

# Agricultural Growth in India and China: A Comparative Analysis

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## ABSTRACT

*With this article an attempt has been made to find out the reason behind painful condition of Indian farmers. Comparison between two neighbouring countries India and China leads us to understand how China growing with their agriculture. We can learn from China where they are producing no. Of agricultural products and farmers in China are not facing the problems which Indian farmers are facing. Condition of farmers in China is much better than Indian one. There is double investment on agricultural research in China compare to India. China is focusing on agricultural research to find new methods and techniques to produce more. Same Indian farmers are not able to produce well because with lack of new methods and techniques. For better forming have also have been discussed agriculture including finance, land and most relevant to this sector is institutional credit and position of both counties in this issues related study.*

**Keyword:** *Agriculture, Dairy, Land Reforms, Institutional Credit, Trade, Agricultural Productivity, Subsidies etc.*

## 1. Historical past of Agricultural production in India and China: From origins to 1990

INDIA has been known as an Agrarian country, around 60% of its people depending directly or indirectly upon agriculture (Parvathamma, 2016) [9]. great physiographic, climate, latitude, etc. led to the production of great varieties of food consumed for India. Since ancient times, Indian population has been practising agriculture and also other activities like the animal husbandry, poultry, etc. If we go back to Vedas, we can see there is written record of agricultural practising in India.

China has vital history of agriculture and its beginning in about 7500 BC with classical millet agriculture, China has developed its method of farming and if we see the history China has played major role in fulfilling basic needs of largest population in the world. Jared Mason Diamond is an American scientist attested some earliest Chinese document which gives information that rice took place in China by 7500 BC. Jared Diamond Finds that agriculture production including rice, millet, and farming tools which were made up of stone and bone used at that period.

After 15<sup>th</sup> century many Europeans like British, French, Dutch, and Portuguese came to India for trading and this was because of agriculture. During same period Britishers also settled their colonies in South American countries like Brazil, Cuba etc. In Brazil they started sugarcane plantation to produce sugar for European countries, African labours were enslaved to produce sugarcane. As like Indian cotton was famous among European countries. To expand their trade and maximise profit India was attractive place. If we talk about India more than 80% of land is suitable for producing agricultural products but due to poor management 15% of land is totally waste (Chandra Shekara P. and Kumar Ajit et. al. August 2016)[2]. This arable land is also not able to fulfil basic needs of its country people because of old methods of agriculture, using primitive tools, depended on climate, staying miles away from new methods of agricultural practices. Other than this frequent climate change has caused damage to the crops and which leads to great loss to the farmers. That leds Committing suicide by farmers for solution to this problem and some have found new techniques and new varieties of crops on other side as well. Due to urbanization and growth of population there is more demand for land so producing more in less available and cultivable land is a great challenge.

## 2. Food production, appropriation of surplus and distribution of means of production before 1990

### 2.1 Land Reform in China and India

Both the nations were in similar phase and their main motive was to increase food production in the 1950s and to increase food production both the two nations reformed the land. So both the nation carried out land reformation after 1950s. "The basic principle of China's land reform was to confiscate the land of the landlord class and to redistribute it to peasants having insufficient or no land" (Wong 1987) [11]. Land reformation took place in many stages like from 1949 to 1952 first stage of land reform took place. This was the period of rehabilitation. The basic and main features of the stage which took place between 1949 to 1952 was to confiscate the land, machinery, livestock, and dwellings (Wong 1987) [11]. Land, machinery was totally under the control of large landlords and merchants. These were the capitalist before 1950s who regulated capital, market, labour, industry etc. The redistribution of land to the landless peasants and farmers was done through the reformation of land. Due to shortage of farming implements, loan credits, fertilizers and seeds generated by scientific method were some hurdles in the improvement of China's agriculture.

In India, in 1951 land reform legislation was launched with an objective to increase the production of agriculture and to enhance industrialization. There are mainly four land reforms which took place during 1951 and their features are as follows:

- Elimination of land intermediaries,
- Tenancy reform,
- Limits on land holdings,
- Consolidation of small holdings.

