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Lecture-27

Lessons From Extension Reforms In Different Countries, Extension And Sustainable Development Goals

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History Of USA

- About 170 yr. ago nearly 75% of the population of the USA dependent on agriculture , as in the situation at present in India.
- In the USA between 1910 to 1955 the number of tractors increased from 1000to 4.4 million and horse-power decreased from 24.2 million to 5 million during the same period.





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In 1970, every farmer had electricity in their farm household, piped running water, mechanical refrigerators and also television and telephones.

The universities provide solutions to the problem of the farmers and the integrated approach of local, state and Federal Govt. with the staff of AU has helped to minimize the gap between the best-known technology and the technology actually used by the farmers.





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Purpose of Extension service

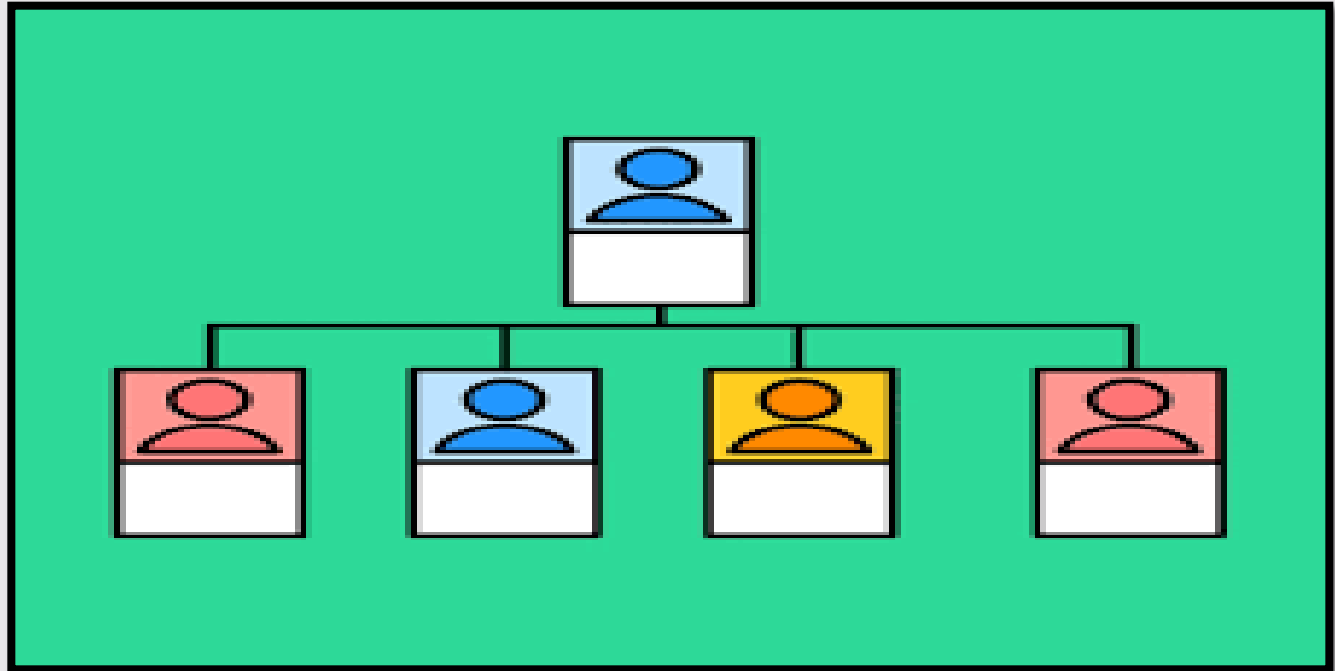
- To obtain the information needed
- Develop the skills
- Solve their problems in farming, home making and community development
- Transfer of technology (TOT) in agriculture from research institutions to farmers.





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Organizational Structure





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1. Land Grant College System(1862)

- Its came into with the passage of Morrill act by the U.S. Congress in 1862.
- It provided grants of public land to states
- The teaching of branches of learning related to agriculture and the mechanic arts.



FIRST LAND GRANT UNIVERSITIES

Year 1855:
First land grant universities established

Land grant college stamp source: Wikimedia Commons. US map: EPA



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2. Farm Demonstration (1903)

Farm demonstration work began in 1903 when Dr. Seaman appointed 22 men in southern states to demonstrate the best methods of growing cotton under boll-weevil conditions.

