SOME ASPECTS OF THE THAILAND - U. S. ECONOMIC DEVELOPMENT AND TECHNICAL ASSISTANCE PROGRAMS

The Country

Thailand, the name for traditional Siam since 1948 when the English name Siam was changed, has a land area of 200, 148 square miles and a population of 24 million. Thailand is situated in southwestern Asia with Burma on the northwest and west, Laos on the north, Cambodia on the southeast, and the Gulf of Thailand, which is a part of the China Sea, on the south and east. It occupies the neck of the Malay peninsula as far as the Federation of Malaya. The country is about half rolling hills and low mountains and half the great alluvial plain formed by the Chao Pharya river.

Agriculture occupies 91 percent of the population, supplies more than 80 percent of the total national income and 85 percent of the total export, of which rice accounts for half. There are large teak wood forests, and teak wood is a large export item to all the world markets. The chief crop and food for the people is rice, with other products--rubber, teak, coconuts, tobacco, pepper and cotton--produced in some quantity. Minerals are tungsten, tin, iron, manganese, and mercury.

The Government

Thailand has been a constitutional monarchy since the bloodless revolution of 1932 when the then King Prajadhipok signed a new constitution providing for a limited monarchy. The present constitution was

adopted in 1952 providing for a unicameral national assembly with 263 members, partly elected and partly appointed. The appointed members are to be gradually replaced by elected members. The country has gone through several minor revolutions in recent years and is presently headed by General Kitkhachon, a national socialist named to the post in December 1957.

Education and Religion

Education is compulsory between the ages of 8 and 15. Thailand, with the possible exception of the Philippines, has the most extensive system of rural and city schools of any nation in Asia, with splendid new and modern buildings scattered all over the country, even in the remote mountain and northern districts where the country is rather dry and rugged. There are five major universities, 31 training colleges and many vocational schools, one of the largest being the Technical Training Institute developed and established under a college contract with Wayne State University, Detroit, Michigan. The principal religion is Buddhism, and the language is Thai of the Indo-Chinese monosyllabic branch.

Thailand is one of the most picturesque countries of Asia. There are literally acres of temples and shrines, and the placid Chao Phraya, meandering between the very old Bangkok and the new Westernized and industrial version across the river, is one of the thrilling and peaceful sights of the Orient. The river is the main thoroughfare for people and

goods between the two parts of Bangkok and the famed floating markets on the river are known wherever tourist literature is printed.

THE U. S. PROGRAMS IN THAILAND

Thailand is an area where a so-called impact technical assistance program has been going on since 1951.

The program really began in Thailand in early 1950 when a group came out to study the possibility of some pilot technical assistance projects. At that time, the Thailand government was not too well acquainted with what might be expected of them or what they might expect from an economic and technical assistance program from the United States. At the beginning of this early pilot effort, Thailand's main concern was the improvement of her rice production methods and seed multiplication, a better concept of the use of fertilizers, the improvement of her very inadequate agricultural research facilities, and the strengthening of her small agricultural college. To that end, late in 1950, the U. S. Department of Agriculture sent Dr. W. C. Love and Dr. R. L. Pendelten of Cornell University to Thailand under Smith-Munt funds. Shortly thereafter, because of political developments in this area, the large Griffin mission was sent to seven of the countries in South and Southeast Asia. One of these was Thailand. This mission felt that a greater impact and a more aggressive type of assistance

program should be undertaken in at least four of the key countries in the area. Again, Thailand was selected for one of the programs. Drs. Love and Pendelten already had arrived and a technical assistance and very small aid program had been set up. This began in 1951 and has continued up to this date.

Distinct Features of Program

There are features of the Thailand situation somewhat distinct from what is found in other parts of the world. Here is a country that has no food problem. The agriculture of Thailand, while backward in some aspects, has always produced more than enough food for its people. Agricultural products are its chief source of foreign exchange.

Its people are rather vigorous and enterprising. There is not the tendency to shy away from physical, manual labor nor the status given to the professor or the government servent in this country that is characteristic of some of the countries on the Indian subcontinent and more particularly in the Middle East.

