



**Issues of Food Self Sufficiency in Jammu and Kashmir**

**Sakeena Rather( *PhD Scholar*)**

*UNESCO Madanjeet Singh's Institute of Kashmir studies*

*University of Kashmir*

*Srinagar, India.*

*Email Id:- [Sakeena.rather@gmail.com](mailto:Sakeena.rather@gmail.com)*

*Mobile No. 9797079946*

**Abstract:**

Agriculture has remained a main stay of the J&k State occupying an outstanding place in the socio economic fabric of the State. This sector has a vital place in the economic development of the State as it is the key sector for employment and income generation, because large scale industrialization is not ecologically desirable, and the infrastructure is too poor to attract industries. Therefore, agricultural sector continues to remain the important sector for socio-economic development of the people. Despite many institutional and technological changes, agricultural sector in the state has not been able to achieve a real breakthrough yet, which is obvious from the fact that large amount of food grains are imported every year. Imports as percentage of domestic production have increased significantly from 23 per cent in 1964-65 to 47 per cent in 2009-10 .In this paper an attempt has been made to study the increasing dependency of J&K state in terms of increasing food imports on rest of Indian states and measures have been suggested to help the state in overcoming this dependency syndrome.

**Key words:** *Agriculture, Imports, Food grains, Dependency, Jammu & Kashmir,*



## **Introduction**

Agricultural sector is predominant in the economy of Jammu and Kashmir and provides livelihood to the majority of the population. The overall economic growth of the state depends largely on the progress of agricultural sector, since only a very nominal progress has been achieved in the secondary as well as in the tertiary sectors. It is well recognized that the livelihood of those dependent on agricultural sector is Unsustainable, which necessitates the creation of supplementary sources to raise it to a sustainable level. Agriculture being the dominant sector of economy, the pace of economic development is directly affected by agricultural development. Food security and providing gainful employment to the labor force, especially to those engaged in agriculture sector has virtually become a cynosure. If agriculture has to play a dynamic and vibrant role in improving economy of the state, it has not only to produce sufficient food to feed its growing economy, but to produce on sustainable basis. It is all the more important that the objectives are achieved without damaging the environment and preserving the natural resource base. J&K might have made significant strides in agricultural production, but a large procurement of food grains is needed to meet the food requirements as 40 percent of the food grains come from outside the state. Against this backdrop the present study has attempted to analyze the declining trends in production and productivity of principal crops and increasing dependence of state on rest of Indian states in terms of increasing food grain procurement.

## **Methodology**

The study is primarily based on secondary data and the data utilized in the study has been obtained from Directorate of Economics and Statistics, Government of Jammu & Kashmir and office of financial Commissioner, Government of Jammu & Kashmir. The data has been analyzed by using appropriate statistical tools like compound growth rate and Decennial growth



rates have been used. The compound growth rate have been estimated by using the following exponential model:

$$Y_t = ab^t$$

Where “a” and “b” are the two constants, and t represents the value assigned to time. As the exponential trend gives the constant percent rate of growth in the time series data per unit of time, the rate is given by (b-1). Taking logarithms on both sides of the exponential trend, it takes the form:

$$\ln(Y_t) = \ln(a) + t \ln(b)$$

The value of two constants “a” & “b” are estimated by the method of least square.

Decennial growth rate has been used to measure decadal population growth rate and food grain production growth rate over the study period (1980-2010) by using the following formula

$$PR = \frac{(V_{\text{Present}} - V_{\text{Past}})}{V_{\text{Past}}} \times 100$$

Where:

PR = Percent Rate

$V_{\text{Present}}$  = Present or Future Value

$V_{\text{Past}}$  = Past or Present Value

The annual percentage growth rate is simply the percent growth divided by N, the number of years.

### **Issues of Food Security in Jammu & Kashmir.**

Food security is of prime importance and so is the nutritional security. As defined by FAO, food security means that all people at all times have access to safe and nutritious food to maintain a healthy and active life. Achieving food security has, therefore, been the primary goal of



agricultural strategies. The principle feature of crop production strategies followed in post-green revolution period has been directed to change from subsistence agriculture to self-sufficiency and surplus agriculture, which has now transformed into a commercial activity. While there has been significant expansion in food output, but urbanization, higher economic growth, change in occupational structure as well as addition to the population have further increased the food demand<sup>1</sup>. State of J&K is bestowed with considerable land and water resources paving the path for large scale agricultural production especially sustainable mixed farming systems. Few decades back Kashmir was a producer state with potential for self-sufficiency and export. However with changing land use pattern, stagnant agricultural production and misplaced policy priorities have transferred the state in whole and valley of Kashmir in particular into a major importer of food grains. As a result production of J&K state has not been able to keep pace with increasing population (Table 1.1) resulting into huge imports of food grains.

