

AGRICULTURAL COMMUNICATION RESEARCH WORKSHOP

27 — 30 March 1989

S I N G A P O R E

THE AGRICULTURAL EXTENSION SYSTEM OF THAILAND

Dr Somkuan Kaviya

in collaboration with

Mr Thavi Masmondana
Mr Somchit Chaipakdee

© International Development Research Centre, 1989



Organised and Sponsored by the
International Development Research Centre
Canada

CONTENTS

Map of Thailand Agro-Economic Zones

1. An Introduction
2. The Country at a Glance
3. National Agricultural Extension System
4. Re-organizing for the Future
5. Research Extension Linkages
6. Extension Strategy for Innovations
7. Communication Role
8. Communication strategy
9. Market Information
10. Evaluation of Extension Activities
11. Strength and Weakness of the System

Agro-Economic Zones of Thailand



Major Crops of the Agro-Economic Zones

- | | |
|-----------|--|
| 1 | Tobacco, cattle, buffalo, silk, cassava. |
| 2 | Kenaf, silk, cattle. |
| 3 | Cattle, buffalo, kenaf, silk, cassava. |
| 4 | Cattle, buffalo, kenaf, silk, corn, cassava. |
| 5 | Corn, kenaf, cattle, cotton, silk, castor, cassava. |
| 6 | Corn, sorghum, tobacco, cotton, mungbean, soybean. |
| 7 | Corn, mungbean, cotton, soybean, sorghum. |
| 8 | Soybean, groundnut, corn, mungbean. |
| 9 | Cotton, tobacco, soybean, cattle, buffalo. |
| 10 | Tobacco, soybean, cattle, buffalo. |
| 11 | Rice, diversification crops in paddy field, sugar-cane. |
| 12 | Cattle, sugarcane, cassava, corn, cotton, castor. |
| 13 | Rice, cassava, buffalo. |
| 14 | Marine fisheries, coconut. |
| 15 | Cassava, sugarcane, marine fisheries. |
| 16 | Para rubber, fruit-trees, marine fisheries. |
| 17 | Rice, para-rubber, coconut, cattle, buffalo, coffee, marine fisheries. |
| 18 | Para-rubber, coconut, marine fisheries. |
| 19 | Para-rubber, coconut, fruit-trees, coffee. |

Office of Agricultural Economics
Ministry of Agriculture and Co-operatives

1. An Introduction

According to a Naewna Daily columnist in February 1989, Kukrit Pramoj, one of the most senior politicians and of the most influential personalities of Thailand, said that " to become a newly industrialized country (NIC) " like Singapore, Hongkong, Taiwan and South Korea ", Thailand must be aware of the upcoming impacts because there will be an important social change. Agriculturists will be depressed and poverty-stricken which might be expressed into forms of stealing, robbery, killing and rapes. "

" To become NIC, it is to have 43,000 bahts annual income per capita, say 3,600 monthly. And this amount must increase every year to cope with inflation. To become NIC, it is then like to approach the nirvana state which is always seen but never reached. "

The columnist was then convinced that farmers, majority of the population, would gain almost nothing. Lower educational standard, lack of trade skills and innovative agro-technology would rather make them " ant " labour who, tiringly working all through their lives, would be deliberately exploited by the others. Industrial society is different from the agricultural society. If the farmers had to work like machines under systematic control, they would lose their humble happiness already earned from the nature. And the pressure would finally cause negative change rather than the positive one.

Many thinkers certainly agree with the forecasting insight which may be looked by some as unimportant prediction and even meaningless phenomenon.

But in reality, certain ideas and actions have been coming up to prepare ourselves for the future change and even to solve some problems already occurring during the turning point. We might therefore have seen the development of agro-industry concept and construct. Consequently, we are witnessing the new movement of industrialized agriculture, what we call in Thai "Karn Kaset Khrop Wong Chorn" (full-circuit agriculture) or "Karn Kaset Choeng Rabop" (Systematized Agriculture).

To us, the industrialized agriculture means modern agriculture technologically, economically and socio-politically. Agriculture is not only equipped with appropriate techniques and technology but also commercialized in itself. Farmers will as well earn proper income and a fairly good standard of living, quality of life that is not too far from the other sectors.

More strong and productive people would then remain in this industrialized agricultural sector. Sociologically speaking, two types of society would be combined to form a dual society of agriculture and industry. Both of them are in fact the same type-that is materially productive type-which is different from the information society which is informationally productive. Agriculture and industry would therefore enjoy the same status, socio-economically and socio-politically as well. There would never be Thailand as NIC but as NIAC or Newly industrialized and Agricultural-industrialized country. The problems predicted by Kukrit and supported by the columnist would, of course, be decreased depending on how well we could balance the status.

The effort to upgrade the status of agriculture and the farmers is however the main thrust of the National Agricultural Extension System for more than 20 years. Its success has been known but not up to the level we mentioned above. Partly because the overall policy and plans have not been contributed to the development of such society and partly because the Agricultural Extension System has not fully utilized its communication component and potentiality to convince policy-makers and planners and, particularly, to build up favorable atmosphere for common attitudes, shared feeling; equal self-esteem and cooperative actions.

This is why this paper will try to assemble facts and feels about the past, present and the future of the system. May be we just help you understand more about it. Maybe we could convince policy-makers of whatever level and whatever organization and concern them with the real situation and some proper things to do.

2. The country at a glance

Area : 514,000 square kilometers (about the size of France or three-fourths of Texas).

Location : On Indochinese and Malayan Peninsulas in South-East Asia.

Neighbors : Burma on West, Laos on North-East, Kamphuchea on lower East, Malaysia on South.

Topography : A plateau dominates the North-East third, a fertile alluvial valley of the Chao-Phraya River in the centre. Forested mountains are in the North with narrow fertile valleys. The Southern peninsula is mainly covered by rain forests

Population : (est) 55 millions, (about 5 millions in Bangkok)

Ethnic groups : Thai 80 %

Chinese 10 %

Malays 4 %

Lao, Burmese, Vietnamese, Indian

Language : Thai

Religions : Buddhists 94 %

Moslems 4 %

Christians 0.6 %

Government : Constitutional Monarchy, with King Bhumibol Adulyadej the Great as head of state and General Chatichai Chunhawan as head of government.