Thailand occupies a key point in the trade and exchange of the Asian world at the present time, particularly with the closing out from the West of the great China coast cities such as Shanghai. This and other factors--particularly the booming, increasing population in the chief city of Thailand, Bangkok--are probably responsible for the aid program taking a highly industrial turn in the early concept of technical assistance. The population boom is also responsible for the

heavy investment over the last few years in resource development and particularly in the development of certain basic semi-public enterprises, such as power stations, telecommunications, railroads, harbor improvements and a great series of public roads and public works generally. Thailand may well represent some guide lines and watermarks for what can be done and what probably should be done in countries that are approaching the "take-off stage" for more rapid industrial and economic development.

U. S. Expenditures Balance Out

As far as United States assistance in various categories is concerned, Thailand is also a country where the economic and technical assistance just about balances with so-called military assistance, if we count the $157,000,000 which has been put into this country under the name of defense support as truly economic aid. To quote the figures another way, straight technical assistance with its supporting funds for demonstration purposes in the 1951-1960 period has totaled $50,500,000. There is another item called defense support, mentioned above, running to $157,400,000. There is an additional item called direct support, which implies some direct grants to certain industrial and other enterprises totaling $7,900,000. Thailand is a part of the Asian triangle development in telecommunications and, as such, has enjoyed $17,200,000 from that fund. Special assistance accounts for $4,000,000, and incentive investments account for another $3,000,000. This makes a total in

the economic and technical assistance field of $233,700,000. The total military aid exclusive of defense support amounts to $290,000,000. Thus, the over-all investment of the United States in Thailand--military, economic, special grants, technical assistance, and what have you--runs close to $560,000,000.

What has that been spent for and what has it been used for? Without attempting to break it down to the last detail, one can say that direct military aid accounts for $319,000,000. The remainder goes for the normal technical assistance and economic development items. Much of this has gone into the development of basic resources--for instance, a lignite mine up in the northern area of the country which is now producing and supplying fuel for power plants and other industrial development. Our economic aid also includes investments in power plants, the rehabilitation of one of the existing power facilities, the building of a Diesel plant, and a start on the construction of a distribution system for hydroelectricity which is being developed out of a couple of large dams and is being partly financed by the International Bank, and partly by U. S. grants, and, at a later stage, by development of loan funds. Development aid includes expenditures for roads, harbors, dredging equipment, railroads and other types of industrial products.

Wide Use of Contracts

A unique feature of the industrial and resource development program in this country has been, first, the wide use of industrial contracts for

technical assistance. In other words, instead of the ICA mission here handling the project on direct hire, which often results in unfortunate delays in getting personnel on the job, the industrial projects are simply contracted out to reputable engineering, management and construction firms; they have not only supplied the technical know-how, but have trained people at the same time. The contract system has been used extensively in the various types of industrial development and resource development which the United States has sponsored in Thailand. This has not all been paid for by the United States. The Thailand government has one of the most stable currencies in the whole Far East. The Thais have substantial government revenues and they have been spending such revenues freely in their own economic development. In addition to that, there has come into the country, through various international loans, substantial sums which have contributed to all of the projects, including the development of one of the largest international airports in this part of Asia. Bangkok is the crossroads of the world when it comes to air. All of the big airlines flying the routes of the world sooner or later find a landing here in Bangkok and take off to other parts of the Orient and all around the world.

Outside Funds Listed

Here are the figures showing funds for development supplied by sources outside of Thailand: $106,800,000 from the International Bank of Reconstruction and Development; grants totalling $27 million from ICA; loans, including $22,500,000 for roads, from the Development

Loan Bank; and $16,500,000 from the Ex-Em Bank, principally for transportation development, including railroads and air. To look at it another way, here is the way the borrowed money breaks down in terms of what it has been used for: power dams and irrigation facilities on the great rivers in this country, two dams--the Chainat and the Yan He--$84,000,000; transportation, which includes railroads, ports and ships, and highways--$39,000,000; power, which includes two terminal plants and the distribution system for power--$37,500,000; communications, a telecommunication system, principally a new telephone system for the city of Bangkok--$7,000,000; and industry, which includes a new cement plant and a meat-packing plant yet to be completed--$2,000,000. The USOM mission contends that the immediate basic needs in resource, power and public type development, while maybe not completely met, are being taken care of adequately for the immediate situation. Therefore, it would appear that the efforts, particularly in the technical assistance line and particularly in the expenditures for 1961 and 1962 for industrial or resource development, will go into feasibility studies of projects to which international money, private money and some government money may be attracted on a rather wide scale in a kind of tri-party arrangement. Feasibility studies, in the next two years, seem to be the main area of interest and development as far as the American side is concerned.

