CHAPTER - III

REVIEW OF AGRICULTURAL POLICIES IN INDIA AND KARNATAKA

3.1 INTRODUCTION

Policy is a Government agenda for the development of particular sector. Agricultural policies represent a set of mandatory regulations, designed to achieve certain public goals (Oskam et al 2011). Agriculture Policy formulation in India is very complex because agriculture is a state subject. But some of the related subjects are in the centre list. The state policies have to be formulated in accordance with the national agenda. The present chapter traces the formulation of agriculture policy in India since independence. Since the decisions of the farmers are influenced by the changes in the input prices and output prices, agriculture price policy and fertilizer policies were also included in the review. Agricultural policies in India and Karnataka is analyzed in this chapter from, 1947 to 1999 some committees appointed to attempt making agricultural policies, National Agricultural policy 2000, Karnataka state agriculture policy 1995, Karnataka state policy on organic farming 2004, Karnataka state agriculture policy 2006, National Farmer Policy 2007, Integrated agribusiness development policy 2011, Karnataka agriculture marketing policy 2013, Input policies that means subsidies on irrigation, Power, fertilizer, Credit Policy for Agriculture, Price Policy and Output policy like minimum support price for various commodities, and Finally the Fertilizer Policy in India.

Policy making in agriculture is set with several difficulties. The following are some of the problems in making agricultural policy. First, agriculture is an unorganized sector activity and therefore policy responses could not be predicted priori with objective probabilities. Second, the information flow to agricultural sector is not as quick as it takes place in other sectors. The information asymmetry poses problems in predicting outcomes. Climatic differences and their influence on agriculture is the third problem. The fourth issue is uneven distribution of land and assets in the sector. Apart from these above, the sector has a strong link with consumers and other industries. The aggregate growth of the economy of any country is sensitive to the fluctuations in this sector. Therefore, the impact of agricultural policies in India needs to be analyzed in conjecture with other policies.

The process of formulating and implementing agricultural policies in India is very complex because several ministries, departments and institutions at both the centre and the
state level are involved in the process. The Union Ministry of Agriculture, under the guidance of the Planning Commission (presently NITI Ayoga), provides the broad guidelines for agricultural policies. But the implementation and administration of agricultural policies remain the responsibility of respective state governments. The allocation of funds to agriculture is guided by the Planning Commission and is routed primarily through the Ministry of Agriculture to various departments.

Agricultural policy comprises different components relating to agricultural production, processing, marketing etc. Various agencies are involved in the implementation of agricultural policy at various levels. Policies relating to agricultural production are the responsibility of Ministry of Agriculture, horticulture, irrigation and power etc. On the other hand price related policies involve ministries of commerce, processing and agricultural marketing commodity boards, corporations like Cotton Corporation of India (CCI) etc. Credit is one of the important agricultural inputs and RBI, NABARD, ministry of finance, commercial banks, regional rural banks are involved in the implementation. Several central and state agricultural research institutions and universities are involved in the knowledge production and agricultural extension work. Therefore several agencies at the centre and state are responsible for the implementation of various components of agricultural policy.

3.2 HISTORY OF AGRICULTURAL POLICY IN INDIA

India has been an agriculture based country. Though its share in the GDP has been declining, still a sizable population is dependent on agriculture for the livelihoods. Since this sector influences the lives of several people, attempts have been made since independence to evolve appropriate agricultural policy which creates incentives for increased production. The present section reviews the development of agricultural policy in India since independence through five year plans.

Various committees have been constituted to review and suggest policies relating to different aspects of agricultural sector like agricultural production, credit, processing, marketing etc.

The first ever committee was Food Grains Policy Committee of 1943 constituted under the chairmanship of Gregory. The committee, popularly known as Gregory Committee (1943) was constituted mainly to focus on food availability, supplies, distribution and control price because food availability situation in India worsened due to the Second World War and
cessation of rice supplies from Burma. Immediately after attaining independence, government faced severe food shortage problem due to lower yield levels and the problem of refugees. Government appointed a committee under Thakurdas in 1947. The committee was also known as Foodgrain Policy Committee (1947). Thakurdas committee was appointed to study the food distribution aspects, the committee recommend to progressively decontrol food. The main features of this policy were gradual withdrawal of control and removal restrictions on movements of foodgrains. However this policy of decontrol could not be pursued due to persistent shortage and large imports. Subsequently Maitra Committee (1950), Mehta Committee(1957), Venkatappaiah committee (1966) were constituted. These three committees were appointed to enquire into food problems and solve the issues. The reports of these committees are important documents in the formulation of agricultural policy subsequently. It is important to observe that all these committees equated food production with agricultural development. Therefore they investigated the issues of food production and made recommendations for improving food production. The first attempt for a comprehensive agricultural policy came from High Powered Committee (1990).

“During the late eighties a committee was appointed to look into the problem of agriculture. This report of the High Power Committee (1990), Chaired by Bhanu Pratap Singh, made recommendations covering all major sectors of agricultural economy”. (Deshpande and Prachitha, 2006) This committee provided a clear picture of agricultural policy, and also this document was very comprehensive, dealing with agricultural policy in the most needed form.

During 1999 agricultural policy document prepared by the Government under the Prime Ministership of Shri H.D Devegowda; But due to instability of the government, policy document could never make it to the floor of the house. After this there is no serious attempt to made a agricultural policy up to announcement of National Agricultural Policy 2000.

Based on the recommendations made by the High Powered Committee several discussions took place and the first draft of agricultural policy resolution was introduced under the Prime Ministership of V.P Singh. But it is only in 2000 the first ever comprehensive National Agricultural Policy was introduced in Loksabha and got its approval.

“It is observed that India never had a formal and comprehensive policy on the agriculture in the five decades since Independence. Not that there were no pronouncements of policy on Agriculture. In fact, there were a quite few: some on land redistribution, some on
this or that specific input, infrastructure, on technology. Statement on food situation were plenty: but the policies, or absence thereof, they contain concern supplies for that public distribution system and only incidentally, production and productivity. A policy statement defines the role of agriculture in the overall economy and its development is conspicuously absent”. (GOI, 1990 quoted in Deshpande and Prachitha, 2006)

3.3 AGRICULTURAL SECTOR THROUGH FIVE YEAR PLANS

Though there is no comprehensive policy addressing agriculture sector, agriculture sector was given importance in five year plans and programmes were introduced to promote agriculture sector. This section reviews the programmes introduced during the five year plans.

First Five Year Plan (1951-56)

Agriculture sector was given topmost priority in the first plan period. This plan mainly concentrated on increasing the food production as there was severe food shortage in India. About one third (31%) of the plan outlay was allocated to agriculture sector. Major features of this plan were abolition of zamindari system, the launching the community development programmes, Grow More Food campaign along with improvement in other related fields like marketing, animal husbandry, soil conservation and fisheries. The production of food grains increased from 54 million tones in 1950-51 to 65.8 million tones at the end of the plan period.

Second Five Year Plan (1956-61)

During the second five year plan period priority was given to industrial sector. The plan outlay for the agriculture sector was only 20%. Fixed target of food production during this plan was 80.5 million tonnes, but the actual production was 79.7 million tonnes. There was shortage in the production of all crops except sugarcane. Food grains were imported to meet the shortage.

Third Five Year Plan (1961-66)

The main objective of this plan was to achieve self sufficiency in food grains and to increase the agricultural production to meet the needs of industry and export. Accordingly the plan gave higher priority to agriculture sector and irrigation than to industry development. Specific programs like the Intensive Agricultural District Programme (IADP), and High Yielding Varieties Programmes were introduced. Government popularized the HYV of wheat
and rice developed in Mexico and Philippine respectively. This was popularly known as
Green Revolution. The plan targeted to increase overall agricultural production by 30%, but
the achievement were disappointing. Due to the drought condition in 1965-66, the production
increased by 10% only against the target of 30%.

With the experience of the third plan, the planning commission assigned greater
priority to agriculture in the succeeding plans. Originally fourth plan was drafted in 1966. It
was abandoned on account of economic disturbance like two years of drought, devaluation of
rupee and inflationary condition. Instead three annual plans were implemented between 1966-
69.

**Three Annual Plans (1966-69)**

During this period high priority was given to minor irrigation and this was followed
by adoption of a high yield variety programme to increase agriculture production and
productivity. During this period government set up Agricultural Price Commission to assure
minimum support price to farmers and the Food Corporation of India (FCI) for maintaining
buffer stock to overcome fluctuations in the supplies of food grains and their prices.

**Fourth Five Year Plan (1967-74)**

Two important objectives relating to agriculture sector were set during this plan. The
first was providing the conditions necessary for a sustained increase of food production by
about 5% per annum over the decade of 1969-78. Secondly, was enabling a large section of
the rural population including small farmers in the dry areas and agricultural labourers to
participate in the process of agricultural development and share its benefit. The approach to
fourth plan emphasized the necessity to create favourable economic conditions for the
promotion of agriculture and systematic efforts to extend the application of science and
technology to improve agricultural practices. The allocation to agriculture was 23% of the
total plan outlay. However, the target was not achieved. The actual production of food grain
was 104.7 million tones in 1973-74 as against target increase of 129 million tones.

**Fifth Five Year Plan (1974-79)**

Fifth five year plan was introduced under severe economic crisis. It was proposed to
achieve the two objectives; removal of poverty and attainment of self reliance through
promotion of higher rate of growth, better distribution of income and a very significant step
up in the domestic rate of saving. During the fifth plan Rs 8080 crores, constituting nearly
21% of the total plan outlay was allocated for agriculture and irrigation development. This plan gave priority to the spread of High Yield Varieties cultivation, greater use of fertilizer, pesticides and insecticides to increase agricultural production. This plan provided special emphasis on small and marginal farmers, dry farming techniques, evolving of High Yield Varieties (HYV) seeds for other crops, and for desert land reclamation. The fifth plan was terminated at the end of fourth year in March 1978.

Sixth Five Year Plan (1979-83)

There were two sixth plans. The first was under the Janatha Party for the period 1978-83 and the second was under Congress during 1980-85. From the sixth plan 1980-85 onwards new impetus was given to agriculture with 24% of budget allocation. Agriculture sector grew at an annual rate of 4.3% and food grain production increased to 152 metric tons and this was named as second green revolution. This has spread into eastern and central states include West Bengal, Bihar, Orissa, Madhya Pradesh, and eastern Uttar Pradesh.

Seventh Five Year Plan (1985-90)

This plan emphasized on policies and programs for rapid growth in food grains production. Public sector plan outlay in seventh plan relating to agriculture was Rs.10.52 crores but actual spending was Rs. 12.79 crores. This plan gave more emphasis on specific projects like Special Rice Production Programme in the Eastern Region, National Watershed Programme for Rain Fed Agriculture, National Oilseeds Development Project, and Social Forestry etc. The seventh five year plan got extended beyond its period by two years. Therefore eighth plan was introduced only in 1992.

Eighth Five Year Plan (1992-97)

Eighth five year plan was introduced in the changed economic environment. New Economic Policy (NEP) was introduced with stabilization and structural adjustment measures. Liberalization, privatization and globalization are the main features of the New Economic Policy 1991. On the lines of conditionalities of the International Monetary Fund (IMF) and world bank, steps were taken towards reducing the role of the state and encouraging active private sector participation. The same mood was reflected in the strategy of the eighth plan in the form of attempts to promote private initiatives, participation of NGOs and Panchayat Raj Institutions (PRI). This plan attempted to promote a regionally more broad based pattern of agricultural growth. The salient feature of this plan was faster
growth of the manufacturing and agriculture and allied sectors. The public sector outlay in eighth plan related to agriculture was Rs. 22467 crores.

