

Myanma Agricultural Extension Services

- Myanmar have been colonized, introduced the extension system as an instrument to increase production of raw materials, e.g. rice, rubber, jute, cotton, coffee that are needed for the administrative of the colonial power.
- During occupying the whole lower Myanmar in 1876-77
- leaders of ACS were assigned to conduct agricultural extension and experiments on tobacco cultivation.

Initial Establishment of Agricultural Institution

- Department of Land Record and Agriculture (DLRA) was established in 1888-89, land records was the priority for agricultural activities.
- The Department of Agriculture (DA) was organized 18 years after establishment of DLRA at 15 October 1906

The main functions :

- Conducting experimental plots on local paddy fields and farms, and showing demonstrations of crops and technologies in township, district and state/division, informing public about agricultural activities,
- Teaching and delivering agricultural subjects and conducting research,
- Distributing seeds.

Establishment of Agricultural College and Institute

- Subsequent agricultural college was opened initially under the jurisdiction of the Department of Agriculture in December 22, 1924. The primary objective of the college was to train for agriculture research as well as for the staff of DA.
- Duties and responsibilities of staff in agricultural college were teaching agricultural subjects and conducting research in related subjects. Occasionally, extension types of activities were undertaken

Department of Agricultural Extension

- The experiments primarily conducted in this department were manure and fertilizer trials, yield trials of different crops and cultural practices. From the experiments on rice seeding rates and transplanting methods, the important results were achieved.
- Pyinmana State Agricultural Institute was opened to teach agricultural subjects to Myanmar rural youth in Myanmar language in 1923.
- For the development of agricultural sector, Agriculture and Rural Development Corporation (ARDC) was established in 1952 according to the "Pyi Taw Tha" program which was formulated to implement 5 years plan

Functions of ARDC

The following functions were undertaken by the ARDC for doing agricultural activities curiosity by farmers to be success the program.

- Planning to get opportunity of farming without interfere for every farmers
- Stability of agricultural produce
- Setting a standard measurement for weight, balance and measuring baskets of crops
- Maintaining qualities and classification of farm produces
- Forming of storage system with license
- Collection and distribution of market price information
- Marketing by co-operative system

Recruitment of staff in the Department of Agriculture

- In 1954-55, according to the expansion of agricultural department, graduates from the SAI and Agricultural University and certificate holders who finished 10 months training of rural development supervisors were recruited in the DA. The DA was divided into three divisions, namely, extension, marketing and research.
- According to the FAO study, office routine and preparation for extension work took the largest amount of time (30%) and Farm & Home visits as well as group activities were commonly conducted by VEWs (Chang 1963).

The Extension Division

- Since 1950, the transfer of technology (TOT) model has been the prevalent practice for developing and spreading innovations.

- In 15 March 1972, with the introduction of Socialist administration system and rearrangement of state organizations, the DA and ARDC were merged into the new organization, Agriculture Corporation (AC) under MOAF.
- The AC was established with 7 divisions, namely, agricultural research, land use bureau, agricultural extension, applied research (or) seed, planning, procurement and distribution, administration and account division .

Extension Division

- The functions of the Extension Division were to advocate improved methods of cultivation, disease and pest control and encourage expansion of cropping areas, and to increase production of industrial crops for import substitution and for export.

- To implement these functions the Extension Division has been assigned to carry out the following duties:
- Implementation of the annual agricultural plan;
- Distribution of essential supplies and inputs to the farmers in co-ordination with other departments and corporations;
- Distribution of pure seeds in co-ordination with the Research Division;
- Extension education to farmers through various means;
- Co-ordination of agricultural activities with Peoples' Councils at various levels.
- A Village Extension Manager had to take charge of a village - tract or villages with 3000 to 6000 acres (1200-2400 ha) of cropland depending upon the locality and state of communication.

Trial of new extension approaches

- During 1960s “Green Revolution” campaign was launched in many developing countries with technical and financial support of FAO, bilateral and multilateral donors and NGOs.

