



**ORIGINAL RESEARCH PAPER**

**Economics**

**THE ROLE OF INPUT SUBSIDIES FOR AGRICULTURAL PRODUCTION IN INDIA**

**KEY WORDS:** Agricultural, Production, input-Subsidies.

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**ABSTRACT**

Agricultural growth and development is adoption of new technology and producer incentives such incentives as price support, input subsidies like seeds, irrigation, electricity subsidies, fertilizer subsidies, credit subsidies and institutional credit, food subsidies etc., the government provide this all subsidies to the farmers reasons of both stimulating growth and achieving certain welfare. The implication of extensive use of incentives and subsidies for regional balance and social equity in a large country such as India with considerable a regional diversity in farming costs, market orientation, and the incidence of rural poverty have not been empirically examined. The main purpose of this study is to know the agricultural production and role of the input subsidies in India. This study is based on secondary data collected from NABARD, Budget estimation India, ministry of Agriculture and finance. Suggested some government policies & programmes.

**Introduction**

The government of India has recently increased support prices of major agricultural commodities substantially which would help in reducing the farmers cost of production through pumping in a substantial amount as fertilizer subsidy. The input subsidies, price supports and subsidized institutions credit and subsidies on target group oriented anti-poverty programmes it's including food subsidies which are expected to promote growth and social justice in the country. The public investment in rural areas it has been brought into higher productivity in agricultural sector due to higher public investment can make a sustainable positive difference in reducing the level of poverty in the rural areas of less developed countries. Comparatively greater success in solving the food supply problems due to substantial introduction of modern technology such as high yield varieties programme and increasing mechanization of cultivation.

The direct public investment in agricultural sector has to be supported by other forms of infrastructure, which would allow farmers access to inputs such as water, make efficient use of modern inputs such as fertilizers, electricity, seeds, irrigation and to facilitate the marketing of the produce and take initiatives for investment in future technologies. The difference in productivity of irrigated area as compared to rainfall zones.

According to Dewett "productivity express the varies relationship between agricultural output and one of the major inputs, like land or labour or capital, other complementary factors remaining the same". The increasing the agricultural or industrial productivity in generally the result of a more efficient use of some or all the factor of production, that is land, labour and capital.

According to Saxon "basically productivity is a physical relationship between output and the input which gives rise to that output. Indian agricultural output currently enters world trade does not by itself mean that agricultural trade liberalization by India would lead to large changes in world relative prices, in India main input subsidies received by agricultural relate to fertilizer, electricity and irrigation and incidence of such subsidies the seventh plan has specified that the public distribution system will be a permanent feature of the strategy to control prices, reduce price, fluctuations and achieve an equitable distribute. Indian agricultural sector is more dependent on inputs subsidies. The effective subsidies to the farmers of 40 to 75 percent for fertilizer and 70 to 90 percent for irrigation and electricity. The main purpose of this study is to know the agricultural production and role of the input subsidies in India. Review of Literature;

Subbaro K (2011), explain the incentive polices and India's agricultural development some aspects of regional and social equity. The main discursion of this paper was producer incentives for stimulating agricultural growth and adoption of new

technology. This paper was focusing price support, fertilizer, institutional credit and incentive policies.

Hanumanthappa K.M (2014), he analyzes a classification of concept of agricultural productivity in Karnataka. This paper focused on the productivity of land, because it is the most permanent and fixed among the three conventional categories of inputs.

Venkatachalam (2003), he studied the infrastructure and agricultural development in Karnataka state. The infrastructure investment has been on irrigation, transportation, electric power, agricultural markets, etc and these not only contributed to the agricultural growth at the macro level but also to wide disparity between different region in terms of agricultural growth. Some empirical studies on the agricultural infrastructure have proved that there exist a negative correlation between level of infrastructure investment and the marginal cost of production.

Sudipto Mundle & Govinda Rao M (1994) this paper discussed our subsidy estimate. Pure public goods with other social or economic services provided by the government and contend that "subsidies should be measured as a difference between total revenue expenditure and total revenue receipts of the government including taxes, etc, that is the revenue deficit.

