

AGRICULTURE PATTERNS IN KARNATAKA AND ITS INFLUENCE ON DEVELOPMENT

H.M.KRISHNA

Department of Political Science
Government Arts college –Bangalore

Abstract: A decade has passed since the adoption of the Agriculture Policy document of 1995 under the stewardship of the then Chief Minister of Karnataka Shri H D Devegowda and the then Minister for Agriculture Late Shri C. Byre Gowda. Therefore, this is an appropriate time to take note of the changing situation. The State also recognizes the increasing distress in the farm sector at an alarming rate and the stagnation of net income flow in the farm sector. In real terms, during the last decade. The average size of holding is shrinking both due to demographic pressures as well as non-viability of farming among the lowest quartile of holdings. As a consequence, the farmers are becoming poorer and expressing unequivocal preference to vocations other than farming. It is also unfortunate that the esteem that the farming profession enjoyed a few decades ago has been eroding, and it is the State's responsibility to redeem it and give back the lost glory to agricultural sector.

Introduction

This paper deals with the environmental factors, socio-cultural and economic factors and governance and implementation of agriculture policy in Karnataka. Karnataka state forms the South Western part of the Deccan Peninsula and lies between 11.5° and 18.6° North latitude and 74.0° and 78.4° East longitudes. It is the 8th largest state in the country having an area of 191,791 Sq. Kms (6.25% of India's total area of 3,065,027 Sq.Kms.).

As per the census of 2001, the State has a total population of 5.27 crores accounting for 5.13 per cent of the country's total population of 102.70 crores. The rate of growth of population in the State has declined considerably from 21.12% in 1991 to 17.25% in 2001. Sixty six per cent of the total population resides in rural areas, whose main occupation is Agriculture and allied activities.

Out of the total population, 44.6 per cent is working population, of which 69.36 lakh are cultivators and 62.09 lakh are agricultural labourers. One important feature, of agricultural labourers is that the percentage of women (58.19%) overrides the percentage of men (41.81%). The literacy rate of the State is 67.04 per cent, while in rural areas it is 59.68% and that of urban areas it is 81.05 per cent. The State has 27 districts, 176 taluks, 745 hoblies, 29,483 Villages (27,575 inhabited and 1908 uninhabited) and 5692 grama panchayaths.

As per the Agricultural Census of 2000-01, the State has about 123.07 lakh hectares of cultivable area out of total geographical area of 190.50 lakh hectares, accounting for 64.60 per cent. The total number of operational holdings is 70.79 lakhs with 1.74 hectares, as average size operational holding. Small and marginal farmers account for 72.9 per cent of the total holdings, cultivating only 34.4 per cent of the total cultivable area. The number of holdings increased by 8.58 lakhs due to fragmentation of the land in the last five years. The average size of holding has decreased from 1.95 hectares to 1.74 hectares.

Out of the total cultivable area of 123.07 lakh hectares, as per the statistics of 2001- 02, the net cultivated area was 100.31 lakh hectares and the gross cultivated area was 116.70 lakh hectares, indicating a cropping intensity of 116 per cent. Out of the gross cultivated area, the area under irrigation was 30.89 lakh hectares (26.5%). The State

is divided into 10 Agro - climatic zones on the basis of soil structure, humidity, elevation, topography, vegetation, rainfall and other agro-climatic factors.

Rainfed Agriculture and Droughts: From Constraint to Opportunity

Karnataka has vast areas under rainfed agriculture, and therefore rainfed farming technology will be the fulcrum of any further development in the agricultural sector. These regions are also the backward regions where poverty is more pronounced. It is a clear economic phenomenon that most of the backward talukas identified by the Nanjundappa committee have large portions of their agricultural land under rainfed conditions. The yields per hectare are quite low, and the crops grown are largely minor millets and pulses.