The Training and Visit (T&V) Extension System

- As a pilot programme in the World Bank assisted land reclamation project, in four townships of the Ayeyarwaddy Division and three townships of the Yangon Division. The T& V System is a strategy that ensures the systematic transfer of technical know-how from the Research Agency to the Subject Matter Specialist (SMS) of the Projects Extension Services and again to the different level of extension agents during the training, workshops, discussion, etc.
- Therefore the T &V system was not extended to other regions of the country, and it was stopped after the completion the World Bank assisted projects.

Special High Yielding Programs

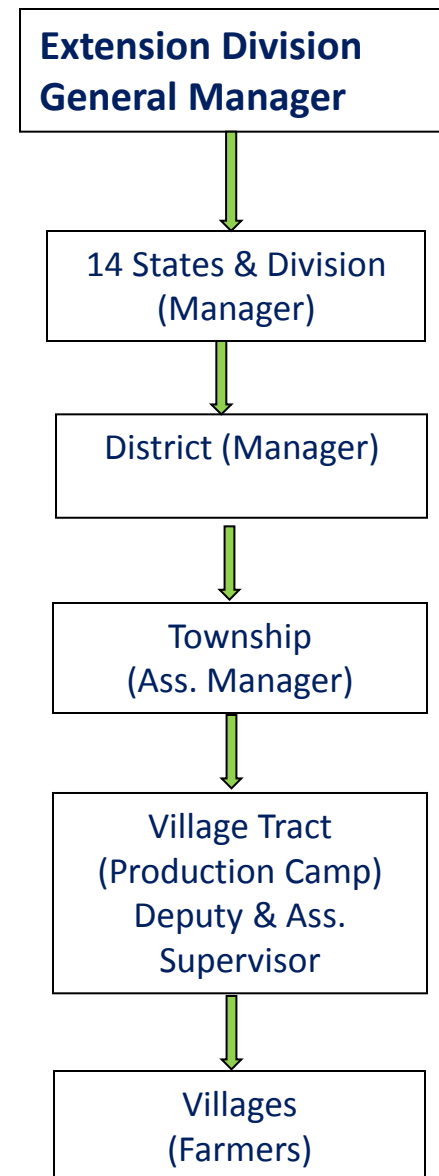
- The appropriate extension methodology ie., Special High Yielding Program (SHY) program or Whole Township Rice Production Program (WTRPP) was started in 1975.
- This program was started on rice crop with a pilot project in Pha-Lon village, TaikKye township, Yangon division. This program included five components such as:
 - Proven new technology;
 - Government support and leadership;
 - Selectivity and Concentration;
 - Mass participation; and
 - Demonstration and competition.
- One VEM supervised 2000ac(800 ha) (approximately 300 farm families).
- However, these WTCPPs were terminated in 1988 with the political changes.

➤ Production camps or education camps have been established throughout the country since implementation of WTRP program. The sites for production camps are selected based on extensively grown major crops areas and accessibility to farmers and extension agents. The extension activities conducted in production camps are as follow:

- Demonstration trails and simple experiments are conducted;
- Field days are held to recognize the performance of new technologies and improved varieties developed by research institutions;
- Training for farmers are being conducted;
- Annual cropping plans can be laid down for village level.
- The aims of demonstration trials are to invite the farmers' participation in agricultural program development and educate the nearby farmers.
- Large scale demonstration trials are being conducted on varietal selection and agronomic practices on the farmers' fields with the closed participation of the contact farmers.

