Role of the United States Agricultural Teacher Education Profession in International Agriculture and Rural Development.

Ismail Bin yahya

Louisiana State University and Agricultural & Mechanical College

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ROLE OF THE UNITED STATES AGRICULTURAL TEACHER EDUCATION PROFESSION IN INTERNATIONAL AGRICULTURE AND RURAL DEVELOPMENT

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy in The Department of Vocational Agricultural Education

by

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B.S., Clemson University, Clemson, 1980
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August 1985
To

Islam, the Source of Eternal Peace for Humankind
Muhammad, (Sallala hu Alaihi Wasalam), the
Examplar of Humankind
Hazrat Ghulam Ahmad, (Alaihi Wasalam), the
Revivor of the Essence of Islam and Nabi Muhammad
Madam Meimuna Yaqub, my Mother, who taught me to care
Mualim Yahya bin Isshaq Babile Mori, my Father, who
continually supplicates for me.
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ABSTRACT

Purpose

The primary goal of this study was to answer the question: What has been the contribution of the United States agricultural teacher education profession to the international development process? The study, therefore, was a synthesis of past involvement of agricultural teacher educators in international agriculture and rural improvement activities since 1950.

Population

The population of this study consisted of 117 agricultural teacher educators in the United States with at least .51 FTE responsibilities in teacher education programs and experience in international development activities abroad.

Objectives

Eight specific objectives of the study were the identification of (1) primary goals of international projects, (2) exact activities of the educators, (3) other experts who co-worked with them, (4) their specific accomplishments, (5) major problems they encountered, and (6) future role of their profession in international development, and the solicitation of (7) recommendations for solving problems of agriculture in developing countries, and (8) advice for successful assignments abroad.
Methods

A census survey was conducted. Data were collected using a mailed questionnaire. Respondents recorded their responses on cassette tapes. Responses were transcribed, analyzed, and synthesized by commonality of each of the objectives of the study.

Findings

More than 90 agricultural teacher educators have been involved in over 230 separate foreign assignments since 1952. They served in 78 countries world-wide. Their activities were funded by different governmental, international, and private agencies.

Project goals were varied and ranged from institution-building to trade promotion. Consequently, activities of these educators differed greatly, for example, institutions were built, programs established, and agriculture teachers trained.

More than 120 different experts representing at least seven occupational clusters co-worked with agricultural teacher educators who were on foreign assignments. These educators encountered several major problems on their assignments. These included bureaucratic red-tape, goals-need conflicts, and culture shock.

Teacher educators reported several tangible and personal accomplishments. They also suggested a variety of roles for their profession in future international development activities. Educators
also made recommendations to host governments and aid donors for solving problems in international agriculture. Finally, educators provided advice on how to succeed as an international agricultural educator.
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Definition of Terms

In order to facilitate reading of this document, the following glossary of terms is provided:

AATEA - refers to the American Association of Teacher Educators in Agriculture, a professional group committed primarily to the preparation of teachers of vocational agriculture.

Agricultural Education - 1. in the broader sense refers to any and all training in the different fields of agriculture and its related disciplines (Anderson, 1984); it is synonymous with education in agriculture.

2. in a much narrower sense as used in the United States (Anderson, 1984; Thuemmel, 1983); it refers to the preparation of teachers of agriculture and teacher educators in agriculture.

AIAE - refers to the Association of International Agricultural Education, a group of professionals from diverse fields of expertise primarily committed to strengthening agricultural and extension education programs and institutions in developing countries.

Agricultural teacher education - refers to that component of agricultural education (see broader definition above) with the primary responsibility of training teachers of vocational agriculture; it is synonymous with teacher education in agriculture.

AVA - refers to the American Vocational Association, a professional group of educators, teachers, and administrators committed to the advancement of vocational education.

BIFAD - refers to Board for International Food and Agricultural Development established by the President under the provision in Section 298 of Title XII and charged with the responsibility "to assist in the administration of the programs authorized by this Title ..."

Development - 1. defined by Weintraub (1971-72; p. 8), "as a change phenomenon that constitutes institutional unfolding, restructuring and consolidation; and specifically (a) diversification and broadening of the bases of activities; (b) specialization and rationalization and (c) institutionalization and coordination of behavior."
2. defined by Todaro (1983, p.62) "as a multidimensional process involving major changes in social structures, popular attitudes and national institutions as well as the acceleration of economic growth, the reduction of inequality and the eradication of absolute poverty"

Growth - a change phenomenon defined by Weintraub (1971-72, p. 7), as "the quantitative process of accumulation of 'wealth' of different kinds."

ILO - International Labour Organization, a specialized agency of the United Nations based in Geneva responsible for working on the problems of world manpower supply, its training, utilization, domestic and international distribution, etc.... (Todaro, 1977, p. 425).

Modernization - a change phenomenon defined by Weintraub (1971-72, p.10) as "a process of increasing societal (and individual) openness and flexibility; of purposive exposure to and ability to solve problems of growing complexity; of 'absorbing' difficulties and reverses; and of creation of novel opportunities. Its essential sense, in other words, is a legitimation of or an institutionalized potential for a continuous rearrangement of existing commitment, and for an untrammeled flow, exchange, and mobilization of all social 'goods'."

Teacher educator in agriculture - refers to the professionally trained educator whose primary responsibility is preparation of teachers of vocational agriculture; it is synonymous with agricultural teacher educator.

Third World - refers to the 118 or so middle- and low-income countries of Africa, Asia, Middle East, Latin America, and the Caribbean which are characterized by low levels of living, high rates of population growth, low levels of per capita income and general economic and technological dependence on First and Second World economies. See usage by Meier (1976), Muni (1979), Rodinson (1978) Todaro (1977), ul Haq (1976), and Worsley (1979). It is used synonymously with developing countries.

