FERTILIZERS SUBSIDIES IN INDIA
A CASE STUDY OF SOUTH ZONE

Rajwinderkaur*

ABSTRACT

To ensure availability of fertilizers to farmers at affordable prices, the government of India provides huge subsidies to fertilizers manufacturing industry from 1977. Hence, the government of India provides indirect subsidies to farmers for the purchase of fertilizers. These subsidies that encourage production and productivity have been widely criticized due to the cost of subsidies and distribution pattern. In this paper, an attempt is made to analyse the growth and distribution pattern of fertilizers subsidies in south zone of India.It is found that in all the states of south zone the fertilizers subsidies neither distributed according to gross cropped area nor productivity throughout the study period 1980-81 to 2006-07. The findings suggest that the centre government should adopt some criteria to give away subsidies to states either on the basis of gross cropped area or productivity.

Keywords:- Agriculture, Distribution, Fertilizers Subsidies, Manufacturing, Productivity.

* Researcher, Department of Economics, Punjabi University, Patiala (Punjab), India.

Introduction

In India, agricultural trade policy is a part of a larger food and agriculture policy regime that seeks to maintain food self-sufficiency while providing income support to the agricultural sector and poor consumers. The Government of India (GOI) uses a variety of policy instruments in attempting to achieve these goals, including: domestic subsidies to inputs, outputs, transportation, storage, consumer prices and border measures such as subsidies, tariffs, quotas, and non-tariff measures to protect domestic producers from import competition, manage domestic price levels, and guarantee domestic supply (Grossman, 2011).

At present, the Indian farmers are getting subsidies on various types of inputs like fertilizers, irrigation, electricity, seeds, pesticides etc. Out of these subsidies, the central government pays subsidies to the farmers on the purchase of fertilizers. Fertilizers are an important component of agricultural technology. Whereas initially organic fertilizers were mainly used in the fields, however, chemical fertilizers have played a very important role in enhancing the agricultural production. To ensure availability of fertilizers to farmers at affordable prices, the government of India provides huge subsidies to fertilizers manufacturing industry from 1977. Hence, the government of India provides indirect subsidies to farmers for the purchase of fertilizers (State Environment of Punjab – 2005).

The new seed-fertiliser technology, introduced in the irrigatedstates in the north-west during the mid-1960s, gradually spreadto new areas. During 1962-65 to 1980-83, all the states in thenorth-western region, in particular Punjab and Haryana, registeredhigh growth rates of agricultural output. In the eastern region,except for Assam, the growth performance of other stateswas rather modest with Bihar recording a very low growth rate of0.27% pa. Crop output in the dry rainfed states in the central regionwas hardly influenced by new technology and agriculturalproduction in that region was characterised by sharp weatherinducedyear to year fluctuations. In the southern region,all states, except Tamil Nadu, were able to register mediumgrowth rates of output (Bhalla, 2009).

Agricultural subsidies that encourage production and productivity have been widely criticized because of the cost of subsidies and they are perceived to be far from uniformly distributed. There is a general view in academic, policy and political circles that agricultural subsidies are concentrated geographically, they are concentrated on relatively few crops and few producers and in many cases do not reach the targeted group(s) **(**Sharma**,** 2009).

The relevant literature is reviewed in detail to understand the nature and extent of the work done on the related topic. Sidhu, (1985) tried to examine the relative merits of price support versus fertilizer subsidy policy for food self-sufficiency in India. This study provided decision criteria for policy makers to select between the price-support and fertilizers subsidy under different situations. Majumdar, (1993) observed the growing burden plashed on Indian Public finances by the subsidization of fertilizer has become one of the most concerning aspects of the Indian Economy. He suggested for policy that eliminates the fertilizer subsidy that neither pampers the farm sectors on the feed-stock sector and that this should evolve from discussions involving representative organizations of those affected academics and experts. Bala, et al. (2004) in their study made an attempt to investigate the trends in production and consumption of fertilizers in India and examined the effects of various factors such as price, area under high yielding varieties, gross cropped area, cross irrigated area and subsidy on its consumption. The author suggested that farmers should be encouraged for balanced use of fertilizers, increasing area under high yielding varieties and enhancing available irrigation potential.