If we compare the China's land reform, we can say that it was a forceful policy but as far as India is concerned it was carried out under the democratic process and under the framework of parliamentary democracy. China's forceful policy was so effective and was implemented rapidly in every corner of the country. But implementation process in China is totally different as compared to India. Implementation of India's policy was slow and reluctant. The structure of land ownership was not affected by the India's land reform, "the abolition of intermediaries removed only the upper layers of the feudal hierarchy in rural India" (Bandyopadhyaya 1976, 67) [1].

Other than this land reform, China focussed more on institutional reforms, such as collectivization, while India's main focus was on the development policies, like to initiate cooperatives and the Community Development Program, policies on health etc. India's first five year plan was launched in 1951 by the first Prime Minister Jawaharlal Nehru and this plan mainly focussed the primary sector development mainly agriculture. As India adopted Harrod-Domar c model in its first five year plan. Total allocated budget was rupees 2069 crore and was allocated to irrigation and energy, agriculture and community, transport and communications, industry, social services, land rehabilitation and other sectors. The biggest problem India was facing at that time was deficiency of capital. Biggest challenge was to develop economy of country and it was possible through agricultural production, 17.4% was invested of total budget on agriculture in first five year plan.

The First Five Year Plan of China was initiated and adopted the Soviet style of collectivization in 1953. As China carried out land reform and set their initial target was to include at least 20 percent of farm households into "Elementary Cooperatives" by 1957. The main objective of elementary cooperatives was to enlarging the scale of farms and to make aware, mobilizing the rural population. To finance industrialization there was a need to extract more agricultural surplus and motive to restrain the so called "re-emergence of capitalist elements". By the end of 1956 advanced cooperatives started and about 87.7% households were included in this. But it was confined to urban China but this collectivization could not improve the situation and condition of farmers in rural China and production dropped. To overcome the problem which occurred in China, Chinese formed large gathering of people who share common life. According to them due to lack administer and proper supervision their production dropped. But this later movement made drastic change and one positive contribution was for infrastructure construction and agricultural sector.

### **3. Cooperatives and the Community Development Program in India**

Before independence (1947) the cooperative farming was at its initial stage as it started in year 1945 and this was totally different from that of China. Main motive was to develop cooperative credits, marketing, development of small scale industries etc. Pilot cooperative farming societies in 1961 were initiated in many parts of India. As far as Chinese collectivization movement is considered, it was differ in some manner and approach. As India developed cooperative farming and more than five thousand cooperative farming were active by the 1965. It employed 20 members in 45 hectares and included both Peasants and farmers. Maximum profit provided by this cooperative farming and this made people accessible to land who were landless.

India also launched community development program in the year 1952 with the objective to mobilize local people and making them aware that state will assist by providing technical services and basic materials. The main objective of the Community development programme (1952) was to transform rural India by making people to access new technology, new methods of farming. By this program more than 5 lac villages and 300 million rural residents were benefitted. However, expectations were not met for two major reasons:

(a) As it was new in India and to reform agricultural productivity by using newly invented techniques and technology was in its early stage.

(b) Second reason was seen as not able to meet proper to implementation of land reform act such as large land holding and propertied class and tenancy system, land intermediaries could be controlled at certain level.

For these reasons the growth of Indian agriculture was less than anticipated. " Not until the 1970s, when it was able to benefit from new technologies, did the basic agricultural production system expand and adjust its production structure to the changing demand associated with rising income (Mellor 1976) [7]"

#### 4. Sovereignty and the agricultural sector till 1990

**Table 1:** Production, labour and land productivities in wheat units from 1960 to 1980).

	China			India		
	Output	labour	land	Output	labour	land
<b>1960</b>	264591	1.46	0.88	217809	1.60	1.24
<b>1965</b>	375714	1.91	1.22	241766	1.70	1.37
<b>1970</b>	457736	2.07	1.47	281219	1.83	1.58
<b>1975</b>	555633	2.22	1.7	316209	1.96	1.76
<b>1980</b>	703801	2.39	2.20	341523	2.05	1.89

