CHAPTER-11
SUMMARY, SUGGESTIONS AND POLICY ISSUES

11.1 INTRODUCTION

With the ever increasing numbers and decreasing holding size, the issue of food security of agrarian population has emerged as centre of focus of all development policy and strategies at all sphere viz. global, national, and at household level. The concept of food insecurity as evolved during last two and half decades has became more enlarged then to earlier concept which was confined to global and regional food security rather than national, household and individual concerns. In Himachal Pradesh agriculture and allied activities has been the mainstay of about 69 percent of agrarian population who are mostly undertaking farm activities for themselves rather than market or with least or no marketable surplus and even unable to suffice their household food feed requirements. It is due to miniscule fragmented holdings combined with traditional cropping pattern and age old tools and techniques, further attribute to low production on these farms. Although both the study region falls in different agro-climatic zones but enriched with conducive climatic conditions suitable for the production of varieties of fruits, vegetables and off-season cash crops with higher value and marketable potential at local and national market.

This is miniscule holdings size, low degree of crop diversification, lack of irrigation facilities, extension services and mismanagement of resources at grass root level further aggravated the situation of food security front. In the state majority of small size holdings has turned uneconomic due to successive cultivation and low degree of crop rotation. Hence, food security concern has been further worsened on these farms. The present study has been focused on to determine the state of food insecurity and vulnerability among agrarian population in the light of various strategies, instrumental at household level in the agriculture sector namely crop diversification, commercialization, livestock rearing and pace and pattern of migration to perform various farm and non-farm works during the slack season.
11.2 METHODOLOGY AND COVERAGE

Himachal Pradesh a small mountainous state lying in the Western Himalayas. The overall development in general and agricultural sector development particularly in the hilly state is circumstanced by various factors namely inaccessibility, marginality, fragility and human adaptation mechanisms in practice. These factors make distinction among various regions of the state based on pace and pattern of agriculture sector growth and food feed concerns of the agrarian population. Two districts of the state have been selected i.e. with higher degree of agricultural commercialization and low degree of commercialization or where subsistence agriculture is in practice namely Shimla and Chamba respectively. On other hand, districts have shown large concentrations of below poverty line households. Two developments blocks from each selected districts and than two revenue village from each block was selected on the basis of purposeful discussion with various development agency workers and administrative authorities' at district headquarter level. A well designed pre-tested schedule is used to draw a representative random sample of 280 agrarian households in probability proportion of their actual numbers. Primary as well as secondary data has been used regarding numerous aspects through field survey and from various publications, gazetteer, unpublished reports and other documents from government offices. In the present study, state of food insecurity and vulnerability was worked out on the basis of paid out cost, home produce, calorie intake, consumption expenditure, income distribution etc. Simple tabular analysis has been used to arrive at conclusion. Therefore Lorenz curve drawn and the value of Gini-coefficient was worked out to trace the impact of unequal income distribution among agrarian population on food security front.

11.3 SOCIO-ECONOMIC PROFILE

In the study various socio economic indicators have been incorporated which have direct bearing on the food-feed status of the households. Households of different economic classes were given proper weight age in the present analysis. The study reveals that there is dominance of marginal and small households in the study regions. In the Chamba district, Tissa block is schedule tribe and Muslim community dominated because of its border with adjoining Muslim community dominated state Jammu and Kashmir whereas Salooni block is general cast dominated region. In
Shimla region, Chirgoan block is general caste dominated one while chopal region is Muslim (Gujzar community) and general casts have been co-existing. For the agrarian population ownership of land is most important household’s assets and entitlement which has direct bearing on the food security of the households. Average holding size in Chamba region was 0.62 hectare, 0.82 hectare while in the state average loading size was 0.72 hectares. No irrigation facility and leased- in and leased - out case was reported, In subsistence farming region Chamba.

11.3.1 Average Family Size

Average family size in Chamba region (5.20 persons) was higher particularly in Tissa block then to salooni block. In Shimla region average family size (4.79 persons) was comparatively smaller than to whole Chamba region. In the state average family size have been 4.99 persons per family. The dependency ratio was 0.69 persons, 0.61 persons and 0.66 persons per working household in subsistence, commercial and in the state respectively. Higher dependency ratio was reported among marginal households of subsistence farming region whereas at state level it was higher among small households of commercial farming region.