**Table 1.1: Food Grain Production in Relation to Population Growth**

<b>Year</b>	<b>Population (million)</b>	<b>Decennial growth rate (in Percent)</b>	<b>Production (MT)</b>	<b>Decadal Growth Rate(in percent)</b>
<b>1981</b>	<b>5.98</b>	<b>29.69</b>	<b>13066</b>	
<b>1991</b>	<b>7.71</b>	<b>28.92</b>	<b>13664</b>	<b>4.57</b>
<b>2001</b>	<b>10.15</b>	<b>31.6</b>	<b>11196</b>	<b>-18.06</b>
<b>2011</b>	<b>12.55</b>	<b>23.64</b>	<b>15185</b>	<b>35.6</b>

<sup>1</sup> M. A. Masoodi, Agriculture in Jammu & Kashmir: A perspective, Mohisarw Book Series, Srinagar.



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*Source: computed on the basis of data obtained from Directorate of Economics and Statistics Department, Jammu and Kashmir*

Despite considerable advances in agricultural sector, the average production and productivity of various food crops is either stagnant or is declining (Table 1.2). It is the matter of concern that food grain production in the state by and large has not increased significantly during the study period (1980-2010). The average production, yield and area under rice has either stagnated or declined during last three decades (1980-2010). In terms of compound growth rates, there was an overall decline in the growth rates

**Table: 1.2**

**Area, Production and Productivity of Major Crops in Jammu & Kashmir**

Crops	Area/Prod./Yield	1981-1990	1990-2000	2000-2010
Rice	Area	269.13	271.36	254.92
	Production	557.4	516.5	500.09
	Yield	2070.6	1900.7	1992.1
Maize	Area	284.9	302.38	320.08
	Production	442.7	489.9	510.5
	Yield	1555.6	1621.8	1593.4
Wheat	Area	224.0	245.7	267.06



	<b>Production</b>	223.8	365.3	455.8
	<b>Yield</b>	999	1485.6	1707.9
<b>Pulses</b>	<b>Area</b>	44.9	33.7	29.15
	<b>Production</b>	28	18.21	14.4
	<b>Yield</b>	621	14.4	494.4
<b>Other cereals</b>	<b>Area</b>	8.66	5.56	4.45
	<b>Production</b>	21.5	18.4	21.7
	<b>Yield</b>	2698.7	3305.4	5039.2
<b>Total Food grains</b>	<b>Area</b>	865.5	888.8	928.6
	<b>Production</b>	1273.5	1409.6	1475
	<b>Yield</b>	1472.1	1585.5	1659

*Source: Computed on the Basis of Data obtained from Directorate of Economics and Statistics & office of Financial Commissioner, Government of Jammu and Kashmir*

**TABLE: 1.3**

**COMPOUND GROWTH RATES OF AREA, PRODUCTION AND YIELD OF RICE,  
MAIZE AND WHEAT**

**(Per Cent)**

<b>Crops</b>	<b>Area/Prod/Yield</b>	<b>1980-90</b>	<b>1990-2000</b>	<b>2000-10</b>
<b>Rice</b>	Area	-0.4	-0.66	0.70
	Production	-2.7	-1.8	2.3



	Yield	-2.3	-1.1	1.62
<b>Maize</b>	Area	1.0	1.0	-0.74
	Production	-1.6	-0.90	0.59
	Yield	-2.6	-1.9	1.3
<b>Wheat</b>	Area	1.9	-0.32	1.8
	Production	4.3	3.0	2.6
	Yield	2.3	3.3	0.8
<b>Other Cereals</b>	Area	-3.3	-2.3	-1.5
	Production	-2.8	-4.2	1.5
	Yield	0.47	-1.94	3.1
<b>Pulses</b>	Area	-2.4	-2.3	0.85
	Production	-3.9	-2.2	3.0
	Yield	1.6	0.1	2.1
<b>Total Food Grains</b>	Area	0.55	-0.02	0.62
	Production	0.08	-0.11	1.41
	Yield	-0.47	-0.08	0.78

*Source: Computed on the Basis of Data Obtained from Directorate of Economics and Statistics & office of Financial Commissioner, Government of Jammu and Kashmir.*

of area, production and yield of principal crops (Table1.3). Among the principal crops, the production of wheat recorded the highest decline from 4.3 percent (1980-1990) to 2.3 percent



(2000-2010). Growth rates of Maize and Wheat were significantly higher in the period I in comparison to Period II and Period III. Although growth rates of Rice has improved in Period III in comparison to period I and Period II but the growth rates has not remained significant enough to lower the annual imports of Food grains. . As far as other cereals and pulses are concerned they have also not shown a significant positive trend. As the analysis of data above shows that production of food crops have either declined or have stagnated except for some years where data exhibits a positive trend. The decline in production has been attributed to various reasons like low cropping intensity, low use of fertilizers, non-availability of quality inputs in time, low seed replacement ratio and conversion of agricultural land to non-agricultural uses giving rise to increased imports by state of Jammu & Kashmir from rest of Indian states. Contribution of agriculture and allied sectors has come down to 19.41 Percent in 2011-2012 against 28.06 percent in 2004-05 and 33.66 Percent in 1999-2000. Though some part of increase in import is due to increase in population and income, but the rising magnitude of imports has been mainly due to stagnant/declining productivity and production of cereals particularly rice. During last three decades imports of food grains has increased from 1.42 lakh tones during 1980-81 to 7.86 lakh tones during 2010-12 (Table 1.4) and out of total imports rice alone accounts for 5.53 lakh tones<sup>2</sup>. The gap in production which was around two metric ton in 1980 has grown up to nine lakh metric tons now and is met through imports. Warning food grain shortage in future the Economic Survey report revealed that state's food shortage would grow as projected population would rise beyond 1.5 crore by 2020 with decadal growth rate of 23.71 percent.