**Ninth Five Year Plan (1997-2002)**

The objectives of the 9th plan related to agriculture are as follows,

- Priority to agriculture and rural development with a view to generate adequate production, employment and eradication of poverty.
- Ensuring food security and nutritional security for all, particularly the vulnerable sections of the society.
- Promoting and developing people’s participatory institutions like PRI, Co-operatives and SHGs.

The ninth plan proposed to realize the targets through a regionally differentiated strategy based on agronomic, climatic, and environment friendly conditions. For the first time ninth plan developed agricultural strategy based on the broad regional characteristics of the agro-economic situations as

- North western High Productivity Regions: The strategy is to promote diversification and high value crops and to strengthen linkages with the agro processing industry and exports and creation of basic infrastructure.
- Eastern Region with abundant water: The strategy is to exploit the productivity potential of this region, bringing the yield to the levels of high productivity states of Haryana and Punjab.
- Water-scare Region - Peninsular India and Rajasthan: Development of efficient water harvesting and conservation methods and technologies, suitable irrigation packages based on watershed approach and promoting appropriate farming systems.
- Ecologically Fragile Regions – including Himalaya and Desert Regions: The thrust will be on the development of eco-friendly agriculture in these regions.

The much awaited National Agricultural Policy 2000 was announced during the ninth plan period. This has changed the approach from the earlier scheme approach to macro management approach. Several initiatives were taken during this plan in accordance with the agricultural policy, 2000. Some of these are creation of a Watershed Development Fund with NABARD in 1999-00, introduction of Technology Mission for Integrated Development of
Horticulture in the North Eastern Region in 2000-01, Technology Mission for Cotton in 1999-00, introduction of centrally sponsored scheme for Farm Water Management to increase crop production in eastern India in 2001-02. The other important policy measures are legislation for plant variety protection and farmers rights, announcement of National Seed Policy in 2002 and implementation of National Agricultural Insurance Scheme in 1999-2000. To address the credit needs credit linked capital subsidy scheme for construction/modernization/expansion of cold storage infrastructure was introduced in 2000-01. The other schemes were introduction of rural godown scheme 2001-02, lifting some of the restrictions and controls on the movement and storage and export of foodgrain or agricultural produce, dereservation of the manufacture of some farm implements/machineries from the small scale industry sector 2002.

Public sector outlay in ninth plan related to agriculture and allied activities was Rs. 37546 crores. The performance of the agriculture sector during this plan period was not encouraging. The average growth was 2.06% through the targeted growth was 3.9%. The average annual production of pulses was marginally declined to 13.3 metric tones from 13.41 metric tons during the eighth plan. However there is an increase in the production of food grains to 202.58 metric tones.

**Tenth Five Year Plan (2002-07)**

During the tenth plan Public sector outlay related to agriculture and allied sector was Rs.58933 crores. During this plan period Ministry of Agriculture introduced several programs aimed at diversification of agriculture, strengthening technology validation, demonstration and dissemination, water saving and development infrastructure. The programs are National Horticulture Mission, Micro Irrigation Programme, National Gender Resource Centre in Agriculture, Jute Technology Mission, National Agricultural Innovation Project, National Fisheries Development Board, National Mission on Bamboo Technology and Trade Development. Government decided to set up a Krishi Vigyan Kendra (KVK) in each rural district (578) in the country. Agriculture Technology Management Agencies (ATMAs), the National Rainfed Area Authority (NRAA) were introduced. Government upgraded a rehabilitation package amounting to Rs 16978.69 crores for farmers in distress in 31 selected districts in Andhra Pradesh, Karnataka, Kerala, Maharashtra. These packages from prime minister relief fund were released to strengthening institutional credit support, irrigation development, promotion of micro irrigation, watershed development, extension services,
enhancing Seed Replacement Rate (SRR) and income augmentation through horticulture, livestock and fisheries in above mentioned states.

Eleventh Five Year Plan (2007-12)

This plan emphasized inclusive growth to achieve a target growth of 4% per annum in GDP from agricultural and allied services. Eleventh plan identified the need for improving the access to technology to increase production and optimum use of natural resources. There are identified tools to make agricultural sector inclusive in the development process. The plan aimed to attracting higher public investments and promoting diversification to higher value crops and livestock, decentralizing decision making to address location specific local problems and to improve the accessibility of land, credit to the farmers. Several programmes like National Food Security Mission (NFSM), Rashtriya Krishi Vikasa Yojana (RKVY), Macro Management of Agriculture (MMA), Integrated Scheme of Oil Seeds, Pulses, Oil Palm, and Maize (ISOPOM), National Mission for Sustainable Agriculture (NMSA), National Project on Management of Soil Health and Fertility (NPMSHF) were introduced. During this plan period the projected allocation for agriculture and irrigation was Rs 121556 crores at 2006-07 prices.

3.4 NATIONAL PROJECT ON MANAGEMENT OF SOIL HEALTH AND FERTILITY (NPMSHF)

Government of India has introduced NPMSHF during 2011-12 in order to provide access to information about soil fertility management to farmers through improving the soil testing facilities by establishing more testing laboratories including mobile testing facilities, training and demonstrations and financial assistance for promotion of Integrated Nutrient Management (INM). The following table shows the progress in release of funds under different components.
Table 3.1
Funds sanctioned under National Project on Management of Soil Health and Fertility (NPMSH-F), Integrated Scheme of Oilseeds, Pulses, Oilpalm and Maize (ISOPOM) in India

<table>
<thead>
<tr>
<th>Components</th>
<th>Unit</th>
<th>2010-11</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting up/Strengthening of Soil Testing Laboratories</td>
<td>Nos.</td>
<td>35</td>
<td>17</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Setting up/Strengthening of Fertilizer Quality Control Laboratories</td>
<td>Nos.</td>
<td>2</td>
<td>7</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Trainings</td>
<td>Nos.</td>
<td>184</td>
<td>297</td>
<td>0</td>
<td>160</td>
</tr>
<tr>
<td>Demonstrations</td>
<td>Nos.</td>
<td>274</td>
<td>210</td>
<td>0</td>
<td>472</td>
</tr>
<tr>
<td>Promotion of Integrated Nutrient Management (INM)</td>
<td>Ha.</td>
<td>0</td>
<td>82000</td>
<td>0</td>
<td>11140</td>
</tr>
<tr>
<td>Total Amount Sanctioned under NPMSH and F</td>
<td>Rs. in Crore</td>
<td>16.89</td>
<td>11.29</td>
<td>8.29</td>
<td>19.15</td>
</tr>
<tr>
<td>Total Amount Sanctioned under ISOPOM</td>
<td>Rs. in Crore</td>
<td>55.8</td>
<td>64.88</td>
<td>32.35</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: indiastat.com

The data shows that 35 laboratories were set up in 2010-11 and 17 in 2013-14. The project also proposed to strengthen the fertilizer quality control laboratories. The project gave greater importance to demonstrations and conducted 274 demonstrations in 2010-11 and 472 in 2013-14. The project aimed at promotion of Integrated Nutrient Management (INM). During 2011-12, 82000 ha were brought under INM. An amount Rs 16.89 crores was spent in 2010-11 and during 2013-14 an amount of Rs 19.15 crores was spent. Exclusively for oilseeds, pulses, oil palm and Maize (ISOPOM) an amount of Rs 55.8 crores was spent in 2010-11 and 27.00 crores during 2013-14.

3.4.1 Allocation to Southern Region

The following table shows allocation to southern states under NPMSH-F during 2015-16. The data shows that among southern states, Karnataka was sanctioned highest amount of Rs 7.53 crores. The next is Andhra Pradesh with an amount of Rs 4.61 crores.

Table 3.2
Allocation of funds under NPMSH-F to southern states during 2015-16

<table>
<thead>
<tr>
<th>States/Uts</th>
<th>Allocation (Rs in Crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>4.61</td>
</tr>
<tr>
<td>Karnataka</td>
<td>7.53</td>
</tr>
<tr>
<td>Kerala</td>
<td>0.87</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>3.47</td>
</tr>
<tr>
<td><strong>India</strong></td>
<td><strong>90.02</strong></td>
</tr>
</tbody>
</table>

Source: Indiastat.com
3.4.2 Establishment of Soil Testing Laboratories

As explained earlier, soil testing is given highest priority under this project so that location specific nutrient requirement can be identified and recommended. Therefore the project has proposed to start mobile and static soil testing laboratories all over India to cater to the needs of the soil testing. The proposed soil testing laboratories during 2007-12 in south zone is presented in table 3.3.

The data shows that largest number of soil testing laboratories were proposed in Karnataka and Tamil Nadu. While 15 mobile soil testing laboratories were proposed in Karnataka, 12 were planned in Tamil Nadu and 7 in Andhra Pradesh, 29 static laboratories were proposed in Karnataka and 24 in Tamil Nadu.

<table>
<thead>
<tr>
<th>States/Uts</th>
<th>Mobile</th>
<th>Static</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>7</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>Karnataka</td>
<td>15</td>
<td>29</td>
<td>44</td>
</tr>
<tr>
<td>Kerala</td>
<td>7</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>12</td>
<td>24</td>
<td>36</td>
</tr>
<tr>
<td>Puducherry</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Andaman and Nicobar Islands</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Lakshawdeep</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

*Source: Indiastat.com*

Twelfth Five Year Plan (2012-17)

Twelfth five year plan emphasized on inclusive growth. The plan document observed that agriculture growth has always been an important component for inclusiveness in India and higher GDP growth without corresponding growth in agriculture leads to accelerating inflation in the country. It was estimated that 9.0% growth of the economy as a whole will generate the demand to support 4.0% growth in agriculture with food grains growing at about 2.0% per year and non food grain growing at 5.0 to 6.0%.

3.5 NATIONAL AGRICULTURAL POLICY 2000

The first ever comprehensive National Agricultural Policy in India was announced in 2000. The major objectives of this policy are to attain-
1. A growth rate in excess of 4% per annum in the agriculture sector.

2. A growth that is based on efficient use of resources and conserves soil, water and biodiversity.

3. A growth with equity, i.e. growth which is wide spread across regions and farmers.

4. Growth that is demand driven and caters to domestic markets and maximises benefits from exports of agricultural products in the face of the challenges arising from economic liberalisation and globalisation.

5. Growth that is technologically, environmentally and economically sustainable.

The objectives of this policy are broad based aiming at promoting agricultural development with efficient use of resources and equitable distribution of the fruits of the development. These two objectives are essential for sustainable development. The policy also aims at maximising the benefits from domestic and international market which is very appropriate under the neo-liberal policies of privatization and globalization.

3.5.1 Focus Areas under National Agricultural Policy (NAP) 2000

To attain the stated objectives, the policy focused on the following areas,

1. Changing the approach of addressing agriculture sector from schematic approach to macro management approach. Central government is expected to assume the role of advocacy, articulation and facilitation to help the states in their efforts towards achieving accelerated agricultural development.

2. Efficient use of natural resources like soil, water, biodiversity and environment are essential for sustainable agriculture. The policy suggested that sustainable agriculture should be promoted through technically sound, economically viable, environmentally non-degrading and socially acceptable use of natural resources. Therefore the policy aims at promoting special measures for conserving soils and enriching the fertility, watershed approach, promotion of balanced and optimum use of fertilizers together with organic manures etc.

