



Agricultural Development in Karnataka: Some Observations

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ABSTRACT

Economic development is thus a process with noble ideals and backward countries without exception are endeavoring to make it successful. For about four decades in Latin America, Africa and Asia, many less developed countries have been relentlessly trying for social and economic transformation. But the progress made in this direction is not very encouraging. In some cases, mistakes, failures and setbacks are so glorying that the future development prospects also to be rather bleak.

Key words: Production, productivity, labour force, climate, credit, price, Chemical Fertilizers. Irrigation land and yield etc.

Introduction:

The importance of agriculture in the economic development of any country, rich or poor, is borne out by the fact that it is the primary sector of the economy which provides the basic ingredients necessary for the existence of mankind and also provides most of the raw materials which then transformed into finished products, serve as basic necessities of the human race. In a preponderantly agrarian economy, agriculture plays a most strategic role from several points of view. At a minimum, farm production must be increased rapidly enough to keep pace with population growth. However, in a speedy industrializing economy, this is not enough. Industrialization necessarily brings with it urbanization and a rapid expansion of the industrial labour force. This may then be expected to bring with it a rising per capita demand for food, based on higher urban incomes. In addition to supplying food, agriculture must provide many of the raw materials for industry. For instance, the fate of textile industry will be crucially affected by the supply of raw cotton; leather goods industry will depend on the availability of hides and skins; food processing, brew and tobacco manufactures will all be dependent on agricultural supplies. Therefore the pace of advance in a wide range of consumer goods manufactures will be eventually affected by the pace of agricultural development. In addition, agriculture must generate export surpluses in order to earn the foreign exchange with which to finance the import of capital goods and certain kinds of industrial raw materials. However, agriculture is not only a supplier of goods for domestic and export needs, but is also a supplier of production factors such as capital and labour. A rapidly expanding industrial sector necessarily draws some of its labour force from the rural areas. Moreover, in one form or another, agriculture is called upon to save and finance a significant part of the investment for an expansion of industrial plant, transport and other sectors as well.

Agricultural Situation in Karnataka- Some Observations:

Self-sufficiency in food grains to be achieved by increasing both production and productivity in the agricultural sector. Rising imports of food is not an honorable solution to solving the food problem, sometimes self-sufficiency in food grains becomes vital for the independence and existence of a country.

Productivity is generally understood to be a yardstick for measuring the effectiveness of production activities, in a broad sense, productivity also deals with fairness, in distributing economic gains achieved through improvement in efficiency so as to enhance people's standard of living.

Need for studying and dealing with disparities at levels below state the district and the block arise mainly because of regional imbalances found not only between states are agriculturally advanced . Leave apart the agriculturally backward states in terms of high average incomes, or output, poverty does exist in the several areas of the states, Karnataka state is not an exception to this

Following are the important observations made on the basis of agricultural development in Karnataka at present viz:

a) Nature of Irrigation

The major complementary inputs to the new seeds are irrigation and fertilizers. In Karnataka irrigation is provided by three major sources- Canals, Wells and Tanks and these sources present five typical situations each suggesting a different perspective on how irrigation may be harnessed to promote agricultural development. (Rao, 1979). Among these five, two may be identified as having the attributes of farming with irrigation situation. These are a tank irrigation and a subtype of canal irrigation where canal water is available only during the main crop-seasons of the area. Area of well irrigation and area receiving perennial irrigation from canal provide the two situations at the other extreme. Resembling the irrigated farming situations canal irrigation has yet another Sub-Type called the dry-cum-wet irrigation canal, which offers some scope to the farmers to grow a wet crop in addition to the customary dry crop.