Transformation - a change phenomenon defined by Weintraub (1971-72, p.9) as "a process in which changes transcend and reshape existing values and institutional terms of reference, and which forms new patterns of behavior."

UNESCO - refers to United Nations Educational, Scientific and Cultural Organization whose major function is to promote international understanding by spreading ideas or knowledge, encouraging multi-racial coexistence, sponsoring educational, cultural and scientific exchanges, etc... (Todaro, 1977, p.439).
USAID – United States Agency for International Development: a bilateral assistance agency of the United States government whose primary objective is to assist Third World countries in their development efforts as part of United States foreign policy. (Todaro, 1977, p. 440). It was established in 1961 by Congressional Act, Public Law 87-195.
CHAPTER I

INTRODUCTION

Background

Improving agriculture in the developing nations has become a fundamental issue and great concern within the international community. Problems relating to the improvement process seem to receive ever-increasing attention from agencies and organizations outside of the principal foci, the Third World nations themselves. The more developed nations, particularly the United States of America, have become deeply committed to the transfer of relevant development technology to the Third World. In the United States of America this concern has been translated into an interest which seems to culminate in a deep commitment to and involvement in the international development process since 1950.

To demonstrate its intentions for progress in the developing world, the Congress of the United States of America passed the Act of International Development in 1950. Title IV of this act reads in part:

The peoples of the United States and other nations have a common interest in freedom and in the economic and social progress of all peoples. Such progress can further be the secured growth of democratic ways of life, the expansion of mutually beneficial commerce, the development of international understanding and good will, and the maintenance of world peace. The efforts of the peoples living in economically underdeveloped areas of the world to realize their full capabilities and develop the resources of the lands in which they live can be furthered through the cooperative endeavor of all nations to exchange technical knowledge and skills (researcher's emphasis) and to encourage the flow of investment capital (US Congress, 1952, p. 204).
Recognizing the need for progress in the developing world and declaring that exchange of technical knowledge and skills was also paramount, led the Congress to authorize the government of the United States of America and its agencies to render services to international agencies upon request. In this regard, "bilateral technical cooperation programs" were to be planned, conducted, and administered so as to achieve seven objectives (US Congress, 1952, p. 205). Three of these objectives were:

1. To coordinate and direct existing and new technical cooperation programs
2. To assist other interested governments in the formulation of programs for the balanced and integrated development of economic resources and productive capacities of economically underdeveloped areas
3. To provide for the public information made available by the joint commissions referred to in Section 410 (of this Title IV) and from other resources (researcher's emphasis) regarding resources, opportunities for private investment capital, and the need for technical knowledge and skill in each participating country.

Provisions of the act were perceived to be geared toward creating the greatest possible positive change in the beneficiary nations. To further the goals of this legislation, the Congress passed the Foreign Assistance Act of 1961 which created the United States Agency for International Development (USAID), (US Congress, 1961). Two of the principal foci of this 1961 legislation were: (1) promotion of educational and human resources development and (2) creation and development of international technology in the developing countries. By the end of the 1960s, however, it was already clear to the Congress of the United States of America that the foreign assistance was not producing the desired results of reducing the poverty indicators of
these nations. Rather, there was an ever-widening gap between the "haves" and the "have-nots" as Matteson (1978) pointed out.

Consequently, the focus of foreign assistance was shifted from the broad spectrum of helping the poor majorities of the developing world to helping the "poorest of the poor" (Colter, 1979). Provisions for such aid were made in Title XII of the International Development and Food Assistance Act. This title was referred to as "Famine Prevention and Freedom from Hunger" (US Congress, 1975). In part, this legislation read:

In order to prevent famine and establish freedom from hunger, the United States should strengthen the capacities of the United States land-grant and other eligible universities in program-related agriculture institutional development and research. . . should improve their participation in the United States Government's international efforts to apply more effective agricultural sciences to the goal of increasing world food production. . . longer term support to the application of science to solving food and nutrition problems of the developing countries (89 Stat 861). The United States should effectively involve the land-grant and other eligible universities more extensively in each component; provide mechanisms for the universities to participate and advise in the planning, development, implementation, and administration of each component; assist such universities in cooperative joint efforts with agricultural institutions in developing countries, and regional and international agricultural research centers (89 Stat 863).

The foregoing provisions of the Title XII programs that have been implemented since 1975 had one principal implication for the land-grant and other "eligible" universities of the United States of America. Thuemmel, McCreight, and Welton (1983) and Erlich (1980) interpreted this legislation to mean that these institutions were made equal partners with the USAID in foreign agricultural and rural improvement efforts. In the opinion of Turk, Synder, and Scott (1979) this challenge of equal partnership has been accepted by these universities
as they continue to extend their services beyond provincial boundaries and to foreign locations as well.

However, expertise from the cooperating institutions to most developing countries has remained largely technical. Its sophistication has been deplored by Hannah (1966) who believes:

Emerging developing nations do not need the professional level and research development that is presently the program of most of our land-grant colleges. What is really needed is the initial philosophy of these colleges when they were established by the Morrill Act. What is needed is a system of education that provides basic know-how about production (p. 12).

Matteson (1978, p. 195) observed that the provision of equal partnership between agricultural and other eligible institutions and the USAID "placed universities in a somewhat strange, if not awkward position." He argued that historically, these institutions have not had extended involvement in the development and conduct of programs for the poor majorities of the Third World. But he was convinced "the greatest reserve of personnel which have experience working with small farmers, and in many cases poor farmers, rests within the ranks of the agricultural and extension education profession."