3. Another important area of focus is on providing adequate and timely inputs including credit. This is aimed to be achieved by creating favourable atmosphere for public and private capital formation, providing micro credit etc.
4. The policy took into consideration regarding the importance of main streaming gender concerns in agriculture with appropriate structural, functional and institutional measures for empowerment of women.

5. The importance of tenancy reforms, right of tenants and share croppers was also identified as one important factor for attaining equity. Therefore the policy focuses on consideration of land holdings, redistribution of ceiling surplus land and waste lands among the land less farmers, unemployed youth with initial capital and tenancy reforms.

6. Promoting private sector participation through contract farming and land leasing arrangements to allow accelerated technology transfer, capital inflow and assured markets.

Though the policy is a broad policy taking into account several aspects of agricultural sector, it was severely criticised by the researchers.

According to Thamarajakshi (2000) the National agricultural policy is a broad policy and it is in a way the extension of what was proposed in the IX Plan. But, the themes are too general and unrelated to the specified objectives. Due to this, the document does not lead to a cogent set of policy measures and it does not prioritise the tasks to be undertaken.

The document does not spell clearly the strategies to be adopted and it neglects the most important aspect of mounting subsidies, decreasing public and private investment and growing disparities among the states. Infrastructure is also another area which was neglected, it is not possible to make the agriculture sector competitive in the process of globalisation without a focus on infrastructure. (Indira, 2000)

Deshpande and Praschita (2006) pointed out that “The National Agricultural Policy has not followed some simple steps in evolving a national level policy frame”. According to them the policy ignored the importance of evolving a policy with the involvement of all the stakeholders. It missed the important steps of review of earlier experience, inviting comments, deliberations on various dimensions of the policy etc.
3.6 NATIONAL POLICY FOR FARMERS 2007

Government of India has appointed M.S. Swaminathan as the chairman of National Commission on Farmers and the commission submitted its report on October 2006. The commission also prepared a draft National Policy for Farmers incorporating its recommendations. After consultations with the state governments and the concerned central ministries, Government of India approved the National Policy for Farmers 2007.

3.6.1 The Major Goals of the National Policy for Farmers 2007

The important goals of the National Policy for Farmers 2007 are

1. To improve economic viability of farming by substantially increasing the net income of farmers and to ensure that agricultural progress is measured by advances made in their income.

2. To protect and improve land, water, bio-diversity and genetic resources essential for sustained increase in the productivity, profitability and stability of major farming systems by creating an economic stake in conservation.

3. To develop support services including provision for seeds, irrigation, power, machinery and implements, fertilizers and credit at affordable prices in adequate quantity for farmers.

4. To strengthen the bio-security of crops, farm animals, fish and forest trees for safeguarding the livelihood and income security of farmer families and the health and trade security of the nation.

5. To provide appropriate price and trade policy mechanisms to enhance farmers income.

6. To provide for suitable risk management measures for adequate and timely compensation to farmers.

7. To complete the unfinished agenda in land reforms and to initiate comprehensive asset and Aquarian reforms.

8. To mainstream the human and gender dimension in all farm policies and programmes.

9. To pay explicit attention to sustainable rural livelihoods.
10. To foster community-centric food, water and energy security systems in rural India and to ensure nutrition security at the level of every child, woman and man.

11. To introduce measures which can help attract and retain youths in farming and processing of farm products for higher value addition by making it intellectually stimulating and economically rewarding.

12. To make India a global outsourcing hub in the production and supply of the inputs needed for sustainable agriculture, products and processes developed through biotechnology and Information and Communication Technology (ICT).

13. To restructure the agricultural curriculum and pedagogic methodologies for enabling every farm and home science graduate to become an entrepreneur and to make agricultural education gender sensitive.

14. To develop and introduce a social security system for farmers.

15. To provide appropriate opportunities in adequate measure for non-farm employment for the farm households.

An Inter-Ministerial Committee was set up under the Chairmanship of the Principal Adviser in the Department of Agriculture and Cooperation for preparation of a Plan of Action for operationalization of the NPF, 2007. The Committee comprised officers of Central Ministries/Departments concerned as members. After several discussions the final plan of action for operationalization of the NPF 2007 was finalized and circulated among all concerned in 2008. The Committee identified 201 steps where necessary action was to be taken. Out of these 201 points, 64 relate exclusively to the Department of Agriculture and Cooperation (DAC), another 64 relate exclusively to other Central Departments/ Ministries and 73 points are common to the DAC and other Departments. Another Inter-Ministerial Committee (IMC) was set up under the Chairmanship of Joint Secretary (Policy), Department of Agriculture & Cooperation to monitor the progress of implementation of these 201 action points. A regular monitoring mechanism has also been put in place to oversee the progress of implementation of the NPF 2007. (Government of India, 2014)
3.7 REVIEW OF AGRICULTURAL INPUT AND OUTPUT POLICIES

Landes and Gulati (2003) observed that “India’s major domestic agricultural policy instrument include a system of minimum support prices for major crops, input subsidies on fertilizer, power and irrigation water and public investment in surface, and to a lessor extent, ground water irrigation”.

The review of the agricultural policy at the centre shows that no attempts are made to evolve a comprehensive policy to address the issues in agricultural sector till the announcement of National Agricultural Policy, 2000. Even this policy is also only guidelines under which the respective state governments are expected to prepare their policies. Due to the linkages between the input policies and output policies it is important to look into these policies to understand the impact of agricultural policies on soil fertility management practices of the farmers. Therefore an attempt is made to review the agricultural input policies and output policies in the following section. While majority of the input policies are related to subsidy, output policies are related to price support and export promotion.

Agricultural subsidies are generally two types; investment subsidies and input subsidies. Investment subsidies aim to improve the farm productivity level by encouraging farmers to develop infrastructural facilities like installation of drip irrigation, construction of rain water harvesting system and acquiring farm implements. Input subsidies are fertilizer subsidy and also subsidy on water and electricity used for irrigation and other agricultural purposes. At present input subsidies are also provided on seeds as well as on herbicides and pesticides. Farmers also get subsidy on credit from banks and co-operatives under priority sector lending.

The agricultural input subsidy programmes in India originated during the Green Revolution period of 1960s, to support the green revolution through providing subsidies to fertilizers, irrigation, power and credit. Fertilizer subsidy is provided by the central government, power and irrigation subsidy given by the respective state governments.

All these subsidies by reducing the prices of the inputs, served in the initial stages of green revolution, as incentives to the farmers for adopting the newly introduced seed cum fertilizer technology. (Rajwinder Kaur and Manisha Sharma, 2012)
3.7.1 Fertilizer Subsidy

Fertilizer subsidy was provided by central government from the green revolution period, during 1960s. The main aim of this subsidy is to provide fertilizers to the farmers at reduced prices for encouraging the usage of chemical fertilizers. These subsidies are increasing year after year. While total fertilizer subsidy was amounting to only Rs 33 crores in 1973-74, it increased to Rs 72079 crores by 2014-15. Details of fertilizer policy is discussed in the fourth chapter.

3.7.2 Electricity Subsidy

Electricity is another important input to agriculture. Irrigation is dependent on power supply and the price. Therefore electricity subsidy was introduced in the green revolution period for promoting irrigation. Power subsidy is provided by respective state governments. While some states provide free electricity to agriculture, some other states provide subsidized rates to agriculture purpose. In the state of Karnataka free electricity is provided to agriculture purpose. It is heavy burden to the government. The amount of subsidy on power for the past thirty years is presented below.

Table 3.4
Power subsidy to agriculture sector in India
(In crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>Power subsidy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-81</td>
<td>368.00</td>
</tr>
<tr>
<td>1990-91</td>
<td>4621.48</td>
</tr>
<tr>
<td>2000-01</td>
<td>27083.47</td>
</tr>
<tr>
<td>2013-14</td>
<td>66989</td>
</tr>
</tbody>
</table>


The amount of subsidy increased from Rs 368 crores in 1980-81 to Rs 27083.47 crores by 2000-01 and to Rs 66989 crores by 2013-14.

Subsidies are introduced to provide the required inputs to farmers at reduced cost so that the net return to the farmers will be high. However, working of the subsidies has shown that they have a negative environmental consequences.

Just as in the case of environmental resources for which there is no supply price leads to over exploitation. When the inputs are supplied at lower price through subsidy, it also leads to over usage. This phenomenon is documented in the literature.
“According to GOI reports, input subsidies have resulted in overutilization of inputs. This overutilization has in turn led to soil degradation, soil nutrient imbalance, environmental pollution, and groundwater depletion, all of which have caused decreased effectiveness inputs. The growing cost of input and food subsidies has also contributed fiscal deficit many states”. (Arora, 2013)

3.7.3 Credit Policy for Agriculture Sector

Credit is one of the main inputs for the development of agriculture sector. Finance is the major bottleneck for Indian farmers as majority of those are marginal and small farmers with less than 2 hectares of land.

Several financial institutions provide short term and long term credit to agricultural sector. They are Regional Rural Banks (RRBs), Scheduled Commercial Banks, Non-Banking Financial Institution (NBFCs), Self Help Groups (SHGs), etc.

Government of India has announced several policy measures and programs to improve the accessibility of credit to farmers during the planning period.

The first attempt to address the credit needs of farmers came with the submission of report by the All India Credit Survey Committee Report in 1954. The report emphasised the need for providing financial support to farmers through subsidised credit. Based on this Agricultural Refinance Corporation (ARC) was established in 1963 to provide funds for investment in agriculture. Later the Lead Bank scheme was introduced with the primary objective of taking a territorial approach to rural development. The scheme involved commercial banks, co-operative institutions, government and semi government agencies in the process of economic development. In the subsequent years several institutions are created for financing agriculture sector at subsidised rate of interest. Regional Rural Banks (RRBs) were the first such institutions established in 1975. Later National Bank for Agriculture and Rural Development (NABARD) was established in 1982 mainly as a refinancing institution. Public sector banks formulated Special Agricultural Credit Plan in 1994-95, to achieve distinct and marked improvement in the flow of credit to agriculture. Under this programme banks are required to fix self targets for achievement during the financial year. This programme also extended to private sector banks from 2005-06. Kissan Credit Card (KCC) Scheme was announced in 1998-99 to provide adequate and timely credit support from the
banking system under a single window to the farmers for their cultivation and other needs. Up to the end of March 2013, a total 12.03 crores kissan credit cards were issued.

National Agricultural Insurance Scheme (NAIS) was introduced by the government of India from rabi season 1999-2000 to protect the farmers from the crop failures or losses from the natural calamities. This scheme was available for all farmers, loanees, non loanees and it covers cereals, millets, pulses, oil seeds, and commercial and horticulture crops. National Agricultural Insurance Scheme (NAIS) is presently being implemented in 24 states and 2 union territories except Punjab and Arunachala Pradesh.

Pilot Modified National Agricultural Insurance Scheme (MNAIS) was launched 2010-11 Rabi season in 50 districts.

The central government introduced Interest Subvention Scheme in 2006-07 to enable banks to provide short term credit to agriculture (crop loan) upto 3 lakh at 7% (against the prevailing rate of 9 per cent) interest to farmers. Government of India provided interest subvention at 2 per cent to public sector banks, regional rural banks and co-operative banks in respect of short-term production credit.