11.3.2 Sex Ratio

Sex ratio is one of the most important demographic features of our social system. In subsistence farming region there was 977 female behind 1000 male and it was positive only among marginal households i.e. 1041 female per thousand male. In commercial farming region sex ratio was 1060 female per thousand male and it was also recorded positive among marginal households. Agriculture labour force was found to be about 61 percent in both the regions with the dominance of male workers.

11.3.3 Education

In subsistence farming region literacy ratio was found to be 47 percent and positively related with the size of holdings. Literacy was more among male family members than to female members. In commercial farming region literacy ration was 58 percent with little bit male dominance. In the state literacy ratio was 52 percent.
11.3.4 Dwelling Structure (Housing)

The percentage of households who were residing in mud-plastered (Kchha) wooden made single room houses in subsistence farming region 92 percent and 73 percent in commercial farming region. About 80 percent households did not have separate kitchen and animal sheds. The situation was more alarming in former region than to later one. Thus such poor dwelling structure has direct concern to the food security and on health and hygienic front of the agrarian population which directly hampers their work efficiency, productivity and family income.

11.3.5 Occupation

For the marginal and small households traditional agriculture has emerged as main source of household income and employment whereas farm income from horticulture, animal husbandry and even of from crops increased with the size of holdings. About 4/5th of agrarian population engaged in subsistence farm in Chamba region and just ¼th engaged in commercial farming i.e. cultivation of vegetables, fruits and in other cash crops cultivation. In Shimla region about 2/3rd of agrarian population has been engaged in subsistence farming because of majority of miniscule impossible holdings, commercial farming was impossible and un-economic. Among all households in the state 64 percent agrarian labour force was engaged in agriculture and allied activities whereas the percentage of non-farm workers was 36 percent in the state. The percentage of migratory labourer was about 30 percent and has been showing increasing trends over the recent past in numbers and duration of stay period.

11.4 LAND UTILIZATION

In subsistence farming region most of the cultivated land was under traditional field crops. On an average 0.03 hectares orchard area per household was reported whereas net sown area excluding orchard was 0.24 hectares per household. Gross cropped areas excluding orchard was 112.85 and 104.76 hectares including orchards. The cropping intensity including orchards and excluding orchards was 169 percent and 131 percent respectively. In commercial farming region average net area sown excluding orchards was 0.26 hectares per household and including orchard average net area sown was 0.31 hectares per household. Cropping intensity has been 161 percent excluding orchards and 185.82 percent including orchards, while at the state
level it was 153.82 percent and 239.89 percent excluding and including orchards respectively. In subsistence farming region, kharif crop occupied about 59 percent area while rabi crop accounted for 41 percent of total cropped area. Maize crop was the major Kharif crop grown in this area. Area under kharif crop in commercial farming region accounted for 66 percent against 34 percent under rabi crop. Maize crop again occupied maximum area.

11.5 INVESTMENT ON BASIC IMPLEMENTS

All minor to main agricultural equipments and machinery needed to carry farm operation which forms the basic assets of farm family were accounted in study regions. Expenditure on these equipments also reveals trends of saving, investments and household’s expenditure on farm assets. In subsistence farming region numbers of per farm modern minor and major agricultural equipment was comparatively less to the households of commercial farming region. Most of the equipments were traditional and ages old which emerged as the main hindrance at farm level to enhance farm productivity, income and food security at farm level.

11.6 LIVESTOCK PROFILE

Livestock of farm family has direct bearing on the food security of farm households as it provides milk, Ghee, mutton, eggs wool, etc. as nutritious supplement which effects their farm productivity, work efficiency, and living standard through income enhancement. Livestock rearing has been traditional and ancestral occupation of farm families in the state and proved a boon for the state farmers with small size holdings. Number of per farm livestock units (Standard Animal Unit) was 6.30 per farm among all household in subsistence farming region as compare to 5.49 units (Standard Animal Unit) per farm in commercial farming region whereas at the state level it was 5.77 units (Standard Animal Unit) per farm.