From these studies, it may conclude that fertilizers subsidies are a worldwide phenomenon. Some studies showed the distribution pattern of fertilizers subsidies in different countries and in different states of India. Whereas some studies showed the impact of fertilizers subsidies on income of farmers of different states of India, on agriculture production, on gross cropped area, on cropping pattern etc.

Fertilizers subsidies are often criticized for their financial burden. The objectives of the present study are to study the growth and distribution of fertilizers subsidies insouth zone of India, to study the impact of fertilizers subsidies in south zone of India, to suggest ways and means for giving fertilizers subsidies to farmers of India.

The present study is related to fertilizers subsidies in South Zone of India from 1980-81 to 2006-07. This study also shows the gross copped area, fertilizers subsidies (in Rs. crores) and fertilizers subsidies (in per hectare). For analysing the growth and distribution pattern of fertilizers subsidies, seven states like Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Pondicherry, Andaman and Nicobar Islands and Lakshadweep of South zone have been taken.

State-Wise Gross Cropped Area in South Zone of India

Land is the fundamental basis for the most of the human or natural activities and is one of the major natural resources on earth. Agricultural productivity is entirely dependent on the availability of suitable land (State of Environment Punjab – 2007). In India, there are competing demands of area available for cultivation from increase in rural habitations, forestation, urbanisation and industrialisation. Consequently, gross cropped area in the country has registered a rapid deceleration in its growth over time (Bhalla, 2009).

State-wise gross cropped area (GCA) is shown in table 1. It is observed that in Andhra Pradesh, the GCA has declined from 12,281 thousand hectares in 1980-81 to 12,100 thousand hectares in 1985-86 and increased to 13,410 thousand hectares in 1996-97, it has again declined to 12,811 thousand hectares in 2006-07. In Karnataka, the GCA has increased during pre as well as post liberalisation periods except in 2000-01. It has increased from 10,660 thousand hectares in 1980-81 to 11,146 thousand hectares in 1985-86 and again increased to 12,284 thousand hectares in 2000-01and further increased to 12,438 in 2006-07. The GCA has increased from 6,469 thousand hectares in 1980-81 to 6,632 thousand hectares in 1990-91 and further increased to 8,148 thousand hectares in 2006-07 in Tamil Nadu.

In Pondicherry, the GCA has declined by 35.19 per cent in 1985-86 as compared to 1980-81 and increased by 25.71 per cent in 1990-91 from 1985-86 and further increased by 9.09 per cent in 2006-07 from 2000-01. In Andaman and Nicobar Islands, it has increased by 150 per cent in 1985-86 from 1980-81 and declined by 55.29 per cent in 1990-91 from 1985-86 and again declined by 37.84 per cent in 2000-01 as compared to 1996-97 and further declined by 69.5 per cent in 2006-07 from 2000-01, whereas during pre as well as post liberalisation periods 1980-81 to 2006-07, it is observed that in Lakshadweep, the GCA remains constant.

Table 1

State-Wise Distribution of Gross Cropped Area in South Zone in India during 1980-81 to 2006-07

(In 000 hectares)

South Zone

Years/ States	1980-81	1985-86	1990-91	1996-97	2000-01	2006-07
Andhra Pradesh	12,281 (7.09)	12,100 (6.82)	13,192 (7.12)	13,410 (7.11)	13,545 (7.26)	12,811 (7.29)
Karnataka	10,660 (6.15)	11,146 (6.28)	11,759 (6.34)	12,335 (6.54)	12,284 (6.58)	12,438 (7.08)
Kerala	2,862 (1.65)	2,866 (1.61)	3,020 (1.63)	3,020 (1.60)	3,022 (1.62)	2,918 (1.66)
Tamil Nadu	6,469 (3.73)	6,819 (3.84)	6,632 (3.58)	6,457 (3.42)	6,338 (3.40)	8,148 (4.64)
Pondicherry	54 (0.03)	35 (0.02)	44 (0.02)	34 (0.02)	33 (0.02)	36 (0.02)
Andaman and Nicobar Islands	34 (0.02)	85 (0.05)	38 (0.02)	74 (0.04)	46 (0.02)	14 (0.01)
Lakshadweep	3 (0.002)	3 (0.002)	3 (0.002)	3 (0.002)	3 (0.002)	3 (0.002)

Source:Government of Punjab, Statistical Abstract, Various Years

Note: Percentages are shown in parentheses.