In 2006 the then Prime Minister of India announced a rehabilitation package, to mitigate the distress of the farmers in suicide-prone districts in the country. This scheme included interest waivers, investment in irrigation, restructuring of loans, seed replacement, horticulture and watershed development.

In 2009-10, the Government of India introduced an additional interest subvention of 1 per cent to farmers who repaid their loans on or before the due date; interest rate subvention for timely repayment was raised to 2 per cent in 2010-11 and further to 3 per cent in 2011-12, making the total subvention 5 per cent.

National Bank for Agriculture and Rural Development (NABARD) has introduced a concessional refinance scheme in the year 2011-12, to accelerate investments in agriculture to enhance production and productivity of crops in the Eastern region (Assam, Bihar, Jharkhand, Chhattisgarh, Odisha, West Bengal and Eastern Uttar Pradesh) Under this scheme, NABARD provides 100% refinance to banks at a concessional rate of 7.5% p.a. provided certain minimum targets are achieved by the bank in financing these key investments.
3.7.4 Sources of Credit for Agriculture

Trends in the sources of short term and medium/long term credit needs of agriculture sector is presented in the table 3.5 and 3.6. According to the publication of Department of Agriculture and Cooperation there is a continuous increase in the flow of short term credit to agriculture sector. It increased from Rs 102.89 crores in 1999-2000 to Rs 473.50 crores by 2012-13. However there are changes in the relative share of different agencies. The share of cooperatives in meeting the credit needs of agriculture sector increased from 14.36% in 1999-2000 to 21.67% by 2012-13. Similarly the share of RRBs also increased considerably. The share of other agencies has declined.

In the case of medium and long term credit the amount of credit decreased from Rs 765.53 crores in 1999-2000 to Rs 133.88 crores by 2012-13. In recent times, most of the medium and long term credit needs are met by commercial banks only. The share of cooperative banks increased up to 2003-04, but declined there after. Similarly the share of RRBs also decreased and the share of commercial banks has increased and at present more than 80% of the medium and long term credit needs of the agriculture sector is met by commercial banks.

Table 3.5

<table>
<thead>
<tr>
<th>Year</th>
<th>Cooperative Banks</th>
<th>Regional Rural Banks</th>
<th>Commercial Banks</th>
<th>Other Agencies</th>
<th>Total Amount (in crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-00</td>
<td>14.36</td>
<td>2.35</td>
<td>11.37</td>
<td>71.92</td>
<td>102.89</td>
</tr>
<tr>
<td>2000-01</td>
<td>18.73</td>
<td>3.68</td>
<td>15.28</td>
<td>62.32</td>
<td>88.26</td>
</tr>
<tr>
<td>2001-02</td>
<td>23.06</td>
<td>4.64</td>
<td>21.98</td>
<td>50.33</td>
<td>81.47</td>
</tr>
<tr>
<td>2002-03</td>
<td>23.26</td>
<td>5.65</td>
<td>24.96</td>
<td>46.13</td>
<td>84.55</td>
</tr>
<tr>
<td>2003-04</td>
<td>20.23</td>
<td>5.44</td>
<td>23.40</td>
<td>50.93</td>
<td>111.92</td>
</tr>
<tr>
<td>2004-05</td>
<td>15.26</td>
<td>5.62</td>
<td>20.67</td>
<td>58.44</td>
<td>177.96</td>
</tr>
<tr>
<td>2005-06</td>
<td>20.19</td>
<td>7.18</td>
<td>33.32</td>
<td>39.31</td>
<td>172.98</td>
</tr>
<tr>
<td>2006-07</td>
<td>27.89</td>
<td>12.01</td>
<td>60.09</td>
<td>0.00</td>
<td>138.46</td>
</tr>
<tr>
<td>2007-08</td>
<td>22.08</td>
<td>11.29</td>
<td>66.64</td>
<td>0.00</td>
<td>183.52</td>
</tr>
<tr>
<td>2008-09</td>
<td>19.12</td>
<td>10.65</td>
<td>70.24</td>
<td>0.00</td>
<td>210.46</td>
</tr>
<tr>
<td>2009-10</td>
<td>20.58</td>
<td>10.77</td>
<td>68.64</td>
<td>0.00</td>
<td>276.66</td>
</tr>
<tr>
<td>2010-11</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2011-12</td>
<td>20.66</td>
<td>11.97</td>
<td>67.38</td>
<td>0.00</td>
<td>396.16</td>
</tr>
<tr>
<td>2012-13*</td>
<td>21.67</td>
<td>11.82</td>
<td>66.52</td>
<td>0.00</td>
<td>473.50</td>
</tr>
</tbody>
</table>

*Provision, NA-Not Available
Source: Department of Agriculture and Co-operation, Annual report 2011-12
### Table 3.6
Relative share of different sources of medium/long term credit to agriculture
(In Percentage)

<table>
<thead>
<tr>
<th>Year</th>
<th>Co-operative Banks</th>
<th>Regional Rural Banks</th>
<th>Commercial Banks</th>
<th>Other Agencies</th>
<th>Total Amount (in crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-00</td>
<td>0.46</td>
<td>97.84</td>
<td>1.70</td>
<td>3.79</td>
<td>765.53</td>
</tr>
<tr>
<td>2000-01</td>
<td>0.42</td>
<td>98.13</td>
<td>1.44</td>
<td>2.82</td>
<td>992.51</td>
</tr>
<tr>
<td>2001-02</td>
<td>22.04</td>
<td>5.01</td>
<td>72.95</td>
<td>181.42</td>
<td>21.50</td>
</tr>
<tr>
<td>2002-03</td>
<td>16.58</td>
<td>5.41</td>
<td>78.01</td>
<td>171.31</td>
<td>23.93</td>
</tr>
<tr>
<td>2003-04</td>
<td>13.24</td>
<td>4.67</td>
<td>82.09</td>
<td>84.44</td>
<td>31.98</td>
</tr>
<tr>
<td>2004-05</td>
<td>7.96</td>
<td>4.68</td>
<td>87.36</td>
<td>173.98</td>
<td>51.16</td>
</tr>
<tr>
<td>2005-06</td>
<td>5.98</td>
<td>3.36</td>
<td>90.66</td>
<td>419.66</td>
<td>74.82</td>
</tr>
<tr>
<td>2006-07</td>
<td>4.24</td>
<td>4.18</td>
<td>91.58</td>
<td>0.00</td>
<td>90.95</td>
</tr>
<tr>
<td>2007-08</td>
<td>4.80</td>
<td>6.20</td>
<td>89.00</td>
<td>0.00</td>
<td>66.07</td>
</tr>
<tr>
<td>2008-09</td>
<td>6.52</td>
<td>4.76</td>
<td>88.72</td>
<td>0.00</td>
<td>91.45</td>
</tr>
<tr>
<td>2009-10</td>
<td>6.07</td>
<td>5.02</td>
<td>88.91</td>
<td>0.00</td>
<td>107.86</td>
</tr>
<tr>
<td>2010-11</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2011-12</td>
<td>5.34</td>
<td>6.14</td>
<td>88.52</td>
<td>0.00</td>
<td>114.87</td>
</tr>
<tr>
<td>2012-13*</td>
<td>6.43</td>
<td>5.77</td>
<td>87.80</td>
<td>0.00</td>
<td>133.88</td>
</tr>
</tbody>
</table>

*Provision, NA-Not Available

Source: Department of Agriculture and Co-operation, Annual report 2011-12

### 3.8 AGRICULTURAL PRICE POLICY

Agricultural production being seasonal, agricultural prices experience severe fluctuations depending on the quantity produced. The quantity depends on several factors. While some of the factors are controllable, some are not controllable. The controllable factors are distribution and pricing, uncontrollable are natural calamities, pests etc. Fluctuations in prices influence the income of the growers and their decisions relating to soil management.

Minimum Support Price (MSP) is an important component of agricultural price policy. Based on the cost of cultivation MSP will be announced. Government guarantees minimum support price to the farmers and procures food grains from farmers to ensure food security and supply to the consumers through Public Distribution System (PDS).

#### 3.8.1 Main Objectives of the Agricultural Price Policy

- To protect the producers through guaranteed minimum support price.
- To induce the desired outputs of different crops according to growth targets.
- To increase aggregate agricultural output through large input use and adoption of high yielding seed, fertilizer and water responsive technology.
• To induce farmers to part with a larger proportion of food grains production as a marketed surplus.

• To protect the consumers against an excessive rise in prices.

Considering several factors like cost of production, changes in input prices, price parity, market demand and supply, Minimum Support Price (MSP) will be announced by the CACP (Commission for Agriculture Costs and Prices). Presently 25 crops under the MSP scheme.

3.8.2 Market Intervention Scheme (MIS)

This scheme was implemented by the Department of Agriculture and Co-operation for the procurement of horticultural commodities which are perishable in nature and are not covered under the price support scheme. According to this scheme, if price of a commodity covered under MIS falls below the specified economic level, the Government of India can intervene on the request of state government, by purchasing the product at intervention price, not exceeding the cost of production. The central and state governments share equally the losses incurred in the implementation of MIS. However, the loss is restricted up to 25% of the total procurement value including MIS paid to the farmer plus permitted overhead expenses. Profit earned, if any, in the implementation of the MIS is retained by the procuring agencies. Normally MIS is implemented when there is at least 10% increase in production or 10% decrease in the ruling prices over the previous normal year (Arora, 2013).

3.8.3 Price Support Scheme (PSS)

Government of India introduced Price Support Scheme (PSS) for some of the crops and it is implemented by different agencies. The Department of Agriculture and Co-operation implemented the PSS for procurement of oilseeds, pulses and cotton through National Agricultural Cooperative Marketing Federation of India Limited (NAFED), which is the central nodal agency, at the MSP declared by the government. The NAFED undertakes procurement of oilseeds, pulses and cotton under the PSS as and when prices fall below the MSP. Procurement under PSS is continued till prices stabilize at or above the MSP.
The following table shows the MSPs of Food grains and Non food grains in India.