While agriculture, public health and the usual major divisions of any USOM mission will be discussed in more detail in later sections of

this report, it might be well at this point to review briefly the kind of country Thailand is in regard to occupation of its people, sources of revenue, sources of foreign trade, and the general basic economic structure.

About the Country

Specifically, Thailand is largely agricultural, and, in the opinion of most people, will remain so for the next 10 or 15 years, though it is likely that the city of Bangkok, like all great cities of the world, will continue to expand in population at an accelerated rate and probably reach somewhere between six and eight million in the next 15 years. Agriculture contributes from 45 to 50 percent of the gross national product of this country. As a comparison, 45 to 50 percent of Thailand's gross national product is from agriculture while only 4 percent of the gross national product comes from agriculture in the United States. Over 85 percent of all of the annual exports of Thailand come from agriculture. Twenty-five percent of the total government revenue, that is, taxes on rice, rubber and wood exports, also comes from agriculture. The importance of agriculture is even greater than indicated by these figures, since much transportation, processing, banking, and other activities contributing to the gross national product and generating government revenues depend directly on the magnitude of the agricultural production.

Rice is by far the most important single crop and represents 70 percent of the total cultivated land area of the country. It accounts for

40 percent of the total value of the agricultural output. An estimated 91 percent of the population, or about 20 million out of 23.5 to 24 million, get their livelihood from agricultural pursuits. Thus, in spite of all of the great need for industrial development and the great need for enterprises in the processing and the manufacturing industry for a long time to come, agriculture will be the paramount concern of Thailand.

The ICA Staff and Organization

The general overhead organization of ICA-Thailand follows generally the pattern of each of the other countries which this reporter has visited during his tour. There are the usual agricultural division, public health division, public works division, media communications, education and the many, many subdivisions and parts of those. In this country, both the college contractors and the industrial contractors, or private contractors who are carrying out technical assistance functions under contract, either between ICA, the Thailand government and the contractor, or directly between the contractor and the Thailand government, are considered a part of the over-all mission staff and are so treated in every way possible. This is carried out to the extent that the personnel of the private contractor have access to and the privilege of what they call "vacation" or "recreation" flights or programs which the mission maintains for its personnel here. These flights take the form of a trip by chartered plane to some place like Hong Kong or some other country in the area, and they are part of the vacation or leave

program within the country for mission personnel. Every effort is made to have the private contractors and the college contractors feel that they are definitely a part of the mission and are not only responsible for carrying out certain mission policies, but are entitled to some of the mission privileges heretofore denied private contractors and to some extent college contract personnel.

Agricultural Projects

There have been some tremendously important and really fascinating developments by individual projects in agriculture in this country, though the entire U. S. effort in Thailand can hardly be called a program. At this point, after some nine years (the programs in Thailand actually started in 1951), there is not much to show that an institution or a modern agricultural ministry, with its attendant institutions and services, has been created here. This development may be in the offing, and again it may never come true. However, there have been some significant developments in two or three areas.

The first is rice breeding, which was inaugurated before the ECA program was launched in 1951, after the arrival of the Griffin mission. Dr. Love of Cornell had been sent out here at the request of the Thailand government by the U. S. Department of Agriculture. He began at once trying to find better rice varieties, varieties that would produce up to modern standards and still retain the flavor which the Thai people and the people in the Orient like. The situation was rather simple. Thirty years before Dr. Love's arrival, Thailand had sent its rice to the World's

Cereal Fair at Calgary, Alberta, and had received the World's first prize for the fine quality of rice. In the years that followed, there was not much effort to keep the strains bred up to where it would keep in high production. This rice breeding project, which was started by Dr. Love and carried through with the aid of some "angry young men," not only upgraded the quality and production of rice, but succeeded in starting a rice department in the Ministry of Agriculture. With the young men, Dr. Love established rice breeding centers and selection and reproduction centers where selections were reproduced and tested out throughout the country. Eight of these principal centers were set up and more than 200,000 different samples of rice were brought in and tested; finally about 14 standard strains, which seemed to offer the best results in production for Thailand agriculture, were chosen. Over 40,000 farmers used these new strains in the first few years of the project.