The preceding paragraphs raise issues of concern. Principal among these is that the agricultural expertise rendered developing countries has been partitioned into "technical" and "non-technical." Technical expertise comprises know-how from the bio-agricultural disciplines such as agronomy, animal breeding, forestry, plant pathology, agricultural engineering, and entomology. The non-technical component includes agricultural education, rural sociology, anthropology, and sometimes agricultural extension. This apparent dichotomy appears to be not only superficial but may also be self-defeating in the context of
agricultural and rural development. Massey (1983, p. 68) stated that to achieve development goals especially in developing countries, policy-makers and program planners "must undertake (1) decentralized planning, activity implementing, monitoring/evaluation, (2) integrated multidisciplinary approach, and (3) strengthening the L.D.C. institutions to integrate in some appropriate manner teaching, research and extension programs."

The multi-disciplinary approach to agricultural and rural development has found very strong support from Axinn (1982). She stated:

"this approach to real world problems involves the ability to synthesize relevant disciplines, stretching all of us across disciplinary boundaries and opening our individual perspectives to enrichment from related fields. . . . An insect control problem in apples uses teams of horticulturalists, chemists, entomologists, and agricultural engineers. The challenge ahead is to broaden the interdisciplinary approach to include historians, nutritionists, medical geographers and anthropologists — or whatever disciplines are appropriate to the problem." (p. 28).

Historically, the search for change, as reconceptualized and defined by Weintraub (1971-72) in the context of growth, development, transformation, and modernization particularly in developing countries, has yielded only partial results despite the massive assistance from the more advanced nations. Several factors have been identified as being responsible for these poor results; among them was the premise that high, complex technical expertise in agriculture should provide the much needed solutions for hunger, malnutrition, poverty, and inequality. It appeared that development experts failed to recognize that advanced technological packaging and packages alone would not, all by themselves, bring about desired changes in the beneficiary cultures (Axinn, 1982; Brokensha et al., 1980; Cancian, 1975; Carty & Smith, 1981; Leger, 1984;
Massey, 1983; Ohlin, 1979; Wharton, 1976; Wignaraja, 1984). Also, agricultural development experts seemed to have falsely assumed that their artificially contrived environments would greatly assist in packaging new technologies for the rural farmer. Rejection of these so-called new technical packages by the rural farmer in particular is a clear testimony to the charges by most social scientists involved in agricultural development that these technological packages come without a "human face" (Brokensha et al., 1980; Cancian, 1975; Castillo, 1976; Schumacher, 1973). Therefore, it appears that a reasonably sustained balance between the "technical" and "non-technical" expertise is clearly the only effective approach to the agricultural technology transfer process as strongly recommended by Massey (1983) and suggested by Axinn (1982).

The preceding paragraphs appear to strongly indicate that the old approaches of increasing the supply of mainly technical expertise to create desired changes in agriculture and rural life need to be supplanted by those that are more integrative. Such new approaches take into account the role of each discipline no matter how peripheral it might be to a specific development problem. Fortunately, the training of members of the agricultural teacher education profession lend it to be classified as peripheral to most, if not all, problems of agricultural and rural development. Members of this profession are competent and skilled in the design, development, implementation, and evaluation of what Woods (1984, p. 16) referred to as "content of appropriate education" not only for adult farmers but also for teachers of farmers as well. Agricultural teacher educators by their training and preparation are among the very few professional agriculturalists who
possess what bin Yahya and Moore (1984, p. 1) referred to as "people technology." In the opinion of Thuemmel (1983) they are the true agricultural educators. He, therefore, maintained that their role in international development should not be usurped or undermined by those he referred to as "pseudo agricultural educators" (p. 8).

Universities in the United States need to recognize the very basic needs of the Third World. One of these needs related to lack of competent teachers of agriculture in developing countries. The agricultural teacher education profession has a large reservoir of personnel very capable of training competent teachers of agriculture. Also its members possess the necessary skills to work directly with poor farmers in developing countries (Matteson, 1978). Consequently, the need to extend the principle of equal partnership between the universities and the USAID to the internal systems of each university is evident. Expertise of all faculty members within the College of Agriculture need to be identified for possible integration into the functioning structure of each institution's international programs. This need was implied in Section 418 of Title IV of Public Law 535 (US Congress, 1952). In part, this legislation read:

The term 'technical cooperation programs' means programs for the international exchange of technical knowledge and skills designed to contribute to the balanced and integrated development of the economic resources and productive capacities of economically underdeveloped areas. Such activities may include, but need not be limited to economic, engineering, medical, educational (researcher's emphasis), agricultural, fishery, mineral, and fiscal surveys, . . . , that serve the purpose of economic resources and productive capacities of underdeveloped areas. (p. 209)

Since 1950 agricultural teacher educators have been involved in international agricultural development activities (bin Yahya, Richardson, and Moore, 1983; Thuemmel, McCreight, and Welton, 1983;
Meaders, 1982). These same researchers have also reported on the ever-growing interest of members of the agricultural teacher education profession in international activities. As a professional group, they are in strong accord that: (1) "practically all international agricultural programs undertaken by United States institutions must involve their agricultural and/or extension departments" and (2) "international agricultural education activities in United States institutions must be totally inter-departmental involving faculty members from all the departments of the college or school of agriculture" (Bin Yahya, Richardson, and Moore, 1983). These two positions seem to point to the need for a clearer definition of the role of the agricultural teacher educator in the international development process. Evidently, once defined, this role has to be integrated into the total structure and systems of the cooperating relationships in international development: the land-grant and other "eligible" universities, the USAID, other public and private agencies or organizations and governments of and educational institutions in developing nations.

In order to be able to accurately define the role of the agricultural teacher educator in the context of international development, basic background information and data need to be gathered. Principally, information on the past activities of the agricultural teacher education profession is an important requisite for the role-defining efforts. But of even greater importance, it appears, is the need for such information to be shared among all the professional groups involved in international development. It is especially essential and vital for professionals in those disciplines apparently relegated to the periphery of the development process to educate their counterparts in
the "core disciplines" on the past roles of their respective professions in the development process.

