

'INDIAN SCENARIO OF AGRICULTURAL RESEARCH'**DR. DHARMENDRA SINGH**

Abstract: The Developing countries Like India Still have dominance of Agriculture in Their Economy in various terms from Revenue generation to employment about 60% population is engaged in Agricultural activities in Indian Economy.

Agriculture in Indian Economy contributes about 18% of GDP. It nearly shows that the Economic growth and Development of Indian Economy is closely tied to the Development of Agriculture.

Agricultural growth of Indian Economy depends upon various factors and among Them, Availability of Research work in Agriculture can play a vital role for the Economics growth of Indian agriculture.

Research work in Agriculture plays an important Role in modernization and Commercialisation of Agriculture for improving Agricultural production and productivity but in our Indian Economy, Agriculture Research Activities are not sufficient due to lack of sufficient funding, centralization of Research work, lack of proper publication facilities for Indian farmer's, Unequal participation of Union and State Govt. In India, it is a critical issue also for Agriculture Research be because Agriculture is a crucial and important subject for states Govt. who are taking not sufficient steps for research Activities, Especially eastern and Northern states are unaware about research Activities Than southern and western states.

Development of Agriculture can play a vital Role for Indian Economy. If sufficient research Activities are done in all over country not only in southern and western part in Indian Economy.

Keywords: Agricultural research, Union and state participation, Research facilities in rural sector, Research priorities.

Introduction: Agricultural activities (the back bone of Indian Economy), are the main source of Income for over 70% population in Indian Economy because agricultural activities can Insure food security, Employment for un-organized Rural sector, creation of a solid base for Industrialization in Indian Economy.

Development of Agriculture depends upon various factors but Research facilities, Research work and Research portion are key factors for over all development of Indian Agriculture.

What is Agricultural Research?: Agricultural research is a scientific process for various types of creative work in the field of technological changes, New variety of Seeds, new machineries, New changes in component's of Fertilizer's etc. Agricultural research work are related not only with farmer's but it is related also with every person, every Institution, every organization which are related with Agricultural Activities.

Scope of agricultural research in Indian Economy is Increasing day-by-day especially after globalization and privatization and commercialization of crops. Commercialization of Indian Agriculture Motivates More and more Research activities for Indian farmers.

Here are some of the merits of Agricultural Research:

- Production and Productivity of commercial crop's can be increased.
- More technology, Modern machinery can be provided for Modernization of Indian Agriculture.

- Foreign Trade of Agricultural goods may Increase year by year.
- An Increase in Research creates an Increase in GDP of Indian Economy.
- Development of Scientific Approach for Agricultural activities in India Economy.
- Development of effective participation of Union, State and Local Government.
- Decentralization of Indian Agriculture may be possible by research back ground of Indian Agricultural.
- Improvement in Quantity and quality production of Agricultural goods.
- Development of various Agriculture Supportive economic activities such as: horticulture, Floriculture, Fisheries, Animal husbandry, Soil and water conservation etc.
- Development of a specific Technique for a specific crop. It means specialization in Indian. Agriculture may be possible by research activities.
- Diversification in Indian agriculture is now a powerful output of agricultural research activities.
- Creation and Development of scientific approach in Indian society.

Research initiatives in Agriculture, are not possible only by Union Govt. or only by State government's it can be possible both from Union and State Government as a Joint venture.

Changing scenario of Agricultural Research in Indian Economy: The Union Government organization ICAR (Indian Council of Agricultural

Research) conduct's various Research Activities in



India. In our country some educational Institutions, Chemical Laboratories, state agricultural Universities (SAU's) and state govt. bodies conduct and operate various research activities in the field of high yield, fertility of soil, methods of crop pattern, Utilization of Fertilizer's, new market strategy for commercial crops etc.

Some major and important changes can be highlighted here:

- Agricultural Research Activities have now turned out to private sector from public sector.
- Private corporate sector, MNC's are more interested for Research based agriculture system in India.
- State Agricultural Universities (SAU's) are major functioning body which produce a "Package of various Research Activities" for all food and commercial crops in their state.
- Agricultural Technology and Agricultural Research Management Agencies these are new dimensions who manage and coordinate to new technical and managerial component's in every district.
- In Agriculture Research, Environmental issues have become more important than before. Especially in the field of soil pollution harmful impact of chemical fertilizers role of union govt.

and expenditure ratio of union govt. have increased and percentage ratio for state govt has declined in Indian Agriculture.