3. Smith Lever Act (1914)

- In the 1914, the congress passed the smith-lever act
- Creating a nation wide “co-operative extension service”
- It is a partnership agency.
- The Smith-Lever Act established a national Cooperative Extension Service that extended outreach programs through land-grant universities to educate rural Americans about advances in agricultural practices and technology
- Help to carry out programmes for the financial, educational and social benefit of the community and its individual member.





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4-H Clubs

- The National 4-H Headquarters is located within the families, 4-H and nutrition unit of CSREES.
- This is an organization of boys and girls from 10 to 20 years of age with a definite program of farm and home development and personal and social development.
- It is a part of the national agricultural extension system.
- It has been given the name 4-H club because the club members are expected to have four Hs;
- HEAD, HEART, HAND, HEALTH.



Stamp of 4-H Club



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Policies

The cooperative extension service or organization operates at three levels:

- **The National, the state and the country.**
 1. At the National level, the federal extension service carries out three important functions, the relationship function, and the leadership and assistance function.





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2. The national association of state universities and land grant colleges helps member institutions to cooperate with each other and the U.S department of agriculture in formulating national extension programs and policies.

3. Matters of organization and policy, known as ECOP (Extension Committee on Organization and Policy). It is made up of twelve members elected by the directors of four regions.

**COOPERATIVE
EXTENSION**

EXTENSION COMMITTEE ON ORGANIZATION AND POLICY

**Learning for
Leaders Series**



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Development Of American Agriculture & The Cooperative Extension Service

“ LEARNING BY DOING”.

There were no pre-trained personnel.

The individuals who found ways to get the job done became leaders, but there was a great area of trial & error & experimentation.



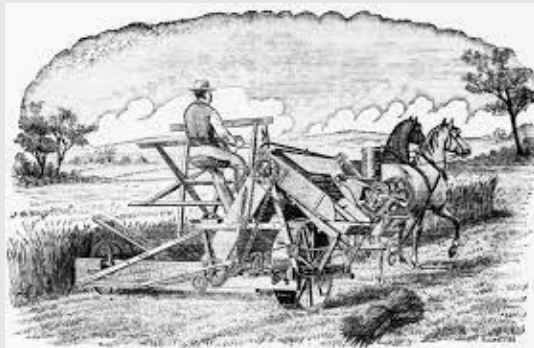


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Important Events Can Be Given As Follows

- **1785** – A Society for promoting agriculture was organized in Philadelphia to disseminate agricultural information through publications, newspapers, articles etc.
- **1796-** George Washington, suggested to congress the establishment of a National Board of Agriculture.
- **1811-** The Berkshire agricultural society (Massachusetts) organized agricultural fairs, the sale of farm products, and exhibits.
- **1852-** The U.S. agricultural society was founded with representatives from 23 different states.
- **1854-** Farmers' institutes start.
- **1867-** The grange organization was formed.
- **1884-** Bureau of animal husbandry was organized.
- **1887-** The hatch act established experiment stations.





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1900-13 – Clubs to work with rural boys & girls were developed in many states.

1902- A national farmer union was organized.

1903- Teaching by demonstration started by seamen Knapp.

1914- Smith lever act coordinated extension work nationally.

Extension service of the US is still the only system in which the main extension function remains within the university , some developing countries, India, have integrated educational institutions into practical extension work.





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Agricultural Extension Reforms in South Asia



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Extension Reform

- Top-Down to Bottom- Up (T & V to ATMA)
- Supply driven to Demand driven (Public to Private Extension)
- Public to Public-Private Partnership (PPP)
- Production to Market led Extension
- Development and application of ICT tools



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Top-Down to Bottom-Up (T & V to ATMA)

This system was introduced in 1974 with the World Bank's assistance.

It was presumed that transfer of technology through the contact farmers shall benefit all farmers.

This system was introduced in the Rajasthan Canal area in Rajasthan and Chambal Command area in Madhya Pradesh. The system has since been extended to 13 states and 4 more are in pipeline.

This system will be further extended in the remaining states of the country by 1985.

They have scheduled programme of the visits to the contact farmers for advising and directing to follow appropriate technology and solving the vary problems faced by the farmer on his field.