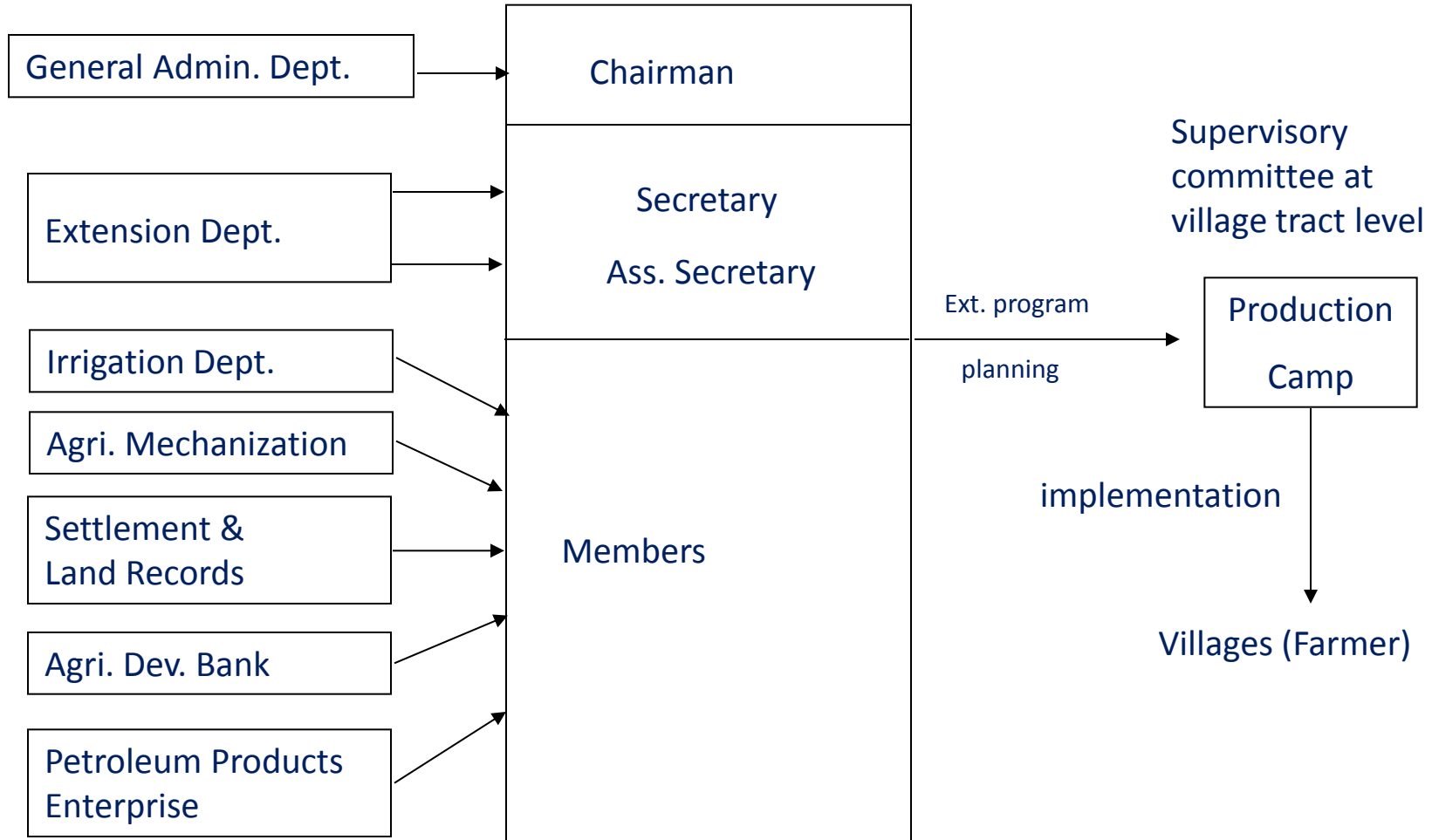
Agricultural Extension

- Structure of the extension service – formed as administrative format
- National, State & Divisional levels – responsibilities on formulation of extension planning, training monitoring & evaluation
- District, Township & Village Tract levels – engaged with more on implementation of extension programs & projects



