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The Agricultural Sector of Kashmir: Between Growth and Mismanagement

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Kashmir is a beautiful state with varied dimensions of beauty. It is enriched with boundless bounties of snow-clad mountains, large natural lakes, forests and rivers. The valley is situated in the bosom of the western Himalayas at an elevation of about 6000 ft. and is surrounded by an unbroken chain of sky high mountains. The valley of Kashmir is full of natural resources and agriculture has always been one of the vital sources of development. Agriculture is the mainstay of the people as it provides employment directly or indirectly to about seventy per cent of the work force. Agriculture in the valley has gone through various phases from foreign rulers to Maharaja Government, from Dogra imprints to land to tiller movement so on and so forth. This flip-flop has greatly shaped development in Kashmir valley and remained a crucial area of concern as well. Land is limited, and therefore its judicious utilization is necessary to meet the growing need of the tremendously increasing population and for sustainability of soils, ecosystems and environment. In contemporary scenario, no doubt agricultural development in Kashmir valley has risen to an appreciable level and government has always been keen in giving boost to agricultural developments in the valley. But there are numerous challenges and impediments in the development of agricultural sector of Kashmir valley. This paper tries to outline and explain various developmental policies and incentives taken up by state government and also throws light on the hindrances and weaknesses in the said sector and also attempts to highlight the areas which can prove beneficial for the development of agricultural sector.

Keywords: Kashmir, Agriculture, Farmer, Governmental policy and schemes.

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BACKGROUND

The practice of cultivating the soil in order to produce crops and domestication of animals and pastoral farming is known as agriculture. The agricultural processes of any region are directly controlled by the prevailing physical environmental condition (temperature, precipitation, terrain, soil etc.) and the socio-cultural milieu (land tenancy, size of holding, technology, workforce, family requirements, irrigation, power, roads, marketing, aspirations of the growers etc.). The state of Jammu and Kashmir lies on the northern fringes of the Indian sub-continent and exhibits a varied geography. In 1947, before forty five percent of its territory became the northernmost state of the Indian Union, the area of this largest princely state in British India was 222,797 sq. km. The state, richly endowed with natural resources and competitive advantages, stretches from 320 17/ to 360

58/N latitudes and 730 26/ to 800 30/E longitudes. Morphologically the state of Jammu and Kashmir can be divided into three main distinct physiographic units- Jammu, Kashmir and Ladakh which differ from each other not only in topography but also in culture. These regions are also referred to as Sub-Himalayan Jammu, Himalayan Kashmir and the Trans-Himalayan Ladakh[i].

Jammu and Kashmir is essentially a mountainous state in which only about thirty percent of the reporting area is under cultivation. Agriculture is the mainstay of the people as it provides employment directly or indirectly to about seventy percent of the workforce, supports about eighty percent of its population. It contributes about sixty five percent of the state revenue which explains the overdependence of the state on agriculture. Land is however limited and therefore its judicious utilization are necessary to meet the growing need of the tremendously increasing population and for the sustainability of soils, ecosystems and environment. The state of Jammu and Kashmir has its own specific geo-climatic conditions, which determines the cropping pattern and productivity. Rice is the chief crop of Kashmir zone, followed by maize, barley and wheat. Jammu region dominates both in maize and wheat production. In the Ladakh region, barley is the major cereal crop followed by wheat. The production of three important food crops namely rice, maize and wheat contributes a major portion of the food grain in the state and accounts for eighty four percent of the total cropped area, the balance sixteen percent is shared by inferior cereals and pulses. Nearly seventy percent of the country's temperate fruits mainly apples are grown in the state.

