NEW DIMENSION IN INDIAN AGRICULTURE:

NON-TRADITIONAL SECTOR OUTCLASSED TRADITIONAL SECTOR

This article converses about the new dimension in Indian agriculture sector development. It also provides an insight about how allied agricultural sector has outpaced India's traditional agricultural sector. The paper further pointed out the major challenges that the country has to face in coming times. It is an undisputed fact that India has to maintain the higher growth rates in these vital sectors (allied and traditional) to sustain the country's economy, which is still the backbone of Indian economy

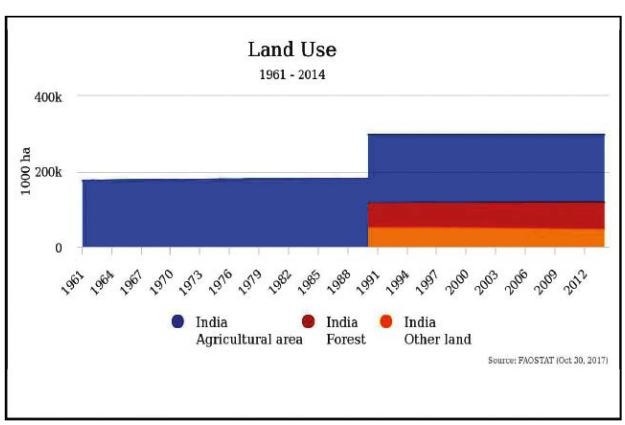
Prof. Dr. Badar Alam Iqbal
Emeritus Professor
External Relation Chair of Research
Frederic Bastiat Institute for African Research
Cape Costal Technical University
Ghana (West Africa)

Agriculture, which is the biggest segment of Indian economy, has not been in good shape and facing a crisis of growth and development. This is because of the lowest growth of 1.8 per cent recorded as against the required rate of 4 per cent for sustaining the country's economy.

Prominence of Agriculture

Around 60 percent of India's land area is arable which makes it the second largest country in terms of total arable land in the world after the United States (The World Bank, 2017). Indian agriculture is dominated by a large number of small scale holdings that are predominantly owner occupied (OECD, 2007).

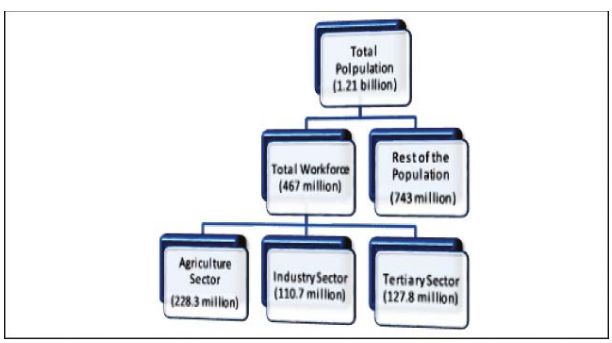
Figure 1. Land Use composition in India



Source: Food and Agricultural Organization of the United Nation

The role of the agriculture sector in the development of national economy is mostly reflected by its share in GDP, foreign exchange earnings, and its role in providing savings and labour to other sectors (Sharma, V.P., 2007).

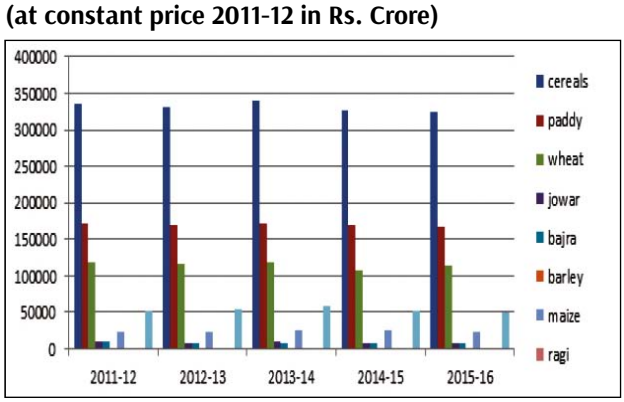
Figure 2. Share of Key Sectors in terms of Employment



Source: National Sample Survey Organization (NSSO), Federation of Indian Chambers of Commerce & Industry (FICCI), 2015.

Agriculture and allied sectors like forestry and fishing accounted for 17 percent of total Indian Gross Domestic Product and employed about 228.3 million of the country's workforce (NSSO & FICCI, 2015). Agricultural products which are having significant economic contribution comprises of cereals, paddy, wheat, jowar, maize, etc.

Figure 3: Crop Wise value of Output (2011-2016) (at constant price 2011-12 in Rs. Crore)



Source: Ministry of Statistics &Programme Implementation, Government of India

As per the Second Advance Estimates for 2016–17, the gross value added by agriculture, forestry & fishing in India is estimated to be 1,687,064 crore, recording an increase of 4.4 percent over previous year (Ministry of Statistics &Programme Implementation, Government of India, 2017).