The new varieties, as shown by the introduction of these new seeds on actual farm plots, increased yields from 10 to 80 percent. The improvement program, spearheaded and carried forward by Dr. Love until his return to the United States in 1957, is given credit by the statisticians of the USOM mission and by the Thailand government for the over-all increase of about a 15 percent average in the per acre yield of rice in Thailand. While this is not sensational, it does show that the application of technology, even without fertilizer and other improved practices, merely in selecting good seed can materially increase the productivity of an area.

The second project in the agricultural program, which is dramatic and contains some significant results in terms of rapid spread, was the introduction of improved and hybrid corn. The project was started in 1954, with the introduction of the Guatamalian yellow hybrids and some of the Hawaiian sweet corn varieties, and corn production has grown by leaps and bounds. Thailand, a country that once produced practically no corn, is now exporting a quarter million tons per year.

Livestock and Poultry

Another project of significance has been the livestock improvement program along with a poultry improvement program. The livestock improved breeding program is centered in about eight spots scattered well over the country, and cross breeds of various types of livestock have been introduced. These cross breeds and improved strains of milk, beef and work cattle, along with some improved hogs are now being distributed as foundation stock throughout many of the villages. While it is true that there are 40,000 villages in Thailand and a program of this kind will take a great many years to reach its fulfillment, one sees evidences of the improvement that is going on in meat animals in Thailand by the simple process of going to the market and observing the animals presented for sale and slaughter. The market place makes it easy, even for the inexperienced, to see that there has been and is a great upgrading of animals in some of the areas as a result of this breeding program.

True Extension Service Slow in Coming

In the one area where the United States probably considers itself the most competent to set up, demonstrate and to institutionalize, namely, agricultural extension service, Thailand still lacks a truly national extension service.

The Thailand Ministry of Agriculture setup is on the traditional European pattern with six departments, each a little island of its own, namely, a rice department, livestock department, poultry department, co-op department, credit department, field crops and soils, and so on down the line. Each has an extension department more or less of its own which is supported by fees and other funds collected from the particular area of its interest. Though a great number of Thai students have been sent to the United States for training in modern extension methods and extension concepts, extension is little more than an appendage in the agricultural ministry. Four or five national training centers for extension workers, including one that trains some 250 workers a year, have been established. The new Kasetsart Agricultural University near Bangkok has the most modern facilities for the teaching of extension, cooperative marketing and agricultural credit as well as the natural sciences. Though there is no truly national organization in extension, there are encouraging setups in the many districts of the country where extension-type work is going on. More than 100 extension training workshops and conferences have been held in the past eight or nine years. There have been 3,000 field crop

demonstrations carried out by field workers alone. Training in the U. S. or other countries is providing 51 Thai specialists and officials with extension training. Seventeen young people were sent to the United States for one year on young farmer training programs. There is a rural youth program that is decidedly exciting and extensive. These things are pointing towards perhaps a breakthrough on agricultural extension sooner or later. At this point, an extension service doesn't exist and agriculture is to some extent greatly handicapped in trying to carry forward its program in a country that is 85 percent dependent on agriculture.

Why the Extension Lag?

Thailand apparently has been and is eager to accept new ideas and is willing and eager to work hard for whatever it seems to feel worth-while or of value to the country. With natural and human resources of a quality above that found in other countries of South and Southeast Asia, there is concern for lack of progress in this area.

In the search for some of the answers to the question "WHY?," there appear to be two or three things on the American side which have contributed to this weakness. One is the slowness of the American recruiting system in getting trained and effective personnel on the job. With a table of organization approved by the mission and by ICA-Washington and requests for personnel far ahead, the present agricultural staff of ICA-Thailand is operating at about 33 1/3 percent strength. After

a distinguished mission was sent out on credit, research, extension and cooperatives and made the strongest kind of recommendation not only to the mission but to Washington on increased personnel in a specific area, the personnel has not been forthcoming. More than a year ago, for instance, a credit man was sought and promised. He is still awaited. It is now 13 months since this position was made open and approved and money committed for it. The man alerted to accept this post died while waiting for clearance from Washington.

