

CHAPTER -VIII

POLICIES AND STRATEGIES FOR THE AGRICULTURAL DEVELOPMENT

INTRODUCTION

Among the land resources agricultural land has played a vital role since time immemorial, owing to increasing population pressures on land and ever growing demands of food and raw materials, the agricultural developmental history in the district and state as a whole can be traced back to the beginning of planned economic development in Sikkim. The First Planned period is conceived in 1954 with the help of a technical team of planning commission of India. It was seven years planned period from 1954 to 1961. During this planned period, a separate directorate of agriculture and horticulture was formed. These first seven years plan was followed by three 5 years plan viz. 1961-66, 1966-71 and 1971-76. But during these three 5 years plan the main emphasis is only on the infrastructural development, except some improvement in the land tenure system.

The agricultural development in the district and state as a whole accelerated after merger the Sikkim state with India. The over all policies and planning for agricultural development in the South District can be discuss as;

1. Earlier Strategies or pre reform period (1975-1993)
2. Present Strategies or post reform period (1993-2007)
3. Future Strategies

8.1. EARLIER STRATEGIES OR PRE REFORM PERIOD (1975-1993)

This period is started from after merging the state with Indian Union in 1975. The development of agriculture was accelerated. A clear cut policy and planning in agricultural sector is emerged for the state, but there is no separate planning for district level, even though the state has been divided into four districts. Most of the policies and planning in this period are the continuation of the earlier policies of seven five years plan. Prior to 1975 there is uncertainties about land tenure right, negligible public investment, Zamindari system, over dependence on traditional methods of cultivation , low productivity, lack of market facility, low inputs and other institutional backwardness like ineffective structure of agriculture were prevails.

The initial phase of this period is main focus of policy and planning is more in establishing foundation for a strong administrative and agri-infrastructural development only. The policies like regional concept of agricultural development were initiated, dividing the whole state into various regional centers. The South District has been divided into two regional centers and one sub regional center where establish with 20VLW centers. The scenario is not much change in 1981 .A high level team for land use planning for the state was formed and drawn up a detail plan of action were suggested for various planning and policies for agricultural development in the state. Some of the important policies and planning suggested by the committee are, preparation of detail land use plan for the whole state, this plan should be in consideration and understanding the existing problem of state, like climatic condition, ecology, inventories of natural resources and infrastructural development, adoption of suitable crop and cropping system, classification of different physio-climatic zones, instruction of horticulture and starting of agro-forestry and farm forestry in the areas with 33% slope areas, Beside, encouragement of terrace farming, reclamation of land slide areas, liking up of knowledge gap, man power training and giving incentives. But the suggestion can not be considered as purely agricultural policy and planning because it is mostly focus on the overall economic policy of the stat. Following the suggestion made by the team, the important steps taken for the development of agriculture in the district are; establishing and strengthening the agricultural farms for the formulating a package of measures covering adoptive trial , demonstration, seed multiplication and prorogation of planting materials including distribution of agricultural material inputs through net work of centers, manure and fertilizer and controlling of diseases for various crops by spray, seed treatment, soil treatment and pest control and farmers training etc. Dry land development, water harvesting and introduction of HYV seeds are the main thrust of the period.

But the main problems is still persists like the lack of train main power, lack of extension service and ineffective management of water resource etc. leads to the vicious cycle of low production, clinging to traditional practice of agriculture and low income from the agriculture. Nevertheless this phase laid the foundation for the agricultural development in the district and state as a whole.

8.2. PRESENT STRATEGIES OR POST REFORM PERIOD (1993-2007)

In accordance with the structural adjustment programmed of the country after 1993 or liberalization programmed. The policy and planning in the district has change tremendously from the earlier period in this phase. The lacunas which arise in the earlier phase have been address in this period. The first half of this period is also the continuation of the earlier phase with little change of policy and planning but the main theme is the strengthening of agricultural administrative in the district. Some of the notable policy and planning is the policy for development of oilseed and pulse in the district beside the traditional maize and rice development. Soil conservation and watershed management are some of the key policy. The second half of this period, the main focus of the agricultural policy and planning is on the development of organic farming along with the declaring of the state as organic farming state. With this change host of new policies and planning were formulated, first by converting all the agricultural farms into organic farms. Introduction of EMI technology, introduction of bio-fertilizer, encouragement of compost manure production, integrated pest management programme. Post and pre harvest operation by using new technologies and modification and adoption of indigenous implements to make them more efficient in agricultural practice. One of the important agricultural policies during the period is the introduction of National Agricultural Scheme, prior to this period in the state and district there is no policy of crop insurance which can benefit the farmers.