Animal husbandry has also not been developed well in these regions due to perennial fodder shortage. It is necessary to sketch out a clear programme of inclusive development for rainfed agriculture in the State. Satishchandran Committee (1993) had earlier noted that protection through irrigation in the State is quite limited and about 67.8 percent of the geographic area is subject to frequent droughts. Location specific recommendations for soil and moisture conservation and crop production practice for dry lands are available, but these are not fully adopted by the farmers due to various constraints including technical, supply and services, marketing and low profit margins. There is need for more vigorous efforts for development of dry lands on a watershed basis with wider adoption of the recommended practice to enhance crop yields.

Unfortunately, adequate attention is not given to rainfed farming in the semi-arid regions of the State. This was largely due to the heavy workload on officers in the regular departments. It was possibly difficult for them to stretch out to lead a policy breakthrough for this crucial sector. Now, at this cross-roads it is very essential to enthuse dynamic growth initiatives in this region of the State that covers 80 percent of the farmers. Keeping this in view, the State will organise a Rainfed Agricultural Commission under the Chairmanship of a well-known public figure connected with the development of agriculture and allied activities. This institution should draw up the plan for the rainfed agriculture of the State in collaboration with the two Agricultural Universities and monitor its implementation through the Department of Agriculture, Government of Karnataka. In addition, the following steps could also be taken to step up agricultural development in the rainfed areas of the State.

Crops and varieties which are suitable for these regions will be identified, and specific research efforts will be made to direct research towards short duration and drought tolerant varieties. The actual yield be increased to the level of potential yield.

As groundwater shortage is an important constraint in the rainfed areas, more thrust for rain water harvesting and watershed development is required. It will be necessary to introduce a scheme of water markets and water sharing by 'groups of farmers'. These schemes will be supported by the State so that unabated groundwater exploitation will be reduced, and at the same time environmental problems are avoided.

Extensive efforts will be undertaken for identifying and rejuvenating ground water recharge zones. Recharge efforts will include recharge points, afforestation in the recharge trails, percolation tanks and fissures in the aquifer.

Rural industrialisation is a key for development of rainfed areas. This will provide the required employment and reduce the carrying capacity of land in the rainfed rural areas. However, this process of industrialisation should be conducive to local resources as well as skills. It will be quite erroneous to import resources and skills in these areas to produce commodities, which are largely consumed elsewhere. With this caveat a list of industries should be prepared to be located in these regions by providing investment subsidies. Capital investment subsidies would be in accordance with those of the recently announced Industrial Policy 2006-2011. Another important lacuna noted in these regions is the lack of development of infrastructure that includes roads, hospitals, schools, markets and input suppliers. Such infrastructure acts as a key to shift the production surface, and that could be utilised very effectively

by providing infrastructure in these regions with funds drawn from the Rural Infrastructure Development Fund of NABARD. A specific programme will be drawn to provide basic infrastructural facilities.

The presence of Raitha Samparka Kendras are quite scattered in these regions. Additionally, the extension mechanism in the rainfed areas has also been quite weak. Strengthening the Raitha Samparka Kendras in these regions could solve the problem of extension as well as technology dissemination. That will be undertaken on the priority. **Watershed Management: An Inclusive Strategy**

Karnataka has given an important place for Watershed Development since mid 1980s. It is one of the priority areas for the state. Karnataka has been one of the pioneers in demonstrating successful watershed development programme. The focus of this development programme is to conserve soil and moisture as well as to put lands to the best use according to their capabilities to improve the overall productivity of the catchment in a holistic manner/way. The process of watershed development involves co-ordinated multi-disciplinary activities of and expertise from several Departments.

The Government has therefore considered various models and decided that better co-ordination in planning, implementation and supervision in watershed programmes would be achieved by setting up a separate department and hence the Government of Karnataka has created the Watershed Development Department since April 2000. All the watershed schemes and projects under State Sector, Central Sector Schemes and Externally aided projects as well as District Sector Schemes relating to watershed development have to be implemented through this department.