Presently, there is a definite lack of adequate and consolidated information on the role of the United States agricultural teacher education profession in international development. As a result, there is evidence of the lack of awareness even among some members of the profession concerning past activities of their colleagues in international development. Members of other agriculture-related professions are even less aware of the significant role the agricultural teacher education profession could assume in national development in other nations. Sharing information on past activities and contributions has, among many benefits, one primary advantage: to most probably raise the level of awareness both intra-professionally and inter-professionally (Meaders, 1982) among all professional groups committed to development and change world-wide. Besides the possibility of raising the level of awareness within and among professions, such information sharing would help governments of and institutions in developing countries to recognize the vital role of professions such as agricultural teacher education in their national development efforts.

To summarize, there is an obvious need for a document that would describe past role and activities of the agricultural teacher educator in international development. Such a document would serve to close the apparent gap of unawareness among members of the international community pertaining to the role of the agricultural teacher education profession in Third World development. Furthermore, it might help in the identification of areas of mutual interest leading, in all probability, to greater inter-professional and intra-professional cooperation in the
efforts to solve the problems of developing nations. Therefore, the fundamental question appears to be whether there is substantive evidence to document the past role and contribution of the United States agricultural teacher education profession in international development.

Statement of the Problem

Since the late 1950s members of the United States agricultural teacher education profession have been involved in international development activities. There are project reports, journal and magazine articles, and monographs which serve as evidence of the participation of agricultural teacher educators and their contribution to the national development in other nations. However, research on the role of the profession in international agricultural and rural improvement is only a very recent phenomenon. As of December 1983, there were only three empirical studies by Thuemmel et al., (1981), Meaders (1982), and bin Yahya et al., (1983) which addressed the subject.

Unfortunately, the available data and information appear to have two major drawbacks. First, they are largely incomplete and as a result require more comprehensive documentation. Second, and more important, they are quite fragmentary. Hence, there is need for consolidation of available information pertaining to the role of the agricultural teacher educator in international agricultural and rural development.

Purpose of the Study

The primary goal of this study was to answer the following question: What has been the contribution of the United States agricultural teacher educator to the international development process? Consequently, this investigation was aimed at, first, analyzing then
synthesizing past involvement of members of the agricultural teacher education profession in international development as a result of Title IV and Title XII programs of 1950 and 1975 respectively. The secondary goal of the study was to identify basic guidelines for the future role of the profession in Third World development.

Objectives of the Study

Eight specific objectives formulated to help the researcher achieve the stated purpose of the study were:

1. To identify the primary goals of the assignments and/or projects in which agricultural teacher educators were involved at foreign locations.

2. To identify the specific responsibilities and activities agricultural teacher educators were involved in while on assignments abroad.

3. To identify other professionals and experts with whom agricultural teacher educators worked while on assignments abroad.

4. To identify the specific accomplishments of agricultural teacher educators resulting from their activities in agricultural and rural development projects abroad.

5. To identify the major problems, both location-specific and external, that have constrained the effectiveness of agricultural teacher educators' involvement in agricultural and rural development projects abroad.

6. To identify the future role of the agricultural teacher education profession in international development.
7. To solicit from agricultural teacher educators with experience in development activities abroad general recommendations for solving existing problems of agriculture and rural improvement in developing countries.

8. To solicit specific advice from agricultural teacher educators with experience in development activities abroad concerning professional and personal strategies for effective performance of the role of the agricultural teacher educator in the international development process.

Significance of the Study

There seems to be general agreement among many agricultural professionals in the United States of America that there is a growing spirit of internationalism in the Colleges of Agriculture. In the past, agriculturalists in different specialties have been involved in improvement projects at foreign locations. Too, Colleges of Agriculture have provided training for international students some of whom return to their native countries to assume roles in national development (Harper, 1982; Kimmel, 1982; Thuemmel et al., 1983). Separately and complementarily, both forms of international assistance and cooperation aim at improving agriculture and rural well-being of the Third World.

This growing spirit of internationalism is believed to have serious implications for the United States agricultural teacher education profession (Bristol, 1975; Key, 1978; Matteson, 1978). It seems appropriate, therefore, that empirical studies be conducted to generate requisite data and information for compiling a more comprehensive
document on the role and activities of the agricultural teacher educator in international development.

In addition to providing completeness to and consolidation of knowledge on the involvement of agricultural teacher educators in international development, findings of this study would serve as an:

1. Assessment of the major clusters of the specific activities agricultural teacher educators were involved in while on international assignments abroad.

2. Assessment of the aggregate achievement of agricultural teacher educators involved in international development projects abroad.

3. Identification of the major problems that have hindered the attainment of objectives of specific programs and projects of agricultural and rural development in the global context.

4. Identification of the major potential problems that could constrain performance of agricultural teacher educators involved in future international assignments abroad.

5. Identification and assessment of the future role of the agricultural teacher education profession in the national development process in developing countries.

6. Identification of experts and professionals from other disciplines with whom agricultural teacher educators worked while on assignments abroad.

7. Identification of the commonalities among the primary goals of international development programs and projects in which agricultural teacher educators have been involved at foreign locations.
Findings of this study would also serve three other major purposes. First, they would, if effectively disseminated, facilitate intra-profession, inter-profession, intra-institution, and inter-institution communication and mutual cooperation aimed at achieving the goals of development in agriculture and rural societies on a global scale. Second, and relatedly, the findings would help reduce the wastage of scarce institutional and human resources within the agricultural teacher education profession. Third, and finally, the information would serve as a database from which to design, develop, and create a comprehensive directory of the involvement of agricultural teacher educators in the international development process.