Rice Production Supervisory Committee

Township Level



Summer rice production program

- Under availability of irrigation water, timely finishing land preparation and distribution of adequate rice seed in time. The production camps and supervisory committees were organized to encourage and monitor farmer's cultivation up to their harvest.
- The extension activities used in summer rice program was similar to the WTRPP programs. In the later years, organizing farmers with extension education and making availability of necessary seeds, fertilizers and pesticides, summer rice sown areas reached 1279.7 thousands hectares within ten years from 1992-93 to 2009-10 (HtunSaing 2006; MOAI 1999; AED 2010).
- The current extension system was the combination of T&V system and SHY program with the following components (MyaMaung 2007).
- The recent extension program for rice is the "Reaching Towards Optimum Productivity (RTOP)"

Budget Allocation for Extension in Respective Organizations (2002-03)

- Around 100 kyats for one acre of cultivated area for extension education. The percent of extension budget to total budget was around 6% (2002-2003).
- It was estimated that generally, 0.9 percent of their AGDP is allocated to agricultural extension. The developed countries spend less, while the developing countries tend to allocate a higher proportion of their AGDP to agricultural extension programs. Myanmar Government used 8.02% and 0.14% of AGDP for agriculture total expenditure and extension budget respectively in 1991(Jalil, 1994).
- The Bachelor holders also increased from 13.23% to 27% in 2010.

Components of extension system

(a) Special crop production zone

- special crop production zone for other crops were practiced for crops like groundnut, sesame, sunflower, black gram, green gram, pigeon pea and other crops.

(b) Block-wise crop production program

- It is practiced at both entrances of each town for rainy season rice, summer rice and other crops according to the localities. In this system, usages of foundation seeds, certified seeds and appropriate agro-techniques were applied.

(c) Participatory technology development approach

- It is to select the pilot project area with 20- 30 contact farmers at every village tract level in the township. The extension agents and participating farmers formulate the designs

(d) Farmer's Field School Model

Brief Description of Extension Management System

- Extension Agent and Township Extension Agent) have to meet each other every 15 days at the township agricultural education camps.
- They discuss their performance of extension activities, the collected farmers' agricultural problems and recommended solutions to these problems.
- The township extension agents have to report monthly all agricultural information collected from their townships to the respective district managers.
- the district managers have to report the information to the respective state or divisional managers.
- The state/divisional managers, deputy state and divisional managers and district managers have to attend the monthly meeting at headquarter of the AED and report the respective state and

divisional information to the General Manager of the AED. The meeting evaluates the implemented agricultural extension programs and makes the planning and decision for the new extension programs (MOAI 1999).

- Training conducted by NGOs
- UNDP, FAO, GRET and CARE Myanmar also conducted agriculture and forestry related trainings particularly emphasis on the grass root level. Trainings are mostly based on the participatory approach and
- subjects included are data collection, program planning, project implementation, monitoring and evaluation, project evaluation, project circle management (PCM) method and SWORT analysis method etc.

- Department of Agricultural Research (DAR), Yezin, Pyinmana;
- Central Agricultural Research and Training Centre (CARTC), Hlegu, YGN Division;
- Vegetables and fruits Research and Development Center (VFRDC), Hlegu, YGN Division;
- Central Settlement and Land Record Development Centre, Taik-kyi, YGN Division;
- Irrigation Training Centre (ITC), Bago;
- Applied Research Centre of Perennial Crops (ARCPC), Mudon, Mon State;
- Farm Machinery Training Centre (FMTC), Meik-hti-lar, Mandalay Division;
- Myanmar Cannan Farmer's Training Centre (MCFTC), Pyin-Oo-Lwin; and
- Myanmar OISCA Farmer's Training School, Yasagyo, Magway Division.

1. Weaknesses of Research and Extension Linkage

Suggestions for strong linkage

- The extension divisions of MAS and MICDE and Department of Agriculture Research should have close contacts freely with international agricultural research institutions for technical market access.
- Effective mechanisms should be established to facilitate closer collaboration between agricultural research and extension.
- Research and extension personnel should participate in more field trials and demonstrations.