Second is the limitation placed by the mission on the size of the agricultural staff. Probably this has been arrived at on the basis of some over-all calculation about what would be an effective program. The size of the ICA-Thailand staff is not commensurate with the need as reflected in the genuine modern approach to agriculture this country is taking from a government institution building standpoint.

There is a rapid turnover, particularly of agricultural personnel and particularly the directors of the agricultural division. This program has been in operation for almost ten years, and in that time it has had seven directors. The seventh director was in Thailand a little over three years and was ordered back to Washington in mid-summer 1960, probably forecasting another change. It is impossible even to think about continuity of a program without continuity of personnel, particularly of the head people in on the original planning.

In contrast to this situation in agriculture is the public health program, which is and has become one of the real models in public

health for the whole Far Eastern area. The director of the malaria project in the public health program went home in January 1960 after serving nine years in Thailand. He started the program and saw it through to a point where the U. S. mission, the U. S. technicians, would be phasing out in two or three more years.

It would not be fair to place all the blame for the situation in agriculture here in Thailand on the American personnel and the American side.

The first consideration is the rapid turnover of Thailand personnel, particularly ministers of agriculture. There have been eight ministers of agriculture in nine years, and there have been three different ministries within the past two years.

Second would be the revolution of 1958, when after long and patient work, there were indications that a genuine nationally-planned, nationally-sponsored agricultural education extension, research program could be gotten underway. The whole thing was stalled for months by the revolution of October 18th. The agricultural minister put in at that time was later killed.

Third, the present minister is an army man who does not appear to know much about agriculture and is trying to run the agricultural department much as a general would run an army.

Fourthly, even the director generals in agriculture have not been as stable as is often the case in some parts of South and Southeast Asia. There have been three director generals in the nine-year period. The

director general, in effect, is the connecting link between the various political ministries and in the political changes. The present minister of agriculture, as an indication of how important continuity in personnel knowledgeable in agriculture is, wears three hats--that of his army, the minister of interior and the minister of agriculture. The greatest degree of permanency, though, is in the director general and that hasn't been very much.

Fifth in this list of problems is that the agricultural ministry is always pinched for money and has not had the favored treatment, for instance, in money to operate on as has the department of education or even public health.

Last, and vastly important, the ministry of agriculture still operates on what the administration experts call "the instruction system." That is, everybody waits down below for the orders from above to move, and this means if nothing comes down from the top nothing moves. This system also discourages initiative at the lower levels; it has profoundly discouraged many of the bright young men who have gone abroad and come back here. They get disgusted and ask for transfers. They have no opportunity to suggest new programs.

Young Men With Rice Department

An exception to this condition were the "young Turks" breaking out under Dr. Love. Dr. Love was revered in this country and he got away with leading these bright young people out of low status in the

ministry and created a new rice department which operated from the ground up rather than from the top down.

The big problem, therefore, from the Thailand standpoint, as an American sees it, is how these young people--well educated, both in their own universities and abroad, and bright, alert and eager to go--may get in control or somewhere near the top in these ministries. Perhaps if they could really be given the "go" sign by the top, there would be genuine hope.

There has been most encouraging progress in the development of the Kasartsart University under a college contract with Oregon State University. The contract was terminated in the summer of 1960. Kasartsart is the heart and center of the total agricultural education system of Bangkok. A magnificent plant is under development, there are at least 58 or 59 bright young Thailand instructors in the university, and about 30 more are coming up who should have some training in the United States. The university graduated 130 students in 1959-60 and, if there is a weakness in the students, it is that too many of them are coming from and are being selected from the city of Bangkok. Most of these people are completely without an agricultural background. Though this does not totally prevent them becoming good agricultural people, it does represent a decided handicap in their becoming agricultural extension workers or good agricultural teachers.