Limitations of the Study

The survey instrument used in this study had 19 open-ended questions dealing basically with qualitative data. Two problems were related to the kind of data generated. First, there is the problem of data validity as pointed out by Kennedy (1984). She identified four threats to what she referred to as "natural validity" (p. 367) of qualitative data. Three of the four relate to this study. They are: (1) obtrusiveness of the inquiry itself, (2) reliance on verbal testimony of respondents, and (3) the inherent ambiguity of the language used in the inquiry and responses. The fourth threat she identified was that "much of the testimony gathered is essentially hearsay evidence." However, this was not considered as a threat to this particular study. It appears, therefore, that the validity of responses of the respondents is subject to question. Thus, Kennedy (1984, p. 367) concluded: "the quality of the investigator's data depends on the quality of the
participants' testimony; testimony that is shaped not only by their concern for social desirability, but also by things such as their insightfulness, their articulateness, and their openness. Also, the data were not amendable to standard quantitative analytical procedures, therefore, a second major limitation of the study arose. It relates to data analysis. As Miles and Huberman (1984, p. 20) stated: "there are few agreed-on cannons for analysis of qualitative data... therefore, the truth claims underlying such work are uncertain." Therefore, findings of and conclusions from the study should be used with caution.

A third major issue of concern with the study related to the frame of the population (Frankel & Dutka, 1983; Cook & Campbell, 1980; Raj, 1973; Meyer, 1971). The researcher used five main sources to help secure a complete frame for the population. These sources were: three past studies by bin Yahya et al. (1983), Meaders (1982), and Thuemmel et al. (1981); the 1983 and 1984 issues of the American Association of Teacher Educators in Agriculture Newsletter; and the Agricultural Teacher Educators Directory (Rogers, 1983-84). With these resources, the researcher designed and developed a one-paged survey instrument used to identify as completely as possible the population as defined. Unfortunately, some agricultural teacher educators were mistakenly indicated by the department or section heads to have been on assignments abroad. It is also possible that some teacher educators who had been on foreign assignments were not identified.

Fourthly, there was the major limitation of nonresponse. Two teacher educators flatly refused to respond to the survey instrument, which they returned to the researcher with the accompanying cassette tapes unrecorded. One of them indicated he had no time and the other
gave no reason for his unwillingness to provide the information as requested. A third teacher educator refused to provide any information when he was contacted by phone.

Finally, the primary purpose of the study was to consolidate as complete as possible information and data on the past involvement of the profession in international development. This required testimonies from all members of the population dating back to 1952. Unfortunately, the frame of the population was incomplete for four main reasons. First, all who retired prior to mid-1984 were excluded from the study. They were not readily accessible. Secondly, two teacher educators were abroad on assignment hence were not contacted. Thirdly, and finally, three educators who were qualified as members of the population flatly refused to participate in the study. Therefore, the information on activities of the United States agricultural teacher education profession in international development still remains incomplete.

Delimitation of the Study

The idea of international economic, rural, or agricultural development has become popular. Development appears to be a sought-after process or concept by all peoples and cultures. Nations of the world all seem to embark on some path towards sustainable development of their economy, agriculture, and technological base. In addition to these key aspects, some countries have come to recognize the need to improve the well-being of their predominantly rural populations.

Based on the level of industrialization, type of economic planning, level of per capita income, and amount of international political force that can be exerted, the globe has been categorized into different
worlds. In *Introducing Sociology* (London: Penguin), Worsley (1977) classified the world into four worlds using a matrix of two parameters: ideological models (i.e. communist versus capitalist) and technical-economic (developed versus underdeveloped) models. According to his typology, therefore, the four worlds are: (1) developed communist, (2) developed capitalist, (3) underdeveloped communist, and (4) underdeveloped capitalist. Respectively, representative countries are the Union of Soviet Socialist Republic, the United States of America, China, and Ivory Coast.

In its *World Development Report* (1978), the World Bank adopted a quantitative approach to grouping national economies of the world based on the so-called "world development indicators" such as levels of per capita gross income and industrialization, and type of economic planning. Wolf-Phillips (1979) modified this Bank's typology but still produced "Four Worlds." They are as follows: (1) First World consisting of 25 capitalist industrialized countries, (2) Second World made up of 13 communist, centrally planned economies, (3) Third World, comprising 77 middle income developing nations, and (4) the Fourth World, a group of 38 low income developing countries.

There seem to be no agreement as to how many "worlds" there are in this world (Muni, 1979; Worsley, 1979; Wolf-Phillips, 1977; The Pearson Commission, 1969). It appears the two main and opposing viewpoints on the issue are that one school of thought categorizes the world into "Three Worlds" and the other into "Four Worlds." The later school seem to have differentiated the "Third World" as designated by the former into two other "worlds": "Third World" and "Fourth World" on the basis
of economic disparities rather than political and ideological differences.

The focus of this study is on the Third World comprising either only the "Third World" of the "Three Worlds" classification or the "Third and Fourth" Worlds of those who perceive "Four Worlds." This position was taken in view of Muni's (1979) argument. He stated:

Notwithstanding the small difficulty of application involved in some specific cases, the Third World, viewed in an overall developmental perspective appears to be a sound concept and a flexible resilient category. Accordingly, this also underlies the fragile, untenable and misleading, if not mischievous, nature of the attempts to question the validity of the Third World concept and evolve that of a "Fourth World" in addition to the Third World (p. 128).

There is also another problem with the concept of Third World. Presently, there still does not exist a sound, universally acceptable definition of the concept. Nonetheless, for the purpose of this study, Todaro's (1977) definition will be used. He defines the Third World as:

the present 118 or so developing countries of Asia, Africa, the Middle East, and Latin America---mainly characterized by low levels of living, high rates of population growth, low per capita income, and general economic and technological dependence on the First and Second World economies (p. 438).