11.7 INCOME DISTRIBUTION

Household’s income from all the enterprises undertaken by sampled agrarian population accounted was over the various costs incurred to earn that income. A total farm income of Rs. 23050 per farm was realized in the state whereas Rs. 13864 per farm and Rs. 32234 per farm in subsistence farming and commercial farming study
regions respectively. The share of horticulture income was highest i.e. 49 percent for large households followed by field crops income among the marginal and small households in subsistence farming region. Household’s income on large farm was recorded about double, than to other farms namely marginal and small in subsistence farming region. In commercial farming region major chunk of small and large household’s income realized from field crops followed by horticulture income also among marginal households. This was due to cultivation of cash crops or off-season vegetables on leased-in farms by marginal farms which enhanced their family income and ensure food security. But farming on these leased-in farms being a costlier affair due to use of high valued seeds, pesticides, insecticides and higher rents( non regulated) makes them more risk prone for food security at household level and raise the degree of vulnerability among the households in case of crop failure or natural calamities. It is non-farm income which to some extent assists household income to mitigate food feed requirements. The study reveals that households of subsistence farming region were realizings 44 percent of total non-farm household’s income from labour works, followed by government service with about one third of income from business, rural artisans and other works. Out of total non-farm income, share of labour work was about 55 percent followed private services earning and government services respectively. Among all households agriculture and non-agriculture labour works remained major source of their non-form income in the state. It is non-farm construction works in Chamba and adjoining areas while mostly farm work in commercial farming region. The study revealed that the ratio of household’s monthly average income from farm sector has been just $1/3^{rd}$ to that of total household income on marginal holdings, while it shows increasing trends with the size of holdings in both study regions irrespective of farming types. The ratio of farm income was little bit higher in commercial farming region rather than any drastic change.

11.8 IDENTIFICATION OF FOOD INSECURE GROUPS

In the study consumption behavior of households on various food and non-food items was worked out to define poverty line and to designate status of food secure, insecure and vulnerable groups along with household’s consumption requirements per standard consume units, based on the recommendation of Indian
Council of Medical Research (ICMR). Hence, the extent of absolute poverty among sample agrarian households was measured in nominal terms.

11.8.1 Consumer Units

To work out the exact consumption requirements of sampled households, each family was converted into standard consumer unit or ‘Adult Man Value’ by the ‘Scale of Co-efficient’ suggested by Indian Council of Medical Research. The total numbers of standard consumer units were 779,697 and 1476 units in subsistence, commercial farming region and in the whole study region. Whereas marginal households totaled to 64 percent along with 30 percent small households and this combined accounted for 94 percent.

11.8.2 Consumption Expenditure

The existing pattern of household consumption expenditure on food items was recorded on the basis of prevailing prices in the concerned study region. The study revealed that maximum percentage share of household consumption expenditure goes to cereals and it was higher among marginal than small and large farmers followed by milk and allied products and edible oils and fats etc. The analysis revealed a decreasing tendency of cereal consumption expenditure with the increase in size of holdings. Consumption expenditure on fruit was least among all categories of agrarian population. It was observed that the propensity to consume was higher among majority of agriculturist as they spent large share of their income on food-feed requirements. It is asserted that along with basic minimum food requirements non-food items was equally important for human survival and thus due consideration was given to these items in this analysis. Since, there are no specific norms comparable to minimum non-food calorie requirements so far suggested at any level, neither at government level nor by any individual scholar. Consumption expenditure (non-food) on clothing accounted for highest share of total expenditure among marginal and small households, followed by social functions and other expenditure in subsistence farming region whereas similar trends were found in commercial farming region.
11.8.3 Valuation of Recommended Dietary Intake

The study reveals the value of per consumer unit per day or monthly recommended dietary intake which provides 2400 calories per consumer unit per day at locally prevailing prices. Among all households it is Rs. 10.73 per day per consumer unit and Rs. 321.90 monthly per consumer unit in subsistence farming region whereas it is Rs. 15.47 per day per consumer unit and Rs. 374.10 monthly per consumer unit in commercial region. Therefore, per consumer unit monthly non-food consumption expenditure was also added to the total food consumption expenditure to derive the exact value of monthly per unit consumption expenditure. Thus the value of poverty index for both study regions was Rs. 486.51 and Rs. 580.00 in subsistence and commercial farming regions respectively.