Economy and Finance :

Gross Domestic Product (1987) = 1,223,218 millions Bahts

Distribution of gross domestic product

- Agriculture 19.02

- Industry

& Manufacturing 39.61

- Services 41.44

Per Capita Income (1987) = 17,728 Bahts

National Budget (1987) = 227,500 millions Bahts

Mass Media (1987)

Total Households : 10,927,392

No. of radio receivers : 8,292,324

(monochrome) 2,391,742

(colour) 2,883,892

Households reported of

reading newspaper : 3,774,909

not reading : 7,152,483

Education

Literacy rate (1985) : 87.67 %

Health

Birth (per 1000) (1984) : 19.30

Death (per 1000) (1984) : 5.20

3. National Agricultural Extension System

Nearly all ministries of Thai government appear to be involved in agricultural development :* office of the Prime Minister, Ministries of Interior, Education, Public Health, Universities, Industry, Science and Technology, Commerce, Finance, Communications, Defense, Foreign Affairs and, of course, Agriculture and Cooperatives.

But interdisciplinary-integrated approach, now advanced by the National Economic and social Development Board (NESDB) seems to re-orientate the directive and the direction of national development particularly in rural areas. Social considerations and quality of life have become dominant in the programming of rural development. Agricultural extension work is now interwoven

with all kinds of activities specifically assigned to six major ministries- interior, education, public health, commerce, industry and, of course, the Ministry of Agriculture and cooperatives which is responsible not only for agricultural extension but also for many related tasks. Within the framework of this new philosophy supported by intelligent strategies, the so-called Department of Agricultural Extension (DOAE) of the ministry has to take charge of two-folded missions :

(1) Strengthening research works that respond to the exigence of integration oriented ideology.

(2) Improving communication system and method among departments and ministries and specifically with farmers Although based on civil-servant system and bureaucracy to some extent, the DOAE has never felt difficult to assume the two new responsibilities, because it has been long preparing, structurally and functionally, to be the central organization of national agricultural extension system and to coordinate for the best outcome which might be expected by any form of policy and strategies.

Since 1977, ten years after its establishment on October 20, 1967 the DOAE

* James H. French and Somchit Chaipakdee (compilers) " An Organizational Analysis of Agricultural Development in Thailand " UNDP/DTCP 1980

has introduced a large-scale extension operation system officially called National Agricultural Extension Project (NAEP) with a part of its financial support obtained from the International Bank for Reconstruction and Development (IBRD). The purpose of establishment of the NAEP is to reorganize existing extension services to farmer residing in 50,333 villages in the entire 73 provinces of the country.

Prior to its functional revision, NAEP operational policy was aimed at implementing its services within the context of production of major economic crops in all regions. This certainly means that other extension activities such as livestock, inland fisheries, and forestry production were not included in its functions. However, due to the new National Development Policy, the NAEP present objectives are to be emphasizing on an integrated agricultural development approach by which several programs on on-farm irrigation, expansion of agricultural credit, improvement of extension delivery system, and creation of marketing facilities to crop, livestock, fishery and forestry production. All these have to be together organized into a functional theme.

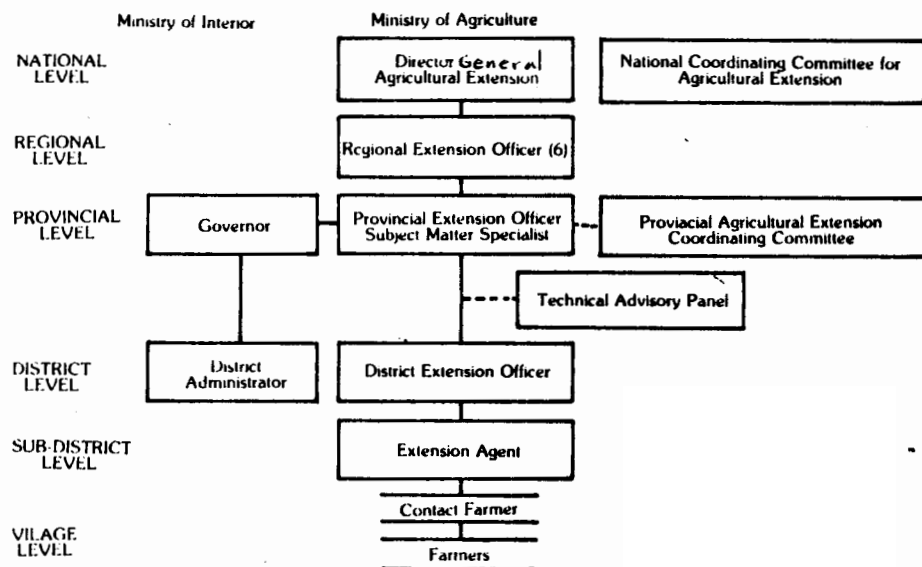
Prior to inducement of the NAEP to the country, DOAE had performed its functional activities to millions of farmer families through a small number of extension personnel at provincial and district levels. The ratio of extension officer to Farmer families was about 1 to 4,000. Experiences, however, indicate that together with a problem of inadequate extension staff to perform their roles at the grass-roots level, extension officers had been found possessing insufficient characteristics to work with rural people. Many of them had been

inadequately trained in subject matters relevant to their work. Furthermore, due to a burden of administrative responsibility requiring them to spend a major portion of their time in the office, they had no adequate field experience to understand the real situations of the target population. As a consequence, lack of self-confidence and communication skills among extension officers to deal with farmer needs and problems was widely recognized.

The establishment of the NAEP has been therefore aimed at reorganizing the structure and functions of the existing agricultural extension system, improving capability of extension personnel at all levels to be ready to work, and increasing number of extension personnel particularly at the field operation level to come up with an expended volume of extension activities. Of the latter, it appears that the number of extension personnel has been increasing considerably. More than 8,000 college and university graduates have been continuously recruited. Among them, 5,600 are village-based extension agents, 465 are subject-matter-oriented specialists, and the rest are district, provincial, regional, and headquarters-based extension officers. In essence, the ratio of extension agent to farmer families becomes at present 1 to 1,000.*

* DOAE " Thailand's National Agricultural Extension System, " Bangkok : The Agricultural Cooperative Federation of Thailand, 1985

THAILAND NATIONAL AGRICULTURAL EXTENSION PROJECT PROJECT ORGANIZATION



NAEP IN FIGURES

PROVINCES :	73
DISTRICTS :	715
SUBDISTRICTS :	6,283
VILLAGES :	56,671
FARM FAMILIES :	approximately 5.9 millions
FARM AREA :	approximately 119 million rai (19 million ha)
NUMBER OF FARMS :	approximately 1,500 millions
AVERAGE FARM SIZE :	26.63 Rai (4.26 ha)
EXTENSION AGENTS :	5,595

The new trend of development policy with emphasis on research and communication, together with the on-going thrust of the NAEP, has however stimulated the DOAE to reorganize its responsibilities to include

1. ECONOMIC ASPECT

- To promote production activities for all major economic crops to meet a target set forth by the Fifth National Economic and Social Development Plan.
- To promote appropriate cultivation techniques for crops economically important to specific localities.
- To reduce production costs of all major economic crops by means of appropriate technology.
- To extend useful information to farmers in both poverty concentration and progressive areas.
- To extend extension services to farmers for other agricultural production activities such as livestock, fishery, forestry, land and water use and conservation.
- To cooperate with credit and market-oriented agencies to benefit the farmers.