Table 8.1 Budget Allocation for Agricultural Development, South District

Head	2003-04		2004-05		2005-06	
	Rs in ('000)	(%)	Rs in ('000)	(%)	Rs in ('000)	(%)
Crop husbandry	1534	34.38	1433	32.95	2155	39.69
Manure and fertilizer	119	2.66	150	3.45	250	4.70
Plant protection	235	5.29	290	6.70	317	5.88
Extension and training	833	18.67	735	16.90	807	14.90
Organic farming	1740	39.00	1740	40.00	1860	34.83
Total	4461	100.00	4348	100.00	5389	100.00

* Source: Department of Finance and Public Accounts, Government of Sikkim.2006

Another notable change of agricultural policy in this period is going back to the village idea which gives emphasis to the educated rural youths to develop other means of income generation by practicing mushroom cultivation and development, capacity development, rearing of rabbits and floriculture etc. Table 8.1 shows the

budgetary allocation in agricultural sector in the South District for the last three years. In accordance with the view, to convert the state into organic farming, the maximum financial allocation has been to the development of organic farming occupying 39%, 40% and 34.83% in 2003-04, 2004-0 and 2005-06 respectively. Crop husbandry occupies second place having 34.38%, 32.95% and 39.69 in the same financial year. The development of manure and fertilizer sector has the lowest percentage among the agricultural investments having 2.66%, 3.45% and 4.70% respectively, but having an increasing trend. The Plant Protection has fluctuating trend having 5.29%, 6.70% and 5.88% of total agricultural allocation in the district in the corresponding years. The extension and training has constituted a sizable percentage of budgetary allocation in agriculture in the district having 18.67%, 16.90% and 14.90% with a decreasing trend. This decreasing trend reveals the underlying problem of lack of understanding, the problem of agricultural development as a government policy of converting the state into organic state, there is need of increased budgetary allocation in agricultural extension and training because the adoption of new methods of farming needs wide spread knowledge and technical know how to the farmers , without training and extension services successful implementation of the policy of organic farming will face a Herculean task.

Another important strategy for the agricultural development in the district which is notable to discuss is the adoption of National agricultural Technology Project (NATP) and Innovation in Technology Dissemination (ITD). In the South district for implementing the (NATD) and (ITD), Agricultural Technology Management Agency (ATMA) is formed as main nodal agency. The main thrust of the (ATMA) is to support the programme for the extension reforms and policy frame work. The main policies are viz. reforming public sector extension, promoting private sector to effectively complement, supplement and where ever possible substitutes public support for extension, main streaming gender concerned in extension and capacity building/ skill up gradation of farmers and extension functionaries.

The novel approaches of this cafeteria approach, which includes cost norms and policy parameters. The new initiatives are multi-agency extension strategies farming system approach, farmer centric extension service accordingly in the district. The Strategic Research and Extension Plan (SREP) have prepared Agro-ecological Situation (AES) by involving NGO's, private participation, scientific community. The whole South District has been divided into three (AES) as AES-I (high altitude 1501-

5000mt with high rainfall, low temperature/rainfed), AES-II (Medium altitude 801-1500mt with medium rainfall, medium temperature/springfed) and AES-III (low altitude 300- 800mt with low rainfall, high temperature/ Channel irrigation). This classification is one of the important steps for agricultural development policy. This (AES) can be considered as agricultural regions in the district for the future planning as the criteria is base on the local physio-climatic conditions. This will helps the farmers to choose the right kind of crop and farming methods, which will boost the agricultural productivity in the district.