State-wise Trends in Agriculture Growth:

It is rightly observed that, among the major agricultural states (Table 1), Gujarat has witnessed the highest growth rate i.e. 8 per cent per year. This is even higher than India's overall growth rate of 3.3 per cent. The most revealing fact has been that Gujarat contribution in country's agriculture GDP was higher than that attained by State of Punjab during the Green Revolution (1971-85) i. 5.7 per cent per annum.

Table 1
Trends in State-wise Agriculture Growth rates 2003 to 2017

State	Growth rates in %
Gujarat	8.0
Madhya Pradesh	7.6
Rajasthan	6.2
Jharkhand	5.9
Chhattisgarh	5.7
Maharashtra	4.8
Himachal Pradesh	4.5
Andhra Pradesh	4.4
Karnataka	4.2
Haryana	3.9
India	3.3

Source: Compiled by the author from MOSPI.

The most alarming trend has been that even Uttar Pradesh has registered a growth rate of less than India's growth rate. The other states like Uttarkhand, Tamil Nadu, Jammu and Kashmir, Odisha have performed better than Uttar Pradesh. The worst is that Punjab has been at the lowest of the ladder recorded just 2 percent.

Production and Exports Trends:

The then Prime Minister, Atal Bhari Vajpayee had take the bold and historic decision in regard to commercial use of Bt cotton and that decision has pushed production and exports of cotton on an increasing trends. It is pertinent to point out that that decision had benefited the Gujarat most. This could be testified from the fact that 90 per cent increase in the area under cultivation of BT cotton by the end of 2014. In the year 2000-01 the all India cotton output was 14 million bales and this figure touched upon almost 35 million bales in 2016-17 an increase of more than 2.5 times. Similar trends have been in case of exports of BT cotton (Table 2). During the year 2000-01 India's exports of Bt cotton was US $ 14 million and this figured has touched a level of Us $ 1535 million. These trends have made out India as the second biggest producer and exporter of Bt cotton in the world.

Table 2
Trends in India's Cotton Output and Exports 2001-2002 -2016-17

Year	Output (Million bales)	Exports (Millions US $)
2000-01	14.0	14.0
2001-02	15.8	6.0
2002-03	13.6	10.0
2003-04	17.9	165.0
2004-05	24.3	80.0
2005-06	24.1	637.0
2006-007	28.0	1350.0
2007-08	30.7	2190.0
2008-09	29.0	624.0
2009-10	30.5	2886.0
2010-11	33.9	2866.0
2011-12	36.7	4258.0
2012-13	37.0	3659.0
2013-14	39.8	3528.0
2014-15	38.6	1847.0
2015-16	33.8	1829.0
2016-17	35.1	1536.0

Source: CCI and MOC, New Delhi

Agriculture during UPA vs NDA:

In a recent article [Gulati & Roy 2017), has advocated Gujarat Model of agricultural to implement in the entire country. The Gujarat Model basically depended upon the provision of best technologies to the farmers and thereafter gives them much needed access to markets to ensure better prices for their crops.

According to agricultural economists, India needs at least 4 per cent of growth rate in agricultural sector to sustain the rural India in particular and Indian economy in general, which Indian economy attained during 2013-14 when the UPA Government was in power. During the three years of NDA Government, growth rate in country's agricultural sector has declined considerably at 1.8 per cent which is a matter of concern for all.

Under the Gujarat Model, the Gujarat had recorded an all time high figure of 8 per cent per annum from 2002-03 to 2013-14 which was much more than all India growth rate in agriculture at 3.3 per cent. It was expected that Gujarat Model will extended to other state of the country. But unfortunately, it did not happen because of one reason or the other. The marginal growth of just 1.8 per cent during the last three years was attributed to deficient rain in major producing states of the country in the year 2014-15 and 2015-16. Although during 2016-17, country witnessed bumper harvest; yet country's farmers suffered a lot due to crush in agri-prices.

Table 3
India's Agricultural Growth under UPA and NDA Governments

Period	% Growth rates
2004-05 to 2013-14 (10 Years) UPA	3.7
2011–12 to 2013-15 (# years) UPA	4.0
2014-15 to 2016-17 (3 Years) NDA	1.8

Source: the Indian Express; New Delhi; October 9, 2017. P. 9

Data set out in Table 3 reveal that India's agricultural growth was much better during the rule of UPA Government in the year 2013-14, the growth rate of Indian agriculture was 4 per cent which India needs to achieve every year in order to sustain rural India in particular and Indian economy in general. Unfortunately, under the NDA Government agricultural growth rate went down considerably and touched a lowest growth rate of 1.8 per cent affecting rural India in big way and Indian economy too.