The above table also indicates the percentage share of GCA in different states of south zone ofIndia during 1980-81 to 2006-07. It is observed that in this zone, Andhra Pradesh has got first rank during 1980-81 to 2006-07. It has got 7.09 percentage share of GCA in 1980-81, 7.12, 7.26 and 7.29 in 1990-91, 2000-01 and 2006-07 respectively. Karnataka has got second rank followed by Tamil Nadu, Kerala during pre as well as post liberalisation periods. During study, it is found that Pondicherry has got a little percentage share of GCA at country level. It is observed that in 1980-81, it has got 0.03 per cent of GCA and 0.02 per cent during 1985-86 to 2006-07, whereas in Andaman and Nicobar Islandsa lot of variation is seen.

State-Wise Distribution of Fertilizers Subsidies in South Zone of India

The Indian fertilizer industry has come a long way since its early days of post-independence era. Today, India is one of the largest producers and consumers of fertilizers in the

world. The mounting burden of subsidies compelled the policy planners to make a serious attempt to reform the fertilizer price policy to rationalize the fertilizer subsidy. The Indian fertilizer industry, given its strategic importance in achieving self-sufficiency of food grains production in the country, has for decades, been under government control. With the objective of providing fertilizers to farmers at an affordable price and ensuring adequate returns on investments to entrepreneurs, a fertilizer policy of providing fertilizers to farmers at subsidized prices was envisaged to induce farmers to use fertilizers (Sharma, 2010).

The subsidies of fertilizers in different states of south zone in India during 1980-81 to 2008-09 are shown in table 2. This table reveals that in Andhra Pradesh these have increased from Rs.50.34 crores in 1980-81 to Rs.1,786.79croresin 2000-01 and further increased to Rs.12,473.73 crores in 2008-09. In Karnataka, subsidies of fertilizers have risen up by 287.53 per cent in 1985-86,165.25 per cent in 1990-91, 36.86 per cent in 1996-97, 161.38 per cent in 2000-01, 20.93 per cent in 2005-06 and 455.37 per cent in 2008-09.

Kerala has received Rs.8.54 crores in 1980-81 as subsidies of fertilizers, whereas these have increased to Rs.29.97 in pre-liberalisation period (1985-86) and further increased to Rs.1,059.79 in post liberalisation period (2008-09). Tamil Nadu has got Rs.43.04 crores in 1980-81, which has increased by226.29 per cent in 1985-86,120.00 per cent, 31.39 per cent, 94.91 per cent, 22.05 per cent and 432.15 per cent in 1990-91, 1996-97, 2000-01, 2005-06 and 2008-09 as compared to 1980-81, 1985-86, 1990-91, 1996-97, 2000-01 and 2005-06 respectively.

In Pondicherry, these subsidies of fertilizers have increased from Rs.11.41 crores in 1996-97 to Rs.113.49 crores in 2008-09, whereas these have increased from Rs.0.22 crores in 1996-97 to Rs.0.52 crores in 2005-06 and further increased to Rs.2.44 crores in 2008-09in Andaman and Nicobar Islands.

The percentage share of Andhra Pradesh has increased from 10.67 in 1980-81 to 12.98 in 1990-91 and declined to 11.14 in 1996-97 and again increased to 12.33 in 2008-09. Karnataka has got third rank by receiving 6.39 per cent of fertilizers subsidies at the country level in 1980-81. It is found that in the same state, the percentage share has increased from 6.47 in 1985-86 to 8.07 in 2000-01 and declined to 7.54 in 2005-06. Kerala has got a little amount of percentage share during pre as well as post liberalisation periods.