11.8.4 Per Consumer Unit Daily Actual Dietary Intake

Per consume unit actual daily consumption of cereals in the whole study region was little bit short off than to recommended quantity specially among households of marginal and small categories of subsistence farming region and only marginal households were found with short off pulses consumption. This is due to Public Distribution System’s network that households had access to enough pulses. Vegetable consumption was again circumstanced by the fact of non-production of vegetables in subsistence farming region while it was up to the mark in commercial farming region where environment is more conducive for the production vegetables. Deficit in consumption of meat, eggs and fish etc. was recorded among all the households due to it's higher prices and lacking affordability. Sugar and edible oil are being also provided through civil supplies which makes their consumption almost up to the mark. Holding-wise analysis reveals that at over all level percentage share of non-food consumption expenditure than to food expenditure was positively related with the size of holdings.

11.8.5 Nutrition Approach

‘Nutrition Approach’ was used to workout the numbers of poor households it shows that the incidence of poverty was more among marginal and small households in the state specially in subsistence farming region with highest number of poor i.e.
about 48 percent, followed by 40 percent in commercial farming region. In the state overall poverty percentage was 44 percent in the state.

11.8.6 A Nutrition Plus Approach

A more inclusive approach to work out food security status that is ‘Nutrition Plus Approach’ was used in the study. An equal weight age was assigned to food and non-food items (i.e. the ratio of total non-food expenditure to total food expenditure used) and thus value of poverty index worked out. Hence percentage of poor agrarian population has been 50.24 percent, 46 percent and 36 percent in subsistence, commercial and at the state level respectively.

11.8.7 Food Insecurity and Vulnerability

The holding-wise analysis reveals that marginal households were more food insecure on the basis of their daily intake except the commodities provided through Public Distribution System. The degree of food security was found inversely related with the holding size in subsistence farming region. Among marginal households of commercial farming region were better off to their counter partner and presently fulfilling their most of food-feed requirements and presently does not fall in category of food insecure. Small households were also found either secure or vulnerable but not facing starvation or alike situation presently. Households of large category were food secure.

11.8.8 Composition of Per Consumer Unit Daily Actual Average Dietary Intake

Among marginal and small households in subsistence farming region deficit in consumption of few items was recorded whereas consumption was surplus for sugar and allied products. Large households were fully food secure on the basis of their daily dietary intake. Average dietary intake of households in commercial farming region was up to mark with some exceptional consumption deficit in case of marginal households. Hence, it may be concluded that agriculturist of commercial farming region were better off on food security front than to agriculturist of subsistence farming region.
11.8.9 Daily Actual Consumption Expenditure

The study reveals that actual daily consumption expenditure on food items among marginal households of subsistence farming region was sufficient only on sugar and allied items whereas expenditure on cereals was just equal to the minimum necessary level, with surplus spending on pulses. In commercial farming region, extent of consumption expenditure deficit was least. Among all households daily actual consumption expenditure was short-off than to minimum necessary consumption expenditure which provides necessary 2400 calories to lead a healthy life.

11.8.10 Food Insecurity and Vulnerability

The monthly food and non-food actual consumption expenditure deficit was highest up to 10 percent among marginal agriculturist whereas overall deficit was above 7 percent in subsistence farming region. It was again highest among marginal agriculturist i.e. 15 percent with overall deficit of 10 percent. Among all households in the state consumption expenditure deficit was above 9 percent. Thus analysis reveals that households of marginal category were most vulnerable group if not food insecure in present situation.

11.9 INCOME INEQUALITIES AND FOOD INSECURITY

In this study ‘Positive Approach’ has been deployed (used) to study the degree of association between extent of income inequalities and food insecurity among agrarian population. For this purpose, Gini-coefficient, Lorenz Curve and Head Count Ratio were worked out. The study reveals that about 30 percent of population at bottom was sharing about 12 percent of total household’s income whereas top 10 percent of population possessed about $1/4$ of income in subsistence farming region Chamba.

The value of Gini-coefficient was 0.3788 among households of commercial farming region Shimla, about 32 percent population at bottom sharing 10 percent income and at top 30 percent population possessed 60 percent of income whereas the value of Gini-coefficient was 0.3969. Thus, Lorenz curve so drawn is farther to the diagonal which shows more unequal income distributions compare to a nearer to
diagonal Lorenz curve for the households of subsistence farming region. In the whole study region for marginal households value of Gini-coefficient was 0.4598, for small household it is 0.2410 and for large household value of Gini-coefficient was 0.5077. It shows more income inequalities among marginal and small households groups than to large households of sampled agrarian population respectively.

