



“Mapping and Assessing University-based Farmer Extension Services in ASEAN through an Agro-ecological/Organic Lens”

University-based Farmer Extension Service in Myanmar

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Agricultural Extension Activities in Myanmar

- Two separate public extension services in Myanmar conducted by the Department of Agriculture (DoA) and the Livestock Breeding and Veterinary Department (LBVD) under Ministry of Agriculture, Livestock and Irrigation
- The agricultural extension service is mainly organized by DoA and follows the national administration format.

- DoA is mainly conducted the traditional extension approach
- LBVD is mainly focus on animal disease surveillance and control whereas the activities on animal breeding and nutrition are still limited

- The private sector, mainly the suppliers of fertilizers, agro-chemicals, small farm machineries and improved seed are important providers of information and advice to farmers.
- Their staff visit villages and arranges farmers meetings and field-days for their product promotion.

Offering Agricultural Extension Courses

- Yezin Agricultural University
- University of Veterinary Science



Yezin Agricultural University

- ❖ One and only agricultural university in Myanmar
- ❖ Main producer of human resources for the agriculture and relevant sectors

Vision

“**to** be a prime mover of agriculture and rural development in Myanmar through HRD and a national supplier of science knowledge and technical **innovation**”

- YAU was founded on 22nd December 1924 as “**Burma** Agricultural Collage & Research **Institute**”



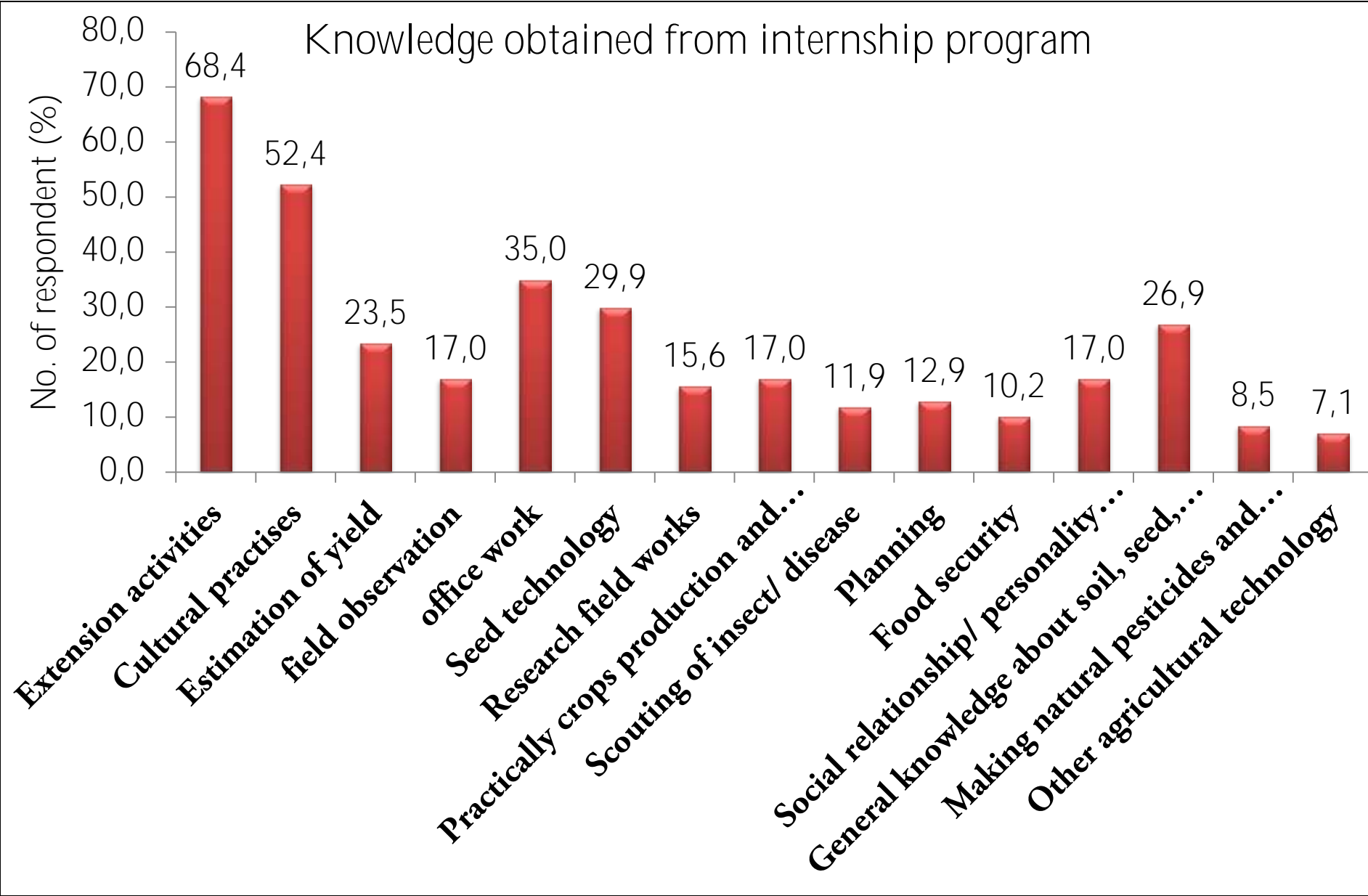
- She could not able to offer extension education subject for 60 years
- The agriculture extension was taken by Agronomy Department as part of the Agronomy subject at those years
- Around 1985, AE was promoted as a separate subject for teaching under and post-graduate classes within the Agronomy subject areas
- In the near future, the AED will be established to take responsibility of teaching and production of agriculturists with extension education background.