Table 2

State-Wise Distribution of Fertilizers Subsidies in South Zone in India during 1980-81 to 2008-09

(In Rs. Crores)

South Zone							
Years/ States	1980-81	1985-86	1990-91	1996-97	2000-01	2005-06	2008-09
Andhra Pradesh	50.34 (10.67)	186.64 (10.34)	602.31 (12.98)	907.81 (11.14)	1,786.79 (13.02)	2,242.61 (12.62)	12,473.73 (12.33)
Karnataka	30.13 (6.39)	116.76 (6.47)	309.72 (6.68)	423.87 (5.20)	1,107.91 (8.07)	1,339.76 (7.54)	7,440.62 (7.35)
Kerala	8.54 (1.81)	29.97 (1.66)	90.87 (1.96)	96.27 (1.18)	142.32 (1.04)	177.88 (1.00)	1,059.79 (1.05)
Tamil Nadu	43.04 (9.12)	140.45 (7.78)	308.99 (6.66)	405.97 (4.98)	791.27 (5.77)	965.75 (5.43)	5,139.22 (5.08)
Pondicherry	-	-	-	11.41 (0.14)	19.45 (0.14)	37.41 (0.21)	113.49 (0.11)
Andaman and Nicobar Islands	-	-	-	0.22 (0.003)	0.35 (0.003)	0.52 (0.003)	2.44 (0.002)
Lakshadweep	-	-	-	821.18 (10.08)	-	-	-

Source: (1) Government of India, Fertilizers Association, Fertilizer Statistics, various issues, New Delhi.

(2) Government of India, Economic survey, union Budget, various years.

Note:(1) Fertilizers subsidies are calculated by multiplying the consumption of fertilizers (in 000 tonnes) with subsidy per tonne at national level

(2) Percentages are shown in parentheses

It is observed that the percentage share of Kerala has increased from 1.81 in 1980-81 to 1.96 in 1990-91 and declined to 1.05 in 2008-09.Tamil Nadu ranked second during 1980-81 to 1985-86, whereas it has lost its rank during 1990-91 to 2008-09. In Tamil Nadu, the percentage share has declined from 9.12 in 1980-81 to 4.98 in 1996-97 and increased to 5.77 in 2000-01.

Pondicherry has got 0.14 per cent during 1996-97 to 2000-01 and 0.11 per cent in 2008-09, whereas Andaman and Nicobar Islandshas got 0.003 per cent during 1996-97 to 2005-06 and 0.002 per cent in 2008-09. In 1996-97, Lakshadweep received Rs.821.18 crores (10.08 per cent at national level) as fertilizers subsidies.

The distribution of fertilizers subsidies per hectare in different states south zone of India during 1980-81 to 2006-07 is shown in table 3. During 1980-81 to 1985-86, Tamil Nadu has got first position, whereas in remaining years it has lost its same position. Tamil Nadu has got Rs.66.83, Rs.463.58, Rs.1,245.92 and 1,615.37 in 1980-81, 1990-91, 2000-01 and 2006-07 respectively. In Andhra Pradesh, these have gone up by 274.35 per cent in 1985-86 194.74per cent, 48.07per cent, 95.07 per cent and 72.33per cent in 1990-91 1996-97, 2000-01 and 2006-07 respectively. In Kerala, these have increased from Rs.29.98 in 1980-81 to Rs.299.41 in 1990-91 and further increased to Rs.837.68 in 2006-07.

In Karnataka, subsidies of fertilizers have risen up from Rs.28.39 in 1980-81 to Rs.262.08 in 1980-81 to Rs.262.08 in 1990-91 and further increased to Rs.1, 397.64 in 2006-07. In Pondicherry, these have increased from Rs.3,334.50 in 1996-97 to Rs.5,883.38 in 2000-01 and further increased to Rs.14,345.50 in 2006-07, whereas in Andaman and Nicobar Islands fertilizers subsidies have risen up by 158.65 per cent in 2000-01 and 580.90 per cent in 2006-07 as compared to 1996-97 and 2000-01 respectively.

This table reveals that Tamil Nadu has got first rank during 1980-81 to1990-91, whereas Pondicherry occupied first position during 1996-97 to 2006-07. The percentage share of Andhra Pradesh has increased from 7.41 in 1980-81 to 7.72 in 1985-86 and declined to 5.06 in 1996-97 and further declined to 4.72 in 2006-07, whereas increased from 5.11 in 1980-81 to 5.25 in 1985-86 and declined to 2.57 in 1996-97 and again increased to 4.18 in 2000-01 in Karnataka.