11.10 CONSUMPTION EXPENDITURE DISTRIBUTION

Consumption expenditure distribution among different categories of households has been worked out on various food and non food items with reference to the household’s actual consumption expenditure incurred during the study period. Among the households of subsistence farming region the value of Gini-coefficient of consumption expenditure distribution was 0.3926. Lorenz curve becomes distant from diagonal for higher consumption groups. The value of Gini-coefficient was 0.3220 for the households of commercial farming region and shape of Lorenz curve becomes again distant from diagonal as we move towards higher income groups. But the distribution of consumption expenditure in latter region was less unequal than to former region. Among all the households in the state, Lorenz curve shows more concentration of consumption expenditure among top 10 percent population while majority of agrarian population at bottom is spending about just 15 percent. The value of Gini-coefficient was 0.4576 which shows more inequalities in consumption expenditure. The objective measure of poverty shows that about 48 percent, 45 percent and 44 percent people were living below poverty line in subsistence, commercial farming regions and in the whole study region respectively.

11.11 ACCESS TO BASIC AMENITIES AND OTHER SOURCES

Food security is not just a matter of food availability only but it also consists of various basic amenities, public and private resources which are available to the agrarian population with easy accessibility and affordability to the public. These all factors are directly correlated to the status of food security at household level. About $\frac{3}{4}$ of rural households had access to pipe and tube bells supplied safe drinking water while other had been accessibility to some distant natural water resources in subsistence farming region. In commercial farming region above $\frac{4}{5}$ of households had access to pipe and hand pump water and other depends upon natural resources.
The responses regarding suitability of drinking water for health was recorded positive from about 3/4th of studied agrarian households in the state. In Chopal region of Shimla district special water treatment and awakening camps had been organized by the concerned departments in recent past. Therefore inadequate supply of water was main problem. Another major pre-requisite to ensure access to drinking water is access to adequate and affordable health services which are directly linked to work efficiency of labour force and indirectly household’s income. Despite having numbers of functional health establishments like Ayurvedic Dispensaries, Primary Health Centers and private clinics etc. respondents in subsistence farming region i.e. 68 percent, commercial farming region i.e. 56 percent and 62 percent in the state respectively were not satisfied with the facilities and services provided to them. The shortage of life saving medicine, inadequate health staff and frequent absence from workplace were the major problems. In commercial farming region household’s expenditure on health concerns was higher as compare to subsistence farming region. It might be due to better health facilities in the region, health consciousness of households and over all better financial position and affordability. Hence, it can be concluded that households are doing well on the food security front.

It may be concluded that it is easy access to credit facilities at the door step of agrarian population which can do a lot of good for the resource poor, poverty stricken households. In both the regions commercial bank as well as co-operative societies has emerged as the major lending institutions. The working and credit services of co-operative societies were move popular in the study regions as compare to commercial banks and other resources. The burden of indebtedness was more among the households of substitute farming region than to commercial farming region. Among the major reasons cited for this tendency were uncertain farm produce, farm income, low productivity, un-irrigated cropping system,(rain fed) and little or no surplus produce on farms, which further aggravated the problem of resource scarcity and debts repayment capacity of agrarian population.
11.12 COPING MECHANISM

In absence of enough farm produce on miniscule holdings, accompanied with low and uncertain family income caused for food insecurity and poverty at household level. The study reveals that there has been evolved a set of strategic tool and techniques for alleviating poverty and food insecurity at the grass root level which was in practice in the study regions, despite government's food security net. Food deficit, over domestic farm produce was made up by public distribution system in both the blocks namely Tissa and Salooni of Chamba district. In the selected blocks of commercial farming region namely Chirgoan and Chopal public distribution system was also at work and successfully fulfilling food (deficit) gap through purchases from fair price shops at subsidized rates. It has been concluded that through ration cards each household in the state has been provided essential commodities on subsidized rates irrespective of their socio-economic status i.e. below poverty line, above poverty line etc. The process of transition of mono-cropped agriculture system into a multifaceted farm enterprises has also took place as an strategic instrument to avoid food insecurity and vulnerability at farm level in the state. But miniscule size of holdings, low potential for mechanization and resource poor households has hampered the process agriculture diversification and slow down the process of agriculture development.