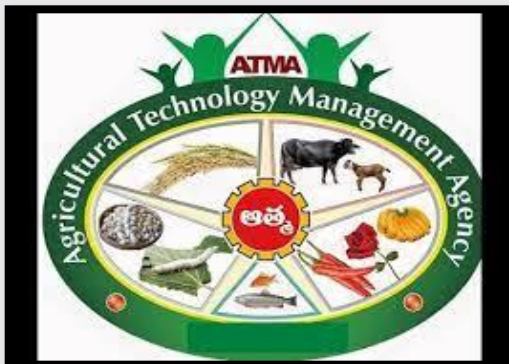


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Agricultural Technology Management Agency (A T M A)

- This Scheme was approved on 29th March, 2005.
- Total 237 Agricultural Technology Management Agency (ATMA) at district level have been set up to operationalize the extension reforms with active participation of farmers / farmer groups, NGOs, Krishi Vigyan Kendras, Panchayati Raj
- It would have linkage with all the line departments, research organizations, non-governmental organizations and agencies associated with agricultural development in the district.
- Goal is to increase farmer input into programme planning.
- The scheme is supported by the Central Government. The funding pattern is 90% by the central Government and 10% by the state government.





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Agriculture Technology Information Center (A T I C)

- ✓ It was started during the year 1999 under the National Agriculture Technology Project (NATP) in the Directorate of Extension Education.
- ✓ The Centre provides information on agriculture technologies in addition to providing other inputs like seeds, plant materials, etc. including advisory services through single window system.
- ✓ To find out the farmers problems in field conditions and provide appropriate solution.





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Public to Public-Private Partnership (PPP)

- A public-private partnership is a contractual agreement between a public agency (federal, state or local) and a private sector entity.
- public and private are shared in delivering a service or a facility for the use of the general public.
- The public partners in a PPP are government entities, including Ministries, departments, municipalities, or state-owned enterprises.
- PPPs may also include non-government organizations (NGOs) and/or community-based organizations (CBOs) who represent stakeholders directly affected by the project.
- Specially targeted towards financing, designing, implementing that were traditionally provided by the public sector.





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Production to Market Led Extension

- Farmers need to transform themselves from mere producers-sellers in the domestic market to producers cum sellers in a wider market sense to best realize the returns on their investments.
- MANAGE started working on the concept of Market-Led Extension' and a beginning was made through a three day national workshop on Market Led Extension at MANAGE during 18th-20th December, 2001.
- Market led Extension Agriculture & economics coupled with extension is the perfect blend for reaching at the door steps of common man with extension persons & market agencies..





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New dimensions for marketing extension

- Marketing of education programme
- Consumer preference
- Storage and preservation of produce
- Post-Harvest losses
- Promoting processing
- Grading and packing





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Objectives

- Grow a healthy crop
- Conserve natural enemies of crop pests
- Make farmers competent in their own field
- Reduce production costs





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Development and application of information technology (IT) tools

- About 103 million farm families, cultivated 165 million holdings, spread over in more than 600,000 villages in the country and 1:1000 extension agent-farmer ratio; these are the characteristics of India.
- man power and shortage of funds have adversely affected the performance of public sector and agricultural extension services.
- The requirement of field level extension worker is estimated to be about 13-15 lakhs. So, ICT gaining ground and help to disseminate information.



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Programmes & Schemes

- The schemes of Extension Division are encompassed under the broad umbrella of NMAET.
- The Modified Extension Reforms Scheme was introduced in 2010
- It aims to restructure and strengthen agricultural extension to enable delivery of appropriate technology and improved agronomic practices to farmers.
- National Mission on Agricultural Extension and Technology (NMAET) was launched by UPA government in 2014 with an objective to spread farm extension services and mechanization.



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This scheme has four sub-missions as under

- Sub Mission on Agricultural Extension (SMAE)
- Sub-Mission on Seed and Planting Material (SMSP)
- Sub Mission on Agricultural Mechanization (SMAM)
- Sub- Misson on plant protection and plant Quarantine (SMPP)





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The Sub Mission on Agricultural Extension (SMAE)

It focuses on awareness creation and enhanced use of appropriate technologies in agriculture & allied sectors. It has four main components, namely are:-

- 1.Support to State Extension Programmes for Extension Reforms (ATMA)
- 2.Mass Media Support to Agricultural Extension
- 3.Establishment of Agri-Clinic and Agri-Business Centers by Agriculture Graduates (ACABC)
- 4.Extension Support to Central Institutions



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Agri-clinics & Agri-business centres (AC)

❖ **AGRI-CLINICS:**

- Setting up of Agri-Clinics to provide expert advice to farmers on
- Various aspects like soil health, cropping practices, plant protection, crop insurance, post harvest technology, feed and fodder management etc.

❖ **AGRI-BUSINESS CENTRES:**

- Commercial agri-ventures for income generation &
- Entrepreneurship development ex. farm equipment, sale of agro-inputs, value-addition activities, livestock enterprises etc.