Agricultural Extension Curriculum in YAU

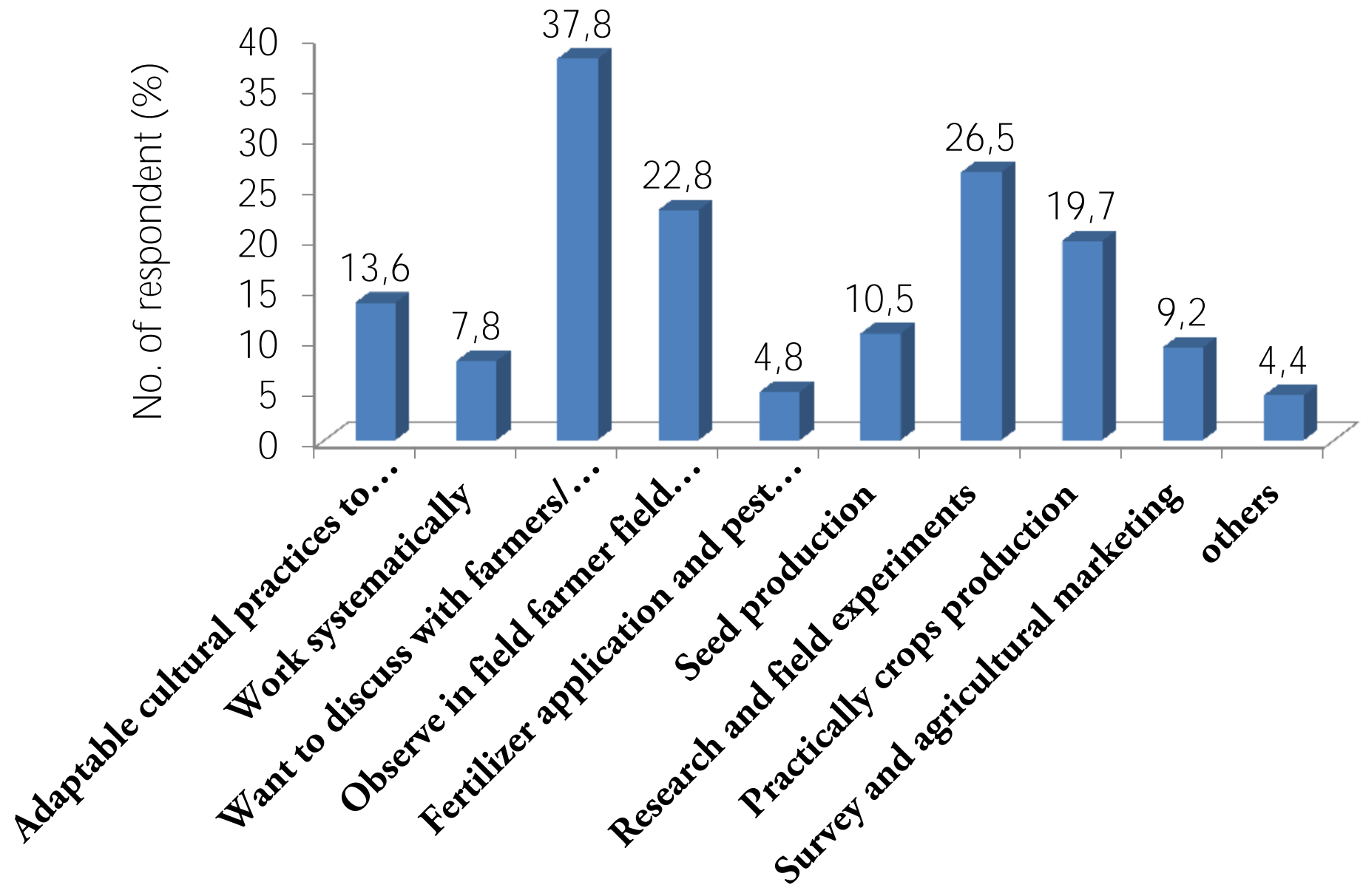
Undergraduate

- AGY- 321: Agricultural Extension and Rural Sociology
- AGY -4105: Agricultural Extension Approaches and Methods
- AGY- 5101: Participatory Extension Approach

Internship Program of YAU



What Student actually want to learn intheir internship Program



Post Graduate (M.Agr.Sc.)