11.13 MIGRATORY NATURE OF AGRARIAN POPULATION

The study revealed that in recent past tendency of frequent migration of farm and non-farm job seeker towards different area has been evolved as a major technique to supplement household income among agrarian population. In subsistence farming region agrarian labourer mostly migrate to perform non-farm works i.e. construction works in adjoining areas namely killar, Pangi, etc. Therefore, the number of labourer who were earlier engaged in the occupation of wild flowers, fruits, herbs and phoj-patra collections declined over the time due to uncertain income their from, heavy life risk during collections, availability of non farm employment in the adjoining areas of subsistence farming region. Another, factors like slow pace of agriculture commercialization, resource poor household, miniscule holdings which have almost turned non-viable and non-economic has further attributed to the migration tendency. It commercial farming region, there is vast potential for further commercialization of
agriculture, especially on large farm and lot of potential for labour absorption their in. Hence, most of the labourer migrated to perform farm works towards apple belt and off-season vegetable cultivation areas in this particular region. No doubt they have been successfully fetching higher wages, for comparatively prolong period near their villages and fulfilling their food - feed requirements.

11.14 LIVESTOCK REARING

Livestock rearing is playing an important role in the socio-economic development of agrarian population of the state especially among those are having small land holdings. About one third of agriculturist were directly engaged in sheep and goat rearing in the study regions. Although, ever-increasing area of reserve forests, urbanization, risk for lives during rearing on higher mountain ridges and day by day declining green pasture in the state has possessed serious threat to rearing occupation among the agrarian population. Further, it is lack of animal husbandry hospitals, extension services, low yield animal stock along with accidental insecurity has further exposed household to food insecurity and vulnerability front too.

11.15 SUGGESTIONS AND POLICY ISSUES

The concept of food security has been modified and enlarged over the recent past and now days the focus has shifted to food security concerns at national, household and individual levels rather than earlier concerns. It is ever increasing number of fragmented holdings and decreasing holding size which has possessed serious threat to the food-feed security of agrarian population on these miniscule farms. Hence, following suggestions are being offered to be incorporated in the concerned policies meant to make agrarian population food secure, hunger free and other poverty elimination policy.

11.15.1 Increase in Public Sector Investment

The geographical location of both the study regions reveals that life of agrarian population in tough, rain fed region is very hard, despite conducive conditions for the production of off-session vegetables and cash crops. Thus channelization or increase in public sector or social sector investment towards creation of irrigation facilities and its optimum use should be given top priority
followed by investment on basic infrastructure namely road connectivity, market accessibility etc.

11.15.2 Diversification of Farming System

Poor farm yields on miniscule holdings, lack of crop rotation system and cultivation of (traditional crops) maize, wheat and paddy etc. in both the study regions have further aggravated the problem of household food security. Thus, any move towards cultivation of high yield cash crops and vegetables along with adoption of supplementary enterprises namely poultry farming, dairy farming, aquaculture and bee keeping etc. can do a lot of good for surplus agrarian population agriculture during slack season.

11.15.3 Agricultural Extension Services and use of Modern Farm Techniques

During special farmer training camps, soil testing camps and accordingly remedial measures to maintain soil health etc. issue should be focused and discussed with the farmers during training camp, awakening camps and other workshops which can help to make farmer familiar with new production tools and techniques. Therefore, demonstration of new farm machineries and tool kits should be taken to their door steps and should be provided through special mobile sale depot on subsidized rates.

11.15.4 Need to Develop Proper Co-ordination between Different Development Agencies and Healthy Feed Back System

There is need to develop proper co-ordination and linkage between different development agencies who are at work at grass root level like district rural development agencies, financial institutions, insurance sector and various department to make a big blow on the rigidities in rural sector. A feed-back system is also required to ensure the benefits of development up to bottom till the last man.