**Methodology:**

This study is based on secondary data collected from NABARD, Budget estimation India, ministry of Agriculture and finance. Suggested some government policies & programmes.

**Result and Discursion:**

In agricultural sector the various resources and inputs required for enhancing agricultural production such as land, soil, water, energy and farm power, credit and insurance, marketing, fertilizer ect, the land and water are the basic infrastructural resources essential for crop production. Agricultural resources managements: Land & soil water crop-production fertilizer energy & farm electricity agricultural infrastructure agro advisory network credit & insurance human resource.

**Production of food-grains and other major crops (million tonnes)**

Crop	Season	2004-05	2010-11	2011-12	2012-13	2013-14	2014-15(4th adv.est)	2015-16(1st adv.est)
Rice	Khari	72.2	80.7	92.8	92.4	91.5	90.9	90.6
	f Rabi	10.9	15.3	12.5	12.9	15.2	13.9	--
	Total	83.1	96.0	105.3	105.2	106.7	104.8	90.6

Wheat	Rabi	68.6	86.9	94.9	93.5	95.9	88.9	--
	Kharif	26.4	33.1	32.4	29.8	31.2	29.8	27.9
Sugarcane (lack tonnes)	Total	2370.9	3423.8	3610.4	3412.0	3521.4	3593.3	3414.3
Cotton	Total	164.3	330.0	352.0	342.2	359.0	354.8	335.1

Source: Directorate of economic & statistics, ministry of agriculture and farmers welfare

Rice production during 2004-05 to 2014-15 raised rice production from 83.1 million to 104.8 million tones. Cotton production in 2004-05 to 2015-16 raised cotton production from 164.3 million tonnes to 335.1 million tones. Cotton productivity from 510kg per hectare in 2013-14. Sugarcane production in 2004-05 to 2015-16 increased sugarcane production from 2370.9 lack tonnes to 3414.3 lack tonnes. The introducing of better crop varieties, intensive application of inputs, irrigation, minimum support price. The productivity of rice cultivation has increased from 2,131 kg per hectare in 2006-07 to 2,390 kg per hectare during 2014-15. However there has been significant improvement in the yield of rice in the recent years. The government is encouraging farmers to adopt suitable technologies and incentivizing the production of location specific high yielding varieties, hybrid rice seeds. Wheat production was made possible by increasing the under assured irrigation facilities, better seed treatment and adoption of new varieties. The unseasonal rains and hailstorm during Feb-march 2015, however adversely affected the production of Rabi crops. Irrigation and electricity subsidies from a significant part of the agricultural subsidies. There is a case to extend similar assistance to dry land farmers who grow their crops only under rain fed conditions. It is estimated that every rain fed millet farmer conserves between six million to ten million liters of water every cropping season in comparison to the rice and sugarcane farmers. Seeds are considered the basic input for enhancing agricultural inputs, such as fertilizers, pesticides and irrigation, the impact agro-climate conditions, is largely determined by the quality of the seed used. The contribution of seeds in the productivity is considered to 20 to 25 percent. Credit is one of the most essential inputs for improving from production and productivity and also to mitigate farmer's distress, the all India level gross cropped area in 2101-15 was 194.4million hectares. The sources of irrigation 11 percent there ia a need to bring more cropped area under assumed irrigation to increase agriculture productivity and production.

**Ultimate irrigation potential:**

Sl. no	Sector	Potential (mha)
1.	Major & medium irrigation	58.47
2.	Minor irrigation	81.43
(a)	Surface water	17.38
(b)	Ground water	64.05
	Total	139.90

Source: ministry of water resources.