Conceptually, the term 'Third World' seems to evoke inferiority and condescension. But Muni (1979) seemed to have provided a better understanding of the concept. He provided an explication of the concept in the following terms:

The expression 'Third World' neither denotes an inferior value structure, nor a descending numerical order. It represents a set of specific characteristics that are unique in more than one way to the countries of Asia, Africa, and Latin America. It represents the broadly similar, although not exactly identical nature of these countries experiences in the process of development; the processes that were arrested in the past are discouraging and uncertain at present, and are likely to be unprecedented in the future (p. 128).
CHAPTER II

REVIEW OF LITERATURE

This chapter contains three major sections. The first section discusses some of the dominant theories of developmental change. Also briefly discussed are concepts related to development and these are growth, transformation, modernization, rural well-being, and relevant technology. A brief outline of United States Congressional legislation on international development is presented in the next section. The final section treats the response of the United States agricultural teacher education profession to the Congressional provisions for international technical assistance. The response of the profession is discussed in three subsections: (a) past involvement of members of the profession in development projects abroad, (b) perceptions and opinions of members of the profession as well as those of other professionals bearing on international agricultural education, and (c) related empirical studies on the role of agricultural teacher education profession in Third World development.

The Conceptual and Theoretical Bases of Development

As a meta-concept, development has been perceived vaguely or too broadly (Birou, Henry, & Schlegel, 1977) that it has remained a catchword which Ohlin (1979, p. 125) referred to as "a shorthand to describe something not previously recognized, such as an all-embracing social change for the better, not confined to mere growth of production but encompassing every kind of social improvement." In the next few
paragraphs a number of views on the meta-concept of development will be presented in support of Ohlin's (1979) viewpoint.

According to Streeten (1979) development, more specifically development economics, was virtually unknown before World War II. He, however, noted that "many of the same problems were dealt with by members of the colonial services, anthropologists, and others" (p. 21). Streeten (1979) traced the trends in interests in the development process to four main factors: (a) a new awakening to mass poverty, (b) the cold war between the First World (the West) and the Second World (the East), (c) the population explosion, and (d) the rapid rate of decolonization since the late 1940s. In the wake of each of these factors and their aggregate impact, politicians and economists began to search for solutions in the form of models, frameworks, or paradigms (Streeten, 1979).

The Rostovian doctrine of the stages of growth appeared to have dominated the development period of the 1950s and 1960s (Streeten, 1979). This doctrine is based on the simple premise that development was linear and in stages beginning with a "take off" and ending in "age of high mass consumption" (Rostow, 1960). Advocates of and adherents to the doctrine equate development with "economic growth" (Streeten, 1979; Lisk, 1977). In responding to such an orientation, national governments of the Third World, at the urging of those nations offering assistance, implemented programs aimed at increasing physical output (Lisk, 1977) through the use of capital-intensive investment strategies.

By the early 1970s the "dependencia" perspective was well established and even superceded the Rostovian doctrine (Streeten, 1979; p. 26). According to Frank (1966), one of the founding conceptualists
of this perspective, the rich are basically responsible for underdeveloping the poor. Thus, his principal argument is that the developed nations have underdeveloped the developing nations. A reason he advanced for his position was that mere coexistence of rich and poor societies makes it quite difficult or even impossible for the poor societies to choose their style of development. His position stems from the central thesis of the "center-periphery" theory developed (1959) and strongly reiterated (1984) by Prebish.

Two other development perspectives identified by Streeten (1979) are (a) interdependence and (b) international discord. Crises over world resources, of population, and over the environment have become global problems, transcending national and even regional boundaries. As a result, some development experts have called for greater solidarity and co-operation for the survival of all in contrast to the viewpoint of advocates of the "spaceship earth" theory of Hardin, (1972). Related to the theory of interdependence is the idea of international disharmony of interests. Cartels such as the Organization of Petroleum Exporting Countries (OPEC) and the Intergovernmental Council of Cooper Exporting Countries (CIPEC) are each using its bargaining power to influence distribution and consumption of world resources to their advantage (Streeten, 1979). This particular perspective is more of a confrontation between the developed and developing nations.

A fifth perspective, according to Streeten (1979) is that the Third World is no more viewed by some development experts and professionals as "a homogenous group of countries with common interests" (p. 34). Rather, the wide variety of experiences, interests, and problems among these nations is now acknowledged (Wignaraja, 1984; Huizer, 1984). This
shift in position appears to have added a new dimension to the develop-
ment phenomenon. That dimension has entrained the pessimism of the
1970s (Streeten, 1979) representing the final perspective on the history of development. These theorists and conceptualists are advocates of the grassroots perspective to development in the Third World. This approach has become known as grassroots initiatives and strategies (GRIS) and is strongly advocated by development conceptualists and theorists from the Third World itself. Wignaraja (1984) developed a model from this vantage based on the initial theoretical and intellectual frameworks laid down by groups such as the International Foundation for Development Alternatives (IFDA), the Dag Hammarskjold Foundation, and the Society for International Development, (SID).

Central to this approach, according to Fals-Borda (1984), Grant (1984), Huizer (1984), Sheth (1984), and Wignaraja (1984), is real participation of and by the masses in all phases of the development effort. In their opinion, participation is a social praexis, a dialectical process which requires "perception-action-reflection-conceptualisation" (Wignaraja, 1984, p. 11) as a continuous process. At the very core of the participatory strategy is a triad: "mobilization, conscientization, and organization" (Wignaraja, 1984, p.8) of the rural masses.

**Contextual Definitions of Development**

Development as a meta-concept and a phenomenon is perceived to defy definition and there appears to be no agreed-upon meaning to it. Carty and Smith (1981, p. 75) underscored this point when they pointed out that "Misconceptions of what development is all about begin the list of
the shortcomings of AIDS. There are as many definitions as there are economic theories." Ohlin (1977, p. 126), also pointed out the glossy nature of the phenomenon in context of how extensive its related problems really were. He stated that "The second result of this extensive concern came with the discovery that the idea of development, was, in fact, quite complex and subject to great disagreement as to its meaning." In his cautionary remarks as to the crisis-situation development professionals invariably seem to have found themselves, Pearson (1969, p. 79) stated: "Development, it cannot be stressed too often, is not a simple or a single process since its planning and strategy cover many sectors of an extended and interconnected front, social, political, economic, humanitarian."