Table 3

State-wise distribution of Fertilizers Subsidies in South Zone in India during 1980-81 to 2006-07 (In Rs./ Hectare)

South Zone						
Years/ States	1980-81	1985-86	1990-91	1996-97	2000-01	2006-07
Andhra	41.17	154.13	454.30	672.69	1,316.46	2,268.67

Pradesh	(7.41)	(7.72)	(9.19)	(5.06)	(6.12)	(4.72)
Karnataka	28.39 (5.11)	104.68 (5.25)	262.08 (5.30)	341.47 (2.57)	900.07 (4.18)	1,397.64 (2.91)
Kerala	29.98 (5.39)	104.49 (5.24)	299.41 (6.05)	316.76 (2.38)	469.98 (2.18)	837.68 (1.74)
Tamil Nadu	66.83 (12.02)	205.81 (10.31)	463.58 (9.37)	624.76 (4.70)	1,245.92 (5.79)	1,615.37 (3.36)
Pondicherry	-	-	-	3,334.50 (25.09)	5,883.38 (27.34)	14,345.50 (29.85)
Andaman and Nicobar Islands	-	-	-	28.95 (0.22)	74.87 (0.35)	509.79 (1.06)
Lakshadweep	-	-	-	272.00 (2.05)	-	-

Source: (1) Government of India, Fertilizers Association, Fertilizer Statistics, various issues, New Delhi.

(2) Government of India, Economic survey, union Budget, various years.

(3) Government of Punjab, Statistical Abstract, Various years.

Note: (1) Fertilizers subsidies per hectare of states are calculated by multiplying the consumption of fertilizers (in Kgs) per hectare with subsidy per kg.

(2) Percentages are shown in parentheses

Tamil Nadu has enjoyed top most rank in 1980-81 by getting 12.02 per cent at National level, whereas it has lost its position in 1996-97 by getting 4.70 per cent and has got third rank in 2000-01 by receiving 5.79 per cent in 2000-01 and again has got third position in 2006-07 by receiving 3.36 per cent in 2006-07. Pondicherry has got 25.09 per cent, 27.34 per cent and 29.85 per cent in 1996-97, 2000-01, and 2006-07 respectively. It is found that the percentage share ofAndaman and Nicobar Islands has increased during pre as well as post liberalisation periods.

State-Wise Productivity of Crops in South Zone of India

Among the various agriculture subsidies, fertilizer subsidy is the next largest food subsidy. Fertilizer subsidy is a development subsidy, which accelerate the fertilizer use and thus

promote agricultural production. The central government removed the subsidy of fertilizer in the year 2003. There after agricultural production gradually decreased. The farmers were not able to purchased fertilizer on the higher price. In such a case farmers, fertilizer use for of their agricultural production gradually declined (Halmandage, 2010).

The State-wise distribution of total subsidies and productivity of different states in south zone in India are shown in table 4. This table reveals that in Andhra Pradesh, the total subsidies have increased from Rs.102.89 in 1980-81 to Rs.10,509.40 in 2006-07. The productivity of important crops in this state has increased from 16,791kgs. in 1980-81 to 1,07,655 kgs in 2006-07. Karnataka has received Rs.74.71, Rs.729.16 and Rs.4,446.72in 1980-81, 1990-91and 2006-07 respectively. In this state, the productivity has risen up from 22,760 kgs. in 1980-81 to 1,23,502 kgs and declined to 1,04,829 kgs. in 2006-07. Kerala has received subsidies of Rs.56.25 in 1980-81, which have increased to Rs.1,599.75 in 2006-07.

The productivity of Kerala has increased from 7885 kgs. in 1980-81 to1,09,076 kgs. in 1985-96 and declined to 67,986 kgs. in 1990-91 again increased to 95,193 kgs. in 2000-01 and again declined to 90,560 kgs. in 2006-07. In 1980-81, the total subsides of Rs.205.73 are distributed in Tamil Nadu, which have increased to Rs.2,832.93 in 1996-97 and declined to Rs. 2,414.77 in 2006-07. On the other hand the productivity increased from 13,627 kgs. in 1980-81 to 1,29,466 kgs. in 1996-97 and declined to 1,31,527 kgs. in 2006-07.