Table 3.7
Minimum support price for food grains according to crop year (Fair Average Quality) (Rs per Quintal)

<table>
<thead>
<tr>
<th>Year</th>
<th>Paddy common</th>
<th>Coarse cereals</th>
<th>Wheat</th>
<th>Gram</th>
<th>Arhar (Tur)</th>
<th>Moong</th>
<th>Urad</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-91</td>
<td>205</td>
<td>180</td>
<td>225</td>
<td>450</td>
<td>480</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>1991-92</td>
<td>230</td>
<td>205</td>
<td>280</td>
<td>500</td>
<td>545</td>
<td>545</td>
<td>545</td>
</tr>
<tr>
<td>1992-93</td>
<td>270</td>
<td>240</td>
<td>330</td>
<td>600</td>
<td>640</td>
<td>640</td>
<td>640</td>
</tr>
<tr>
<td>1993-94</td>
<td>310</td>
<td>260</td>
<td>350</td>
<td>640</td>
<td>700</td>
<td>700</td>
<td>700</td>
</tr>
<tr>
<td>1994-95</td>
<td>340</td>
<td>280</td>
<td>360</td>
<td>670</td>
<td>760</td>
<td>760</td>
<td>760</td>
</tr>
<tr>
<td>1995-96</td>
<td>360</td>
<td>300</td>
<td>380</td>
<td>700</td>
<td>800</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>1996-97</td>
<td>380</td>
<td>310</td>
<td>475</td>
<td>740</td>
<td>840</td>
<td>840</td>
<td>840</td>
</tr>
<tr>
<td>1997-98</td>
<td>415</td>
<td>360</td>
<td>510</td>
<td>815</td>
<td>900</td>
<td>900</td>
<td>900</td>
</tr>
<tr>
<td>1998-99</td>
<td>440</td>
<td>390</td>
<td>550</td>
<td>895</td>
<td>960</td>
<td>960</td>
<td>960</td>
</tr>
<tr>
<td>1999-00</td>
<td>490</td>
<td>415</td>
<td>580</td>
<td>1015</td>
<td>1105</td>
<td>1105</td>
<td>1105</td>
</tr>
<tr>
<td>2000-01</td>
<td>510</td>
<td>445</td>
<td>610</td>
<td>1100</td>
<td>1200</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>2001-02</td>
<td>530</td>
<td>485</td>
<td>620</td>
<td>1200</td>
<td>1320</td>
<td>1320</td>
<td>1320</td>
</tr>
<tr>
<td>2002-03</td>
<td>530</td>
<td>485</td>
<td>620</td>
<td>1220</td>
<td>1320</td>
<td>1330</td>
<td>1330</td>
</tr>
<tr>
<td>2003-04</td>
<td>550</td>
<td>505</td>
<td>630</td>
<td>1400</td>
<td>1360</td>
<td>1370</td>
<td>1370</td>
</tr>
<tr>
<td>2004-05</td>
<td>560</td>
<td>515</td>
<td>640</td>
<td>1425</td>
<td>1390</td>
<td>1410</td>
<td>1410</td>
</tr>
<tr>
<td>2005-06</td>
<td>570</td>
<td>525</td>
<td>650</td>
<td>1435</td>
<td>1400</td>
<td>1520</td>
<td>1520</td>
</tr>
<tr>
<td>2006-07</td>
<td>580</td>
<td>540</td>
<td>850</td>
<td>1445</td>
<td>1410</td>
<td>1520</td>
<td>1520</td>
</tr>
<tr>
<td>2007-08</td>
<td>745</td>
<td>620</td>
<td>1000</td>
<td>1600</td>
<td>1220</td>
<td>1700</td>
<td>1700</td>
</tr>
<tr>
<td>2008-09</td>
<td>900</td>
<td>840</td>
<td>1080</td>
<td>1730</td>
<td>2000</td>
<td>2520</td>
<td>2520</td>
</tr>
<tr>
<td>2009-10</td>
<td>1050</td>
<td>840</td>
<td>1100</td>
<td>17760</td>
<td>2300</td>
<td>2760</td>
<td>2520</td>
</tr>
<tr>
<td>2010-11</td>
<td>1000</td>
<td>880</td>
<td>1170</td>
<td>2100</td>
<td>3500</td>
<td>3670</td>
<td>3400</td>
</tr>
<tr>
<td>2011-12</td>
<td>1080</td>
<td>980</td>
<td>1285</td>
<td>2800</td>
<td>3700</td>
<td>4000</td>
<td>3800</td>
</tr>
<tr>
<td>2012-13</td>
<td>1250</td>
<td>1175</td>
<td>1350</td>
<td>3000</td>
<td>3850</td>
<td>4400</td>
<td>4300</td>
</tr>
<tr>
<td>2013-14</td>
<td>1310</td>
<td>1310</td>
<td>1400</td>
<td>3100</td>
<td>4300</td>
<td>4500</td>
<td>4300</td>
</tr>
<tr>
<td>2014-15</td>
<td>1360</td>
<td>1310</td>
<td>1450</td>
<td>3175</td>
<td>4350</td>
<td>4650</td>
<td>4350</td>
</tr>
</tbody>
</table>

Source: 1. Ministry of Agriculture, Government of India and annual reports of RBI
2. Commission for Agricultural costs and Prices (CACP).
Table 3.8
Minimum support price for non food grains according to crop year (Fair Average Quality)

(Rs per Quintal)

<table>
<thead>
<tr>
<th>Year</th>
<th>Sugar cane</th>
<th>Cotton</th>
<th>Jute</th>
<th>Groundnut*</th>
<th>Soyabean black</th>
<th>Soyabean Yellow</th>
<th>Sunflower seed</th>
<th>Rapeseed / Mustard</th>
<th>Saf flower</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-91</td>
<td>22</td>
<td>750</td>
<td>320</td>
<td>580</td>
<td>350</td>
<td>400</td>
<td>600</td>
<td>600</td>
<td>575</td>
</tr>
<tr>
<td>1992-93</td>
<td>31</td>
<td>950</td>
<td>400</td>
<td>750</td>
<td>475</td>
<td>525</td>
<td>800</td>
<td>760</td>
<td>720</td>
</tr>
<tr>
<td>1993-94</td>
<td>34.50</td>
<td>1050</td>
<td>450</td>
<td>800</td>
<td>525</td>
<td>580</td>
<td>850</td>
<td>810</td>
<td>760</td>
</tr>
<tr>
<td>1994-95</td>
<td>39.10</td>
<td>1200</td>
<td>470</td>
<td>860</td>
<td>570</td>
<td>650</td>
<td>900</td>
<td>830</td>
<td>780</td>
</tr>
<tr>
<td>1995-96</td>
<td>42.50</td>
<td>1350</td>
<td>490</td>
<td>900</td>
<td>600</td>
<td>680</td>
<td>950</td>
<td>860</td>
<td>800</td>
</tr>
<tr>
<td>1996-97</td>
<td>45.90</td>
<td>1380</td>
<td>510</td>
<td>920</td>
<td>620</td>
<td>700</td>
<td>960</td>
<td>890</td>
<td>830</td>
</tr>
<tr>
<td>1997-98</td>
<td>48.45</td>
<td>1530</td>
<td>570</td>
<td>980</td>
<td>670</td>
<td>750</td>
<td>1000</td>
<td>940</td>
<td>910</td>
</tr>
<tr>
<td>1998-99</td>
<td>52.70</td>
<td>1650</td>
<td>650</td>
<td>1040</td>
<td>705</td>
<td>795</td>
<td>1060</td>
<td>1000</td>
<td>990</td>
</tr>
<tr>
<td>1999-00</td>
<td>56.10</td>
<td>1775</td>
<td>750</td>
<td>1155</td>
<td>755</td>
<td>845</td>
<td>1155</td>
<td>1100</td>
<td>1100</td>
</tr>
<tr>
<td>2000-01</td>
<td>59.50</td>
<td>1825</td>
<td>785</td>
<td>1220</td>
<td>775</td>
<td>865</td>
<td>1170</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>2001-02</td>
<td>62.05</td>
<td>1875</td>
<td>810</td>
<td>1340</td>
<td>795</td>
<td>885</td>
<td>1185</td>
<td>1300</td>
<td>1300</td>
</tr>
<tr>
<td>2002-03</td>
<td>69.50</td>
<td>1875</td>
<td>850</td>
<td>1355</td>
<td>795</td>
<td>885</td>
<td>1195</td>
<td>1330</td>
<td>1300</td>
</tr>
<tr>
<td>2003-04</td>
<td>73</td>
<td>1925</td>
<td>860</td>
<td>1400</td>
<td>840</td>
<td>930</td>
<td>1250</td>
<td>1500</td>
<td>1500</td>
</tr>
<tr>
<td>2004-05</td>
<td>74.50</td>
<td>1960</td>
<td>890</td>
<td>1500</td>
<td>900</td>
<td>1000</td>
<td>1340</td>
<td>1700</td>
<td>1550</td>
</tr>
<tr>
<td>2005-06</td>
<td>79.50</td>
<td>1980</td>
<td>910</td>
<td>1520</td>
<td>900</td>
<td>1010</td>
<td>1500</td>
<td>1715</td>
<td>1565</td>
</tr>
<tr>
<td>2006-07</td>
<td>80.25</td>
<td>1990</td>
<td>1000</td>
<td>1520</td>
<td>900</td>
<td>1020</td>
<td>1500</td>
<td>1715</td>
<td>1565</td>
</tr>
<tr>
<td>2007-08</td>
<td>81.18</td>
<td>2030</td>
<td>1055</td>
<td>1550</td>
<td>910</td>
<td>1050</td>
<td>1510</td>
<td>1800</td>
<td>1650</td>
</tr>
<tr>
<td>2008-09</td>
<td>81.18</td>
<td>3000</td>
<td>1250</td>
<td>2100</td>
<td>1350</td>
<td>1390</td>
<td>2215</td>
<td>1830</td>
<td>1650</td>
</tr>
<tr>
<td>2009-10</td>
<td>129.84</td>
<td>3000</td>
<td>1375</td>
<td>2100</td>
<td>1350</td>
<td>1390</td>
<td>2215</td>
<td>1830</td>
<td>1680</td>
</tr>
<tr>
<td>2010-11</td>
<td>139.12</td>
<td>3000</td>
<td>1575</td>
<td>2300</td>
<td>1400</td>
<td>1440</td>
<td>2350</td>
<td>1850</td>
<td>1800</td>
</tr>
<tr>
<td>2011-12</td>
<td>145</td>
<td>3300</td>
<td>1675</td>
<td>2700</td>
<td>1650</td>
<td>1690</td>
<td>2800</td>
<td>2500</td>
<td>2500</td>
</tr>
<tr>
<td>2012-13</td>
<td>170</td>
<td>3900</td>
<td>2200</td>
<td>3700</td>
<td>2200</td>
<td>2240</td>
<td>3700</td>
<td>3000</td>
<td>2800</td>
</tr>
<tr>
<td>2013-14</td>
<td>210</td>
<td>4000</td>
<td>2300</td>
<td>4000</td>
<td>2500</td>
<td>2560</td>
<td>3700</td>
<td>3050</td>
<td>3000</td>
</tr>
<tr>
<td>2014-15</td>
<td>220</td>
<td>4050</td>
<td>2400</td>
<td>4000</td>
<td>2500</td>
<td>2600</td>
<td>3750</td>
<td>3100</td>
<td>3050</td>
</tr>
</tbody>
</table>

*In shell
Source: Ministry of Agriculture government of India, Economic survey 2011-12 GOI, Commission for Agricultural costs and prices (CACP).

3.9 AGRICULTURAL POLICY IN KARNATAKA

Karnataka has always taken a lead ahead of the other states in India as far as agricultural policy initiatives are concerned. It became the first state in the country to unveil its own agricultural policy in 1995 itself.

3.9.1 Stages in the Agricultural Policy Formation in Karnataka

During the mid eighties agriculture sector in Karnataka faced several problems. This led to the appointment of an expert committee under the chairmanship of T.R. Satish Chandra, to investigate the causes for stagnation of agriculture and suggest appropriate
measures for stimulate agricultural sector. The committee observed that, the introduction of HYV and the use of major nutrients (NPK) for higher productivity without the balanced use of organic manure is bound to create problems of micro nutrient deficiency in many situations. It also observed that the soil testing facilities are not always utilized by the farmers for determining the quantum of application of different nutrients, even though it is recommended in the package of practices. The committee suggested that to arrest a stagnant/declining trend in productivity it is necessary to study the changing situation of soil fertility under various cropping systems and in both rain fed and irrigated situations. The committee observed that without organising an efficient soil management programme the crop yields will continue to show a stagnant/declining trend. (Government of Karnataka, T R Satish Chandran Report 1993, Quoted in Hanumappa, 2000).