One of the problems of the future is going to be either how to bring these people to a practical applied approach in agriculture or to

recruit people who know how to apply what they learn in these universities. The youth program is encouraging. The other activities in the agricultural field are certainly not without considerable merit. It does look like Thailand is agriculturally equipped in resources, people and advanced technical knowledge far beyond what is found in many other countries, and literally is ready for take-off in the new agriculture, where the transfer of technology and practices rather than the transfer of capital into agriculture will make a tremendous impact.

Fisheries

It would not be fair to review agriculture or the food production facilities of Thailand and not mention the fisheries department of the Ministry of Agriculture. Fish are second to rice as a food item in the Thailand diet. It is from fish that the population gets its full quota of protein and the other necessary minerals which are not found in some other countries. There has been a major project in fisheries going since 1951. This was principally phased out in 1957 and the contribution which the Americans seem to have made in this particular project was the introduction of improved fishing gear and fishing methods in taking the fish from the sea and to some extent processing them.

Thailand's fish catch from 1951 to 1955 increased by 25 percent. This was accomplished mainly by improved nets, which were introduced by the U. S. and are being purchased by fishermen on a private basis at

a rate of around $300,000 worth per year. Growing out of this increased fish catch has come an improved fish meal industry and the creation of a central wholesale market for fish meal.

Public Works Division

The public works division here in terms of manpower is relatively small, consisting mainly of a director and four or five experts in specific areas of public improvements, public resources and the building of the facilities within a city or a country which are usually financed with public funds.

There is a whole host of specific projects of this kind consisting of river development, harbor development, improvement of the railroads, the engineering and the building of a public highway system for the entire country, an airline system, a telecommunication system, and a telephone system within the city.

The distinctive feature of the operations of this division in Thailand, which makes it differ from practically all other missions up to this point, is the high degree of contract services which are utilized in the carrying out of the public works program. Generally speaking here, the division operates and supervises about three or four types of contracts; one is called the project survey contract, which is simply a consulting engineering firm coming in to determine what the feasibility and the engineering problems are for a given development. Then there is the construction and engineering contract--the contract which actually

builds the project on a fixed fee or other basis. There is also the contract for engineering--a highway or a river development or a railroad--with the contract being carried on by someone else. Finally, there is the advisory type of contract which also has to do with advising the Thai government on construction work and types of things it is doing as a government. The road contracts for the development of a road system are of this kind. There are a few very small engineering contracts which involve actual construction by the engineering contractor. The contracts are more and more being carried out by Thai contracting firms with an over-all advisory engineering firm to keep the Thai government fairly informed in connection with the plan and to protect U. S. interests so far as the American money and American resources being placed into a particular project. This seems to be an excellent arrangement, and the whole public works program has been one of the really significant developments in Thailand. There are several reasons for its high degree of success.

First, Thailand is probably in a position to finance on its own, or to help finance to a very high degree, many of the projects, but lacks the actual practical engineering talent to carry them out. The Thailanders are not too proud to want to learn. Most contracts involving any kind of construction or any kind of engineering provide for the training of Thai personnel in the conduct of whatever contract is in question.

Under this general type of development program and through

contract services, there has been developed in the past seven years a complete rehabilitation of the metropolitan energy commission in Bangkok. A gigantic power dam is being built in the north, and a DLF loan of $20,000,000 has been provided to set up a distribution system with the construction of an intermediate steam plant in the general over-all public utility field. There has been complete engineering, rehabilitation and building of a great international airport; this has also included the training of airplane control personnel, airline administrators, and the whole series of accessories that make possible a modern airline transportation system. The same can be said for railroads, ports, harbors and the development of the natural resources. A lignite mine has been opened up and put into production. This lignite is supplying fuel for steam plants and provides electricity for some of the industries and other enterprises in and around Bangkok. Contracts are usually negotiated, or at least agreement is readied on what the project is, what is going to be done, what the responsibilities of all the parties in the field are between USOM, the contractor and the Thai government. Later the contracts are sent to Washington and the actual contract is negotiated between the Thai and U. S. governments and the contractor specifying the amount of U. S. money that will be put into the contract services. There is a high degree of effectiveness in this type of a contract arrangement. There is the usual follow-through by the USOM engineers to see that the construction is within the framework of the specifications and in line with the agreement. The USOM here, as well as the Thailand

government, feels that this is an easy and rapid way to provide contract services without the long and tedious process of trying to use direct hire personnel. Usually, in a matter of weeks after a contract has been negotiated and signed, the contractor has been on the ground and personnel is there to undertake the work.