Table 1 "also reveals that the growth rates of labour and land productivity were Larger in the period 1974-1980 than in the period 1960-1970 for both China and India. It can also be noted that in the both nations the growth rate of land productivity was higher than the growth rate of labour productivity for the four periods. By focussing on the intensive use of labour and other factor inputs, such as fertilizer, have been the major factors in developing and producing high growth rate of land productivity. It has been noticed that during the period 1960-1980, the use of fertilizer increased 23 times in China and 16 times in India. The factors which are responsible for the slow growth in China's and India's agricultural labour productivity are almost similar. For example, the rural population in China increased from approximately 500 million in 1952 to 780 million in 1977, which added 150 million workers to China's agricultural labour force in the period of 1950-1980. The agricultural development in China and India from Table 2 can be viewed that in 1983 the economic profile of China and India was almost similar".

**Table 2:** Average Yield of Principal Crops (kg/ha) of China and India from 1970-1983

	1970	1975	1980	1983	1970	1975	1980	1983
	China				India			
<b>Rice</b>	3398	3518	4133	5096	1120	1124	1330	1230
<b>Wheat</b>	1148	1635	1890	2802	1310	1410	1630	1840
<b>Maize</b>	2086	2539	3075	3623	1280	1200	1170	1100

Source: Agricultural Productivity in China And India: A Comparative Analysis, Bulletin Number 87-3.

**Table 3:** Economic profile for China and India (1983)

	India	China
• Total Area (000 km <sup>2</sup> )	3287	9600
• Population (millions)	685	1025
• Annual Rate of Population Growth (%)	2.5	1.2
• Population Density (per km <sup>2</sup> )	208.5	106.7
• Percent of Rural Population (%)	76.7	81.5
• Agricultural Land Area (mil hectare)	180.3	386.6
• Population per Hectare of Agri. Land	3.8	2.65
• Multiple Cropping Index	1.236	1.467
• Agricultural Production Index (1964=100)	167.6	273.7

## 5. Post 1990 India and China: Agriculture

### 5.1 Agriculture sector in the Economy of India and China after 1990

**Table-3:** Now economic profile of India and China (2011)

No.	Economic or Social factor	Unit of measurement	China	India
1.	Total Area (out of which water)	millions of sq km	9.60 (2.8%)	3.29 (9.5%)
2.	Arable Land	millions of sq km	1.48	1.79
3.	Irrigated Land	millions of sq km	0.53	0.61
4.	Food grain production	million tons/year	418	210
5.	GDP (China+Hong Kong)	US\$ billions	1139	175
6.	GDP Growth (2006)	US\$ billions	2281	750
7.	Labour Composition	in % rate over last year	9.3	7.9
8.	Population	Agriculture % /Industry %/ Services %	49 22 29	60 17 23
9.	Population increase per year	Millions	7.2	15.3
10.	Per Capita income	US\$ per year/person	1498	638
11.	Investment	% of GDP	44	25
12.	Inflation Rate	%	1.9	4.6
13.	Population Growth Rate	% of population	0.59	1.38
14.	GDP (PPP) per person	US\$ per person/year	6300	3400
15.	Unemployment rate	% of workforce	20	30
16.	Public Debt	% of GDP	29	82
17.	Labour force	In millions	797	496
18.	Government budget Revenues/Expenditure	US\$ billions	392/424	111/126

## 6. Policies of the sovereign states for food production and agrarian society after 1990

### 6.1 Agricultural Growth in India since 1991”

The period since 1991 has been a turning point for Indian agriculture (Jasani 2009) [4]. It can be witnessed after 1991 there was growth in Indian crop which include both food and non-food agriculture. When green revolution started in India in 1961, it became hope for whole because at that time India was on the edge of mass famine. Norman Borlaug an American biologist who is known as father of green revolution came to India and Indian

ministry of agriculture invited him, the Ford foundation and Indian government agreed to import wheat seed from International Maize and wheat improvement centre (CIMMYT). Thus India began its own green revolution programme of plant breeding, irrigation development by selecting Punjab as its first state. It has been noticed, small size of farm has been one of the factors that was responsible for decrease in growth. It is believed those small size farms which are controlled by majority of Indian farmers and families makes difficulty to access new technology and modern methods of production.