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Extension Support to Central Institution

1. Programs for Capacity Building

- Extension Education Institutes (EEIs) & Model Training Courses (MTCs)
- Ministry of Agriculture & Farmers Welfare has established four Extension Education Institutes at Nilokheri (Haryana); Hyderabad (Telangana); Anand (Gujarat) and Jorhat (Assam).
- the training needs of middle-level field extension functionaries working under agriculture and allied departments of States/UTs of respective regions.
- It include organization of on-campus/off-campus trainings, workshops, conferences etc. in the areas of communication technology, extension methodology, training management, Agriculture Knowledge Information System (AKIS) and Information Technology

2. Kisan Call Center (KCC)



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- The project aims to answer farmers' queries on a telephone call
- Toll-Free Number 1800-180-1551
- Available from 6:00 am to 10:00 pm on all seven days of the week.
- Kisan Call Center agents are known as Farm Tele Advisors (FTAs),
- Queries which cannot be answered by FTAs are transferred to higher-level experts in call conferencing mode.
- These experts are subject matter specialists of the State Agricultural
- Departments, ICAR & State Agricultural Universities.



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2. Programmes for Skill Development

I) Skill Training of Rural Youth (STRY)

- It's aims to provide training rural youths.
- The scheme are executed as per the standards mentioned by the National Policy on [Skill Development and Entrepreneurship](#) 2015.
- Both Public and Private/Non-Governmental Institutions including Vocational Training organisations, Youth Organizations (like Nehru Yuva Kendra) are actively involved in the implementation of this programme.





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2. Farmers Capacity Assessment & Certification (FCAC)

- It is aimed at providing recognition to traditionally skilled farmers including farm women .
- The farmers/ farm-women, after obtaining the certificate, may be recognized for getting employment in the concerned skill sector by the prospective employers in the job market.
- Farmers above the age of 18 years with minimum qualification preferably up to 5th Standard (not mandatory) shall be considered for assessment and certification.
- The **Certification** process through the **Vocational Training Institutions (VTIs)/Krishi Vigyan Kendras (KVKs)/Nehru Yuva Kendras (NYKs)**





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3. Diploma in Agricultural Extension Services for Input Dealers (DAESI)

- Agricultural Extension Services for Input Dealers (DAESI) Program has been launched during the year 2003
- Course fee of Rs.20000/-
- Agri-Input Dealers in the country are a prime source of farm information to the farming community, besides the supply of inputs and credit.
- National Institute of Agricultural Extension Management (MANAGE) is the nodal agency to run this program .





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4. Krishi Vigyan Kendras

- Krishi Vigyan Kendras: 1974
- At Puducherry (Pondicherry) under the administrative control of the Tamil Nadu Agricultural University, Coimbatore. At present there are 669 KVKs,
 - ❖ Mandate of KVK
 - On-farm testing
 - Capacity development of farmers and extension personnel
 - Provide farm advisories using ICT etc.





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Sub-Mission on Seeds & Planting M

To produce and supply quality seeds to farmers to enhance production and productivity in
Encouraging Farmers to take up Seed production of Pulses, Oils
and Green Manure crops locally and make available required C
at Village Level





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Sub Mission on Plant Protection and Plant Quarantine (SMPPQ)

- The Department of Agriculture and Farmers Welfare performs regulatory, monitoring, surveillance and Human Resource Development functions through a scheme “**Sub Mission on Plant Protection and Plant Quarantine (SMPPQ)**”
- The aim of minimizing loss to quality and yield of agricultural crops.
- To promote Integrated Pest Management and judicious use of Pesticides, 14 crop specific and pest specific Package of Practices have been issued to the States during the lockdown period.





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Sub Mission on Agricultural Mechanization

- To empower the farmers
- Government of India has released funds for various activities of Farm Mechanization like Establishment of Custom Hiring Centres , Farm Machinery Bank, High-tech Hubs and distribution of various agricultural machinery etc to different states.





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Conclusion

- Since independence Government has been experimenting with various development programmes to develop rural India.
- Many approaches or programmes were shifted from one to other
- after evaluating the weaknesses of previous programmes. Later, ATMA, Farming System Approach
- Public-Private Partnership (PPP) has been introduced after eliminating some flaws of previous attempts at agriculture and rural development. But still, they have failed to give the expected results
- due to various reasons like lack of sincerity in implementation and lack of funds for implementation.
- Therefore there is greater attention to be paid by Government to enhancing funding and promoting reforms in extension.