Andaman and Nicobar Islandshas got 158.65 per cent more subsidies in 2000-01 and 580.90 per cent in 2006-07 as compared to the predecessor year, whereas the productivity has declined from 2,555 kgs. in 1980-81 to 1,880 kgs. in 1985-86 and increased to 27,508 kgs. in 1990-91 and again declined to 2,656 kgs. in 1996-97 and again increased to 30,896 kgs. in 2006-07. A lot of variation is seen in total subsidies as well as in productivity in Pondicherry, Himachal Pradesh throughout the study period.

The percentage share of Andhra Pradesh in total subsidies has increased from 7.55 in 1980-81 to 8.92 in 2000-01 and percentage share in productivity increased from 3.59 in 1980-81 to 6.13 in 1985-86 and declined to 5.51 in 2006-07. Karnataka has got 5.48 percentage share of subsidies and 4.87 percentage share of productivity in 1980-81. Its percentage share in subsidies declined from 6.21 in 1985-86 to 3.78 in 2006-07, whereas its percentage share in productivity declined from 7.13 in 1985-86 to 5.37 in post liberalisation period (2006-07).

Table 4

State-wise Distribution of Total Subsidies and Productivity in South Zone in India during 1980-81 to 2006-07

(Subsidies (Subs.) in Rs. / Hectare, Productivity (Prod.) in Kgs./Hectare)

Years/ States	1980-81	1985-86	1990-91	1996-97	2000-01	2006-07
Andhra Pradesh	16,791 (3.59)	75,200 (6.13)	83,104 (4.68)	8,3153 (5.71)	97,414 (5.65)	1,07,655 (5.51)
Karnataka	22,760 (4.87)	87,592 (7.13)	93,983 (5.29)	1,06,349 (7.30)	1,23,502 (7.16)	1,04,829 (5.37)
Kerala	7,885 (1.69)	1,09,076 (8.88)	67,986 (3.83)	82,474 (5.66)	95,193 (5.52)	90,560 (4.64)
Tamil Nadu	13,627 (2.91)	1,06,759 (8.70)	1,28,040 (7.21)	1,29,466 (8.89)	1,35,192 (7.84)	1,31,527 (6.73)
Pondicherry	12,717 (2.72)	2,344 (0.19)	96,112 (5.41)	2,489 (0.17)	4,841 (0.28)	80,998 (4.15)
Andaman and Nicobar Islands	2,555 (0.55)	1,880 (0.15)	27,508 (1.55)	2,656 (0.18)	2,752 (0.16)	30,896 (1.58)

Source:-(1) Government of Punjab, Statistical Abstract, various years(2) Government of India, Fertilizers Association, New Delhi(3) Government of India, State Electricity Boards (SEBs), Annual reports, various years; (4) Government of India, Water Price policy, 2010.

Note:- (1) * Subsidies of this year does not include irrigation subsidies (2) Percentages are shown in parentheses

The percentage share of Kerala in total subsidies declined from 4.13 in 1980-81 to 2.66 in 1996-97 and further declined to 1.36 in 2006-07 and the percentage share in productivity has increased from 1.69 in 1980-81 to 8.88 in 1985-86 and declined to 3.83 in 1990-91 and again increased to 5.66 in 1996-97 and again declined to 4.64 in 2006-07. Tamil Nadu has got first position by receiving maximum amount of subsidies during pre as well as post liberalisation periods and third, second, first rank in 1980-81, 1985-86 and 2006-07 respectively.

Major Findings and Policy Implications

During post-liberalisation period (in 2006-07), the GCA in absolute terms has declined in all the states of south zone except in Karnataka, Tamil Nadu and Lakshadweep as compared to pre-liberalisation period (in 1990-91), whereas percentage share increased in all the states except in Pondicherry, Lakshadweep (percentage share remains constant) and in Andaman and Nicobar (percentage share declined). During pre-liberalisation period (1990-91), in Andhra Pradesh, GCA has increased approximately two times than that of Tamil Nadu, whereas Karnataka has got near about four times GCA as compared to Kerala, Pondicherry has received near about fifteen times as compared to Lakshadweep in 1990-91, on the other hand, Pondicherry has got twelve times more of GCA as compared to Lakshadweep in 2006-07.