According to the *World Development Report, 2008*, "Agricultural growth has special powers in reducing poverty across all country types. Cross-country estimates show that Gross Domestic Product (GDP) growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside agriculture"[ii]. Economists have, therefore long recognized the importance of this sector for initiating and sustaining economic growth. The famous economist Kuznets rightly argues that a rise in productivity in agriculture is a pre-condition for economic growth and structural change. Moreover, agriculture and especially the agriculture of the Least Developed Countries is the stage on which the world drama of population is being played. Studying Kashmir Agriculture in a historical perspective is also significant in view of the fact that owing to topographical constraints of industrial sector, which in the words of Montek Singh Ahluwalia was the darling of development of India[iii], could not be developed in Kashmir, thereby providing a central position to agriculture in the state economy. It is thus not surprising to see that although the political economy of India does not have any center at all, the economy of the state of Jammu and Kashmir continues to be dominated by agriculture. Jammu and Kashmir is a hill state having varied topography and great diversity in cultural, social and economic practices of its different regions. However, agriculture remains the backbone of the economy of Jammu and Kashmir with over sixty five percent of its population depending on agriculture and allied sectors. These sectors contribute around twenty seven percent to the state's income.

The diversity in physiographic features, agro-climatic variations at macro and micro level, existence of cold arid, temperate, inter-mediate and sub-tropical zones within a small geographical area of 2.22 lakh square kilometers, speaks volumes about the vast agricultural potential in the state. The valley of Kashmir is situated in the bosom of the western Himalayas at an elevation of 6000 feet[iv], and is encircled by an unbroken chain of heaven high mountains. The scenic and beautiful valley is open to view, beyond the pirpanjal range, after crossing the Banihal tunnel[v].The valley of Kashmir presents an interesting morphology and the various regions on the criterion of geographical configuration are the Valley Floor, the Karewas, the Side Valleys and the mountain ranges. The average height of the valley is about 1,850 meters above sea level but the surrounding mountains are at an altitude of about 3000-4000 meters[vi]. Of the physical features of Kashmir, mountain is the predominating feature and has strongly affected the history, habits and agriculture of the people. Although the valley of Kashmir had been held by outsiders from time to time – Akbar defeated the Chaks to annex Kashmir into the Mughal Empire in 1586, the Afghans seized Kashmir in 1756 and it was taken over by the Sikhs in 1819 – however, the installation of the Dogra dynasty by the British in 1846 marked the beginning of perhaps the most oppressive phase of its history. During the Dogra rule, the industrial development in the state was almost negligible and agricultural economy, the predominant sector of the economy was stagnant. The agrarian structure, characterized by feudal land relations and primitive technologies was extremely regressive. Resources were drained off from agriculture without any quid pro quo thereby, subjecting it to an internal drain of capital. In fact, the Dogra state adopted policies ill-disposed to the process of development and introduced changes which led to what A. Gunder Frank describes as the 'development of underdevelopment'. Against this background, there was a widespread consensus among political leaders about the directions of economic policy after the end of the Dogra rule and it was consistently agreed that the state should take direct responsibility of the state's development and must be the primary instrument for changing the existing economic structure and bringing about growth and development. In fact, National Conference, one of the main political parties of the state, had framed a comprehensive plan for the socio-economic, politico-cultural reconditioning of Jammu and Kashmir State, which was adopted in its September

1944 session in Srinagar as the objective of the party and came to be known as New Kashmir Manifesto (Naya Kashmir). It is therefore, not surprising to see that immediately after assuming power the new government envisaged to release the economy from the dominance of international depressants and therefore, embarked upon a series of agrarian reforms. In fact, Jammu and Kashmir was the only state in the Indian sub-continent where the most sweeping land reforms were introduced leading to the redistribution of land without giving any compensation to the expropriator. Agriculture witnessed further transformation on account of the development of irrigation infrastructure, transportation revolution and introduction of new technologies viz. high yielding varieties, fertilizers and modern implements. On the whole, the reconstruction of the state economy received further fillip with the inception of economic planning in 1951. Over the last decades the government launched several programmes aimed at tackling the problems of poverty, unemployment, disease and illiteracy.