Despite this apparent lack of consensus in both meaning and definition and also given the complexity and interconnectedness of the meta-concept of development, a number of definitions are rendered. Each definition is the result of the perspective or orientation of a particular group of development professional in reference. Four major contexts are presented as identified by Lisk (1977) and Todaro (1977). These contexts are (1) "growth-oriented", (2) "employment-oriented", (3) "poverty-oriented", and (4) "basic-needs" development. In addition to these four, Meier (1984) identified three orientations or strategies: (1) agriculture-centered (2) liberalized foreign trade and (3) investment in human capital.

Reference has already been made to growth-oriented development as espoused in the Rostovian doctrine. Rostow (1960) posited his definition of development in the context of economic growth, in terms of gross national product (GNP). His approach has always had one primary
goal: to maximize GNP by increasing the rate of physical capital formation with emphasis laid in the modern sector of the economy. Followers of the doctrine operate under the major assumption of a "trickle-down" effect according to Streten, (1979); Lisk (1977), Huizer (1984), and Wignaraja (1984). This linear theory of development whereby growth proceeds in discrete stages has been heavily criticized. Carty and Smith (1981, p. 85) for example, believed that such an approach to development is an "atavism afflicting aid donors" in that they view development as "essentially an economic and technical problem." Ohlin's (1979) criticism focused on the point that the Rostovian doctrine of linear growth in stages fails to recognize the social dimension of development.

In a similar vein, Tagumpay-Castillo (1977, p. 23) charged that "Community development is not a method of doing economic development on the cheap, and success cannot be measured by adding up the material projects completed . . . . The chief end of successful community development is not wells, roads, schools and new crops. It is stable, self-reliant communities, with an assured sense of social and political responsibility" (underscores mine). Seers (1977a) also charged that using GNP as the sole indicator of development is one of the major obstacles to development. Rather than saying "economic growth was development" (Seers, 1977a) as is the position of the "economic-growth" theorists, Seers (1977) argued that development has to be understood in terms of poverty, unemployment and inequality.

The linear growth theory has also been criticized on various points of weakness by Hirschman (1977) and Cairncross (1962) as to its undue emphasis on building physical capital and by Schultz (1962) for its
neglect of the human capital. Frank (1966) and Darling (1977) argued that the Rostavian doctrine of linear stages of development and the policies and strategies resulting therefrom have been largely responsible for the underdevelopment of the poor nations.

To summarize, it appears the "growth-oriented" approach to development as propounded by Rostow (1960) has raised a lot more questions now about development (Helleiner, 1984; Mohammed, 1984) than it has offered needed solutions. One fundamental reason for the apparent failures of the orientation appears to rest on faulty premises. Axinn (1977, p. 9) summed it up thus: "A false assumption of the development decades may be that development is a linear process."

Two other definitions of development are based on the "employment-oriented" and "anti-poverty" approaches as identified by Lisk (1977). Development is defined in the context of employment in the former approach. The approach was inaugurated in 1969 by the World Employment Program within the International Labor Organization (ILO). Greater stress is laid on labor, which becomes a substitute for capital according to the ILO (1970, 1972) and Lisk (1977). Lisk (1977) defined the approach in the context of the sum of the aims of the economic growth orientation and improved living conditions through even distribution of benefits. Seers (1977, p. 3) seemed to have rendered a partial definition of development within the context of employment for as he noted that "Another basic necessity, in the sense of something without which personality cannot develop, is a job." He was quick to point out, however, that "this does not just mean employment" but includes a set of other "accepted roles," which when not assumed leaves
the individual "chronically unemployed, dependent on another person's productive capacity, even for food" (p.3).

Lisk's (1977) typology also introduced what he referred to as "anti-poverty approach" or "poverty-oriented" strategies to promote development. Rather than define the approach he described its aim, which is "to raise per capita incomes above a predetermined 'poverty line' as quickly as possible, with the related aim of reducing income and social inequalities which may have been accentuated by the growth process itself" (p. 182). Chenery et al. (1974) led this school of advocates to expound the approach. Again, the two key issues of poverty and income inequality are central to Seers's (1977) thesis as well. Lisk (1977), however, criticized those advocates and practitioners of this approach on the grounds that it echoes the "growth-oriented approach" in terms of emphasis on per capita income.

The final development approach classified in Lisk's (1977) typology is the "basic-needs" approach. Conceptually, it is new to development literature. As Rimmer (1981) noted this approach is diametrically opposed to measuring developmental change in abstract terms of monetary aggregates of the gross national product. The roots of this approach, however, dates back over four decades.

Prior to World War II development economics was non-existant (Streeten, 1979). But ideas about improving human conditions were present. There were two movements of significance according to Rimmer (1981). The first was the International Food Movement of 1935 as reported by Black (1943). One of the leading pioneers of the Movement in the 1940s was Sir John Boyd Orr. He is credited with the idea of "human needs" (Rimmer, 1981), which presaged the concept of basic needs.
Concerning "human needs" and the capabilities of existing knowledge, Orr (1966, p. 163) wrote: "most futile of all was the recommendation for research. No research was needed to find out that . . . with modern engineering and agricultural science the world food supply could be easily increased to meet human needs".

The movement was founded on the faith in scientific evidence which revealed the importance of nutrition to health (Rimmer, 1981). This dimension of human conditions was referred to as the physiological necessities of life (ILO, 1938). But there was also a second important dimension relating to human conditions. This was the concept of "psychological necessity." It was an idea conceived by Orr (1942, p. 55). He defined this concept in the simpler term of a job in contrast to the reference made to it by the ILO (1938) in terms of consumption, leisure, work, emotional balance, and comfort.