2. SOCIAL ASPECT

- To encourage all farmer families to utilize appropriate farm production techniques and home economics information through group organization.
- To promote an integrated agricultural development approach for a better quality of life of local farm population.

- To help educate farm population and become good citizenship.
- To cooperate with other government and private agencies to promote a planned social development scheme in the rural sector.

3. SECURITY ASPECT

- To cooperate with the concerned government agencies to promote agricultural production activities in politically sensitive areas.
- To support releasing farmer burdens caused by natural disasters such as floods and droughts.

4. Re-organizing for the Future

When the DOAE was established by a Royal Decree published in the Government Gazette special issue of October 20, 1967, its organization has been structured in the following manner:

A. Central Administration

1. **Office of the Secretary:** correspondence and clerical work; serves as a coordinating center among central administration, regional and provincial offices, and with other government agencies; sets and allocates budgets to regional, provincial, and district extension offices; provides services such as radio communication and telex between central and provincial administrations.
2. **Personnel Division:** deals with formal tasks of personnel administration, including manpower planning, recruitment, appointment, transfer, resigna-

tion, promotion, pension, bio-data, examination, control of leave, release of officials to attend training/study/or study tours; strengthening discipline and morale; taking action on violation of disciplinary regulations; and social welfare.

3. **Finance Division:** in charge of finance, accounting, control of annual budgets, receipts and payments consistent with internal and external financial resources, and procuring supplies, materials, equipment, and vehicles. It is also responsible for upkeep of DOAE's buildings.
4. **Planning and Special Projects Division:** sets up all extension work plans in line with the socio-economec situation and national policy; administers and seeks ways to develop the extension system; carries out extension activities under loan projects and other special projects; analyzes agricultural production and marketing data so as to support production planning; draws up DOAE's budget; monitors and evaluates extension programs; cooperates with research institutes, universities, and other technical institutions in conducting certain research; coordinates with international organizations to seek assistance for agricultural development projects, fellowships, training, and study courses; prepares DOAE's annual reports and collects agricultural statistics.
5. **Crop Promotion Division:** promotes crop production in accordance with overall plans; provides technical knowledge to farmers on how to increase production efficiency and improve quality; coordinates with research institutes and agricultural institutions in adapting the knowledge acqui-

red so it can be imparted to extension officers who can then relay it to farmers; studies, conducts, and tests agricultural technology to secure its adoption by farmers; supervises, monitors, and reports on implementation of agricultural extension projects at the farm level.

6. **Seed Division:** produces seed of improved varieties of major economic crops to help farmers increase their yields; promotes private-sector production of high-quality seed to help ease the government's burden; studies and disseminates knowledge on seed technology; provides seed testing and analysis services for government agencies, farmers, and seed users.
7. **Plant Protection Service Division:** helps control plant diseases, pests and weeds, and prevent the spread of pests, rodents and other noxious animals; promotes safety precautions in pesticide use; provides technical knowledge to farmers on protecting their crops efficiently; studies research findings to adapt them so they are workable for extension activities; draws up plant protection plans; provides plant protection services to farm people in serious and widespread disease outbreaks; and promotes beekeeping.
8. **Agricultural Administrative Development Division:** promotes and supports organization of farmers into institutions or groups which can render mutual help and acquire technical knowledge; gives advice on managing the implementation of farmer groups, farm women groups, and 4-H groups; disseminates knowledge on home economics, farm management, use of produc-

tion inputs to fit local conditions, agribusiness entrepreneurship, and utilization of farm mechanization.

9. Agricultural Communication Division: draws up guidelines and plans dissemination of technical farming information; develops agricultural communication systems and transfers knowledge through mass media such as radio television, and printed matter; publishes manuals, leaflets, posters, etc; produces films, slides, and audio-visual aid; organizes agricultural exhibitions and contests aimed at improving production efficiency; carries out farm broadcasting programs, and produces audio-visual films, cassettes, and information for mass media; establishes information exchanges and maintains on-going supervision of these activities.

10. Training Division: designs training programs; organizes training for DOAE officials and farmers; supervises training by regional and provincial offices so it is in line with overall plans; monitors, evaluates and reports on training activities; coordinates with research and academic institutions in sending officials to training courses and acquiring recognized resource persons; develops publications and acquiring recognized resource persons; develops publications and audio-visual aids for training programs; and manages DOAE's library.

B. Regional Agricultural Extension Offices (RAEO)

There are six regional offices, each equivalent to a Division:

1. Northern RAEO, Chiang Mai
2. Northeastern RAEO, Khon Kaen

3. Western RAEO, Ratchaburi
4. Central RAEO, Chainat
5. Eastern RAEO, Rayong
6. Southern RAEO, Songkhla

Regional offices provide technical knowledge to provincial and district offices; receive policies, plans, and projects from central administration divisions and use them to set up implementation plans for the region so as to provide support and develop local staff; supervise, monitor and report field operations

The Regional offices serve as centers for:

- Agricultural information and extension research study;
- Agricultural extension planning;
- Organizing training programs;
- Supervising extension activities;
- Monitoring and evaluating extension programs;
- Rendering technical-knowledge services.