If we compare the recent data of 2010 we can see “China at the top of the list in production of wheat that is 4,748 kg per hectare, whereas for India it stands at 3,264 kg a hectare. China is leading producer of wheat. India stands at the bottom in terms of maize productivity compared to China, Pakistan, Bangladesh, Nepal, Sri Lanka and Myanmar. China is producing Maize 5,459 kg a hectare whereas in India it is 1,958 kg/hectare. In pulses, China tops the list with 1,567 kg per hectare followed by Myanmar at 1,114 kg a hectare, Bangladesh at 871 kg/hectare, Nepal 791 kg per hectare, Pakistan 762 kg every hectare, while in India it stands at 694 kg per hectare” (Zee News, March 25, 2012 - 10:54) [12].

The productivity depends on factors like rainfall, extent of inputs such as fertiliser, micro-nutrients, seed replacement rate, duration of crop, extent of area sown under any crop and the nature of lands used for cultivation. To enhance the agricultural production, the government is working on frontier areas of research like marker assisted selection, stem cell research, nanotechnology, cloning genome resource conservation (Zee News, March 25, 2012 - 10:54) [12].

It has been noticed that there is great variations in GDP between India and China, despite globalization, modernisation and industrialisation India is lacking behind in production of agriculture products. There are many reason, for example, if we compare the GDP of China with India we will find that China has much larger GDP ( approx. 10 trillion USD) and after USA which is at the top position with (approx. 17 trillion USD) China is the second largest in the world. As far as India's GDP is concerned there is only (approx. 2 trillion USD) , which is much far behind China. In terms of population China is the top ranking in the world with 1.3 billion which is slightly larger than India that is 1.2 billion.

Today Chinese goods have replaced the other countries goods in global market and at every corner of world we can find Chinese goods in almost every sector, like Auto Parts & Accessories, electrical and electronics, industrial equipments, Manufacturing & Processing Machinery, Mining Machinery, Textile Machinery & Parts etc. Other than this there are number of agricultural products like Food Additive, Garlic, and Tea & Tea Leaf etc. We can see everywhere in the market products which are “Made in China” but hardly find “Made in India”. This means that China exports a lot to the other nations and India imports a lot. China is a country with a communist government, which means that the PRC decides everything themselves while India doesn't. One government means less conflict. China's economy is growing much faster than India. China is the second largest economy in the world and is economically better then India.