Besides, the SREP also gave emphasis on macro management in agricultural development by suggesting the following:

- i). Sustainable development with watershed approach to achieve the twin objectives of enhancing productivity with simultaneously conserving the natural resource, like soil, land, plant nutrient and moisture with public and private participation in village level.
- ii). Water harvesting methods will be strengthening by encouraging the roof water harvesting with incentives and protection development as well as find out new water source.
- iii) Demonstration on package of technology involves HYV seeds, organic manure and IPM.
- iv) Popularization of mushroom cultivation and production
- v) Farm mechanization and human resource development are the major components.

8.3 FUTURE STRATEGIES FOR DEVELOPMENT

Both the pre and post strategy does not address some of the important issues of agricultural development like, credit, capital inputs, labour problems and choice of crop. It is ironic that farmers are not able to get good supporting price of their product after so much of sweat and toil. Marketing and getting good price for the produce is a matter of concerned. It is therefore very important for the co-operative agencies, operating in South District should come forward to procure the produce from the farmers there by reducing involvement of middlemen and helping the farmers to earn profit. The institutions like PACs/Nationalize Banks/ NABARD have to come forward to assist the farmers financially as well as in the form of inputs not only for the big farmers but also for the small and marginal farmers. Arrangement should be made to avoid middlemen interference and also involvement of moneylenders.

Since a major portion of the produce come from the village, they have to be brought to nearby towns only. Therefore storage facilities have to be developed. So far, not a single storage facility is available in the district. During the winter after ripening the horticultural product and the cardamom, due to the lack of storage facility, the farmers have to sell off the production at cheap and throw away price. To solve the problem, co-operative societies have to be encouraged for storing and purchasing of products. Efficient marketing system is essential to help the producers. Farmers in the district face a number of constraints due to the lack of various facilities. The nature, seasonality and high degree of perisibility of goods also aggravated the problems. Hence, marketing management need to be strengthened by evolving marketing department, transport department both lending and storing of agricultural products in the district.

The pre and post reform policies and planning has left out the major problems of choosing crops in this direction. The AES suggested by SREP can be applied with some modification as farming system which can more beneficial to the farmers as the suggestion is based on the local physio-climatic conditions as well as the traditional cropping patterns are considered.

Table 8.2 Farming System, South District

Size	AES-I	AES-II	AES-III
Big Farmer	Agri+Hor+Fro+AH	Agri+Hor+Fro+AH	Agri+Hor+MP+AH
Marginal Farmer	Agri+AH+Fro	Agri+AH+Fro	Agri+AH+Fro
Small Farmer	Agri+PT+AH+BC	Agri+PT+AH+BC	Agri+Fro+AH

*Agri: Agriculture, Hor: Horticulture, AH: Animal husbandry, PT: Poultry, Flo: Floriculture, MP: Medicinal Plant

Table 8.2 represents the suitable farming system in the district. Along with the agriculture and horticulture, the emerging agricultural and allied practice likes floriculture mushroom cultivation and augmentation of all practice of animal husbandry, poultry, and medicinal plant cultivation with altitudinal suitability. Besides, horticulture and floriculture, the cultivation of medicinal plant is also an emerging field which farmers can practice in hilly terrain and climatic conditions which very favorable for medicinal plants and herbs cultivation, but it is in infantile stage of development. So far, more than 45 numbers of medicinal value plants and herbs are identified. If proper training, policy and planning is provided to the farmers it can become one of the important ventures in the South District especially for the

farmers of the district. These also can change the cropping pattern by shifting from low profit crops cultivation to high value crop cultivation.

In order to solve the various problems, lacuna and loopholes in the earlier policy and planning, for the future development of economic conditions based upon agriculture and allied sector, the following suggestions may be adopted.