Governmental Incentives towards Agricultural Development in Kashmir

The Department of Agriculture in Jammu and Kashmir State came into existence during the pre-independence era. Till the year 1981 there was a single Directorate of Agriculture for the whole state. The Department was assigned specific mandate to bring about increase in crop production in a planned way to feed its fast growing population. In the year 1981-82, separate Directorates of Agriculture were established for both Jammu as well as Kashmir Divisions due to diverse agro-climatic conditions prevailing in these divisions[vii]. This facilitated formulation of policies and programmes aimed at optimizing and rational utilization of land and water resources for sustained agriculture production. Initially the department was exercising jurisdiction in the fields like Agriculture Development and Extension, Development of Seed Multiplication Programmes, Research on Agriculture, Maintenance of Botanical Gardens and Development of Poultry and Development of Horticulture and Management of Rakhs and Farms.

With the passage of time some of the schemes like parks and gardens, Horticulture Development, Poultry Development got separated during the early sixties. Subsequent to 60's the department got tremendous expansion in various schemes under the agenda of Crash Programmes, intensive agriculture production, drought prone area programme plant protection management and with particular attention to development area under vegetable development programme and involving high yielding varieties of paddy and cereal seeds, besides introduction of farm machinery subsequently farm machinery was withdrawn and a separate corporation namely Agro Industries Development Corporation (AIDC) came into existence during the late sixties. During April 1982, the department got bifurcated into two directorates one each at provincial level of Jammu and Kashmir state, followed by another bifurcation in the form, that all the research schemes of department were transferred to a new organization known as J&K SKAUST. With the help of the Department of Agriculture, Kashmir envisages to help growers in the field of agriculture. With land being a limited resource, it would continue to be under stress in future. A very high priority will therefore be accorded to exploring possibilities and potentialities of crop diversification in different agro-climatic zones with a view to maximize the return per unit of the land to the farmer, consistent with ecological and environmental considerations[viii]. In high cropping intensity areas including irrigated areas, knowledge intensive precision farming techniques shall be prescribed and promoted for adoption. Use of hybrid varieties shall be encouraged in order to break yield barriers. Farmers will be advised about suitable technological packages including choice of crops, varieties and the requisite inputs to ensure high productivity with elastic cropping mechanisms. The pattern of incentives in these areas and input packages shall be reviewed and tailored to suit the changing needs.

Over the years, the agriculturists and farmers have adopted several area specific and time specific cultivation practices to meet the requirement of their staple food crops. Rice, maize, wheat, pulses, fodder, oil seeds, potato and barley are the main crops of the region. The farmers are now diversifying to cash crops such as flowers, vegetables, quality seeds, aromatic and medicinal plants and mushrooms etc. round the year. Honey-bee keeping, fodder intensification, production of quality saffron, basmati rice, rajma, off-season vegetables, potatoes are also practiced in specific areas, belts and clusters depending upon their agro-climatic suitability. Hilly terrain puts limits to mechanical farming and transportation of products, especially horticulture produce. Fragile soil in hilly areas is susceptible to soil erosion and a single cropping season is available in temperate and high altitude areas. In rain-fed areas, diversified and value-added agriculture system shall be advocated. Incentives and technical messages shall converge on promotion and adoption of the full package of recommended practices including the choice of crops and varieties, rain water management including in situ moisture conservation, water harvesting and recycling. The principle of management on water-shed basis shall be adopted for this purpose. Available surface and ground water resources shall be tapped through public and private investments with a focus on providing irrigation facilities for appropriate crops in Karewas areas. Ground water resources shall be properly mapped with assistance from the concerned central agencies.

Extensive awareness program shall be planned and implemented for judicious and efficient use of irrigation water. Energy needs for ground water exploitation shall be met on priority under single window clearance. Existing canal systems shall be brought under participatory irrigation management. Special incentives shall be provided for popularization of water-harvesting structures, storage tanks and water-saving methods of irrigation like sprinkler, drip and underground pipelines. Agro-met advisory services shall be initiated for all the agro-climatic zones covering medium and long range weather forecasts for timely operations, in co-ordination with the state Agriculture Universities and National Centre for Medium Range Weather Forecast.