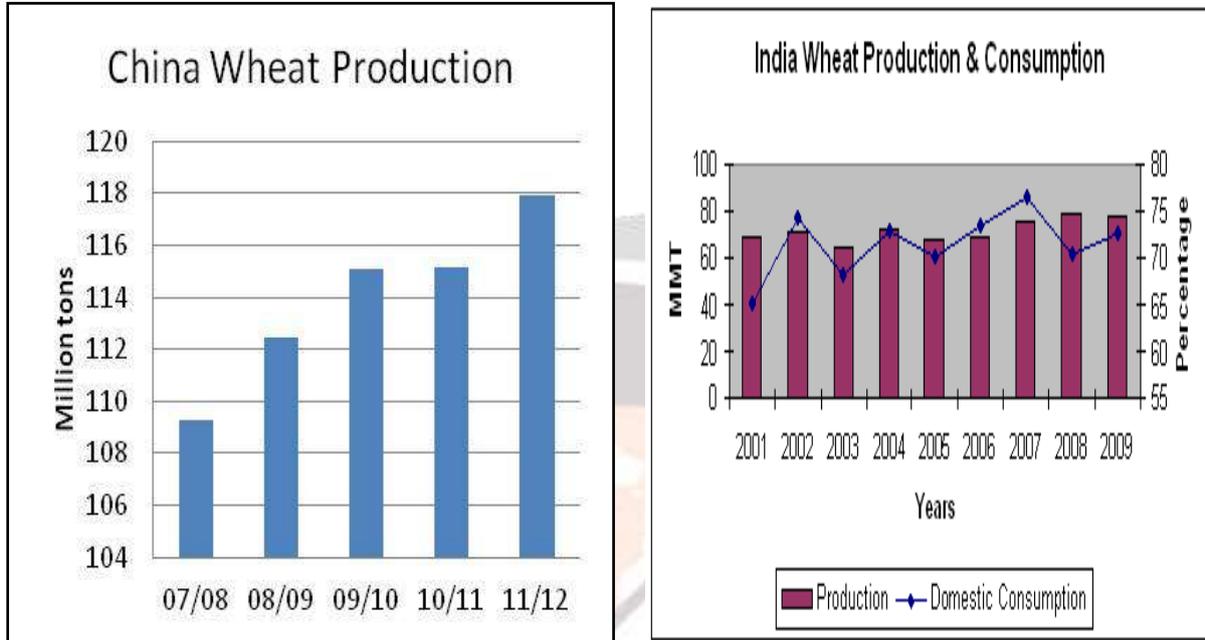
Chinese goods are sold all over the world and manufacturing goods at very large scale and at very cheap price. While in India the goods are not produced and exported (mainly electrical and electronic items). It is easier to setup and do business in China as compared to India where there are lot of paper work involved and lot of formalities to be done .India imports more, China exports more. Government bodies in China are more disciplined and government policies and schemes are implemented effectively, while in India most of the policies for the betterment of economy and its people are on the official papers only with no ground implementation. At last it is always said "India promises but China deliver".

China and India were somewhat similar in terms of economic growth and poverty levels till the 1970s and 80s. Many economists believe that it was the rural reforms of early 1980s that triggered China's growth and alleviated a record number of people from poverty in just several years (Kanbur and Zhang 2008) [6]. The China before late 1970s was not very different from India and many other developing countries. Most industries in China were State-owned Enterprises (SOEs) that were established in the 1950s and 1960s, covering core industries like energy, aviation, telecom and construction etc.

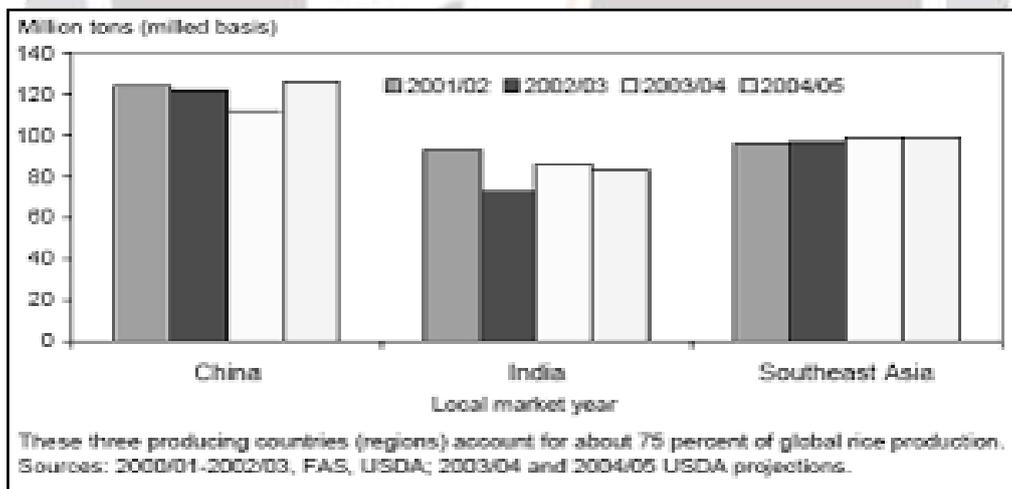
Then came a reform period, when policymakers in many developing countries (including China and India) attempted to shift their economies away from capital-intensive sectors towards more labour-intensive activities, but many of these countries have experienced sluggish growth at best, stagnation at worst (Kanbur and Zhang, 2008) [6]. This is also the period (early 90s) during which China's GDP per capita started rising more rapidly as compared to India.