- i). Popularization of high yielding, improved and locally suitable varieties of crops.
- ii). Proper and natural management of crop with scientific and traditional methods of practice
- iii). Research and improvement of indigenous varieties of seed crops.
- iv) A proper market linkage facility should be developed.
- v). Pre and post harvest management should value added and properly manage.
- vi). Streamlining and strengthening research and extension with farmer's participation.
- vii). Promotion of mix farming system which insure the failure of a particular crops e.g. cultivation of maize and soybean will help the farmers as the maize does not give higher profit to the farmers will compensated by selling the soybean . Like this, the new cropping pattern likes ginger+ maize, pea + oilseed; ginger + pulses and turmeric cultivation can help the farmers.
- viii). In hilly area, like South District the conservation of soil is very important, approach to the treatment of catchments area, integration of sartorial measures for comprehensive watershed management. The concept of public private participation (PPP) be emphasized on sustainability and treatment of watershed area, a micro-economic unit will uplift the economic conditions of the farmers and solved the problems of soil erosion.
- ix). Lack of irrigational facility is the most important problem in the district. The agricultural practice in the district is base upon the rainfed. This problem can be some what solved by practicing roof water harvesting, during the rainy seasons the excessive water can be collected in the tank and can be use latter on, it can also use for the recharging of ground water.
- x). Water shade and catchments area development approach is one of the important soil water conservation practices for sustainable agricultural development in hilly area. This approach can be adopted in the district by participating farmers, local body and planners.
- xi). Application of improve traditional means of implements and experimentation of traditionally use implements with suitable modification will help to minimize the

labour cost in agricultural practice. Encouragement of mix and double cropping with supports from authority will increase the productivity.

xii). Setting up of regulated market with infrastructure and providing market information along with transport facilities will help the farmers to get the proper price of produce commodity

xiii). Financial input institutions in agricultural sector in the district are very poor. Proper policy and planning for procurement of inputs, sales of products, proper and stringent norms to eliminate middlemen, will increase production and income as well as the agricultural development in the district.

xiv). Introducing and encouraging the farmers to adopt the scientific package of practice for medicinal plant, identification and collections of indigenously found medicinal and aromatic plant, formulation of integrated pest and disease management policy and training of local practitioner for the identification and importance of medicinal plants in scientific way and formulation of mechanism for market linkage for medicinal and aromatic plants will benefit the agricultural development.

xv). Horticulture and floricultural sector becomes another important area where the farmers can flourish. Proper guidance policy and planning is needed to develop these two fields. Both the venture requires large investment, proper financial helps from the institutions. Until and unless the financial institution came forward, the opportunity can not be materialize. Even after getting the financial supports, the farmer does not know where to sell the products. If proper guidance is given them, it can be one of the important sectors of agricultural development

xvi). The policy of organic farming should be strengthened. Because this is only ways and mean by which the result of long term sustainable agriculture can be practiced without affecting the immediate environment. But there is a big question about the norm and policy to protect the contamination of product and the price. To honours the work of the farmers and also in respect to nature conservation and human well being, they need to get a price premium for their products.

xvii). Last not the least motivation of the farmers in the right direction and their participation will be encourage for various planning and policy implementation is very necessary.

CONCLUSION

The policies and planning for agricultural development in the district has emerged after merging the state with Indian Union in 1975. A clear cut policy and planning in agricultural sector specially establishing strong foundation for agricultural administration is the main focus of the initial period. After this agri-infrastructural, regional concept of agricultural development, expanding and strengthening of dry land farming giving more emphasis to the oilseed and pulse along with the tradition crops like rice and maize are the some of the important step taken during the period. Besides, implementation of soil conservation and watershed management for the agricultural development are the important measures taken during the stage. The second half of the second planning period's main focus is the large scale adaptation of organic farming. With these shift host of new policy and planning were formulated, like introduction of EMI technology, introduction of bio-fertilizer, encouragement of compost manure production, integrated pest management programme, improvement of traditional agricultural tools and post and pre harvest operation etc. The future policy and planning which were formulated for the development of agriculture are the adaptation of national agricultural technology project and innovation technology dissemination etc. These policies and planning were executed and monitor by Agricultural Technology Management Agency. The main focus of ATMA are reformation of public sector extension, promoting private sector to effectively complemented, supplementing main streaming gender concerned in extension capacity building/skill up gradation of farmers and expansion of farmer centric extension as well as formulation of agro-ecological situation are the important policy which will certainly develop the agriculture in the district.