Major thrust shall be laid on increasing farm power as a supplement and substitute to reduced availability of draught animals for farming operations. Appropriate energy efficient, user-friendly and sturdy implements suiting the needs of various regions shall be developed and popularized. Stress shall be laid on quality at all stages to farm operations from sowing to primary processing. Quality consciousness among farmers and agro-processors will be promoted through effective use of media and personal contact by the departmental functionaries and instituting scheme of awards for recognizing outstanding performance. Integrated Nutrient Management practice using chemical fertilizers in conjunction with organic resources like farm-yard manure, enriched compost bio-fertilizers and green manure will be popularized. This will optimize crop production in irrigated as well as rain-fed areas, besides improving soil productivity. Integrated Pest Management package will be popularized for adoption through special incentives. This would check the indiscriminate use of chemical pesticides and out-break of secondary pests, pollution in food materials and eco-system and add a new dimension of organic produce for promoting marketing of fruits and vegetables. Farmers will also be educated about the concept of integrated development of their farm household by taking a holistic view of their assets and potential. For this purpose, bringing about convergence of various schemes for development of the rural sector will be the priority. It is necessary to bring out proper convergence in the implementation of various schemes for up-liftment of rural masses and poverty alleviation. Necessary intuitional mechanism will be devised to bring out the requisite convergence. The State Agriculture Policy is aimed at developing a road map that will seek to actualize the vast untapped growth potential of the agriculture, promote value addition, accelerate the growth of agri-business, create employment in rural areas, secure fair standard of living for the farmers and agricultural workers and their families, discourage migration to urban areas and face the challenges arising out of economic liberalization, globalization and climate change[ix]. Figure 1

CHALLENGES

The overriding challenge is sustainable and profitable growth in agriculture. Lack of political will has been the single most important constraint so far with a strong government now in office, there is reason to hope for gradual improvement. State is facing the low productivity of all agricultural crops and there is massive deficit in its own production of food grains (forty percent), oil seeds (seventy percent) and vegetables (thirty percent). The net sown area of 7.52 lakh hectares (2004-2005) is thirty five percent of the reported area as against national average of forty six percent. Over seventy percent of the Net Sown Area is under food crops and the area under fruits is a little over thirteen percent. Viability of agriculture as a profession is presently affected capital inadequacy, lack of infrastructural support and controls on movement, storage and sale etc. of agricultural produce. Dwindling water resources too is a major challenge as only forty two percent of the cultivated area is under irrigation. The lack of new technologies after the effects of the Green Revolution have worn off, in contemporary scenario is becoming worrisome, only few promising seeds have been commercialized and most other innovations are still languishing due to poor extension or lack of investment. Furthermore corrective action regarding fertilizer subsidy, inadequate seed production, market rigidities and other market-distorting policies is desperately needed – but as yet political commitment is not visible. Achievement of irrigation potential unlikely to surpass fifty percent of targeted acreage, given the large backlog of previous projects to be completed and the fact that no tangible change has been made in the strategy hence, monsoon dependence and erratic growth will continue to plague the sector. The effectiveness of government measures/schemes will remain erratic across the country, private participation can help but this will happen very slowly (fundamental enabling measures such as land reforms, corporations, taxation of agriculture do not look likely at this time)

Fundamental degradation in environmental parameters and lack of Good Agricultural Practices (GAP) are not likely to be addressed in the foreseeable future, this will create a serious long term threat. Soil degradation is approaching worrisome levels in most parts of India, fifty percent of total land and sixty six of cultivated land is degraded – the highest amongst Asia Pacific countries. Water scarcity is projected as the single biggest factor for civil and social strife in the next decade. Though, the large diversity in agro-climatic conditions of the state is conducive for propagation of diversified farming system, the terrain at the same time is tough and accessibility to a greater part of the region is poor. This causes a lot of hurdles to the inhabitants in provision of inputs, products and level of literacy and awareness. Climate change presents a real and exogenous force that will work