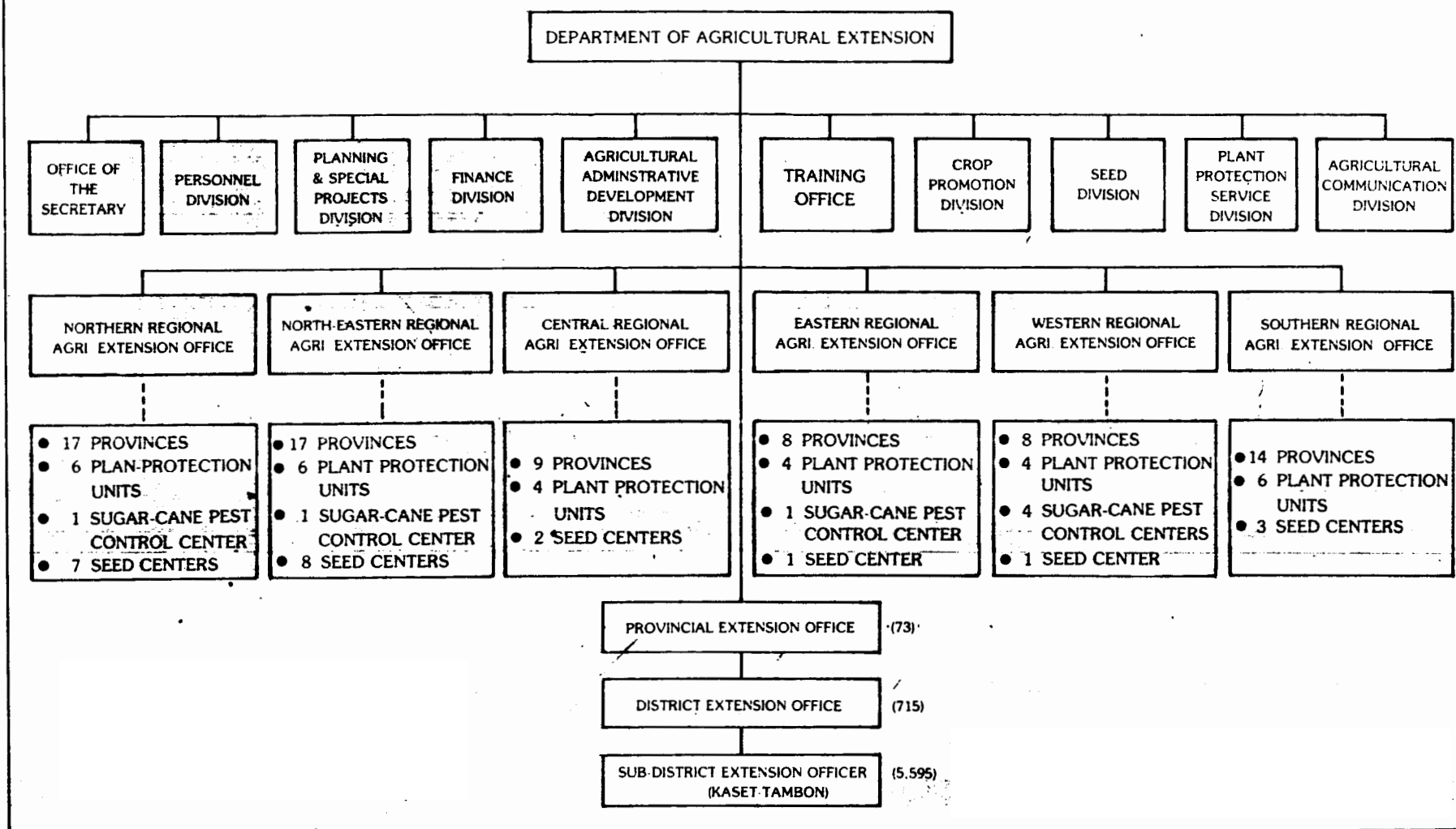
C. Provincial Administration

1. **Provincial Agricultural Extension Office:** the 73 provincial offices are operating units; they receive policies, plans, and projects from the central administration and draw up implementation plans in conjunction with provincial plans. They provide advice to extension workers; follow-up extension activities to be sure they are consistent with plans; prepare reports; coordinate within the province in conducting extension activities; give advice to farmers and help them solve production problems; and represent the Ministry of Agriculture

and Cooperatives at the provincial level.

2. District Agricultural Extension Office: perform extension activities at the field level in line with plans and projects received from the provincial office; gives advice to extension workers; follow-up and reports on operations of extension workers; coordinates within the district in carrying out extension programs; help farmers solve production problems; and represents the Ministry of Agriculture and Cooperatives at the sub-district level.

ORGANIZATION CHART DEPARTMENT OF AGRICULTURAL EXTENSION



It should be here noted that the manpower of the DOAE has always increased since its establishment in 1967. At the first start it had only 2,000. Eight years later, in 1975, the number was doubled to 4,000. And in 1982 it was surprisingly boosted up to 12,000, which was three times in only seven years.

To cope with the future tasks emphasizing upon research and development based on communication and coordination, the DOAE has again planned to improve the capacity and capability of its personnel with help from the Civil Servant Commission Office. During the period of 1989-1991, actions will be taken to develop both quantity and quality of personnel guided by the new and modern direction. Agro-business, agro-industry, as well as industrialized agriculture will be main targets of integration-approach character. More crops will be promoted through more effective and realistic coordination among four important groups-government departments, private sector, banks and agriculturists. This "Four hands in hand" Project will certainly change way of thinking and working style if not the social stratification itself. Farmers might possibly become a part of middle class and could therefore help a lot in calming down the forever-felt political and social problems.

5. Research extension linkage

Technological Research

Since it has been found that research sector is one of the most important components in the development dynamics of the system, many kinds of efforts have been pushed forward to improve the status and the situation.

First of all, it is necessary to mobilize all the potentials existing both inside and outside the DOAE. Competent individuals have been invited to join the research teamworks set up at various levels with in the framework of the National Coordinating Committee for Agricultural Extension (NCCAE). This committee consists not only of the DOAE personnel, but also those of related ministries and departments. For better results, it is also linked up with the network of the National Committee for Rural Development (NCRD) from high level down to sub-district and village levels, the NCRD network itself is, since 1988 composed of six sub-networks belonging to six core ministries: agriculture, interior, education, public health, trade and industry.

Secondly, it is to increase both moral and material supports for the professional researchers. More funds are now allocated to research activities relating to crops, livestock, fisheries, land development and irrigation. Five to six million bahts each year seem to be small comparing to other

countries, but it is fairly high for Thailand which has just emerged to appreciate the R&D philosophy. Funding sources are at the same time from the National Research Council and particularly from foreign countries in form of loan mainly to the Department of Agriculture. (Agricultural Technology)

Research topics are normally identified by the professional researchers. People's feedback and government policy are however checked and brought in to help determine the topics. The professional researchers are responsible for the research activities but agricultural technicians and subject-matter specialists can take charge of specific topics. As for field-trials, the DOA is the only authority to plan and implement.