The committee submitted its report in 1993 and the recommendations of this committee were far reaching. The major recommendation of this committee were to discourage those crops whose average yield is less than the average of the state, removing the restriction on the import of seeds, allowing the private sector in seed technology, withdrawing the facilities of free supply of electricity to the agriculture, supporting research and development programmes by the private sector, allowing the leasing out of land for a minimum period of 20 years and relaxing the land ceiling laws. The committee report became base for the Karnataka State Agricultural Policy 1995.

3.9.2 Karnataka State Agricultural Policy 1995

The Government of Karnataka adopted the Agricultural Policy Resolution in 1995. It is a comprehensive policy. The main aim of Karnataka state agricultural policy was achieving the higher growth rates in agricultural and its allied sectors. The policy assumes that the growth in agricultural sector would provide momentum to growth in other sectors, through its backward and forward linkages. The other important aim was promoting efficiency in the use of resources simultaneously for protecting the environment. The policy clearly targeted efficient use of resources and also conserving the environment by reducing the environmental pollution.

The basic guidelines of the policy as perceived by Deshpande & Praschitha (2005) are

1. Land and land use policy to improve growth prospects.
2. Policy to improve yield and achieve self sufficiency in food grain production.
3. Policy towards increasing the availability and improving the efficient use of scientific inputs and other supporting services like credit.

4. Policy to provide adequate research, education and extension support for accomplishing points 2 and 3 above.

5. Policy to reduce regional imbalance in agricultural development with the state by identifying the needs and growth potentials of different sub regions based on agro climatic conditions.

6. Policy to sustain the growth in output and yields through creating proper marketing and pricing structure.

7. Potential for growth in other sub sectors.

Some of the special progressive measures proposed in the agricultural policy document are, fixation of realistic water and power rates, reversal of the declining trend in agriculture investment, legalizing contract farming by food processing units and alteration of land laws to permit land lease by farmers themselves.

Major deviation in the present policy was the suggestion to grant industry status to agriculture. The policy document identified declining investment and capital formation, as one of the important problem in the stagnation of agricultural sector. Therefore, to supplement the private sector investment, public sector investment was envisaged in the creation of economic and social infrastructure, higher out-lays in agricultural research and development, investment in major and minor irrigation projects, investment in water harvesting, roads, development of markets, social infrastructure like primary health and education, providing low-cost housing.

Private investment is sought in, production, marketing and processing activities, seed multiplication, high tech agriculture, setting-up cold storage chains, agro-processing, bringing new technology in processing, working with farmers on their fields in raising their productivity, providing them with a forward market.

The State Government had also constituted a cabinet sub-committee under the Chairmanship of Minster for Agriculture with 10 other Ministers of various departments as members to oversee the implementation of State Agricultural Policy. In the context of liberalization and opening of the Indian Economy, the Government had identified nine important areas where further scope existed for improvement: a) agricultural research and adoption of improved technology b) protection of yield levels already attained and bridging
the yield gap between potential and actual yields to attain higher productivity in all the ten agro-climatic regions c) hastening the pace of Integrated Watershed Development d) cost effective land development, and water management techniques, etc. e) extension services f) input supply and farm mechanization g) rural credit h) horticulture including Floriculture, Dairying, Poultry, Meat, Wool, Fisheries and Sericulture i) agricultural marketing infrastructure, processing, etc, j) organic farming and trade policies with particular reference to input and output. (Deshpande and Praschitha, 2005).

Due to the focus on public and private investments, promotion of future markets with a little attention to land reforms etc. The policy was criticised by many leftist political parties and several researchers.

It is felt that the policies benefit the big industrialists, capitalists, multinationals and create corporate landlordism. (Assadi, 1995)

Despite the policy measures several suicides by the farmers were reported. The Government of Karnataka appointed a Joint House Committee (JHC) in 2000, under the chairmanship of G.B. Shivakumar, former member of legislative assembly, to study the farmers suicide. The committee made several recommendations and justified the need to give immediate relief for the victims of natural calamities.

Another expert committee under the chairmanship of G. K. Veeresh was appointed to look into the issue of compensation payment and confidence building measures to be taken and also find out the root causes of suicides to suggest measures.(Nagappa. P et al. 2010)

The committee submitted its report in 2002 with several recommendations. The major recommendations of the committee are,

1. Constitution of separate Farmers Welfare Department in the state to function under the direct supervision of Chief Minister.
2. Creation of Farmers Welfare Fund (FWF) and adopt measures for its proper utilization.
3. Introduction of special concessions to farmers who have crossed 60 years of age considering as ‘Senior Farmer’.
4. Designing Health Insurance Plans at the state level for the benefit of farming community.
5. Extension of irrigation facilities.
6. Amendments to the existing Land Reforms Act.
The Karnataka state has constituted a state level Agricultural Commission in April 2000, under the chairmanship of Dwarkinath, to deal with a few crucial problems confronting the Agriculture sector. The immediate task of the committee was to identify the missions for bridging the gap between actual yield and possible yield in the different agro climatic zones of the state. Agriculture Commission submitted the short term report in December 2000. The major recommendations of the commission are as follows,

1. The committee suggested for promotion of cultivation of BT Cotton to reduce the incidence of pests in cotton production. The agricultural universities should directly involve in testing the technology in their own research stations and monitor the testing elsewhere in the state.

2. The committee identified the need for improving the productivity of rice and suggested for the promotion of newly evolved and tested hybrid rice.

3. The committee suggested for efforts to promote public and private sector partnership in the interest of farmers and consumers with suitable networking arrangements for sharing ideas and information and exchange of materials.

3.9.3 Karnataka State Policy on Organic Farming 2004

Sustainable agriculture is very essential for agricultural development. Unscientific farming and imbalanced usage of chemical fertilizers impact soil degradation. Though increased use of chemical fertilizers and pesticides has increased the production, it depletes the soil nutrients. Organic farming is important tool for reduce these problems. The main aim of organic farming is to produce of quality and safe agricultural products which contain no chemical residues, following eco friendly production methods and the farming systems that restore and maintain the soil fertility. Considering the importance of organic farming, Karnataka state has announced Organic Farming Policy in 2004. As per the policy document (Commissionerate of Agriculture, 2004) the main objectives of this policy are as follows.

1. To enhance the soil fertility and productivity by increasing life of soil.
2. To reduce the dependence of farmers for most of the inputs like seeds, manures, and plant protection materials by sourcing local natural resources thereby reducing the cost of cultivation.
3. Judicious use of precious water resources and maintenance of production level.
4. To improve farmer's income through production of quality produce.
5. To increase the food security by encouraging traditional crops and traditional food habits.
6. To increase the rural employment opportunities to prevent migration to urban areas.
7. To facilitate farmer's Self Help Groups for most of their requirements.
8. To make the environment safe and pollution free and also to protect health of human beings and animals.
9. To equip the farmers to effectively mitigate the drought situation in rain fed and drought prone areas.
10. To bring about suitable institutional changes in teaching and research on organic farming.

The promotion of organic farming programmes was entrusted to the state departments and agricultural universities which work under one umbrella. The financial allocations of the state are pooled under the head “Organic Farming” and the State Level Empowered Committee has the powers to allocate the funds to different schemes and agencies. One Additional Director in the Department of Agriculture was exclusively made responsible for promotion of Organic Farming programmes in the State.

3.9.4 Karnataka State Agricultural Policy 2006

Nearly after a decade of announcing agricultural policy in 1995, Government of Karnataka has announced a new agricultural policy in 2006. It is based on the experience gained and the response of agriculture sector to the policy.

The policy adopted ‘Farmer Centric’ approach. It has focused on the farmers rather than the technology alone. The policy envisaged agricultural growth rate of 4.5 percent per annum. It is estimated that the 4-5 percent growth rate in gross value of agricultural production would set the income of about 3 percent per annum for the farmer household and this is essential for the livelihoods of the farmers.

The policy envisaged a major role for the state to attain the stated objectives of the policy through budgetary support and macro-economic adjustments, production and technology sector, land issues, agro processing, trade and value addition to the farm products, removal of domestic market distortions and strengthen the linkages with other allied sector.

The policy was announced at a time when the net income of the farmers was almost stagnant, farm sector income was under stress, the suicide of farmers, and agriculture sector
has registered growth rate between 2 and 3% per annum. To address all these issues the Government of Karnataka has announced a policy in 2006.

3.9.4.1 Major Goals of the Policy

The major goals of the policy as presented in the policy document are

1. To improve the Soil Health.
2. Conservation of Natural Resources mainly land and water.
3. To improve the availability of agricultural credit.
4. Integrated Post Harvest Management.
5. Lab to Land at quick pace.
6. To double the agricultural production in a decade and net income of the farmer.
7. To achieve growth rate of 4.5 percent per annum.
8. Shift to ‘demand driven’ technology from the ‘supply pushed’.

3.9.4.2 The Proposed Macro Initiatives

1. Increase the growth rate of agriculture to 4.5 per cent per annum.
2. Ten percent of budgetary plan expenditure to agriculture sector.
3. Double the developmental expenditure on agriculture out of total development expenditure.
4. Increase capital formation at 5 per cent per annum.
5. Invest in Agriculture for food security.
6. Promote investment in rural farm and non-farm enterprises.
7. Issue of ‘Raitha Mitra Pustaka’ (RMP) a small coded pass book with all information of the farm family.

Karnataka State Agricultural Policy 2006 is based on five principles known as “Panchsutra” announced in 2006-07 budget. All these five principles provide integrated support to agricultural sector in accelerating the growth rate.
3.9.4.3 Panchasutra for Agriculture Development

1. Protect and improve the soil health

2. Conservation of natural resources, with special emphasis on water and Micro irrigation.

3. Timely availability of credit and other inputs to the farmers.

4. Integrate post harvest processing with the production process.

5. Reduce the distance between lab and land in transfer of technology.

The policy document identified the strategies to operationalize these principles into action. For each of these five principles the following strategies are proposed.

- To protect and improve soil health it is proposed to provide micro nutrients, bio fertilizers, bio pesticides organic fertilizers etc, to farmers at discount price.

- For the conservation of natural resources with giving special attention to water and micro irrigation the policy envisaged on proper utilization of water under micro irrigation program bringing in more and more area under irrigation.

- To improve the timely availability of credit and other inputs to the farmers- it is proposed to provide sowing seed and other inputs and plant protection chemicals and other modern agriculture equipments to farmers at discount price to take up agricultural activities in time.

- To integrate post-harvest processing with the production process the policy proposes to provide processing units and tarpaulins to farmers at discount price.

- In order to reduce the distance between lab and land in transfer of technology the policy proposes to encourage departmental training, demonstrations, agriculture fairs, study tours and other extension programs and also by using mass media to educate the farmers about technology.

Several initiatives are introduced implement to the strategies proposed in the policy.

Initiatives for the Conservation of Natural Resource

The policy aims at increasing the growth rate of agriculture sector by adopting several programmes which include conservation of natural resources, mainly land and water. A land policy document has been prepared by Land Use Board (LUB). The board initiated several measures. Some of them are handing over the responsibility of development of wasteland to
the farmers groups constituted at panchayat level under the technical support of state Department of Agriculture in a Public Private Partnership (PPP) model. In case farmers do not want to contribute monetarily in this programme, the department will undertake it and the cost should be treated as loan at nominal interest rate. The main aim of the programme is to bring one lakh hectares of waste land into economic use by the next ten years, specifically in Bijapur, Bagalkot, Raichur, Koppal, Hassan, Bellary and Gulbarga districts.