The USOM director here feels that it would be an almost impossible task and would take almost unlimited time to recruit on a direct hire system the technicians and the type of people that are needed in such a business, even if it were desirable that they be direct hire type. This system is satisfactory to the Thai government. What is being accomplished by the mission in making contract personnel feel a genuine part of the total ICA effort in Thailand might be a reasonable pattern for other countries to consider when and if the funds begin to flow in a relatively heavy volume to these public resource-public utility-public facility-type of technical assistance contracts.

Only one of the engineering contracts seems to have gone sour. That was an advisory engineering construction contract taken by the Pan American Airways to reorganize and establish a genuine national airline for Thailand. Somewhere along the line there were some cross-ups between Pan American and the Thailand government which caused this contract, while not cancelled, to more or less terminate itself. Pan American had put great effort in here--great numbers of technicians, great numbers of instructors--and was on the way to building what looked like a new and modern airline and, behind it, a new and modern airport

and control system. Most of these things are here. With the closing out of the Pan American contract, the airline operations were taken over by the Scandinavian Airlines System, and Thailand now has an excellent airline, as does most every other underdeveloped country in this area.

There are nine university contracts and fourteen industrial contracts. The mission here has a contract operations officer whose duty it is to establish proper working relationships and liaison between the mission and the various contractors. It is not his job to get into the technical aspects of the contract; he sees that the people who are carrying out the contract have the full backing and whatever facilities and help USOM can give them to forward the over-all objectives. This does not hold for the university contracts, where each technical division of the mission supervises the contract. The contract system seems to be working exceedingly well except in the case of the university contracts, where there is some friction between the USOM personnel and two or three of the university group.

As far as the industrial contracts are concerned, the system used in the Thailand mission appears to work out better than any of the arrangements observed in other countries.

Public Education

The education division here is distinctive for a number of reasons; one, it is a part of a regional education setup dealing primarily with language instruction. The division rests heavily on university contracts

for specific higher education development. They also strongly stress educational materials in connection with the literacy and English teaching as a means of forwarding education.

The general ICA-Thailand program in education has developed and installed a new curricula for elementary, secondary, and teacher-training schools. Four secondary and 44 elementary schools have been included in the program as demonstrators of the new curricula. A system of supervision has been installed in the ministry of education to assist in improving and upgrading the provincial schools. A teacher training program has been installed at the College of Education and more than 600 students have been awarded the Bachelor of Education degree since the project started several years ago. Some 30 teacher-training colleges have been improved in equipment and materials; the Bangkok Technical Institute has been developed and more than 5000 students are enrolled in courses covering 15 technical fields. Improved technical training has been made possible for some 3600 other students through the upgrading of the College of Engineering of Chulalongkorn University.

Nine U. S. universities have contracts for development of specific phases of the educational system, ranging all the way from Oregon State with Kall-tsart Agricultural University through Wayne State, which developed the Technical Institute, to the University of Michigan, which has established the area language programs for Thailand, Laos, Cambodia, and South Vietnam.

Participant Training

Like most missions, heavy emphasis is placed upon participant training in all fields. Thailand is probably doing more in the so-called third country category than any other country in the Asian area. Some 1902 participants have come to the United States for study on everything from atomic energy to social welfare and housing. Education has been represented by the largest number; health and sanitation and agriculture rank next in order. Some 347 Thais have been trained in third countries with agriculture, totaling 160 persons, at the head of the list. In Taiwan during our visit, there were some 25 Thais there studying various aspects of agricultural education and cooperatives.

By the same token, Thailand is a very large receiver of participants from other countries in the area. Through a contract set up in 1954, 17 participants from Indonesia and 2 from Korea were brought to Thailand for training. Since that time, 700 such participants from twelve of the countries in Asia have been trained in Thailand institutions.

This review is a very sketchy review of some of the distinctive features of the Thailand-U. S. cooperation in economic development and technical assistance.