Large-scale government planning programs alongside market characteristics and participatory economic growth is what has helped raise China's per-capita income and reduced poverty in the beginning of the 1980s reform period. However, during the second half of the 1980s and early 1990s China's progress in poverty reduction was not sustained. Between 1988 & 1989 (one year), the number of poverty-stricken people in rural areas briefly increased from 96 million to 102 million.

**Figure 1:** Wheat production in China and India which shows difference between productions of recent years.



Comparative analysis of Rice production of India and China with Southeast Asia



From 1960 to 1975, there was 1.25% per year growth rate of labour productivity in China and the commune movement and Cultural Revolution reached their highest peaks during this period. The Commune members not only busy in agricultural productivity but they had to contribute their important time to the political activities and activities which are not related to farming like construction ( building, schools, roads, dams, etc. ). Because of this the growth of labour productivity in China was lower than that in India from 1960 to 1970. As far as this period is considered we can see that China and India were its highest level in the world for the growth in labour productivity. The report by the New York-based economist and experts and other Board, says that “China and India remain the largest and most dynamic economies with 8.7% and 5.4% growth in labour productivity in 2010. China’s position stands third in the world and India at the tenth position” (Sen 2011) [10]. Total factor productivity, which takes into account contribution by all factors of production, shows a divergence between China and India. While China has shown regular growth in production since 1995 and if the productivity factor

of India taken into account we can see it has slowed down since 2005 as compared to China. "China has shown a strong output growth since 2005. Employment level of India has increased by 2.3 percent in year 2010 and increase in the GDP per person by 5.4%. In comparison, China had around 8% growth in GDP per person, despite lower employment growth (Sen 2011) [10].

## **7. What Indian agricultural sector can learn from China:-**

The famous Economist and agricultural scientist Jim Rogers has underlined that agriculture will be one of the best investments over the next few decades and that people should start taking closer attention to these markets. As highlighted by the UN Population Projections, world population will total 9.6 billion by 2050. The world's rising population alongside consumption outgrowing production over the last decade highlights the increasing importance of agriculture. It will be unsustainable to feed the world's population with the current levels of agricultural production. He also quoted "if you want to become a rich man than become a farmer". He always says to "invest in agriculture, believes the best ways to invest profitably in agriculture are through purchasing farmland and leasing it out, or buying shares in farms, farm equipment and fertilizer companies that trade on exchanges around the world" (CNBC, Mon, 24 Mar '2014) [3]. But as far India is considered people will not believe what Jim Rogers said because condition of farmers is not good. But farmers in India have been facing lot of problems which are discussed below.

### **7.1 Small and fragmented land-holding**

India has enough net sown area of 141.2 million hectares and total cropped area of 189.7 million hectares (1999-2000) according to the developmental report of India. The average size of holdings was 2.28 hectares in 1970-71 which was reduced to 1.82 hectares in 1980-81 and 1.50 hectares in 1995-96 and in 2010-11 it is reduced to 1.16 hectares. "The size of the holdings will further decrease with the infinite Sub-division of the land holdings. In India this is the serious problem in densely populated and intensively cultivated states like Kerala, West Bengal, Bihar and eastern part of Uttar Pradesh where the average size of land holdings is less than one hectare and in certain parts it is less than even 0.5 hectare.

Rajasthan with vast sandy stretches and Nagaland with the prevailing 'Jhoom' (shifting agriculture) have larger average sized holdings of 4 and 7.15 hectares respectively. States having high percentage of net sown area like Punjab, Haryana, Maharashtra, Gujarat, Karnataka and Madhya Pradesh have holding size above the national average". (Source NNSO). This serious problem and reason for low production of agriculture in Indian states.