Irrigation has a dual role in bringing growth and stability in yield levels. In a study of yield uncertainty in Karnataka agriculture, it was found that not only across districts in respect of food grains as a whole, but even across individual crops at the state level, irrigation was not significantly correlated with stability in yields. The coefficient of variation in yields of food grains during the period from 1955-56 to 1975-76 in all districts of Karnataka as the dependent variable. Only instability in rainfall emerged as a significant explanatory variable, but not the proportion of irrigated area. Across crops, highly irrigated crops like maize and summer rice were found to have highly unstable yields whereas relatively rain fed crops like Jawar and Tur showed less instability. (Nadakarni and Deshpande 1980). But the analysis carried out for three different periods i.e., 1955-56 to 1970-71, 1970-71 to 1980-81 and 1980-81 to 1990-91 had shown lower instability in crop yields in the last period compared to the earlier two periods. (Vivekananda and Satyapriya 1994). This could be due to the use of pest resistance seeds or awareness brought in farmers to combat the pests in the later period. These results show that irrigation by itself may not bring instability in yields if proper steps are taken to combat the pests either by using pest's resistant seeds or better pest management.

b) Chemical Fertilizers

The yield response to fertilizer varies across soils, climate conditions, crops and use of different technological and management options. These resulted in spatial disparities in the use of chemical fertilizers. About 80 percent of nitrogen and phosphorus has been consumed in less than one third of districts in India, which have well developed irrigation sources. The studies on fertilizer consumption in Karnataka showed that the fertilizer use in the state was about 51 kgs per hectare compared to 100 kgs. In Tamilnadu and 75 kgs. In Andhra Pradesh (Govindaraju 1989). In respect of the use of fertilizers by seasons, Kharif season has higher share in fertilizer consumption in south and west zones of India compared to north and east zones. Karnataka had higher share in fertilizer consumption in Kharif season which was about 62 percent in the year 1984-85. The crops Paddy, Sugarcane, Cotton, Groundnut account for about 70 percent of the irrigated area and these crops account for about 86 percent of the total fertilizers consumption. Fertilizers being the important input in crop production. The price hike of fertilizers may adversely affect its consumption, resulting in lower yields.

A primary survey conducted in three villages in the state showed that the price hike had insignificant impact on HYV's of Rice and Cotton, and on richer segments of rural population. However, the price rise had adversely affected consumption of fertilizers in the case of dry crops and poor farmers (Hanumappa and Rajashekhar, 1994).

c) Agricultural Labour

The other major input in agriculture is labour. In the context of development planning aimed at the elimination of poverty and unemployment in a society where two-third of the population depend on agriculture for their employment and income with no sign of any significant reduction in the percentage of population depend on agriculture in the near future. The development strategy of agriculture should be labour intensive. Can the impact of irrigation and new technology on high productivity facilitate absorption of the growing labour force is an interesting question with implications for policy. In Karnataka there is positive relation between agricultural labour, land ratio and value of output per hectare in the Northern and Southern Maidan regions. A rate of growth of 4 percent in the value of agricultural output will bring in 2 percent growth in labour employment. Since the growth of the supply of agricultural labour will be greater, even a successful agricultural production development strategy can only partially absorb the growing agricultural labour force. (Venkataramanan 1985).

A study conducted in Tumkur district of Karnataka showed that the use of new Technology in un-irrigated area led to increased crop production and to an increase of employment by 18 percent in the seven year period 1970-71, 1977-78. (Satyapriya 1981). These findings show that a big thrust is needed in agriculture in the state not only to boost agricultural production but also to absorb the growing labour force.

d) Agricultural Credit

A strong institutional credit system is a basic-requirement for agricultural development. The felt need is met with the expansion of rural banking in India. The rapid expansion in rural credit is impaired by poor loan recovery. The poor loan recovery cannot be solely contributed to the bad years of agriculture.

The flow of agricultural credit is not adequate to the agricultural sector in Karnataka. (Shenoi and Vivekananda 1995). The farm credit system in Karnataka could serve only 20.3 percent of the operational farm holders in 1986-87. (According to the State Agricultural Input Survey, 1986-87). From the Cooperative credit institutions only 13 percent of marginal and 21 percent's of small farmers could get credit in 1986-87. The requirement of crop production credit was of the order of Rs. 1800 crores a year while the actual credit provided was of the order of Rs.300 crores in 1991-92. The annual, medium and long term credit requirement to strengthen the assets and set up production was of the order of Rs.800 crores while the actual was Rs.259 crores in 1991-92. Thus there is wide gap between agricultural credit requirement and its actual availability in the state.

