic value

| Sr. No. | Products | Economic Value | Per Unit Price | Avg. yield India-2010 | Most productive farms across the glob | |
|---------|--------------|---------------------------|----------------|-----------------------|---------------------------------------|-----------|
| | | 2009 Price (Billion US\$) | US\$/Kg | Tonnes/Hectare | Tonnes/Hectare | Nation |
| 1 | Rice | 38.42 | 0.27 | 3.3 | 10.8 | Australia |
| 2 | Buffalo Milk | 24.86 | 0.4 | 1.7 | 1.9 | Pakistan |
| 3 | Cow Milk | 17.13 | 0.31 | 1.2 | 10.3 | Israel |
| 4 | Mangoes | 9 | 0.6 | 6.3 | 40.6 | Cape |
| 5 | Sugarcane | 8.92 | 0.03 | 66 | 125 | Peru |
| 6 | Wheat | 12.14 | 0.15 | 2.8 | 8.9 | Netherlan |
| 7 | Banana | 8.38 | 0.28 | 37.8 | 59.3 | Indonesia |
| 8 | Cotton | 8.13 | 1.43 | 1.6 | 4.6 | Israel |
| 9 | Vegetables | 5.97 | 0.19 | 13.4 | 76.8 | USA |
| 10 | Potatoes | 5.67 | 0.15 | 19.9 | 44.3 | USA |
| 11 | Tomatoes | 4.59 | 0.37 | 19.3 | 524.9 | Belgium |
| 12 | Buffalo meat | 4.00 | 2.69 | 0.138 | 0.424 | Thailand |
| 13 | Chicken meat | 3.12 | 0.64 | 10.6 | 20.2 | Cyprus |
| 14 | Onions | 3.17 | 0.21 | 16.6 | 67.3 | Ireland |
| 15 | Soyabean | 3.33 | 0.26 | 1.1 | 3.7 | Turkey |
| 16 | Chick peas | 13.11 | 0.4 | 0.9 | 2.8 | China |
| 17 | Eggs | 2.80 | 2.7 | 0.1 | 0.42 | Japan |
| 18 | Okra | 3.07 | 0.35 | 7.6 | 23.9 | Israel |
| 19 | Cattle | 2.93 | 0.83 | 13.8 | 24.7 | Japan |
| 20 | Beans | 2.57 | 0.42 | 1.1 | 5.5 | Nicaragua |

TABLE 2
Production of major crops during the recent years

| Crops | Seasons | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 Final Estimates | 2012-13 2nd 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 | Kharif | 31.89 | 28.54 | 23.83 | 33.08 | 32.46 | 28.51 |
| Cereals | 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 | 118.9 | 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 |

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

| Sr. 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 |
|------------------------------|---------|---------|---------|
| Total Area Under Crops | 185.74 | 189.67 | 192.20 |
| Net Area Sown | 143 | 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 /Gross Irrigated Area | 63.20 | 78.04 | 86.42 |

Source: Agriculture census 2010-11

III. CONCLUSION

Indian agriculture sector is suffering from climate change in the form of draught 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. We need fundamental changes are each sub sector of agriculture. However the 'Green Revolution' not met its expected target. 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. The immediate need for interfere action restrains 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 major models of farming are not propitious to adaptation either given their high external input dependency – models which increase the risk of pervious farmers. On the other hand, Sustainable agriculture holds tremendous mitigation and adaptation potential, specifically in the context of climate change even as it improves rural livelihoods and addresses the ecological crisis like genetic erosion, land degradation, water depletion and contamination etc. in Indian farming. This article concludes that there are no choice with Indian government and Indian farmers but it is essential to establish, promote and develop sustainable agriculture across the country.

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