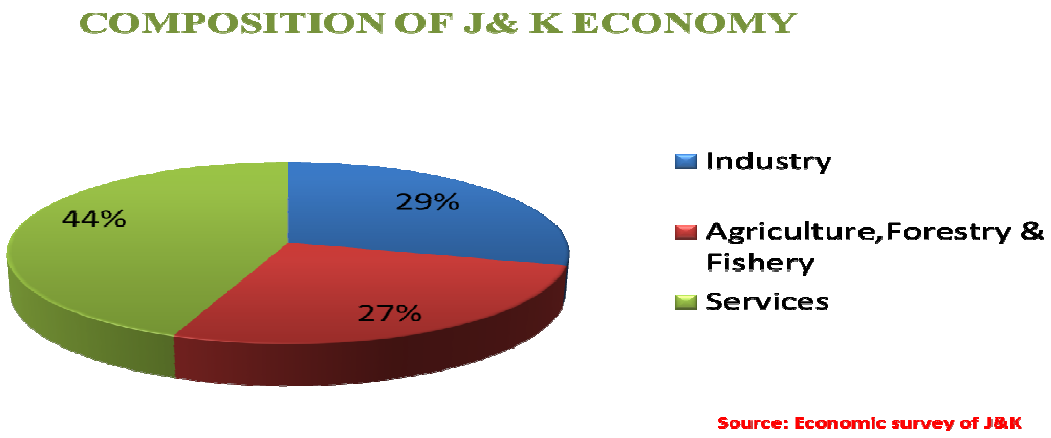

Figure 1. Highlights the composition of J&K Economy and total share of Agriculture in it

Figure 2. Highlights one challenge to Agricultural Land of the valley

"***As per J&K Economy Survey 2014, more than 3 lakh Kanals of paddy land have been converted since 2012"***

against productivity improvement measures locally as well. India's overall crop yields could fall by thirty percent by 2050 according to the Inter-Governmental Panel on Climate Change (IPCC) because of coastal flooding, greater drought incidence and reduced water availability. Other studies suggest vulnerability of 5-15% in rich yields and 25-42% in wheat yields[x], response times of mitigation measures are 5-15 years. In fact the impact of climate change on the environment is visibly obvious and valley is showing the incidents of the ill-effects of climate change[xi]. (Figure 2)

The performance of the agriculture sector depends on several drivers, which rather than impacting the sector in isolation, interact with each other and also depend on sub-drivers, consequently strengthening or weakening specific trends. The key drivers that directly impact output can be grouped into six categories:

1. Technology (farming and crop technology)
2. Government policy (availability of credit, crop specific programmes etc.)
3. Cropping pattern (which depends on profitability, awareness etc.)
4. Environmental factors (water availability, soil degradation, climate change etc.)
5. Market forces (market openness, pricing, transparency, integration with downstream sectors)
6. Global factors (supply-demand, trade norms and restrictions)

SUGGESTIONS

- Development of dramatically better seeds has been almost non-existent in the last decade; hence greater focus should be laid on increasing adoption rates of existing seed technologies. Better seeds can raise yields by forty percent, an effective means to raise yields is through better seeds – seeds have an average forty percent impact on yield variations.
- Balanced fertilizer is equally critical, unbalanced fertilizer usage is one of the biggest reasons for stagnant yield and depleting soil fertility. Fertilizer usage continues to be skewed due to irrational subsidy structure that favors nitrogenous fertilizers over others while with the same importance greater fertilizer usage and area under high yielding varieties can greatly boost yields.
- Poor fund management by the government often leads to acute shortage as fertilizer companies complain of delayed payments. The rising subsidy bill on this account has reached worrisome levels – by issuing off-budget fertilizer bonds, the government is only postponing the inevitable.

According to World Bank, there are certain areas where every nation can achieve greater benefits from agriculture. By enhancing agricultural productivity, competitiveness and rural growth a nation can greatly benefit from agriculture. Major reform and strengthening of India's agricultural research and extension systems is one of the most important needs for agricultural growth. These services have declined over time to chronic underfunding of infrastructure and operations, no replacement of aging researchers or broad access to state-of-the-art technologies. Research now has little to provide beyond the time worn packages of the past. Public extension services are struggling and offer little new knowledge to farmers. There is too little connection between research and extension or between these services and the private sector.