- AGY – 652 Advanced Rural Sociology Credit-3
- AGY – 653 Extension Organization and Management Credit-3
- AGY – 654 Extension Research And Evaluation Credit-3
- AGY – 655 Communication Credit -3
- AGY – 656 Agricultural Extension Practices Credit – 3

Postgraduate (Ph.D)

- AGY- 719: Agricultural Extension in Rural Development

- Institutionally, for the development and improvement of the academic aspects, the current curriculum is revising to be in line with other agricultural universities.
- Therefore, the curriculum development is also focused on biotechnology application to agriculture, food science & technology and agricultural extension.
 - Crawford fellowship –Curriculum Development for Agricultural extension
 - SEARCA - develop curriculum for Agricultural Extension

Research activities related to Extension (Postgraduate Program)

- General role and technical efficiency of agricultural extension agents under human resource development (HRD) in Myanmar
- Improving the agricultural extension services: empirical study on prospects and perception of field extension agents in Mandalay Division of Myanmar
- Farmer's technical knowledge, communication and adoption behaviour on rice production technology package in Pyinmana area
- Impact of flood on livelihood and agricultural production in Seikphyu Township, Magway region

- Towards private extension trend in Myanmar: analysis of parallel extension services in greengram production area, Yangon Division
- Self-sufficiency of fodder crops in Seikphyu Township, Magway Region, central dry zone of Myanmar
- Livelihoods and decision making on livelihood assets of farming community at household level: a case study in Tatkon, Nyaung U and Meiktila Townships, Myanmar

Strengthening institutional capacity, extension services and rural livelihoods in the Central Dry Zone and Ayeyarwaddy Delta regions of Myanmar

- Institutional Analysis of DoA Extension Service
- Farmer Reference Group Research
- Baseline study on livelihood of Myanmar
- Train PRA methodology to Extension personnel from DoA, DAR, LBVD, DoF, NGOs, develop PRA manual
- Train Staff from YAU, DAR and DoA – qualitative research and Nvivo Software
- Crop Benchmarking research in pulses growing area in CDZ
- Train Extension Personal from CDZ
- Empower rural women in CDZ, Gender Analysis



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Training and field trip



Increasing productivity of legume-based farming systems in the Central Dry Zone of Myanmar

➤ On-farm trials

Evaluation on Performance of Pigeonpea (*Cajanus cajan* L. Millsp.) Varieties in Central Dry Zone, Myanmar



➤ Communication channels used by pulses growers in CDZ of Myanmar





Sustainable and Affordable
Poultry for All



Sustainable and Affordable Poultry for All (SAPA) Project

- Baseline study
- Corn on-farm trials, Demonstration plots and field day
- Train corn GAP to 2500 corn farmers until 2020



- On farm trials in CDZ
 - Effect of seed rates on yield and yield components of three varieties of chickpea (*Cicer arietinum* L.) in Seikphyu township, Magway region
 - Evaluation on agronomic performance of cowpea (*Vigna unguiculata* L.) varieties at Seikphyu township, Magway region
 - Evaluation on performance of chickpea (*Cicer arietinum* L.) varieties at Seikphyu township, Magway region

- ❖ In collaboration with IARI, India, YAU is planning to establish 4 village knowledge centers in rice and pulses growing areas (Nay Pyi Taw and Mandalay region)
- ❖ Knowledge Management in ACARE (ICT)

Yezin Agricultural University provides the knowledge and technical support for agro-ecology and organic farming or food systems in its respective departmental curriculum.

Researches on agro- ecology, organic farming and food systems are conducted by the faculty and students in the specific areas of organic fertilizers, systematic rice intensification (SRI), alternative wet & dry system (AWD) and integrated pest management (IPM)

YAU is more emphasis on teaching and training of YAU graduates as extension agents rather than directly deals with agricultural production and farmers.

YAU is involved in doing extension education with farmers

- by giving training related to crop management,
- conducting on-farm trials
- broadcasting farmer channel
- producing media summary of research finding in myanmar Language

A man in a white shirt is standing at the front of a room, presenting to a group of people seated at wooden tables. The room has green walls and a large screen displaying text in the background. The audience is seen from behind, seated at tables with white plastic chairs.