Karnataka has the highest proportion of drought prone area next to Rajasthan (152.2 lakh ha). Out of the total geographical area of 190.049 lakh ha., 129.70 lakh ha is available for watershed development (including 12.80 lakh hectares degraded forest area) against which 39.20 lakh hectare is treated under various Watershed Development Projects upto March 2006. The balance area of 90.50 lakh ha. needs to be treated. It is proposed that the balance area will be developed in phases in next 20 years.

Watershed Programme has resulted in increased yields of most of the crops and have helped recharge of ground water. There is therefore need to augment the resources for Watershed Development department. It is envisaged that even though optimal results may not be secured, watershed development approach excluding the treatment of non- arable lands should be extended on a wider scale, the treatment of such lands being taken up as and when funds are available. Jawahar Rozgar Yojana funds may be permitted to be used on private lands also, the owner being asked to pay part of the cost. A number of programmes are under implementation having bearing on dry land development. An attempt may be made in one or two districts to begin with to bring about maximum integration among them through co-ordinated planning at the district level.

The most backward taluks (37) in the State are prioritized on basis of the recommendations of High Power Committee for Redressal of Regional Imbalances in the State for development in the first phase. The remaining taluks of the State will be subsequently treated in a phased manner. The details of backward taluks proposed for development are presented in table - 1.

Table 1: The details of backward taluks proposed for development

SI. No	Phase	No. of Taluks	Prioritisation criteria
01	Phase - I	37	most backward taluks in Agriculture infrastructure and development as per the HPC constituted for redressal of regional imbalance in the state. (Normal rainfall is also less than 750 mm).
02	Phase - II	56	aluks where normal rainfall is less than 750mm., which affects Agricultural productivity and needs watershed development on priority basis in phase-2.
03	Phase - III	46	Taluks where normal rainfall is between 750mm and 1000mm. needs development in phase-3.
04	Phase - IV	36	aluks where normal rainfall is above 1000mm., needs development in phase-4.

Source: Economic Survey Report, Government of Karnataka.

Crop Insurance

First crop insurance scheme was presented to the parliament by Dr Rajendra Prasad, as the First Minister for Agriculture of independent India in 1948. Subsequently, the Government of India in March 1970, prepared a draft of the model scheme. An Expert Committee chaired by Dr Dharm Narain examined its feasibility. The Committee did not favour introduction of crop insurance. However, GIC of India offered the schemes of crop insurance in 1972 on its own. In 1976, Prof Dandekar suggested an alternative approach linking crop insurance with crop loan. This was initially introduced in three states in 1978 on a pilot basis. Later on a Pilot Crop Insurance scheme with modifications was launched as Comprehensive Crop Insurance Scheme (CCIS) throughout the country in 1985. The scheme was voluntary in nature in the initial phase but was made compulsory for institutional loanees but failed to provide the needed protection to the vulnerable. Followed by this Rashtriya Krishi Bima Yojana (RKBY) was launched formally in 1999. The participation in RKBY was compulsory for farmers growing notified crops and availing crop loans from formal credit institutions. However, non-borrower farmers growing notified crops were also eligible to opt for the Scheme on voluntary basis. RKBY is being implemented in Karnataka from Kharif 2000.

The Government of India constituted a joint group in pursuance of the directions of Government to study the improvements required in the existing crop insurance program and to develop a farmer friendly scheme. The group has examined the views and suggestions of various interest groups including farmers on the shortcomings of the scheme and has suggested improvements in National Agriculture Insurance Scheme (NAIS). A special team of experts will review these recommendations to make them farmer friendly.

Conclusion

On the basis of the study it can be concluded that Karnataka being a State that has huge tracts of drought-prone land, the Budget announced World Bank-funded new multi-State watershed area development project (REWARD) for the next six years to assist farming on 10 lakh hectares of land. Jalamrutha project will be implemented in 810 small watersheds, covering four lakh hectares in the next three years.