It is interesting to here mention that since 1987 more research projects have been oriented toward the so-called agro-socio-economic approach. They are aimed not only at the applied-scientific technology but also at human and social side of the coin. One farmer is not simply grower but human being. Many farmers are not always cooperative members, but social being of many form. Communication with them is not always to teach, to push or to change but also to learn, to follow and to spend some time together. The new approach has therefore shed new light on the field of agriculture which needs human touch as well.

Questions may be raised about who would decide that a new technology is ready for extension. Based on the same principle as the new research approach, spirit of teamwork, again, plays the role of decision-maker. Central and regional committees, within the framework of the NCCAE, act as selecting bodies depending on areas where the new technology would affect. But new techniques do not derive from agricultural departments alone they can come up from universities, international organizations, or even from villagers themselves. Folk technology is normally appropriate, effective and less costly.

To systematically select new techniques or new practices, the DOAE has nevertheless set up two methods:

1. Selection by objectives

Each project has its own objectives which respond to the guiding policy and master plan. Any innovative technique to be selected must be effective, economical and yield maximum outcome as planned.

2. Selection through workshop

Workshops and training courses are organized in order to exchange knowledge and ideas as well as all kinds of innovation. Workshops are held annually and monthly, aimed at developing new methods/techniques and selecting proper ones for different projects or areas, which training courses are offered fortnightly in view to teach and train new methods/techniques already

selected. Both workshops and training courses are established and planned under World Bank system.

6. Extension strategy for innovations

In the Agricultural Extension Development Plan (1987-1991), the DOAE has set up main agricultural extension guidelines to direct actions which are aimed at serving objectives and the policy. These guidelines also determine the process during which extension strategies are designed for any new technology.

1. To improve the agricultural production structure by taking into account both local and foreign market trends, so farm families can earn higher incomes. This can be done by:

- encouraging crop diversification by diverting land from economic crops which have marketing problems and constraints, thereby reducing risks and increasing income to farmers.
- improving the quality of agricultural production, so farm products meet market demands.
- increasing production efficiency, to gain higher yields per rai and reduce production costs so Thai farm products can compete more

favorably with foreign products.

- promoting on-farm crop diversification, to create jobs and increase farmer income.
- developing the value-added aspect of agricultural products to help increase farm income.

2. To emphasize extension activities in less-advantaged area, by developing 12,500 villages indicated in the Fifth National Economic and Social Development Plan as poverty areas, to help increase income and generate jobs for poor farmers.

3. To provide production inputs sufficient for all farmers, and support the realistic effectiveness of the agricultural production policy by:

- propagating various crops in the amounts seeded by farmers and the market.

- increasing efficiency in land utilization, so farmers can obtain greater yields per rai and can reduce cash production costs.

- encouraging utilization of small scale water resources already developed to create more jobs for farmers and increase farm family income.

- rendering plant protection and pest control services, to prevent and reduce losses.

- coordinating closely with agencies that provide agricultural

credit and inputs, to resolve problem of lack of capital and inputs.

4. To cooperate and coordinate closely with other agencies whose work is relevant to agricultural technology development, to develop appropriate, low cost, and workable technology which can be transferred to farmers.

5. To set up a complete marketing and production information data system utilizing the existing computer system, so that the farm people, private agri-business, and government agencies can develop effective production and marketing plans.

6. To speed up the extension delivery system so it operate more efficiently and can increase farmer adoption of technology and benefits to farm families.

7. To encourage merging farmer groups into farmer institutions, and improve efficiency of existing groups.

8. To improve the competence and ability of extension personnel at district and sub-district levels, so they can perform their duties consistent with DOAE policy and respond effectively to farmer problems and needs.

9. To develop extension projects and plans which specifically fit local conditions and serve as effective mechanisms of promoting agricultural production in line with conditions and market demands.

7. Communication role

The process, linking policy strategy, technology and implementation can only be successfully activated by effective communication. Extension strategy and new technology, even guided by far-sighted policy, may turn up useless if officers and farmers, in particular, are not well informed and appropriately motivated.

Information, both technical and motivational, must be disseminated to the farmers and concerned publics. Field extension officers, as well as higher-level officers, must be continually brought up to date and taught about agricultural research advancements, extension techniques and communication skills.

That is the reason why the Agricultural Communication Division (ACD) has emerged as development-support-communication unit of the DOAE

First established in 1968 under the title of training and Extension Division, it has got the new title in 1975, and has since developed into a modernised division with 4 main functions:

1. providing various levels of agency staff with technical reference materials to improve their knowledge and skills.
2. Providing agency trainers with teaching materials which they can

use to improve the effectiveness of pre-service and in-service training of field workers and other staff.

3. Providing agency field workers with materials for face-to-face communication which would be useful in motivating, training, and/or educating rural families.

4. Providing the mass media with material to use such as press releases, scripts, or pre-recorded tapes for radio stations, slides, videotapes, etc.

In order to fulfill these functions, the division delegates and decentralizes as much of the work and responsibility as possible. At the national level, the Agricultural Communication Division is divided into 7 sub-division. They include:

1. General Administration Sub-division: responsible for correspondence, typing, finance, accounting, and procurement of materials.

2. Public Relations Sub-division: increases the positive image of the department and the understanding of extension work on the part of the public by providing an information dissemination center and at all levels, mobile units to support communication work in remote areas.

3. Audio-visual Aids Sub-division: serves as a center for the production of slides, films, video tapes, and other audio-visual aids; and

provides information about lighting and sound to various divisions within the department.

4. Exhibition and Contest Sub-division: supports other divisions within the department in the operating of agricultural extension exhibitions, production contests, field days, and field trips; also provides graphic art services.

5. Publication Production Sub-division: prepares and publishes technical manuals, extension manuals, farmers pamphlets, handouts, posters, and other printed extension media for dissemination to the public.

6. Radio Farm Broadcasting Sub-division: functions as a center for program production which will be broadcast over central and local radio stations; and serves as an administrative center for the Radio Broadcasting Station, which broadcasts 18 hours per day at a capacity of 20 kilowatts and reaches 22 provinces.

7. Agricultural Communication Planning and Development Sub-division: deals with planning and agricultural communication development work; coordinates the planning, supervising, monitoring, evaluating, and reporting of agricultural communication development work; serves as an agricultural information center; oversees communication research and development; and directs communication trainings for extension personnel at all levels.