**Initiatives for Reducing the Gap between Lab and Land**

To reduce the gap between the lab and land the policy took note of the suggestions made by Arora Committee and initiated the programmes in association with the agricultural universities and the Grama Panchayats. The policy initiated to conduct a number of frontline demonstrations by the scientists to reach a large number of farmers. The policy envisaged to provide all services from a single window and take constant feed back on problems from farmers to orient applied research from the State level down to Gram Panchayat level. In order to avoid loss to farmers it is proposed that new technologies need to be tested under localized situations and suitably modified wherever necessary for adoption by farmers. It is proposed to strengthen the linkage already developed between agricultural research and extension under National Agricultural Research Project (NARP) and National Agricultural Education Programme (NAEP). The policy has taken initiatives to reduce the time taken to release new varieties and to adopt the useful results of other states quickly.

Credit is one of the crucial input in agricultural development. Timely availability of credit is important to the farmers to take appropriate farm related activities. Giving due importance to credit, the policy made a very innovative suggestions for improving the access to credit in time to the farmers. The policy makers observed that farmers do not need bulk credit at the beginning of the season itself, but they need it at different intervals. Our existing banking system does not have a provision for the release of loan in instalments. Therefore the policy suggested for the provision of loan at different intervals and change the interest only on the advance made. This will have a double advantage in the farm of reducing the interest burden on the farmer and availability credit for different operations. The same procedure should be applied to the credit from cooperative banks also. It is also observed that the commercial banks change higher rate of interest compared to the cooperative banks. The policy suggested that the commercial banks also should change the same lower rate of interest of 4% just as cooperative banks on crop loan.
The policy suggested for the introduction of credit counseling to the severely indebted farmers to bring them out of the credit trap and prevent them from committing suicides.

The policy also suggested for the greater involvement of radio and TV channels to promote credit and insurance literacy through the ‘Every Village, a Knowledge Centre’ movement.

The policy took note of the need to focus on the rainfed agriculture as most of the taluks under rainfed are backward taluks. The policy has suggested for the formation of Rainfed Agricultural Commission under the chairmanship of a well-known public figure connected with the development of agriculture and allied activities. This institution is expected to prepare a plan for the rainfed agriculture of the State in collaboration with the two Agricultural Universities and monitor its implementation through the Department of Agriculture, Government of Karnataka. The policy suggested for promoting rural industrialization of these backward regions by providing capital investment subsidy. These initiatives were announced in the industrial policy 2006-2011. The policy suggested for the strengthening of Raitha Samparka Kendras in these regions.

The policy addressed the drought issue also. It suggested for the merging drought monitoring cell with Karnataka Natural Disaster Monitoring Cell and increase scope of its objectives to provide forewarning of all types of natural disasters and also mitigation methods. It is suggested that telemetric rain gauges should established at all taluk headquarters in the first phase; hobli headquarters in the second phase and at Mandal Panchayat level in the third phase. Similarly, stream-gauging stations, one for every 150 Sq. Kms, are to established to monitor the rainfall. Weather watch committees and resource management groups should be established at taluk levels. This should be supported by Drought Monitoring Units at District level involving local people.

The policy observed that the state government has given important place for watershed development programmes since mid 1980s. The focus of this development programme is to conserve the soil and moisture as well as to put lands to the best use according to their capabilities to improve the overall productivity. These interventions have resulted in increased yields of most of the crops and have helped recharge of ground water. The policy suggested to augment the resources of Watershed Development Department. The policy suggested for covering the balance area of 90.50 lakh ha. It is proposed that the remaining area will be developed in phases in next 20 years.
This policy looked into the suggestion made by the joint group regarding making the National Agriculture Insurance Scheme (NAIS) more farmers friendly. The policy endorsed the suggestions of extending the Crop Cutting Experiments (CCE) up to hobli level to increase the sample size so that reliability of CCE data will be enhanced. Coverage of Perennial and Horticulture crops of fruits, vegetables and launch insurance schemes for the said crops were suggested.

The policy identified the challenges faced by the floriculture in the state. The three significant challenges are; firstly lack of proper transportation with refrigerated vans to reach nearest airports, this requires huge investment. The second challenge is lack of access to modern methods of floriculture technology and prices to many small growers. The third challenge is poor status of primary markets for floriculture products. The policy suggested for the involvement of Raitha Samparka Kendra (RSK) in providing information. It is also suggested to start floriculture markets in vantage places on the lines of Bangalore floriculture market.

The policy suggested some measures for the development of irrigation in the state. The important suggestions are the completion of the incomplete Projects, implementation of “On-Off” system, Irrigation Management through Water Users Associations (WUAs) in canal and tank command areas etc. It is suggested that tanks are to be rejuvenated and managed by Panchayats. Diversification of cropping pattern, shifting to less water consuming methods like System of Rice Intensification (SRI), revision of water rates, piped water delivery system, community based recharge of ground water and discouraging deep tube wells, micro-Irrigation are some of the suggested interventions.

The policy took note of the inefficient works of Raitha Samparka Kendras (RSK) and suggested measures to make them more efficient. It is suggested that Raitha Samparka Kendras should be started at the taluk headquarters in all the taluks identified as most backward by the Committee on Regional Imbalances in Karnataka. The Kendras should be in charging of an agricultural graduate trained in all the vocations in agriculture, as well as allied disciplines. Refresher courses should be run for these graduates once in two years. The graduate in charge of Raitha Samparka Kendras will coordinate the activities of the farmers and help to constitute farmers groups for the purpose of purchase of inputs as well as marketing produce. The kendras should display prominently the prices prevailing in the markets as well as new technologies that have been developed by Agricultural Universities.
and research stations. It should be equipped with a toll-free telephone number that will be accessible to the farmers in the region in case of emergencies. It is envisaged that these Kendras should serve as hub centre for the farmer as well as a meeting point for consultation by the farmers. Knowledge inputs from farmers will also be available here.

The policy suggested for the formation of state level expert committee for monitoring the performance of varieties developed by private companies for assuring the quality of seeds supplied to the farmers. Formation of Seed Villages to meet the requirement and promotion of and production of certain traditional/local varieties on scientific basis to improve the quality of seed material are suggested. It was planned to establish at least one seed village in each hobli to produce open pollinated varieties required for the hobli. The technical support should be provided for the seed village by the State Agricultural Universities (SAU’s), while the logistic support will be provided by Karnataka State Seed Corporation (KSSC) and Karnataka State Seed Certification Agency (KSSCA). It is proposed that the newly released seeds by private organizations should be brought under compulsory certification. This certification procedure should be such that the commercial interests of the producer companies are safeguarded with regard to disclosure of the names of parental lines. It is also proposed to establish a Custom Hiring Centre at each Gram Panchayat for custom hiring of farm equipments as it reduces the production cost and also increases the productivity of land. The panchayats can hire out the implements and ensure that the farming operations are carried out on time.

The policy gave greater importance to organic farming and has suggested several steps to encourage the organic farming. The policy proposed to provide incentives to organic farmers. It is also proposed that organic farming should be made compulsory in 40% of the government land used for farming. It is suggested that the food provided in Anganawadi should be prepared from organic farm product. The policy proposed for the identification of Organic Farming Systems for each Agro-Climatic region, scientifically analyzed and recommended through a special publication entitled Organic Package of Practices. Organic Seed Banks should be opened at each Raitha Samparka Kendra and Panchayat Office. Local level Farmers Committee will manage these. Organic Farmers Associations will be promoted in order to facilitate certification of the products. Subsidy scheme will be prepared for harvesting, collection, processing and marketing expenditure relating to Organic Farm
Products. Organic Farming System will be taken up under special extension programme and popularized through mass media.

The policy has rightly identified the need for improving the return on investment in agriculture inorder to provide incentives to the producers. Ago-processing plays an important role in value adding to the farm produce so that the returns will be more. The policy suggests several measures to improve food processing units. A subsidy scheme is proposed to be developed in order to establish processing units in the backward regions on the lines of the scheme presently operating in the industrial sector. A complete technical know-how will be provided by the state to establish these units and the project proposal will be scrutinized by experts of processing, both in financial and technical fields. A special Advisory Cell is proposed to be established in Karnataka State Agricultural Produce Processing and Export Cooperation (KAPPEC). KAPPEC will also provide the backup facilities and help to build the forward and backward linkages for agro processing.

Animal husbandry is one of the important allied sectors to provide income to the farmers. Considering the importance of this activity, the policy suggested several measures to improve the sector to make it more profitable for farmers. The policy suggested for the establishment of Livestock Feed and Fodder Corporation that will involve self-help groups for breeds, purchase of inputs and marketing of the products, this Corporation will help the livestock farmers to deal with the exigencies during distress. The policy suggested for the involvement of private investment for promotion and integration of supply chain in the sector by providing enough support and incentives to ensure remunerative prices for producers.

The policy also concentrated on the problems related to marketing and prices and has suggested measures to improve the agriculture market and prices in the state. The policy suggested for the reviews of Karnataka Agricultural Produce Marketing (Regulation) Act, 1966, to give incentives for setting up regional commodity exchanges, auction houses, terminal markets under Public-Private Partnership (PPP). The promotion of marketing infrastructure development has receive utmost importance with a view to reduce quantitative and qualitative losses and improve the efficiency of marketing services. Creation of scientific grading facilities at market yards and in production centers to ensure supply of quality products are suggested. Private as well as co-operative sectors will be encouraged in this endeavour.
The policy suggested to review the methodology used for the calculation of Minimum Support Prices (MSP) periodically in consolation with the stake holders.

3.9.5 Integrated Agribusiness Development Policy 2011

Karnataka state has taken initiatives for developing sustainable agribusiness through ‘Integrated Agribusiness Development Policy 2011’. This policy included agriculture and allied sector, like horticulture, fisheries, animal husbandry, sericulture and food processing. This policy document included several interventions including infrastructure and industrial segments. The policy addresses issues relating to agriculture starting with issues relating to production to the issue of processing, marketing and export.

3.9.5.1 Objectives of the policy

1. Promote sustainable agriculture, and enhanced the productivity, better realization to farming community.

2. Development of agro based industry including Food Processing units.

3. Encourage the research, skill development and employment generation.

4. Boosting agro exports of the state.

5. Investments in Agriculture and allied sectors.

6. Prepare investor friendly policies and regulatory framework.

The policy emphasis on the adoption of efficient, eco friendly and sustainable crop production and protection techniques to manage the natural resources in sustainable manner.

The policy focuses on development of agro based industries. It suggested for the improvement of infrastructure for storage, transportation and processing of food produce, to minimising the wastages.

The policy suggest the promotion of research in crop sciences, horticulture, veterinary science, animal science, dairy science, food packaging technology etc. for employment generation.

In order to boost the agro export the policy aimed at creating new product lines and create new markets with an emphasis on improving the global competitiveness of small scale agro based units. The policy also emphasised the need for the involvement of private sector in developing agricultural infrastructure. Karnataka Agribusiness Development Corporation
(KABDC) was established to promote value added agro and food exports, conduct regular investors meet etc.

3.9.6 Karnataka Agriculture Marketing Policy 2013

Government of Karnataka announced a state level Karnataka Agriculture Marketing Policy in 2013 to address the marketing related issues of agriculture sector.