To take services to farmers' doorstep, it has been projected to launch "mobile agricultural health clinics" for soil and water testing besides providing various technical information relating to insecticides and diseases. However, there is no mention of size of the scheme and financial allocation. To address the issue of post-harvest losses in the

horticulture sector, the Budget has proposed to establish 10 cold storage units with a capacity of 5,000 tonnes each under public-private partnership in the APMC yards at a cost of Rs.75 crore.

It has also proposed to strengthen HOPCOMS besides utilizing the Krishi Rail scheme of the Centre to transport flowers and horticultural produce from Bengaluru to Delhi, Mumbai, and Thiruvananthapuram. The cultivation of teff, chia, and quinoa too has been brought under the 'Raitha Siri' scheme under which incentive will be provided for cultivation of drought-resistant varieties such as minor millets. Similarly, Rs. 200 crore has been earmarked for encouraging organic farming.

To reduce the quantum of loss due to unsatisfactory post-harvest management of horticulture crops and the lack of cold storage, the state government announced 10 cold storages of 5,000 metric tonne capacity will be constructed with public private partnership with an expenditure of Rs.75 crore in the agricultural produce markets of districts where demand exists.

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AGRICULTURE POLICY FRAMEWORK IN KARNATAKA – AN ANALYSIS

H.M.KRISHNA

Research Scholar,
Department of Political Science
Bangalore University, Bangalore

Abstract

In agriculture, the market failure, fragmentation of the landholding, shift in the farming patterns, introduction of land reforms, and fragmentation of family has decreased the size of landholding. The large agricultural lands were replaced by the medium and small land holding. The shift to nonagricultural sector, commercialization of agriculture has collapsed the system of interdependency of farmers-labours and hierarchical system of agricultural production. The urbanization and commercialization process have influenced the rural community and its economy has neglected, forgotten the traditional regional practices like jajmani system. The collapse of the jajmani system changed the practices of villages as today crops are produced for self-consumption and marketing.

Introduction

This paper outlines the union agriculture policy, Karnataka State Agriculture Policy 2006, integrated agri business development policy 2011, Karnataka Agriculture marketing Policy 2013 and Karnataka Agriculture Policy 2015.

Modern 'Mysore state' came into existence by the State Recognition Act (1956). Hanumanthaiah (1952-56) the first Chief Minister of Mysore state, approved for the regions to regroup with the Princely Mysore state which was the largest unilingual Kannada speaking region and State of Mysore was formed on November 1st 1956 and Bangalore became the state capital. Since 1956, the geo-political marking of the states based on vernacular languages created inter-regional and intra- regional disparities. The regional disparity was prevailed in the Mysore state because of integration of backward regions into Mysore state from the neighbouring provinces. From the colonial time, these regions were not given prominence to improve their socio-economic condition leading to backwardness and after independence similar situation continued under provincial governments.

In five year plans, the planners and policy makers gave greater importance to the regional perspectives, looked into regional needs and development potentials of the backward regions. Government prepared indicators to measure development and accordingly, all the districts were ranked based on the degree of development. Soon after, government shifted its approach to sectoral development to bring overall progress. However, here the policy makers provided less preference for regional planning (Patil, 2002). Although, state undertook specific measures to improve the quality of life and equality in the development of backward regions, due to lack of regional policy or programmes have resulted in uneven regional progress.

Karnataka does not have its own agriculture history, as the region was socially and politically dispersed during pre-colonial and colonial times. Interestingly, other than a few accounts by the colonial administrators in the pre-colonial time, the historians, economists and agriculturists did not give attention to research, study and consolidate the agrarian history of Karnataka in the past 60 years. As rightly pointed out by Nair, James Manor due to his interest

in Karnataka political history, explored and rewrote the political transformation of Karnataka from Princely Mysore State to enlightened, advanced and democratic state in India during 1970s and 1980s. His account gives firsthand, in-depth insights about the politicians, the character of their governance, political processes, public policies and the relations between the state and society in Karnataka. Government of Karnataka did not show its interest in understanding the history of agriculture in the state. It appears that, early developmental policies and programs in agriculture did not give attention to the regional disparity and cultural diversities and this aspect of the state government contributed in the poor performance of the state agriculture.