As the year 2008-09 is compared to the year 1990-91, it is found that in Karnataka, the fertilizers subsidies have increased by twenty four times more of fertilizers subsidies, in Andhra Pradesh near about twenty one times and in Kerala near about twelve times. Andhra Pradesh has got 1.94 times fertilizers subsidies as compared to Karnataka during pre as well as post liberalisation periods. Tamil Nadu has received 3.4 times more of fertilizers subsidies and 4.85 times in 1990-91 and 2008-09 respectively as compared to Kerala.

In all the states of south zone the fertilizers subsidies in Rs. per hectare have increased in absolutes terms during 1980-81 to 2006-07, whereas the percentage share has increased during pre-liberalisation period in Andhra Pradesh, Karnataka and Kerala and a lot of variation is observed during post liberalisation period. Among all the states of this zone, in Karnataka, these have risen up by more than five times, in Andhra Pradesh 4.99 times and in Kerala near about three times during post-liberalisation period (2006-07) from pre liberalisation period (1990-91).In 1990-91, Andhra Pradesh from Karnataka and Tamil Nadu from Kerala have received less than times more of fertilizers subsidies per hectare, the same pattern is also seen in post liberalisation period.

As compared to the year 2006-07 with the year 1990-91, productivity has increased maximum 1.33 times in Kerala, 1.29 times in Andhra Pradesh, 1.12 times in Karnataka and 1.03 times in Tamil Nadu. During pre- liberalisation period (in 1990-91), Tamil Nadu has got 1.36 times of productivity than that of Karnataka, on the other hand, during post-liberalisation period (in 2006-07), Tamil Nadu has got 0.79 times of productivity than that of Karnataka.

From the study, it is observed from the analysis that at state level, there is unequal distribution of fertilizers subsidies during the study period.It is observed that Andhra Pradesh got first rank among all the other states in GCA as well as in fertilizers in Rs. crores, whereas got second rank in fertilizers subsidies in Rs. per hectare throughout the study period. An interesting fact is found that Pondicherry occupied fifth position in GCA during 1980-81 to 2006-07, on the other hand, the same state got first rank by getting maximum percentage of fertilizers subsidies Rs. per hectare, Lakshadweep achieved seventh and second rank in GCA and fertilizers subsidies in the year 1996-97. In case of productivity, Tamil Nadu got first rank, whereas a lot of variation is seen in GCA as well as fertilizers subsidies during 1990-91 to 2006-07. The findings indicate that the centre government should adopt some criteria to give away subsidies to states either on the basis of gross cropped area or productivity.

References

[1] Grossman Nick and Dylan Carlson, Agriculture Policy in India: The Role of Input Subsidies, *USITC Executive Briefings on Trade* March 2011

[2] Government of Punjab, State Environment of Punjab – 2005.

[3] Bhalla, G.S and Gurmail Singh, Economic Liberalisation and Indian Agriculture:A State-wise Analysis, 24(2) *Economic and political l Weekly*, 2009.

[4] Sharma, Vijay Paul andThaker, Hrima**,** Fertilizer Subsidy in India: Who are the Beneficiaries?,Working Paper, *Indian Institute of Management*, 2009

[5] Sidhu, Jagrup Singh and D.S. Sidhu, Price-Support versus fertilizer subsidy: An evaluation, *Economic and Political Weekly*, 20(13), 1985.

[6] Majumdar, H.H., Fertilizer subsidy in India - who benefits?,*Economic and Political Weekly*, 67 (11),1993

[7] Bhalla,G.S. and Gurmail Singh,Economic Liberalisation and Indian Agriculture:A State-wise Analysis,*Economic and Political Weekly*, 25(52), 2009

[8] Government of Punjab, Statistical Abstract, Various Years

[9] Government of India, Fertilizers Association, Fertilizer Statistics, various issues, New Delhi.

[10] Government of India, Economic survey, union Budget, various years.

[11] Halmandage, B.V. and Dr.N.N.Munde, A Study of fertilizer subsidy in India, *International ResearchJournal*, 1(7), 2010.