3.9.6.1 Objectives of the policy

The important objectives of this policy as presented in the policy document are

1. Reduction or elimination of barriers to participation in markets to foster competition and efficient determination of price and also linking the primary market in the state to the national market for the benefit of all stakeholders in the marketing chain.

2. Address the risks associated with clearing and settlement that arise in course of marketing of produce by the farmer or by the subsequent buyer, through technology solutions.

3. Encourage and promote primary value addition through aggregation, grading and packaging at the village level through farmer self help groups / societies / associations / producer companies to respond to increasing and changing market demand in domestic, regional and international markets.

4. Enhance the skill levels of all stakeholders in the marketing system through well designed capacity building intervention efforts.

5. Improve access to finance to all market participants, scientific storage and preservation of commodities, encouraging investment in infrastructure for market access, and enabling primary value addition of the commodities.

6. Encouraging setting up new institutions and strengthening of existing ones to provide state of the art facilities to all stakeholders, fostering self-help groups and cooperative ventures for improving the bargaining and holding capacity of farmers to handle the challenges in marketing.

7. Establishment of a progressive regulatory environment that provides an environment for public and private initiatives to function in tandem for the benefit of all stakeholders, with the government playing an enabling policy making role.
8. Implementation of all Farmer friendly provisions of the Karnataka Agricultural Produce Marketing (Regulation and Development) Act, 1966 to safeguard the interests of the farmers.

In order to operationalize the above policy, the Government of Karnataka has initiated several interventions. One of the initiatives is setting up a comprehensive electronic auction system in the regulated markets for transparent price determination. To increase competition in the auction of the agricultural produce, administrative processes with regard to license would be simplified and automated for improved efficiency and conditions that restrict participation would be removed. Encourage the private markets to provide services to farmers and other participants etc.

Review of agricultural policy adopted in Karnataka reveals the efforts made by the Government to address the issues faced by the agriculture sector. Starting with the first agriculture policy in 1995, there is a gradual shift in making the policy as comprehensive as possible. One important observation is that the policy makers have identified the importance of addressing the issues of allied sectors in promoting the agricultural sector. Importance was given to promotion of livestock which works as complementary. It is also observed that the policy makers took note of the global trends in the making of subsequent policies. For example encouragement to private participation, introduction of electronic auctioning system etc are some such initiatives addressed. Similarly the sustainability issues were addressed in promoting organic farming through Organic Farming Policy 2004.

The policy makers have identified the changing marketing problems of agricultural produce in a globalized economy and the need for promoting processing of agricultural produce to increase returns to the farmers. A separate policy for the promotion of agribusiness development, Agri Business Development Policy (2011) was made to promote agribusiness in the state. The agricultural policy 2006 is a comprehensive policy which considered several issues i.e. the need for dissemination of scientific knowledge by bridging the gap between the scientists and the land users, the need for land rights, the need for promotion of high value horticulture crops, provision of appropriate transportation etc. the latest in the series of policies is the introduction of Karnataka Agricultural Marketing Policy 2013 which addressed the marketing needs in a globalized economy.
3.10 INITIATIVES

Government has taken several initiatives to improve soil fertility they are as follows

3.10.1 Programmes

Several programmes were taken up by the government to implement the policy. Some of them are, conversion of 100 ha area into organic cultivation (organic village/site), conversion of state government and state agricultural universities farms into organic cultivation, documentation of existing organic farming practices to develop package of practices, research in organic farming, training, publicity & propaganda, organizing trade fairs and organic farming exhibitions in krishimelas, market development for organic produce etc.

3.10.1.2 Organic Village/Site Programme

The first phase of organic village/site programme was initiated in the year 2004-05 at district level to establish model organic farming site in around 100 ha area in each of the districts. Based on the results and success of organic village/site programme at district level, the programme was extended to each taluk during 2006-07. Three agricultural universities were given the responsibility of evaluating the project and they gave a positive impact of the programme. Based on this evolution and the demand from the organic farmers and local NGO involved in organic farming, the programme was extended to convert another 100 ha farm into organic farms in each taluks during 2010-11.

3.10.1.3 Savayava Bhagya Yojane

It is a mega programme initiated during the later part of 2013-14. It is an extension of the earlier organic village/site programme to hobli level with few modifications in its implementation. In the extended programme provisions are made for developing good marketing linkages and market development for organic products. The programme is being implemented in association with the NGOs selected from each taluk through e-tendering. The selected NGO is entrusted with the responsibility of bringing around 100 ha under organic farming in each hobli of the taluk. During the year 2014-15 certification of organic products, evaluation and monitoring of the organic farming programme, publicity and awareness about programmes, research in organic farming etc. were initiated.
3.10.1.4 Bhumi Tayiya Arogya

The programme was initiated with an objective to improve the soil health. It is being implemented under Public Private Partnership (PPP) where in the Tungabandra project, Upper Krishna project area, and Malaprabha-Ghataprabha project regions where soil has degraded. While 20% is contributed by the land owner and 80% is contributed by the state government. The main objective of this programme is to cover 35,000 hectares land per year. Manual intervention to restore soil health, agronomic conservation, integrated plant nutrient system, bio inoculums and application of green manure to improve the soil health are encouraged by the government under this programme. The policy focused to provide soil health card to individual farmers at nominal price. This card will depict the present soil nutrient content, deficiencies as well as the requirement of various nutrients for the soil to bring it back to optimum fertility level.

3.10.1.5 Bhoomi Project

Since maintaining proper land records is a pre requisite for ensuring property rights, priority is given to develop computerized land record system under the programme called Bhoomi.

3.10.1.6 Bhoochethana

With the objective of increasing the productivity of selected rain fed crops by 20%, Karnataka government has initiated a mission mode project called Bhoochethana from the year 2009-10. The partners of this project are Karnataka State Department of Agriculture, Watershed Development, UAS Banglaore/Dharwad/ Raichur and ICRISAT, Hyderabad is the technical consultant.

The main strategies are soil test based nutrition management with major thrust on micro nutrients, distribution of inputs at 50% subsidy at cluster village level, farmer field schools, wide publicity about soil fertility management through writings, posters, village meetings and mass media etc.

While the project was started in six districts in 2009-10 and extended to 16 districts by 2010-11 covering 12.00 lakh hectares during kharif season, 5030 villages and 8.50 lakh farmers. During 2011-12 kharif the programme was extended to all 30 districts covering 25.4 lakh hectares and 20 lakh farmers. The yield enhancement of 29-41% was observed in the treated areas.
Bhoochethana phase 2 was approved for five years from 2013-14 to 2017-18. During 2013-14, 12490 Farmer Facilitators (FF) have been appointed for transfer of technology under this scheme. With the help of these facilitators 11000 Farmers Field Schools (FFS) were organized and several training programmes were organized.

From 2013-14 onwards Bhoochethana plus scheme was initiated from 2013-14 onwards for a period of four years with a focus to improve the livelihoods of rural population in Karnataka in collaboration with international institutions like ICRISAT, IFPRI etc. The scheme is in implementation in Bijapur, Chikkamagalur, Raichur and Tumkur districts on pilot basis.

3.10.1.7 National Project on Management of Soil Health and Fertility (NPMSHF)

National Project on Management of Soil Health & Fertility (NPMSHF) has been introduced in 2008-09 to promote balanced and judicious use of fertilizer in conjunction with organic manure on soil test basis.

The programme was formulated based on the recommendations of the task force on balanced use of fertilizers. The scheme has been approved for implementation during the 11th five year plan with a total outlay of Rs 429.85 crores for various components such as setting up of additional Soil Testing Laboratories (STLs), strengthening of 315 state STLs having micro nutrients analysis facility, capacity building through training of STL staff/Extension officers, farmers field demonstration and workshops, creation of databook for site specific balanced use of fertilizers, adoption of village by STLs through frontline field demonstrations, preparation of digital district soil maps and GPS based soil fertility recommendations by ICAR/SAUs etc.

The estimated budget for 2012-13 was Rs 30 crores. Out of this Rs 10.89 crores has been released by 14.12.2012. The proposed outlay for the year 2013-14 was Rs. 2470.00 crores.

3.10.1.8 Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM)

In order to promote the production of oilseeds and other dry crops to meet the domestic requirement and promote exports an integrated scheme for promotion of oilseeds, pulses and maize was introduced during 2004. The focus was on eight edible oilseeds viz. groundnut, rapeseed, mustard, soyabean, sunflower, sesame, safflower and niger and two non-edible oilseeds, castor and linseed.
This scheme is being implemented in 14 major states for oilseeds and pulses, in 15 states for maize and in 8 states for Oil palm. Pulses component of ISOPOM has been merged with NFSM-Pulses w.e.f 1.4.2010 to provide focused approach for pulses production programme.

During the Eleventh Plan, Department of Agriculture and Cooperation restructured the Centrally Sponsored Integrated Scheme of Oilseeds, Pulses, Oilpalm and Maize (ISOPOM). Based on the experience gained in the implementation of ISOPOM, the following modifications were made to ISOPOM in 2007-08. The assistance on production of foundation and certified seed has been enhanced from Rs. 500/- per qtl to Rs. 1000/- per qtl and the subsidy was enhanced from Rs. 800/- per qtl to Rs. 1200/- per qtl during 11th Plan Period. The Private Sector seed producing agencies have been involved in the distribution of Certified Seeds of Oilseeds besides NSC, SFCI, NAFED, KRIBHCO and IFFCO.

The area expansion programme of ISOPOM has been launched under Rashtriya Krishi Vikas Yojana (RKVY) as per the announcement made by the Union Finance Minister in Budget Speech 2011-12. Besides RKVY, the support for committed expenditure on oil palm components is being implemented under ISOPOM.

The estimated budget for 2012-13 was Rs. 575 crores. Out of this Rs. 341.90 crores has been released by 14.12.2012. The proposed outlay for the year 2013-14 was Rs. 661.25 crores.

3.10.1.9 National Project on Promotion of Organic Farming

National Project on Organic Farming has been launched as a central sector scheme during Xth Plan on Pilot basis with an outlay of Rs. 57.05 crores. The scheme has continued in the XIIth Plan. According to the plan document the following are the main objectives of this project.

1. To facilitate, encourage and promote development of organic agriculture in the country.

2. To encourage production and use of organic and biological sources of nutrients like biofertilizers, organic manure, compost for sustained soil health and fertility and improving soil organic carbon and to promote production and use of biopesticides, bio-control agents etc. as alternative inputs in organic farming.
3. To act as nodal agency for implementation of quality control regime for biofertilizers and organic fertilizers, as per the requirement of FCO.

4. To run short term certificate courses on organic system and on-farm resource management.

5. To initiate research on validation of established indigenous practices, inputs and technologies leading to development of package of practices.

6. To act as central information and data collection centre on all aspects of organic farming and dissemination of information through print and electronic media.

7. Awareness creation through seminars/conferences/trade fairs and publicity through print and electronic media.

The estimated budget for 2012-13 was Rs. 21 crores. Out of this Rs. 5.90 crores has been released by 14.12.2012. The proposed outlay for the year 2013-14 was Rs. 56.14 crores.

### 3.11 CONCLUSIONS

Evolution of agricultural policy both at the national and state level and the programmes implemented to operationalize the policy objectives have been discussed in this chapter. It is observed that there is an increased awareness and efforts to promote sustainable agriculture focusing on conservation of natural resources. Land as an important resource in the sustainability of agricultural production has been given major thrust during the eleventh and twelfth plan periods.