MEDIA PRODUCTION OF YAU

“FARMERS CHANNEL”



Academic-Farmer Research Partnerships

- JICA Technical Cooperation Programs
- ACIAR Projects

Research Grants on the topic of Organic agriculture or Agro-ecology

- Soil conservation or conservation agriculture

Research grant from EEPSEA-worldfish

Publication related to agroecology by faculty members

- -Effect of hot water treatment on mango postharvest diseases: stem end rot and Anthracnose.
- -Effect of some commercial biocontrol products (*Bacillus subtilis*, *Trichoderma harzianum*) on fusarium wilt of tomato
 - Diversity and biocontrol potential of tea endophytic fungi.
 - Diversity of tea endophytic fungi isolated from different tissues of tea plants
 - Evaluation of indigenous rhizobial isolates on different chickpea (*Cicer arretinum* L.) variety
 - Response of inoculation with Rhizobia isolated from wild legumes

Challenges and Opportunities

Challenges

- No Agricultural Extension Department
- Insufficient number of highly qualified new generation specialized in Agricultural Extension and Agroecology
- Need to aware of university based farmer extension service by teaching staff of YAU
- Improvement and upgrading of infrastructure
- Acquisition of Lab equipment and facilities
- Unorganized research team from different disciplines

Challenges and Opportunities

Opportunities

- Set up of new organization
- Outreach campus from various agro-ecology zones
- Collaboration with International and national organizations
- Broadcasting Farmer Channel to dissemination of Agro-ecological practices

Conclusion

- YAU is more emphasis on teaching and training of YAU graduates as extension agents rather than directly deals with agricultural production and farmers.
- Need to develop curriculum Agro-ecological aspect in Agricultural extension courses
- Need to collaborate with national and international agencies
- Need to collaborate with DoA Agricultural Extension activities,
 - to scaling up technical scales of extension staffs
 - receive the feedback from farmers

Thank You

Historical Background

British Colony- introduced agricultural extension system in 19th century

- created and established dams and embankments in lower Burma for the expansion of paddy cultivated areas
- Agricultural Cooperative Societies (ACS) and Agricultural Units (AU) were organized among village leaders and farmers
- Myanmar Land Record and Agriculture Department (LRAD) was set up in 1888

Department of Agriculture (DA)- established 18 years after the establishment of LRAD by the Law No.20 on 15 October 1906

- issued and published annual report, agricultural bulletins and pamphlets for farmers, agricultural survey book and agricultural calendar
- process of educating farmers by using advanced technologies

Nature of extension work - mainly focused on the distribution of inputs and farm implements, the standardization of weight and volume measurement of crop produce, and the purchasing of farm products

(a) Traditional Extension Approach in Agricultural Development

- Agricultural and Rural Development Corporation (ARDC) in 1952
- The extension of cotton, jute, rubber, oil palm, orange, apple, grapes, sugarcane and medicinal and herbal plants
- The extension strategy employed by both Department of Agriculture and ARDC was the traditional trickle-down or transfer of technology (TOT) system.

(b) The Training and Visit (T&V) Extension System

For the effective transfer of improved technology, new extension approach Training and Visit system was introduced in 1974.

(c) Special High Yielding Programs

- ❖ Whole Township Rice Production Program (WTRPP) was started in 1975.
- ❖ Five components
 1. Proven new technology;
 2. Government support and leadership;
 3. Selectivity and concentration;
 4. Mass participation; and
 5. Demonstration and competition
- ❖ Training facilities and a demonstration-cum-trial farm was established to test a package of the improved rice production technology.

(d) High-Yielding and High Quality Seed Production

- ❖ The high-yielding and high quality seeds for paddy, maize, sesame, sunflower, green gram, pigeon pea, soy bean, cotton (Ngwe-chi-6) and sugarcane have been produced by MOAI throughout the country for the benefit of farmers and for the increase of the production of quality crops.
- ❖ The production of certified seeds by Seed Model Villages, Contact farmers and private companies throughout the country in 2011-2012, 2012-2013 and 2013-2014 were 81852, 96361 and 149,689 metric ton respectively.

(MOAI 2015)

(e) Training and Education Activities for Good Agricultural Practice

- ❖ The extension staff provided educating and trainings of Good Agricultural Practice (GAP) to the farmers through the contact farmers for the efficient application of those methods appropriate with the respective ecological conditions.
- ❖ They established demonstration farms for the systematic use of GAP methods and agricultural machinery.
- ❖ AED organized education activities such as field days, trainings and meetings with the farmers.

- The agricultural extension division is the largest portion of the total staff of the Department of Agriculture, having 7516 staff members.
- Under the control of the Director, the agricultural extension division (AED) is organized on a state/regional basis, with offices at the district and township levels.