Commercialisation changed the mode of transactions at the farm level; farmers started paying daily wages for the agricultural workers and payment in kind for the work slowly vanished. These changes in the agrarian society have created problems of lack of self-sufficiency among agricultural workers and issues of food security among poor families, agricultural workers and farmers. The implementation of the pragmatic land reforms in 1970s directly and indirectly contributed towards social and economic changes. Understanding the importance of local government in the development and introduction of state programmes in village gave importance for democratic decentralisation of power at the local levels. These two policies have changed the agrarian and political history of the state as they brought changes in the rural economy. The next section gives a glimpse into the Karnataka Land Reforms Act as it has created new social, economic, political stratification and divergences in Karnataka agriculture.

Major Goals of the Policy

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

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

The Proposed Macro Initiatives

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

Karnataka State Agricultural Policy 2006 is based on five principles known as "Panchsutra" announced in 2006-07 budget. All these five principles provide integrated support to agricultural sector in accelerating the growth rate.

Initiatives for the Conservation of Natural Resource

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

Integrated Agribusiness Development Policy 2011

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

The policy emphasis on the adoption of efficient, eco friendly and sustainable crop production and protection techniques to manage the natural resources in sustainable manner. The policy focuses on development of agro based industries. It suggested for the improvement of infrastructure for storage, transportation and processing of food produce, to minimizing the wastages. The policy suggests the promotion of research in crop sciences, horticulture, veterinary science, animal science, dairy science, food packaging technology etc. for employment generation.

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

Programmes

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

Organic Village/Site Programme

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

Savayava Bhagya Yojane

It is a mega programme initiated during the later part of 2013-14. It is an extension of the earlier organic village/site programme to hobli level with few modifications in its implementation. In the extended programme

provisions are made for developing good marketing linkages and market development for organic products. The programme is being implemented in association with the NGOs selected from each taluk through e-tendering. The selected NGO is entrusted with the responsibility of bringing around 100 ha under organic farming in each hobl of the taluk. During the year 2014-15 certification of organic products, evaluation and monitoring of the organic farming programme, publicity and awareness about programmes, research in organic farming etc. were initiated.

Bhumi Taylya Arogya

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

Bhoochethana

With the objective of increasing the productivity of selected rain fed crops by 20%, Karnataka government has initiated a mission mode project called Bhoochethana from the year 2009-10. The partners of this project are Karnataka State Department of Agriculture, Watershed Development, UAS Bangalore/Dharwad/ Raichur and ICRISAT, Hyderabad is the technical consultant. The main strategies are soil test based nutrition management with major thrust on micro nutrients, distribution of inputs at 50% subsidy at cluster village level, farmer field schools, wide publicity about soil fertility management through writings, posters, village meetings and mass media etc.

While the project was started in six districts in 2009-10 and extended to 16 districts by 2010-11 covering 12.00 lakh hectares during kharif season, 5030 villages and 8.50 lakh farmers. During 2011-12 kharif the programme was extended to all 30 districts covering 25.4 lakh hectares and 20 lakh farmers. The yield enhancement of 29-41% was observed in the treated areas.

Bhoochethana phase 2 was approved for five years from 2013-14 to 2017-18. During 2013-14, 12490 Farmer Facilitators (FF) have been appointed for transfer of technology under this scheme. With the help of their facilitators 11000 Farmers Field Schools (FFS) were organized and several training programmes were organized.