**Table:1.4**

**Import of Food Grains**

<b>Years</b>	<b>Rice</b>	<b>Wheat</b>	<b>Total</b>	<b>Annual Growth Rate</b>
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<sup>2</sup> Anonymous, Digest of Statistics 2010-11, Directorate of Economics and Statistics, Government of Jammu & Kashmir.





				<b>in percent</b>
<b>1980-1981</b>	1.02	0.40	1.42	
<b>1990-1991</b>	1.87	0.92	2.79	9.64
<b>2000-2001</b>	0.79	0.34	1.13	-5.9
<b>2010-2011</b>	5.53	2.33	7.86	59.5

*Source: Various Issues of Digest of statistics, Directorate of Economics and Statistics, Planning and Development Department.*

percent. This situation has been attributed to low productivity, low Seed Replacement Ratio (SRR), yield stagnation, poor irrigation facility as around 60 percent of the net area sown is rain-fed and small size of land holding. The average holding size is 0.67 hectares and merely 97 percent of farmers lies in the category of small and marginal farmers. The inability of government to promote agriculture is threatening the food security of the state, as deficit continues to grow with serious repercussions. Experts say that lack of coordination among various government departments meant to boost the promotion of agricultural produce has resulted in stagnation of the yield in the state. It has made the state, an importing destination of various food products including the staple food – rice and wheat. The annual deficit in rice is 48 Percent overall and it is 32 percent in all food items. Despite having a Rice Research Station established in 1942 at Khudwani in Kulgam district, the gap between the local production and import of food grains to meet the demand is increasing every year. The main importer states are Punjab, Haryana and Uttar Pradesh, where the per hectare yield used to be much lower than Kashmir in the 1960's. However, today these states not only produce food grains for the local consumption but also export it to other places, making farming a lucrative occupation there. The trend at which J&K state is importing food items is an alarming trend if persists state may face 40 percent food deficit during 2020-21 and this figure may go up to 50 percent in 2030-



31<sup>3</sup>. Given the limited scope of area expansion, enhancing yield potential would, therefore be the major and almost exclusive means of realizing the projected food demand. This has to be achieved without further deteriorating the natural resource base particularly land and water as there is growing competition for their use and also without harming the quality of environment<sup>4</sup>. Attaining livelihood security, sustainable food production and environmental protection has been a challenging task in this hill and mountain ecosystem. The production constraints<sup>5</sup> in J&K which has limited the crop production need to be addressed and proper strategies need to be framed in order to come out of this dependency syndrome.

### Concluding Remarks

Given the agrarian structure of the state it is important to revive this sector, which is witnessing declining trends in production, productivity and acreage from last few decades and thus transforming J&K as one of the major food grain importer state of India. Therefore, a high priority needs to be accorded for developing the agricultural sector of the state and optimal use of important resources is essential to make agriculture remunerative and profitable. To meet the growing requirement of food and other agricultural products, it is imperative to have the realistic targets projected over a time scale. The previous trend of growth in productivity indicates that the additional production envisaged can be achieved only after special action plan is undertaken to explore all avenues of productivity gains and productivity enhancement is possible only through input management policy as accelerated productivity gain is required for enhancing total food grain production. Further there is a need of replacing low potential/pest susceptible old varieties by new high yielding varieties including hybrid. In order to increase production of various crops it is very important to break the yield barriers, breeding location specific, stress tolerant, climate change resilient crop varieties having high yield potential are dispensable for

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<sup>3</sup> Department of Agriculture, Government of Jammu and Kashmir, Srinagar.

<sup>4</sup> A.R Trag and A.G Rather, Food security in J&K, *Food security scenario in J&K (India)*, Paper presented at International Conference on Technology and Business Management, March 18-20

<sup>5</sup> Apart from low temperature, water shortages as a result of aberrant weather conditions and susceptibility to biotic stresses; socio-economic, technical, management, institutional, technology transfer and adoption/ linkage problems limit the crop production



sustainable crop production.<sup>6</sup> Introduction of harvesting and transplanting machines is also needed to revolutionize the agriculture of the state. Mechanization will reduce the dependency of agriculture on outside labour and at the same time farmer will take utmost interest in farming activities as there will be less expenses, less manual work in the field and more harvest in the end. As a large gap exists between the yield of farmers fields and the experimental fields, using improved production technology there is a need to develop extension services responsive to changing agricultural scenario. Finally Huge increase in construction activity and diversion of agricultural to non agricultural pursuits need to be checked in order to stop further squeezing of the paddy land .Although state has a potential to meet the growing challenges of future but there is a need to realize that potential which can raise food output in the state and fill the gap between the production and demand of food.

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<sup>6</sup> A.R Trag and A.G Rather, Op. cit.



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