Agriculture largely hinges on water. However, increasing competition for water between industry, domestic use and agriculture has highlighted the need to plan and manage water on a river basin and multi-sectorial basis. As urban and other demands multiple, less water is likely to be available for irrigation. Ways to radically enhance the productivity of irrigation (more-crop-per-drop) need to be found. Piped conveyance, better on-farm management of water and use of more efficient delivery mechanisms such as drip irrigation are among the actions that could be taken. There is also a need to manage as opposed to exploit the use of groundwater. Incentives to pump less water such as levying electricity charges or community monitoring of use have not yet succeeded beyond sporadic initiatives. Other key priorities include modernizing Irrigation and Drainage Departments to integrate the participation of farmers and other agencies in managing irrigation water, improving cost recovery, rationalizing public expenditure with priority to completing schemes with the highest returns and allocating sufficient resources for operations and maintenance for the sustainability of investments[xii].

Encouraging farmers to diversify to higher value commodities will be a significant factor for higher agricultural growth, particularly in rain-fed areas where poverty is high. Moreover, considerable potential exists for expanding agro-processing and building competitive value chains from producers to urban centers and export markets. While diversification initiatives should be left to farmers and entrepreneurs, the government can first and foremost liberalize constraints to marketing, transport, export and processing. It can also play a small regulatory role, taking due care that this does not become an impediment. Promoting high growth commodities can work wonders. Some agricultural sub-sectors have particularly high potential for expansion notably diary. The livestock sector, primarily due to diary contributes over a quarter of agricultural GDP and is a source of income for seventy percent of India's rural families, mostly those who are poor and headed by women. Growth in milk production, at about four percent per annum, has been brisk but future domestic demand is expected to grow by at least five percent per annum. Milk production is constrained, however by the poor genetic quality of cows, inadequate nutrients, inaccessible veterinary care and other factors. A targeted program to tackle these constraints could boost production and have good impact on poverty.

India's legacy of extensive government involvement in agricultural marketing has created restrictions in internal and external trade, resulting in cumbersome and high-cost marketing and transport options for agricultural commodities. Even so, private sector investment in marketing, value chains and agro-processing is growing, but much slower than potential. While some restrictions are being lifted, considerably more needs to be done to enable diversification and minimize consumer prices. Improving access to rural finance for farmers is another need as it remains difficult for farmers to get credit. Moreover, subsidies on power, fertilizers and irrigation have progressively come to dominate government expenditures on the sector and are now four times larger than investment expenditures, crowding out top priorities such as agricultural research and extension. Developing markets, agricultural credit and public expenditures can bring great returns as far as agricultural sector is concerned. While agricultural growth will in itself provide the base for increasing incomes, for the one hundred and seventy million or so rural persons that are below the

poverty line, additional measures are required to make this growth inclusive. For instance, a rural livelihoods program that empowers communities to become self-reliant has been found to be particularly effective and well-suited for scaling-up. This program promotes the formation of self-help groups, increases community savings and promotes local initiatives to increase incomes and employment. By federating to become larger entities, these institutions of the poor gain the strength to negotiate better prices and market access for their products and also gain the political power over local governments to provide them with better technical and social services. These self-help groups are particularly effective at reaching women and impoverished families.

In parts of India, the over-pumping of water for agricultural use is leading to falling groundwater levels. Conversely, water-logging is leading to the build-up of salts in the soils of some irrigated areas. In rain-fed areas on the other hand, where the majority of the rural population live, agricultural practices need adapting to reduce soil erosion and increase the absorption of rainfall. Overexploited and degrading forest land needs mitigation measures. There are proven solutions to nearly all of these problems. The most comprehensive is through watershed management programs, where communities engage in land planning and adopt agricultural practices that protect soils, increase water absorption and raise productivity through higher yields and crop diversification. At issue, however is how to scale up such initiative to cover larger areas of the country. Climate change must also be considered. Most extreme events – drought, floods and erratic rains are expected and would have greatest impact in rain-fed areas. The watershed program, allied with initiatives from agricultural research and extension may be the most suited agricultural program for promoting new varieties of crops and improved farm practices. But other thrusts such as the livelihoods program and development of off-farm employment may also be beneficial.