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

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

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

The programme was formulated based on the recommendations of the task force on balanced use of fertilizers. The scheme has been approved for implementation during the 11th five year plan with a total outlay of Rs.429.85 crores for various components such as setting up of additional Soil Testing Laboratories (STLS), strengthening of 315 state STLs having micro nutrients analysis facility, capacity building through training of STL staff/ Extension

officers, farmers field demonstration and workshops, creation of databook for site specific balanced use of fertilizers, adoption of village by STLs through frontline field demonstrations, preparation of digital district soil maps and GPS based soil fertility recommendations by ICAR/SAUs etc. The estimated budget for 2012-13 was Rs 30 crores. Out of this Rs 10.89 crores has been released by 14.12.2012. The proposed outlay for the year 2013-14 was Rs. 2470.00 crores.

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

In order to promote the production of oilseeds and other dry crops to meet the domestic requirement and promote exports an integrated scheme for promotion of oilseeds, pulses and maize was introduced during 2004. The focus was on eight edible oilseeds viz. groundnut, rapeseed, mustard, soyabean, sunflower, sesame, safflower and niger and two non- edible oilseeds, castor and linseed.

This scheme is being implemented in 14 major states for oilseeds and pulses, in 15 states for maize and in 8 states for Oil palm. Pulses component of ISOPOM has been merged with NFSM-Pulses w.e.f 1.4.2010 to provide focused approach for pulses production programme.

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

The area expansion programme of ISOPOM has been launched under Rashtriya Krishi Vikas Yojana (RKVY) as per the announcement made by the Union Finance Minister in Budget Speech 2011-12. Besides RKVY, the support for committed expenditure on oil palm components is being implemented under ISOPOM. The estimated budget for 2012-13 was Rs. 575 crores. Out of this Rs. 341.90 crores has been released by 14.12.2012. The proposed outlay for the year 2013-14 was Rs. 661.25 crores.

Conclusion

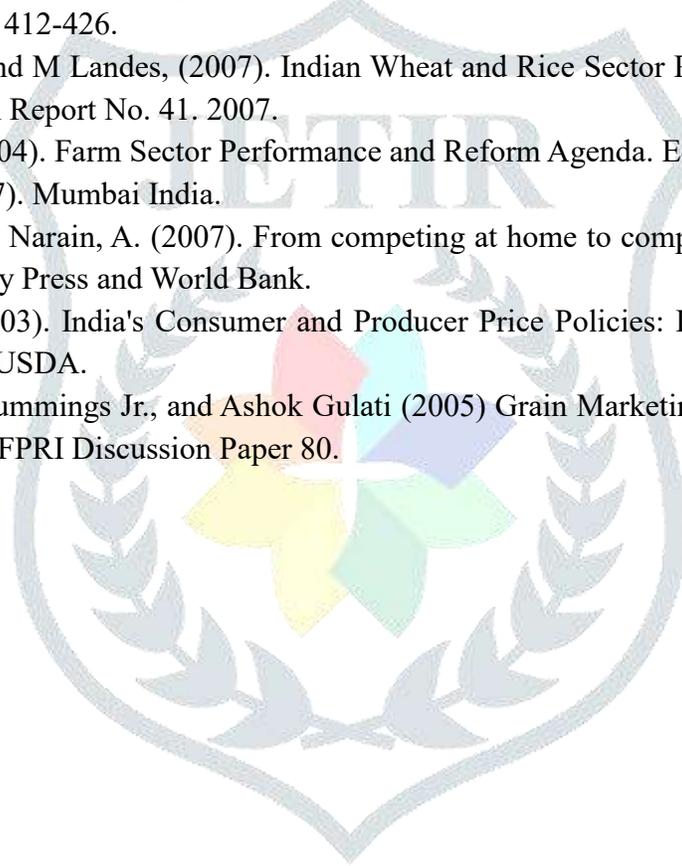
In conclusion, the concept of development emerged in Karnataka much before the formation of the modern Indian state and India's independence. The concept emerged under the Mysore elites, the Maharaja, who was fascinated by the Japan model of development. It was Dewans Visvesvaraya, who with his economic policies actually laid the foundation for the emergence of 'economic development' in Mysore. In his speech, Chandan Gowda highlighted the image and perspective of Mysore elites on agriculture. From an evolutionist vision, the Mysore elite viewed 'agriculture as a sector that should become marginalized in future and this was shared across the Indian National economic thinkers' (APU-INET Workshop; 2012). From the above quote, it becomes clear that, Karnataka from the time of Mysore regime has followed the path of modernization and agriculture was part of this vision. In this sense, post 1990s liberalization policies and programmes do not break away from the system of agriculture proposed by the state government. From the perspective of Karnataka agriculture, the government focused on the growth and diversification of the economy. The introduction of the organic farming policy, which emerged as a critique to the modernization of agriculture, becomes an even more interesting site for public policy research to explore the present state perspectives on organic farming.