Year	Ratio Union Govt : State govt.
1960-61	39:61
1965-66	26:74
1979-80	67:33
1990-91	71:29
1997-98	71:29
2006-07	75:25
2009-10	75:25

Source: CAG Report 2012-13

- Agricultural policy reforms like C-DAP's (comprehensive district agricultural plans) and PVPR (Plant varieties protection Research) these are two major promising indicators in Indian economy.
- According to share of different regions in total agricultural research expenditure, south region and west region are more prominent than north and east region.

Year	East	West	North	South
1970-71	18%	32%	38%	12%
1980-81	17%	30%	31%	22%
1990-91	17%	27%	31%	25%
2000-01	12%	33%	25%	30%
2010-11	16%	30%	18%	35%

(Source: CAG report 2012-13)

- Southern state's like Tamil nadu, Kerala, Karnataka and Andhra Pradesh are more active in the field of expenditure for agricultural research but percentage wise expenditure of eastern and northern state's have declined than before.
- Southern and western parts of Indian economy have maintained a strong growth in agricultural research and proper education of agriculture subject.
- Utilization of research work for agriculture in southern and western states has increased specially utilization of integrated pest management by RKVY (Rastriya Krishi Vikas Yojna) allocation.
- Local knowledge and ancient knowledge in agriculture field has now received more attention than before with new norms of patent's publications and effective participation of Indian farmers.
- Increment of managerial elements in Indian agriculture has created and developed new research scenario in Indian economy.
- Centralization of agricultural research should be changed into decentralization and effective participation of state and local bodies.
- Gross capital formation (GCF) in India, decline from agriculture and it is insufficient also it was 20% in 1980-81 to 10% in 2009-10 and 7.2% in 2011-12 so over all improvisation in GCF system is must for agricultural research funding.
- There is a long and critical distance between agricultural funding and growth of agriculture sector. Indian govt. should have shorten to this distance.
- Effective participation of private domestic sector should be increase and it will be possible only by effective commercialization of Indian agriculture.
- Educational facilities and educational institutions should be established and developed in remote areas for agricultural education system.
- Infrastructural facilities should be sufficient for research laboratories and research institutions of state government.
- Local government like gram and Janpad panchayat can play a vital role in local research activities.
- Strong co relationship, effective co ordination should be created and developed to create a strong scenario for agricultural research.

Some practical suggestions for agricultural research in India:

Agricultural growth and agricultural research activities have positive and direct relationship like cause and effect relationship. Lack of research activities may be improved by agricultural growth and agricultural research facilities with some practical suggestions.

- Sufficient increment in funding from union and state government should be a policy matter.
- Agricultural policy of Indian govt. should have clear criteria for agricultural research.
- Research priorities should be based on Indian climate and agricultural requirement not by foreign requirement.

Conclusion: "Agriculture Policy 2000" was formulated in the 21th century. The policy goal was 4% growth rate per annum in agriculture sector this target can be achieved by agricultural research mainly, because an increase in research funding is an effective capital investment for future prospect but state govt and local govt. are failure fog proper funding in agricultural research activities.

Ignorance of agriculture sector and also ignorance of research funding from state and local govt. is the main obstacle in the path of strong research scenario in Indian agriculture.

References:

1. Dutt and Sundharam: Indian economy (2013): S. Chand Pub. New Delhi
2. Soni R.N.: Leading Issues in Agricultural Economics (2012): Vishal Pub. Jalandhar
3. CAG Annual report 2012-13 : Controller and Auditor Gen. of India, New Delhi
4. MOA (2003) Annual Report : Ministry of Agriculture new Delhi
5. Rajeshwari, S. (2005) : Agricultural Research efforts : vol.23(4)
6. Raina, R.S. (2011) : The Evolution of Agricultural Research in India : Shaping India Rout ledge, New Delhi PP 99-123
7. Vaidyanathan, A (2010) : "Research for Agriculture some current Issues" EPW vol. 35
8. Rajeshwari, S. Raina (Research Article) : "Increased funding for decentralized agricultural research" : Yojana (Dec. 2014)
9. Dr. Arpita Sharma (R. Astical) : "Agricultural financing An overview : Kurukshetra (Nov 2014)
10. Reddy, P: Global Innovation in emerging economies (2013): Rout ledge Pub. New York.

Dr. Dharmendra Singh/PDF Scholar (ICSSR New Delhi)/
S.O.S. in Economics/V.U. Ujjain (M.P.)