During the period 2003 and 2014, Gujarat state registered the highest growth rate as high as 8 per cent, followed by MP, Rajasthan, Jharkhand, Chhattisgarh, Bihar, Maharashtra, Hp, AP, Karnataka, and Haryana. These states were having higher growth rate as compared to all India growth rate. The remaining sates such as Uttar hand, Tamil Nadu, Jammu and Kashmir, Uttar Pradesh, Assam, West Bengal, Punjab and Kerala were recorded less than all India growth rate in Agriculture. It is being predicted that the estimate for 2017-18 may not be higher and may be around 2 per cent. This will result into keeping more pressure on Rural economy in particular and Indian economy journal.

Indian rural sector including agriculture is in doldrums and required immediate action plan for boosting the agricultural food. For this, the Government must make considerable investment in irrigation; power and rural roads. It must be kept in mind the country's economy will not reap the fruits of growth and development without ensuring higher growth rates in agriculture and allied sectors of the economy especially in rural sector.

Allied Sector Outpaced Traditional Sector:

The most astonishing fact and trend is that India's allied sector has outpaced country's farms sector in terms of value. According to Central Statistical Organization (CSO), the premier institution for providing data on the activities of India economy pointed out that India's farm crops or food grains value during 2014-15 amounted to Rs. 4.86 lakh crore as compared to Rs. 4.95 lakh crore generated by milk production. In the year 1999-2000, the scenario of India's agriculture and allied sector was reversed of 2014-15. In the same year, the total value of Paddy output was Rs.2.3 lakh crore and Rs. 1.3 lak crore was the value of wheat.

During 1999-2000, the value of India's milk output was Rs. 8.8 thousands and this figure was not even 2/3rd of food grains amounted to Rs. 1.34 lakh crore. In the year 1999-2000 the total value of output of paddy was Rs.70 thousand crore and the output value of wheat was amounted to Rs. 46 thousand crore [Table 4]. The fact is that milk has outpaced commercial crops in terms of output value and Indian farmers are taking milk as a full time operation and accordingly, the farmers are cultivating fodder instead of commercial crops.

The above mentioned data indicate that the value of

output generated by milk (white revolution) has outclassed the value out comes from the farm sector (green revolution). There are so many reasons that are being attributed to these trends and situation which are as follows:

1) We don't consider milk as a crop. This is due to fact that milk is brought out from the animals and not from the farm land;

2) Milk output basically dependent on the supply of fodder which is cultivated by the framers on land and consumed by the cows and buffalos;

3) Famers sell out milk through the year, whereas agricultural crops are cultivated only during nine months;

4) Milk is measured in terms of litres, while farm crops are measured in terms of quintals;

5) Farmers sell out milk throughout the year, whereas the farm crops are sold out on the session;

6) Indian planners and policy makers consider milk is a allied operation, while crops like paddy, wheat, sugarcane are considered as commercial ventures.

Table 4
Trends in Output Value of Milk and Other Commercial Crops 1999-2000 and 2015-16

(Output Value in Rs. Crore)

Item	1999-2000	2015-16	% Change
Milk	88.0	495	462.5
Fruits & Vegetables	86.3	451	
Cereals	134.0	413	
Meat	21.9	154	
Fish	22.3	136	
Oilseeds	28.6	127	
Sugarcane and Gur	24.5	96	
Spices	15.5	73	
Pulses	18.2	73	
Cotton	11.6	71	
Total (includes all crops, livestock & fisheries)	534.7	2462	

Source: CSO, Calcutta 2017.

It is undisputed fact that, Indian agriculture transformation is not confined only to milk. Data released by CSO, opined that value output of fruits and vegetables has been more than the value of out of cereals i.e. the rise has been more than 5 times between 1999-2000 and 2014-15.

Key Challenges Faced by Indian Agriculture

Agriculture is still the livelihood for major population in Indian economy, as more than 50 percent of the population directly depends on it. However, looking on the graph from previous few years, its growth is declining, because of the challenges coming across its way like

- Ecological issues like Weak or delayed monsoon, leading to loss of production, loss of soil fertility, draught conditions.
- Fragmentation of land holding due to increase in population leading to only 0.2 hectares of land per head of rural population
- Farmers are usually at the mercy of traders. The better the crop the lower would be the price.
- Increasing debt burden and suicide case among farmers because of the declining farmer income.

Conclusion

Agriculture sector inhabits a conspicuous position in Indian economy not only because of its contribution towards the GDP but also because of the large fraction of the population is still dependent on the sector for its livelihood. The green revolution immensely increased the production of vital food grains and introduced technological innovations into agriculture. This progress is manifested in

India's net trade position, which has changed since 1990 from imports to net exporter of agricultural food products. Further, introduction of high-yield variety seeds, better use of fertilizers and upgraded water management systems, reforms to land distribution will surely. MA

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dr.Iqbal@fbiresearchedu.org