Evolution of agricultural policy both at the national and state level and the programmes implemented to operationalize the policy objectives have been discussed in this paper. It is observed that there is an increased awareness and efforts to promote sustainable agriculture focusing on conservation of natural resources. Land as an

important resource in the Sustainability of agricultural production has been given major thrust during the eleventh and twelfth plan periods.

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“RELATIONSHIP BETWEEN INDIA AND RUSSIA (1952 -2020): A CRITICAL ANALYSIS IN THE 21ST CENTURY”

- H M Krishna
Associate professor,
Govt. Arts college, Ambedkar veedhi
Bengaluru.

INTRODUCTION

India had very old and historical ties with Soviet Union. After independence, Although India took some time to work on this positive gesture. India's membership of the commonwealth, policy of nonalignment of Stalin's rigid approach, perhaps caused some doubts and misunderstandings in the way of better relationship. but this situation did not last long their relations started improving with the beginning of the decade of fifty.

• DURING STALIN ERA

Rigid approach of Stalin towards India. Stalin's approach was that for those who are not communist were against the Soviet Union. India's decision in 1949 to remain a member of the commonwealth even after becoming a Republic causes irritation in the Soviet union. India's opposition to pro-Soviet development in Malaya (NAM countries) also made Stalin unhappy. India's support to Greece against communist expansion cause bitterness in the-Indo Soviet relationship

AFTER STALIN INDO USSR RELATIONS

- The relationship began with a visit by Indian Prime Minister Jawaharlal Nehru to the Soviet Union in June 1955, and first Secretary of the Communist party.
- Khrushchev's return trip to India in the fall of 1955. While in India, Khrushchev announced that the Soviet Union supported India Sovereignty over the disputed territory of the Kashmir region and over Portuguese coastal enclaves such as Goa.
- The Soviet Union declared its neutrality during the 1959 border dispute and the Sino Indian war of October 1962, although the Chinese strongly objected.
- The Soviet Union gave India substantial economic and military assistance during the Khrushchev period, and by 1960 India had received more Soviet assistance than China had.
- In 1962 the soviet Union agreed to transfer technology to co - produce the MiG - 21 jetfighter in India, which the Soviet Union had earlier denied to China.
- In 1965 the Soviet Union served successfully as peace broker between India and Pakistan after an Indian- Pakistani border war. India signed with the Soviet Union the Indo-Soviet Treaty of Friendship and Cooperation in August 1971.
- USSR did not criticized India after Pokharan test in 1974. Relations between the Soviet Union and India did not suffer much during the right wing Janata Party's coalition government in the late 1970s. India did not criticized the Soviet intervention in Afghanistan.
- Indian Prime minister, Rajiv Gandhi, visited the Soviet Union on his first state visit abroad in May 1985 and signed two long term economic agreements with the Soviet Union. In turn, Gorbachev's first visit to a Third World state was his meeting with Rajiv Gandhi in New Delhi in late 1986.

INDIA AND RUSSIA RELATIONS

Boris Yeltsin did not respect the age old friendship between two countries and try to develop cordial relation with USA and Pakistan and Bypassed India. Russia voted in favor of Pakistan proposal in the denuclearization of

South Asia. Russia diluted its stand on Kashmir declaring it adapted territory between India and Pakistan. Russia sought to sell arms to Islamabad.