From there, all of this agricultural communication work and material is then decentralized. It is spread out to training and dissemination subdivisions of Regional Extension Offices, to communication officers of provincial offices, and finally to local district offices. It also shares with other DOAE offices such as seed centers and plant protection units.

The personnel positions of the Agricultural Communication Division are much different than those of the other divisions within the department. This is particularly true in terms of the positions and levels of the officers. According to a 3 year manpower resource planning report, the Agricultural Communication Division has a total of 150 officers. This breakdown to 97 permanent officials, 46 permanent employees, and 7 temporary employees. Of the 97 permanent officials, there are 23 communication specialists, 6 photographers, 10 typographic technicians, 14 electricians, and 10 artists. The remaining personnel makeup the typists, accountants, clerks, and radio broadcast announcers.

Additional communication personnel are also at the regional and provincial levels. The regional level has 4 communications artists, and an electrician. For regional offices with an offset-printing machine, there will be a typographic technicians, as well. Communication work at the provincial level is assigned to a communication officer. As of 1988, communication work has begun to be assigned to district extension officers at the district office level.

To assist in the dissemination of information to as many people as possible, DOAE has purchased and developed a significant amount of communication production equipment and facilities. These include:

- 1 Central & 3 Regional Modern Offset Printing Houses
- 1 Agricultural Radio-broadcasting Stations with 3 Regional Recording rooms
- 1 VDO Editing room with 10 VDO cameras
- 1 Central & 6 Regional Darkrooms
- 2 Central & 6 Regional Mobile Units
- 2 Micro-computers

In total, the division has a budget of (US) \$800,000 each year for the development of communication materials, productions, and other activities.

The information which the division disseminates comes from a number of sources. Some of it comes from research done by the department itself, but a majority of it is the result of research done by the major agricultural universities found in the 4 regions of Thailand, i.e. Kasetsart Univ. in the central region, Chiang Mai Univ. in the north, Khon Kean Univ. in the northeast, and Prince of Songkla Univ. in the south.

The department and division are also in contact with other agencies under the Ministry of Agriculture & Cooperatives. At the national level, there is a

committee which links the department with the Ministry. This committee, which is chaired by the Minister himself, meets to devise plans for the transferring of knowledge and technology from the national to the regional and provincial levels. At the provincial level, the provincial agricultural officer is responsible for coordinating all agricultural extension activities within the province. These include activities involving other agencies such as plant protection, forestry, cooperative extension and livestock development. At each provincial office there is also a communication officer who can assist and advise in the planning of these activities.

The ACD has improved tremendously over the past 20 years, but like all things there is still room for improvement. Recently, the division has put a strong emphasis on decentralizing and extending itself to the local extension agent. While this has helped, the problem still exists that the agents are not using the unit's resources to their fullest potential. Much of the problem appears to be a combination of ignorance of the resources available and insufficient knowledge about how to use these resources effectively. A majority of extension agents have only agricultural degrees and lack any kind of communication training. Often when they do take advantage of the resources, it is in a haphazard way and thereby lacking much of an organized strategy.

**Facts about agricultural communication
situation in Thailand, 1988**

1. Target Audiences in Agricultural Communication

- 15,000 Government Officials in Dept. of Agricultural Extension
(separate into 885 extension units all over country)
- 40,000,000 Farmers (70 % of Thai populations)
- Public (incountry / foreign)

2. Communication personel in Department of Agricultural Extension

- 891 DSC organizers
- 34 Communication Specialists
- 16 Artists
- 11 Photographers
- 13 Printers
- 11 Electricians

3. Mass media resources

- 9 TV Stations
- 300 Radio Stations
- 300 Newspapers/agriculture magazines

4. Local communication resources

- 4,500 Sub-district Agricultural Extension Offices
- 10,000 Local public address system centers
- 50,000 village publications centers
- 100,000 schools/temples/mosques/churches
- 500,000 contact farmers/farmer leaders

5. Communication production facilities in Dept. of Agricultural Extension

- 1 Central/3 Regional Printing Houses
- 1 Radio Station /3 Central/6 Regional Recording Rooms
- 1 Central/6 Regional Darkrooms
- 1 VDO Editing room/10 VDO Cameras
- Government support US \$ 800,000 each year for communication materials

production and activities

6. Yearly outputs from communication production

6.1 Public relation activities

- 255 press releases
- 100 TV news
- 40 warning announcements
- 260 short recommendations

6.2 Radio-farm broadcasting activities

- 2,200 radio news
- 6 daily document programs
- 30 interviews
- 2,000 short articles
- 96 long articles

6.3 Printed materials activities (title/copies)

- 15/35,000 technical documents
- 20/300,000 extension manuals
- 20/600,000 booklets
- 80/2,400,000 posters
- 4/20,000 posters
- 10/33,000 journals
- 12/18,000 newsletters
- 12/18,000 calendars

6.4 Still picture productions

- 8,000 pictures
- 10 slide sets
- 1 transparency set
- 2 exhibition prototypes

6.5 Films & VDO production (titles/copies)

- 5/16 films
- 39/504 VDO tapes

6.6 Exhibition activities

- 20 in central level
- 36 in regional level
- 73 in provincial level
- 1,710 in district level

6.7 Contest activities

- 2 in central level
- 5 in regional level
- 31 fruit contests
- 73 crop varieties contests
- 56 crop production contests
- 73 village agricultural activities contests

6.8 Field-day & demonstration activities

- 33 field-days
- 73 farmers days
- 2 regional agricultural extension days

8. Communication Strategy

In 1985, The Thailand Development Research Institute (TDRI), conducted a research project under DOAE's Agricultural Development Information Programme, strengthen on agricultural data dissemination through mass media ,which was support by the Asian Development Bank (ADB). They have found out that television has became one of the most important media transmitting agricultural information and knowledge to farmers. Radio-broadcasting ,ranked after television, is however most useful in giving data about product prices.

The Labour Force Preliminary Syrvey 1987, done by the National Statistics, has further more confirmed rapid growth of number of radio and television sets as well as a potentially of newspapers in rural areas.