### **7.2 Seeds:**

For more production and to maximise profit from agriculture quality of seed plays an important role. India's rural population is unfortunate to get good quality of Seed, majority of farmers; marginalised sections are not able to buy quality seeds due higher prices. In order to solve this problem, "the Government of India established the National Seeds Corporation (NSC) in 1963 and the State Farmers Corporation of India (SFCI) in 1969. Basic motive of government to provide better quality seed to the farmers. High Yielding Variety Programme (HYVP) was launched in 1966-67 to increase the production of food grains in the country" ( Mondal 2016) [8].

### **7.3 Manures, Fertilizers and Biocides:**

Growing crops without replenishing and this led to depletion and exhaustion of soils, by practicing this method, agriculture production reduced and this problem can be solved by using more manures and fertilizers. India is putting its best efforts to overcome this problem and set up 52 fertilizer quality control laboratories in different parts of the country. Central Fertilizer Quality Control and Training Institute located at Faridabad and there are three regional centres which are located at Mumbai, Kolkata and Chennai. About 70 % growth in agricultural production is increased by using fertilizers.

### **7.4 Irrigation:**

After China, India is the largest irrigated country of the world and more than 35 percent area is under irrigation. As Irrigation played an important role in agricultural input because there is tropical monsoon in India and rainfall is uncertain, unreliable and it not possible for India to get much higher production without irrigation.

### **7.5 Lack of mechanisation:**

Most of the developed and developing countries using modern and mechanised tools but many parts of India are confined to the primitive tools. Agricultural practices in rural India are mostly done by the human hand or by the primitive tools. Most of the farmers in India still using conventional tools and simple implements like wooden plough, sickle, etc. Partial Technological methods are able reach to the farmers and it can be seen in the developed states of India like Punjab, Haryana, Tamilnadu, Maharashtra and western U.P etc. But many Indian states are still deprived of technical tools and machines made in ploughing, sowing. New methods irrigation have generated to conserve water as water proportion is declining day by day and these new methods of irrigation, thinning, thinning and pruning, weeding, harvesting threshing and transporting the crops are not accessible to every farmers, many farmers in different state deprived of these facilities due to lack of awareness and most important is economic aspect specially Small and marginal farmers. This shows that still there is huge wastage of human labour and this results to low yields per capita labour force.

### **7.6 Soil erosion:**

Wind and water erosion eliminated top fertile layer of the soil and there is no checks to reduce erosion. As deforestation plays an important role which leads to maximum erosion mainly in hilly terrain. To restore its original fertility there should be proper treatment and checks.

### **7.7 Agricultural Marketing:**

Agricultural marketing still a problem in rural India due to absence of marketing facilities and the farmers are totally dependent on local traders and middlemen. These traders and middleman purchase farm produce at very low rate and are forced under socio-economic conditions. "According to an estimate 85 per cent of wheat and 75 per cent of oil seeds in Uttar Pradesh, 90 per cent of Jute in West Bengal, 70 per cent of oilseeds and 35 per cent of cotton in Punjab is sold by farmers in the village itself (NSSO)". This kind of situation arises when poor farmers are not able to sell on proper time and they have to wait for long after harvesting their crops. The Rural Credit Survey Report "tells that the producers in general sell their produce at an unfavourable place and at an unfavourable time and usually they get unfavourable terms. This is because of organised marketing structure and middlemen dominate the marketing and trading of agricultural produce" (Mondal 2016) [8].

### **7.8 Inadequate storage facilities:**

Storage facilities are also an important problem in rural India and due to this farmers are compelled to sell their agricultural products at the cheaper rate. At present there are number of agencies engaged in warehousing and storage activities. Government of India constituted number of agencies like Food Corporation of India (F.C.I.), the Central Warehousing Corporation (C.W.C.) and State Warehousing Corporation and by creating such agencies government helped in setting up or building up buffer stock and that can be used in the hour of need. Other than this Central Government of India also implemented some schemes to establish national Grid of Rural Go downs in 1979-80 (Jindal 2017) [5].