The importance of the fisheries sector has been highlighted as a major food source and also a means of attraction for tourists. As an important activity allied to agriculture, it strengthens the productive base of agricultural economy and generates self-employment. In order to exploit the potential of this sector, various steps are required, some of which are, private enterprise should be encouraged for marketing of fish and the possibility of selling fish in neighboring districts of Punjab should be explored. Infrastructure support by way of purchase of refrigerated containers or vehicles and working capital, should be extended to the private sector. Fishing should be made part of tourism promotion in the state. Organizing fishing festivals or tournaments could attract fishing enthusiasts from the rest of India and abroad.

In Jammu and Kashmir, animal husbandry plays a significant role as 0.13 percent of gross domestic product (GDP) of the state is contributed by this sector. The state has a precious wealth of livestock in the form of cattle-buffalo, sheep, goats, poultry etc. The cattle and poultry amongst all the livestock are considered the most important tool for the development of the rural economy. The production of pashmina shawls and other animal products like carpets, shawls and blankets of Kashmir earn handsome foreign exchange of the nation. Therefore livestock industry in the state has vast scope for development rendering quick economic returns. In terms of livestock production, there is a gap between demand and supply. Due to the climatic condition there is great demand for meat and warm clothes in the valley. The breeds of animals available in the valley are not able to provide both components in sufficient quantities. This sector provides direct employment to about two lakh people, indirectly benefiting people who are dependent on agriculture. This sector needs more attention and the following incentives to achieve adequate expansion to bridge the demand supply gap, the state government should commercialize research output in regard to the conversion of agricultural waste into cattle feed either through its own initiatives or private initiatives. This can lead to the use of non-conventional feed and fodder resources. Jammu and Kashmir provides a suitable climate for cattle breeding. So, the state government should take the initiative to establish a cattle-breeding center. The development of poultry with modern technology should be encouraged to meet the increased demand for poultry products. Moreover, animal husbandry services being provided by the animal husbandry department are not effective, qualified private parties should be allowed to provide some of these services. Selective privatization of animal husbandry services would be the preferred approach, as some services in which the public interest is greater than individual interest would have to be provided by the government. The development of the diary sector needs the provision of specialized infrastructure such as bulk farm coolers and refrigeration systems as well as basic infrastructure like power and water. Providing a cost-effective and continual supply of power and water to procurement and processing units will have to be top priority. This will reduce costs and improve milk quality considerably. The government needs to upgrade rural roads leading to milk collection centers to increase the frequency of collection, reduce logistical costs and improve the quality of the raw milk.

CONCLUSION

As a state with unique features and a strategic location, the speedy development of Jammu and Kashmir needs an integrated approach. The top priority of the

government should be to create a secure environment by improving the law and order situation in the state. State finance should also receive proper attention in order to ensure better fiscal management. A sound policy should be devised to exploit the potential in the sectors of strength. The development of potential sectors such as agriculture, horticulture, sericulture, animal husbandry, tourism and will have strong inter-linkages with the rest of the sectors. In nutshell, sound policy and good governance can lead the state of Jammu and Kashmir to a faster development path. Considering the growth prospects of agricultural sector, the state government should plan for higher production and productivity of major cereal in order to achieve an annual agricultural growth rate of 3-4 percent. In this context the state agricultural department should make suitable policies. The state should shift its agricultural development strategy from food security mode to the value addition mode by growing certain products like high value fruits, vegetables and some cash crops which can give good returns to the cultivators. There is good scope for the production of high value, low volume crops like saffron, black zeera and other spices especially in Kashmir region. Regular availability of agricultural inputs such as seeds, fertilizers, pesticides, credit etc. should be ensured. Comprehensive cost of cultivation studies needs to be conducted in each region/zone. The state should pay attention to short term soil conservation measure aimed at stabilizing gentle slopes. The gap between national and state average of the area under forest can be filled by the development of social forestry. It should be promoted through various steps. A comprehensive review of cropping pattern and shift in the same to fruits and vegetables is called for. The example of Punjab, which has launched a massive crop diversification plan, needs to be emulated.

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