(see table)

Estimation of Radio ,Television and Newspaper,1987

	Whole Kingdom	Municipal Area	Sanitary District Area	Non-municipal/ Non-sanitary Area
Total private Households	10,927,392	2,075,889	997,478	7,854,025
Households having				
Radio Receivers	7,698,003	1,622,195	719,437	5,356,371
Total Television Sets	5,001,219	1,592,556	594,050	2,814,613
Black & white	2,366,018	447,331	242,568	1,676,119
Colour	2,736,670	1,212,473	359,770	1,164,427
Numbers of				
Radio Receivers	8,292,324	1,973,094	768,165	5,551,065
Total Television Sets	5,275,637	1,801,857	610,915	2,862,865
Black & white	2,391,742	458,444	243,904	1,689,394
Colour	2,883,895	1,343,413	367,011	1,173,471
Households Reported of				
Reading newspapers	3,774,909	1,256,184	443,884	2,074,841
Not reading newspapers	7,152,483	819,705	553,594	5,779,184

Source : Labour Force Preliminary Survey 1987, National Statistical Office

Therefore, the ACD has built up a new communication strategy to efficiently direct its activities during 1987-1991. The strategy is aimed at attacking three crucial domains of communication.

The first one is **information campaign through mass media** in order to swiftly and largely spread out new agricultural information considered urgent and necessary for certain masses of farmers.

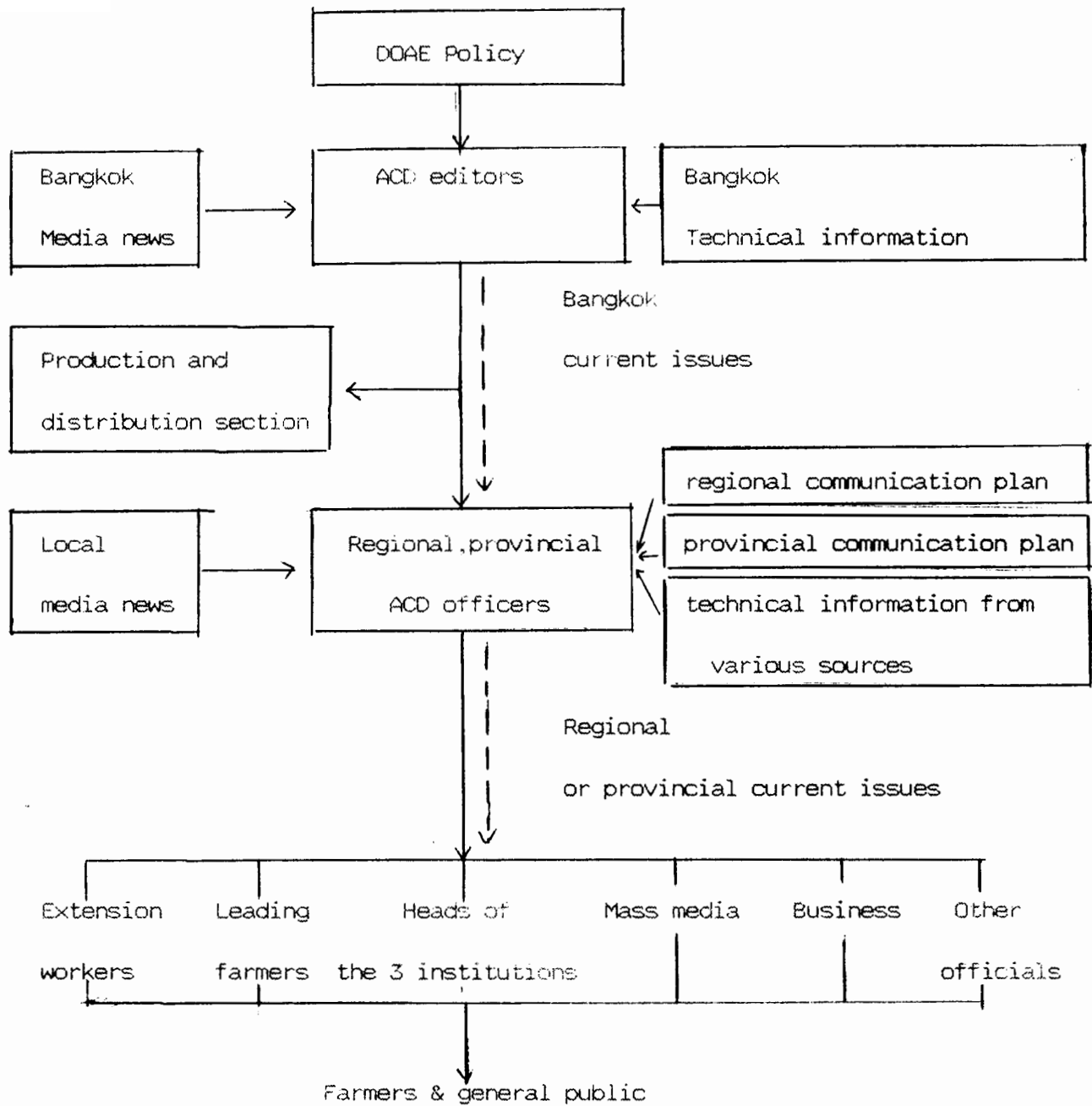
The second one is to apply a **public relations model** for public awareness, public understanding and adoption. Information about any project will be prepared and message-designed in view to effectively inform and motivate target groups which include farmers, businessmen, media people, change agents and, in certain cases, general public.

The third one is **the intra-organizational** communication which is intended to increase productivity of ACD personel by building up team spirit and cooperative atmosphere among themselves and with others. A quality-control-circle model is also under consideration.

In order to apply the three-faceted strategy successfully, the ACD has planned out and operated a **communication system** covering both Bangkok and rural areas. ACD editors, working from the metropolitan office, twice a month select media news and technical information, then, produce communication materials for internal use and sending out to ACD officers in the regions.