2 (a) Weakness in Government Agricultural Policy

2 (b) Inappropriate Government Pricing and Marketing Policy

Suggestions for improvement

- Government should not set or control the price of agricultural commodities, but should introduce proper and appropriate regulatory system. For pricing policy, it is important to consider world market price: should compare domestic price to world market price for important crops to indicate whether the given price is a reasonable incentive for a farmer to produce a given crop.
- Government should not intervene market mechanism.
- The existing agricultural land policy should be reviewed and make some necessary amendments or adjustments in line with market economic system.

2 (c) Inadequate Financial Resources

Suggestions for improvement

- Myanmar, being agricultural country, the Government should make greater investments in agricultural sector, especially for extension service rather than other sectors.
- Adequate financial support for agricultural research and extension should be paramount in national investment planning.
- Should initiate to get foreign aids and grants from donor agencies to develop agricultural extension and improve rural life.
- Private Sector involvement in agricultural sector should be encouraged more and more.

2 (d) Unavailability of Agricultural Inputs

Suggestions for improvement

- Micro-Finance institution should be well established in the country for the distribution of agricultural loans to the farmers.
- Fertilizer should be available in a timely fashion as farmers required. Procurement and distribution of all agrochemicals should be undertaken by the private sectors.
- Commercial infrastructure should be well developed in the form of private, individual ownerships, partnerships, corporations and cooperatives.

3. Inadequate Human Resources

Suggestion for improvement

- It is an urgent need to place more emphasis on manpower development programs for extension methodology.
- It needs to train many persons in different fields of agriculture, both in-country and abroad. Many scholars should be sent abroad for both short and long term training.
- Regular training sessions (particularly for village managers, VEWs) should be conducted to improve knowledge of production technology, communication skills and leadership abilities.

4. Lack of Program Development Procedure

Suggestion for improvement

- Project planners should introduce participatory approach so that farmers will get involve in the extension program development process.
- Program development procedures in the extension system and agricultural planning system should include the following steps:

5. Weakness of Extension Delivery Methods (Technology Dissemination)

Suggestions for Improvement

- Extension Service should use more mass media methods.
- To be more efficient and effective technology dissemination method, extension service should be able to utilize a variety of communication channels ranging from nationwide radio broadcasts to satellite programs to deliver agricultural technical information for farmers.
- Scientific findings and publications should be transformed into extension bulletin & pamphlet to circulate freely.
- Extension officers should do on-farm demonstration-cum-research in cooperation with researchers. A higher priority should be given to applied research to utilize limited resources more effectively and research should focus on low-input technologies.

6. Time Allocation to Agricultural Extension Education Duties

Suggestions for Improvement

- Extension workers should concentrate on farm education activities.
- As private sector has undertaken distribution of agrochemicals after 1988 the authorities should think about privatization of some trading businesses relating to agricultural development leading to national economic growth.

7. Low adoption of Technology Utilization

Suggestions for Improvement

- For the effective technology utilization, it is highly recommended to make some agricultural inputs, especially fertilizers, irrigation facilities and energy should be available and affordable for farmers whenever necessary.
- Appropriate technologies for the enhancement of productive capacity of the farmers should be developed so that small farmers can utilize these technologies.
- Technology recommendation developed by researchers should be based on actual farmers' problems and should be more appropriate to small farmers' needs.
- Researchers should pay more attention to some non-technical factors such as marketing system, pricing policy, institution and infrastructure to carry out an effective research programs.

8. Lack of Transport and Communication

Suggestions for Improvement

- Extension workers should be provided with more transport and communication facilities according to their level of position.
- Agricultural extension workers should be motivated and given incentives and adequate salaries to cover cost of living.

9. Lack of Monitoring and Evaluation system

Suggestion for improvement

- Goals, objectives and policies of extension system should be clearly defined and job descriptions for extension personnel, especially for VEWs should be clearly stated. All objective must consist of (1) criteria (2) time and (3) action.
- Policy- makers or authorities should encourage subordinates to report real situation, failures as well as accomplishments.
- The extension system should establish a suitable procedure for personnel management or for monitoring and evaluating agricultural programs.

Thank You