Russia made an attempt to annual the deal for Supply cryogenic engines to India under the US pressure. Russia stalled much needed spare parts supply to Indian Army. The turning point of Indo Russia relations came nine-year after the collapse of the USSR when Vladimir Putin succeeded Boris Yeltsin.

India and Russia began with the Strategic Partnership signed between the two countries in 2000. Annual Summit started in 2000. Both countries closely collaborate on matters of shared national interest these include at the-UN, BRICS, G20 and SCO.

- Russia also strongly supports India receiving permanent seat on the United Nations Security Council. In addition, Russia has vocally backed India joining the NSG and PEC.
- Russia currently is one of only two countries in the world that has a mechanism for annual ministerial level defence reviews with India.
- The Indo Russian inter-Governmental Commission (IRIGC) is one of the largest and most comprehensive governmental mechanisms that India has had with any country internationally.

AREAS OF COOPERATION

1. Combat international terrorism.
2. To counter USA hegemony.
3. Permanent seat in UNSC.
4. Space cooperation.
5. Aircraft and Missile development.
6. Energy Cooperation.
7. Nuclear Cooperation.
8. Defence Cooperation.
9. Economic Cooperation.

*** MILITARY RELATIONSHIP**

The Soviet Union was important supplier of defence equipment for several decades, and this role has been inherited by the Russian federation. In 1977, Russia and India signed a ten year agreement for further military technical cooperation encompassed a wide range of activities, including the purchase of completed weaponry, joint development and production, and joint marketing of armaments and military technologies. Russia with 68% share, the major arms suppliers to India (2012- 2016). Now, the cooperation is not limited to a buyer-seller relationship but includes joint research and Development, Training, Service to service contacts, including joint exercise.

*** ECONOMIC RELATIONS**

- Bilateral trade in 2002 stood at \$1.5 billion and increased by over 7 times to \$ 11 billion in 2012 and with both governments setting a bilateral trade target of \$3 billion by 2025.
- Both Governments have jointly developed an economic strategy that involves using a number of economic components to increase future bilateral trade. Both Governments have setup a joint study group (JSG) to negotiate the specifications of a free trade agreement, a final agreement would be signed between India and Eurasian Economic Union of which Russia is a part (also include Kazakhstan, Armenia, Kyrgyzstan and Belarus)

*** SPACE COOPERATION**

Aryabhata, India's first satellite was launched by the Soviet Union on 19, April 1975. December 2004, Two Space Relation Bilateral agreements were signed :-

1. Inter-Governmental umbrella Agreement on-co-operation in the outer Space for peaceful Purposes. 2. The inter Space Agency Agreement on cooperation in the Russian satellite navigation system GLONASS. In November 2007, the two countries have signed an agreement on joint lunar exploration.

* SCIENCE AND TECHNOLOGY

The ongoing collaboration in the field of Science and Technology, under the integrated Long Term Programmed of cooperation (ILTP) is the largest cooperation programme in this sphere for both India and Russia.

* NUCLEAR COOPERATION

- On 7 November 2009, India signed a new nuclear deal with Russia.
- India and Russia are in discussion for construction of two more nuclear Power units at Kudankulam. During Russia President Vladimir Putin's visit to India for the 14th annual summit in 2012, a cooperative civil-nuclear energy road map was accepted. Running until 2030, sixteen to eighteen new reactors will be constructed, with installed capacity of 1,000 MW each.

AREAS OF DIFFERENCES

- Indo US relationship
- Russia Pakistan relationship
- Search for other Sources of weapons.
- Deal of aircraft

Conclusion:

In summary, this paper shows that the relationship between India and is blurred with conflict and cooperation. There are positive element India China relations from 1900s onwards. Both find new areas of cooperation, especially in economic and trade relations, as India's economic reforms led to the high growth rate and India's improve status as one of the emerging economies attracted lot much attention globally.

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