The demand for water for various purpose is increasing due to population growth, urbanization presently the agriculture sector is using about 83percent of available water resources, but demand from other sectors may reduce availability for agricultural use to 68 percent by 2050. The government of India introduce some irrigation programme on 15July 2015, the pradhan mantra krishi sinchayee yojana (PMKSY) was launched with an outlay of Rs 50,000 crore over a five years period in 2015-16 to 2019 to boost irrigation facilities. "Har khet ko pani," and "more crops per drop." Use recycling and potential recycling of water under a common platform so that a comprehensive and holistic view of the entire "water cycle" and proper water budgeting is done for all, household, agriculture and industries sector. PMKSY schemes accelerated irrigation benefit programme (AIBP) of the ministry of water resources, river development and gangas rejuvenation; integrated watershed management programme of department of land resources and on-farm water management component of the national mission on sustainable agriculture. An awareness gives to farmer's water use efficient technologies such as drip-irrigation, micro irrigation, sprinklers, ect., may be encouraged to reduce the

pressure on water consumption by the agriculture sector and reduce the excessive withdrawal of groundwater, irrigation and electricity subsidies from a significant part of the agricultural subsidies. The dry land farmers who grow their crops only under rain fed conditions. They should be treated as water conservers for the nation.

**Consumption of fertilizers (NPK Nutrients, lakh tonnes)**

Sl.no		1991-92	2000-01	2012-13	2013-14	2014-15
1.	Nitrogenous (N)	80.46	109.2	168.21	167.50	169.46
	Phosphatic (P)	33.21	42.15	66.53	56.33	60.98
	Potassic (K)	13.61	15.67	20.62	20.99	25.32
	Total (N+P+K)	127.28	167.02	255.36	244.82	255.76
2.	Consumption of fertilizers	69.84	89.63	131.36	118.55	128.08

Source: state government

The average consumption of fertilizers increase from 69.84 kg per hectare in 1991-92 to 128.08 kg per hectare in 2014-15. The subsidies are given sa fertilizers depending upon the content of nutrients in the fertilizer. The present subsidy regime does not taken in to account the nutrient use efficiency of the fertilizer due to which there seems to be no initiative on part of industry on research and development of new efficient or better products. The nutrient based subsidies scheme may be made broder to consider nutrient use efficiency of fertilizer so that focus on efficient uptake of nutrient by bringing them under subsidy regime.

**Fertilizer subsidies disbursed (2010-11 to 2014-15) Rs in crores**

Sl.no		2010-11	2011-12	2012-13	2013-14	2014-15
1	Urea	24336	37760	40016	41853	54400
2	P & k fertiliser	41500	36809	30576	29427	20667
3	Total	65836	74569	70592	71280	75067

Source: Dept of fertilizers.

The availability of fertilizers, the dept of agriculture, cooperative and farmers welfare in consultation with department of fertilizers makes an assessment of the requirement for major fertilizers namely, urea, DAP, MOP and complex fertilizers before each cropping season kharif (April 1 to 30 September) and rabi season (10 October to 31 march) in consultation with all the states and concerned agencies. During 2010-11 to 2014-15 the fertilizers subsidy disbursed in urea witnessed an increasing trend from Rs 24336 crore in 2010-11 to Rs 54,400 crore in 2014-15. Whereas subsidy released has a decreasing trends in case of P & K fertilizer from Rs 41500 crore in 2010-11 to Rs 20667 crores in 2014-15.

**Conclusion of this study:**

The agricultural and cultivable land has marginally declined from 185.16 million hectare in 1980-81 to 181.95 million hectare in 2012-13 the agricultural and cultivable land are decreasing the government of India has been implemented various programmes have been put to cultivations leading to a net sown area of around 140 million hectare in last decates. During the eleventh five year plan developed 81.70 million hectare area of undertake the those programmes- rashtriya krishi vikas yojana. The integrated watershed management program (IWMP) has been merged with pradhan mantra krishisinchayee yojana as PMKSY- watershed in 2015-16 small farmers are faced by market access and input supply problems. The various source of irrigation in agriculture surface water resource a large no. of dams , barrages, hydro power structures, canal networks, tube wells, other wells ect. There is a huge temporal & spatial variation in rainfall and water availability in the country most of the water is available during the monsoon, and in a few spells of intense rainfall. The major problems for irrigation are poor maintenance of the canal system, lack of participatory management, changing land use pattern, soil

degradation and deviation from the designated cropping pattern and delay in the development of the command area. The adoption of farm machinery and technology for agricultural mechanization has significant contributed to improve the cropping intensity and farm produce.

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