### **7.9 Inadequate transport:**

As in India central government has formulated number of policies to provide adequate transport facilities in rural areas like PRADHAN MANTRI GRAM SADAK YOJANA. Other than this state government is also providing funds to village Panchayats to construct roads and interconnect villages. State has set up operational guidelines to implement project in villages. But we can see there are number of villages in rural India which are not connected to main city roads where markets are set up. Proper road connectivity affects their agricultural produce.

### **7.10 Capital Scarcity:**

Like other industries in require capital to start its production and required initial capital to start . As like Agriculture also require capital and it is the important industry. Farmers are getting capital at the very high rate of interest from the money-lenders, traders and commission agents and in return these agents purchase their agricultural produce at very low price. "All India Rural Credit Survey Committee showed that in 1950-51 the share of money lenders stood at as high as 68.6 per cent of the total rural credit and in 1975-76 their share declined to 43 per cent of the credit needs of the farmers. Rural credit scenario has undergone a significant change and institutional agencies such as Central Cooperative Banks, State Cooperative Banks, Commercial

Banks, Cooperative Credit Agencies and some Government Agencies are extending loans to farmers on easy terms” (Jindal, 2017) [5]. KISAN CREDIT CARD is playing an important role in villages, it is providing loan to farmers at very low rate and maximum farmers are benefitted across country by this scheme.

**Conclusion:** Now we can learn from China where they are producing no. Of agricultural products and farmers in China are not facing the problems which Indian farmers are facing. Condition of farmers in China is much better than Indian one. There are about 200 crore farmers in the world who are indulged in agriculture practicing, three fourth of total farmers of world are in Asia and 60 percent of farmers of Asia are in India and China. According to a survey, there is double investment on agricultural research in China compare to India. China is focussing on agricultural research to find new methods and techniques to produce more. Global food policy submitted a document in which it reveals that there are about 80 crore and 50 lakh in the world who are hunger because of food scarcity. Out of these 23 percent exist in India which is about 19 crore of total population, where as in China it is 18.7 percent which is 15 crore of total hunger population. 20 percent of land in the world is used to produce agricultural products and where agriculture is taking place. If talk about India more than 60 percent land is used for agriculture, despite this we are lacking behind China in agricultural production. China is the leading producer of food crops in the world. It's an amazing fact that only 15 percent of total land is used in China for agriculture. In China 75 percent land of total the total agricultural land is only used to produce food grains and China has only 7 percent of land of the total land of the world which is used for agriculture and China is able to feed 22 percent of world population. Due to lack of agricultural land China is growing vegetables besides roads, traffic signals and using roof top of the houses, as most of the agricultural land is used to produce food grains. This is because of the good policies provided to the farmers while in India it's totally opposite. In India farmers are facing higher rate of seed and fertilizers and at the time of cultivation they sell it at lower rate, this factor promoting farmers to suicide. There is huge gap between farmer of China and India, as annual income of a Chinese farmer is about 12 lakh per annum while in India farmers are not able to generate good amount because of the factors discussed above. In China a farmer can live good life, can fulfil basic needs of family and can provide qualitative education to their children. Chinese government provide 100 percent insurance to the farmers if their crop is destroyed. Because of this they do not take any critical step but in India every year we can see many farmers commit suicide. According to the NSSO (National sample survey organisation), in India average income of a farmer which include whole family is 3078 rupees per month by a report in year 2014. In the last 20 years in India more than 3 lakh farmers have committed suicide. Every year about 14000 to 15000 farmers ending their lives. In Every hour two farmers committing suicide in India and about 76% farmers in India are ready to leave agriculture if they find other employment. 75% farmers are BPL. Common man in India earns five times more income. China developed labour based industrial infrastructure due this their agro based economy changed, farmers employed in industrial work and construction work, sudden change in the productivity.

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