11.15.5 Creation of Off-Farm Job Avenues Through Infrastructural Development

Agriculture being mainstay of majority of agrarian population characterized with long-slash season. Thus agriculturist are hardly getting jobs on their farms for 4
to 5 months around the year which consequently, leads to frequent migration towards for flung areas or towards urban areas to perform non-farm unskilled labour works, caused for social, economic and health damage in already over populated urban areas. Hence, development of strong infrastructural base and industrial base for agro-based small and cottage industries in rural areas are needed that can help to provide non-farm jobs at their door step and enough income for households food-feed requirement

11.15.6 Horticulture Enterprise

Horticulture is one of the most important and appropriate cropping system for hilly conditions, leading to optimum use of hilly or slanting land and to harnessing the existing vast potential for fruit crops cultivation. The basic problem is related with heavy investment requirements and little or no return accompanied with risk factor on orchard during initial (non-bearing) stage. Hence, there is a need for more scientific orchard management and suitable post harvest technology beside provisions for quality nursery plants and advice for the use of pesticides and insecticides. Special provisions should be made to bring more area under fruits cultivation through involvement of farm households with miniscule holdings. Therefore, enterprises like floriculture, medicinal plants and herbs production should be promoted on small holdings where no heavy investment is require and even may be grown in rain fed condition with least crop failure risk, watch and ward.

11.15.7 Livestock Enterprise

Animal husbandry has been one of the major enterprises undertaken by most of households with agriculture in the study region. It is livestock rearing that has proved boon for state’s farmers living in far-flung snow bound areas. There is a need for series of reforms in this sector because households kept mostly local breed sheep and goat characterized with low wool,, milk and meet yields, having serious affects on rural households economy and on food security front. Special stress should be laid on the development of cross-breed ships and other livestock with a view to benefit the farmers in these far-flung areas and opening of more livestock product processing and collection centers in the state. During winter season special destination should be identified for their rehabilitation, grazing land and market for their products.
11.15.8 Monetization in Rural Economy

The need of hours is to systematize and promote the factors which helps for diet diversification to ensure food security not only quantity but in quality terms also. These factors are monetization in rural household economy i.e. change in wage payment systems, commercialization of food economy, education etc., which needed special attention on the government part.

11.15.9 Food Security and Social Security Net

In order to be effective and particular on the food security issue the food security policy must be evolved as a basic element of social security policy, with a degree of accountability and co-ordination between different government and non-government development agencies at work. All the ongoing programmes of direct food and nutrition support must be more intensive and widened downs toward the earth with maximum local participation. Provisions should be laid down to improve the life quality of local people through heavy investment on education, health, public sanitation and drinking water etc. There is need for reformulation and re-structuring of guidelines and norms meant to identify poor rural households to be covered under food security net by the government. It was observed that due to increasing local political interference it caused for misidentification of real poor and needy households. The issue of pre-determined fixed numbers of poor households to be covered under specific food security net also attracts annoyance among rural people. It is argued that all these prefixed targets has been based on some earlier population statistics.

Hence, attention is needed to be paid at government and planning agencies level in order to check the loop-holes in existing public distribution system there is need for total computerization of entire system (PDS) with a degree of accountability on the part of fair price shop holders and beneficiaries simultaneously. It was noticed during the study that the quantity of cereals provided through fair price shops, for some household’s categories, it was above to their home produce quantity of cereals. This fact shows the dominance of public distribution system over the demand of cereal consumption among rural households. In this concern it is suggested that this phenomenon is directly or indirectly harming the farm production system and
increasing their dependence on PDS rather than farms and promoting non-working culture. Hence, it is suggested that supply of only essential food and non-food items through PDS should be promoted towards specific poor and needy groups of households.

11.15.10 Public Resource Management

A more useful and scientific management of existing public resources is advocated because of heavy dependence of rural households on these resources since ages for their livelihood directly or indirectly. Thus, management of natural water channels, forests and other public resources needs special attention because these are not only providing fruits, herbs to rural people but also providing livable healthy environment, protecting agriculture through soil and water conservation, conducive conditions for more valuable cash crops (vegetables and fruits) and overall ecological balance. Thus protection of these resources should be accorded full importance. Since, the issue of food security is the primary concern of all planners, policy makers, development agencies and government in present scenario and this study would also provide enough input for an over all change in the food-feed management policy as well as overall agricultural strategy. On the government part, there is a need to increase farm production particularly of non-cereal foods, vegetables, fruits and animal products beside reformulations of support price and procurement policy. More attention is needed to be paid to bring together various agricultural research, development agencies and institutions at work to evolve new high yield varieties of seeds and plants conducive for the prevailing conditions in the study region.