e) Agricultural Prices

The important policy measures, generally accepted to accelerate agricultural production are stepping up the capital formation in agriculture and provide price incentives to farm produce. As far as capital formation is concerned, there is no second opinion about the need for investment in agriculture, particularly on infrastructure. Agriculture prices have not been deliberately depressed in India considering the cost of production, terms of trade and world prices. Changes in the relative prices bring about changes in the cropping pattern. The change in the relative prices are responsible for increase in the area under Rice and Groundnut and decrease in Bajra and Ragi in Andhra Pradesh. (Venkataramanan and Prahladachar 1978). The change in the cropping pattern in Karnataka, particular after the 80's, has been shift in favour of high value crops of Maize, Oilseeds and Pulses from Bajra, Jawar and Ragi and from Rice to Sugarcane and Garden crops though there is no productivity gain in many of these crops. (Vivekananda and Satyapriya 1994). Though in the 80's there was general decline in per hectare total costs, yields and total returns, the net returns recorded improvement for many of the crops particularly for commercial crops, due to favorable relative prices. (Rao, Hanumappa, Shylendra 1993). The deliberate change of relative prices of agricultural produce may not really prove to be advantageous in the long run.

f) Farm Size and Productivity

The empirical relationship between farm size and productivity has important policy implication for agricultural development strategy, land reforms and agricultural taxation. Some of the studies showed that there is inverse relationship between farm-size and productivity in traditional agriculture.

In the case of inverse relationship it was observed that small farmers achieved higher crops yields at higher cost of production per unit of land by using relatively more labour and animal power. This related in lower economic efficiency of small farms compared to large forms. If market wage rates were used in the inputted costs for family labour was lower than the market wage rate for hired labour using market wage rate for family labour resulted in the overestimate of labour cost and hence, production costs. (Satyapriya 1990). These results showed that small holders are not economically efficient compared to the big farmers to review; and rejuvenate Karnataka's agriculture there is a need to create economically viable land holdings. It is possible to make size of the farm economically viable by allowing leasing of land. (Nadkarni 1993, Thimmaiah). This requires changes in the Land Reforms Act. 1971 of Karnataka.

g) Dry Land Agriculture

The dry land agriculture cannot depend only on miracle seeds or crops, but also refers to comprehensive watershed specific measures for soil and moisture conservation. A study of watershed development programme in Karnataka indicated inadequate preparatory planning for the watershed as a whole and lack of enthusiasm among the people in the efforts to improve the common property land. (Rao, Hanumappa and Erappa 1991).

The dry land agriculture in Karnataka is handicapped by a combination of three favorable factors. Harsh physical conditions, inadequate and indifferent policies, and competition from the more productive parts of agriculture. (Rao 1991)./they have one adverse influence on the thrust for growth of the new dry land technology and on the market environment for dry land crops. The strategy for development is to be based on conservation oriented technology, use of local and often degraded resources and mobilization of people.

h) Yield Gap

The yield levels of major crops in Karnataka are generally on the lower side compared with neighboring states of Tamilnadu, Andhra- Pradesh and Maharashtra, which have predominant area under dry land agriculture like Karnataka. (Shenoi and Vivekananda 1995). The yield levels and the yields of these crops are compared with yields obtained in demonstrations conducted in farmer fields.

A Comparison of Karnataka's Crops yield levels with three neighboring states show that out of the nine crops Karnataka's yield level is higher only in Maize and it is lower in four crops viz. Rice, Bajra, Tur and Groundnut. The yields of Jowar and Bengal gram are high only compared to Andhra Pradesh and the yield of cotton is high only compared to Maharashtra. Thus, the crop yield levels in the state are in general, lower than the yield levels of neighboring states.

Conclusion:

To sum up, in a developing economy like India, agriculture is the most important sector in terms of contribution to gross national product, labour absorption and provisions of livelihood to the population. Its share in the total output is well over to presence in the developing economies. Whatever may be the increase or decrease in the agricultural output, it will have a relative impact on the level of national product. The modern agricultural inputs are far more superior to the traditional inputs. Again, the superiority of the modern inputs lies in their innovations based on science and their constructive translation through practical application i.e., technology. In these days, science and technology are promising humanity more than ever before. Thus, one of the key features of the modern agriculture is that its current level of production and to an ever greater extent increments in production are based on a set of purchased inputs of a farm not found in traditional agriculture.

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