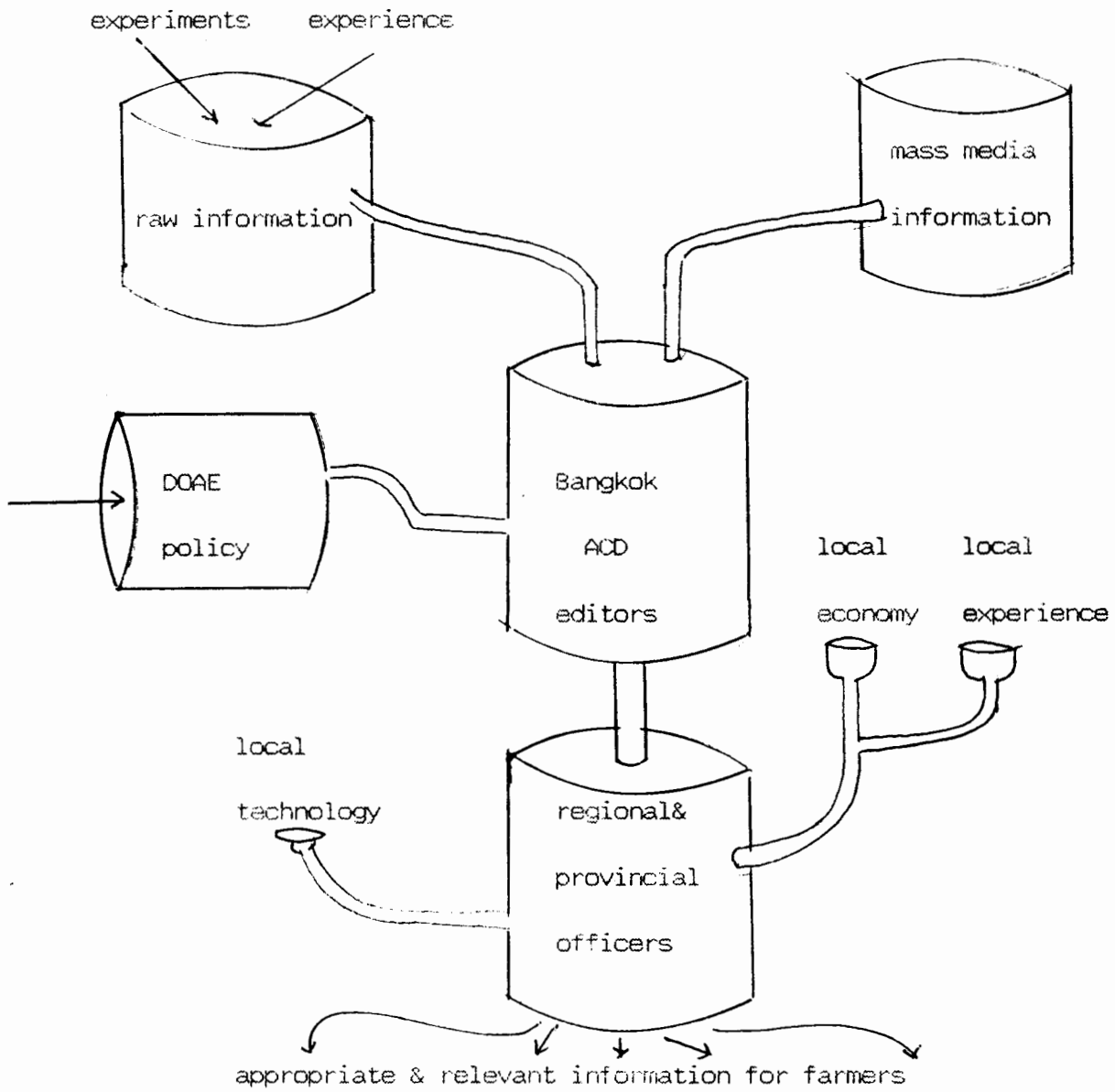
The officers, regional or provincial, again select items and issues relevant to local plan and objectives then mix up with local media news to make ACD bulletin for local distribution.

ACD Communication System



Communication media are of course the channels through which the regional and provincial officers tactically send out the designed messages to primary and secondary groups. Such media are not only radio, television, newspapers but also persons, mobile units, exhibitions and other forms of print media. Persons may include ACD officers themselves and sub-district agricultural officers, while other forms of print media can include posters, folders, leaflets or newsletters.

A model of
Agricultural Information Processing



9. Market information

An AM station belonging to the ACD and Radio-Thailand regularly broadcast daily price-list of some agricultural products. That is the only thing the DOAE can do to help farmers in the field of marketing. The vicious circle is still there because producers do not exactly know what and when to produce and specifically where to sell the products which are successfully promoted by the DOAE and many other authorities.

The DOAE therefore joins hands with the Ministry of Commerce and the Agricultural Economics Office which also depends on the Ministry of Agriculture and Cooperatives (MOAC). They are in the process of developing computerized information system which will be mainly specialized in agricultural market information. Ultimate goal is to deliver "product to export" data from the computerized center down to village level.

This will need more efforts and more times, since the DOAE has many other missions relating to complex politico-economic policy of the government. For example, it has to sell fertilizers, to recuperate government debts and to act an enforcer of poisonous objects law. Fertilizers selling and control of poisonous objects are surely more urgent for the farmers than market information. But the DOAE has never abandoned the key-idea to modernize the

market information system which is increasingly important in the long run.

10. Evaluation of Extension Activities

Since 1987, a model of monitoring-evaluating-reporting (MER) system has been used in the evaluation phase of extension activities. At the center of the system, the Planning and Special Project Division (PSPD) has always improved significant research methods to cope with increasingly complex extension activities in the present and in the future. Three indicators were, for instance, set up to measure degrees of accomplishments. Actual performance of activities themselves, their effects or effectiveness and then their impacts on farmers level.

Reports of overall activities and their outcome are published annually.

11. Strength and Weakness of the System

Annual reports and many evaluation report of extension activities have shown that Thailand agricultural extension system is satisfactorily effective, progressive and coordinative. In spite of extensive functions, it can fairly well serve farmers and agriculture economics sector like business people and

consumers' marketplaces. It is also fortunate that policy-makers have put out clearcut policy of rural development and brought six ministries in to coordinate in accelerated and integrated workers. Budget and personel are consequently and understandingly put in adequately. It is therefore evident that, due to good command and hard works within and around the agricultural extension system, Thailand has reached a certain level of success in the field of agriculture which has then contributed a lot of the national "leap forward" economy.

The system must go on for the sake of betterments in this direction. Nevertheless, it has to strengthen three dominant factors which always play decisive role in the field. First of all, **organizational system** must be revised and improved. From metropolitan offices down to village groups, new approach of management and equipment must be considered as a necessity for efficiency. Secondly, **extension agents** need to be kept continually in formed and properly trained. A working system using the quality control circle approach should be seriously applied. Thirdly, may be the most important, **social technology** and partially communication arts and sciences should be regarded as development catalysts or force-multiplier. Network, methods and media of communication must be systematically organized and fully utilized to support the system. More down-to-earth research must be done in order to find out the most meaningful way of communication and interaction with both workers and farmers.