The second campaign, another presage of the basic needs concept, was undertaken by the Living-Standards Movement of 1939 (Rimmer, 1981). Its central theme was also on nutrition. Again, this Movement too found leadership in Orr according to Rimmer (1981). One of its goals was to address the issue of social and economic inequalities in the global context according to Joseph (1942), who wrote "We shall have to enlarge our ideas of the community. Just as we are now prepared to a certain extent to tax the richer parts of the population in order to raise and maintain an adequate standard of living in the lower sections, we shall have to be prepared to do this internationally." (p. 40-41).

In summary, the concept of basic needs which is now in vogue in development literature is only a revived idea according to Rimmer (1981). The Committee for Development Planning (1972) report and the UN
(1973) report as a biennial review of its Secretary-General also preceded the concept and approach as it exists today (Rimmer, 1981). It was developed at length, however, by the ILO (1976) report on employment, income distribution, and social progress. The primary goal of the approach as espoused by ILO (1977) is the eradication of poverty and unemployment by meeting basic human needs.

A fundamental premise, both scientific and consensual, of the basic needs approach according to the ILO (1976, p. 7) rests on the fact that "there are indeed certain minimum levels of personal consumption and access to social services which are universally regarded as essential to a decent life." This premise is shared by Soedjatmoko (1984), Streiten (1981), Butterfield (1977), Ingrid (1977), Lisk (1977), Seers (1977), Tagumpay-Castillo (1977), and Bienefeld (1972). Related to the premise on preconditions of a decent life is the critical premise of what Rimmer (1981) referred to as "popular participation." Its importance is underscored by the unambiguous position of the ILO (1976, p. 35) that: "It is essential that the people whose basic needs have to be met should participate in the determination of these needs rather than having them handed down from above." Butterfield (1977), Tagumpay-Castillo (1977) and Castillo (1976) have also presented forceful argument on this issue of popular participation.

Together they have advanced both a theoretical base and a praexis for the grassroots philosophy to development.


Grassroots as an approach to development is based on the premise of participation which implies a triad of "mobilization, conscientisation, and organization - in that order" (Wignaraja, 1984, p. 8) at the very core of the micro-level of the target community. The focus is principally the rural sector.

Views beyond the established thinking of development, theoretical or conceptual, have being identified by Wignaraja (1984, p. 7) as (1) err-development, (2) cultural identity, and (3) self-reliance approaches.

There is a wide range of orientations to the definition and meaning of the meta-concept of development. But it also seems apparent that at a given point in the historical perspective of the phenomenon a particular orientation appears to dominate the others. The current dominant approach to development appears to be that which uses "self-needs" strategies to achieve development (Minhas, 1979). The approach is also what the Dag Hammarskjold Foundation (1975) referred to as "human development." In its simplest form, the primary goal of the self-needs approach is "to satisfy the essential requirements of each
country's population within the time horizon of one generation, or by the year 2000." (Lisk, 1977, p. 184) The essential requirements referred to above include needs such as food, shelter, drinking water, sanitation, health and education as the personal dimension (Minhas, 1979). The need to be self-reliant as a society and to create and maintain harmony with the environment, is considered a crucial element of the approach according to Minhas, (1979).

However, the grassroots approach strongly advocated by conceptualists and theorists from the Third World seems to be gaining grounds as a means of achieving development. The strategy has transcended its conceptual and theoretical frames or models. Activities of groups such as SID and IFDA have operationalized the intellectual frameworks in countries such as India (Pendse, 1984; Sheth, 1984), Sri Lanka (Wickramaarachchi, 1984), Tanzania (Shayo, 1984), and Mali (Rahnema, 1984).

Summary

It is, therefore, evident that there is lack of consensus as to the meaning and definition of, and certainly not the means (i.e. strategies) for achieving development. This impasse is evident in the most enlightening study by Birou et al (1977). In this study, 54 internationally renown students of development prepared essays on each of 20 questions and issues on development. Items on the questionnaire included the following inquiries:

1. On the Nature of Development
2. What Development? And Why?
3. Development Principles and Practices: Right and Wrong
Meaning of Development

4. Right and Wrong Meaning of Development: Testimony from the Third World

5. Conditions for the Economic and Political Independence of Developing Countries

6. The Essential Driving Force Behind Development: Science and Technology

7. The Bases of Understanding Between Peoples

8. Proposals for the Future

9. Vulnerability of the Developed Countries

These questions and similar other queries seem to indicate that development, whether conceptual, theoretical, or praexiologlcal, has been a perennial problematique of unimaginable magnitude within the context of both national and international perspectives. The situation appears to be most critical in the Third World. In spite of the obvious state of flux of development in that world, efforts are being made towards a better understanding and the achievement of its goals by the international community. In the following paragraphs the responses of the (1) United States Congress and (2) United States agricultural teacher education profession to the international appeal for technical aid for Third World development are briefly discussed.

Legislation on International Development

Three major pieces of legislation on international development have been passed by the Congress of the United States of America since 1950. First, there was the Act of International Development or Public Law 535 (US Congress, 1952). It mandated the establishment and implementation
of the Title IV Programs. The primary objective of these programs were to assist "economically underdeveloped areas" to achieve progress.

Second, in 1961 the Foreign Assistance Act or Public Law 87-195 (US Congress, 1961) was passed. This act created the USAID, which was charged with the administration of all economic and technical assistance overseas programs.

Third, and finally, Public Law 94-161 was passed which created and mandated the implementation of the Title XII Programs under the International Development and Food Assistance Act (US Congress, 1975). Provisions of the 1975 act are commonly referred to as strengthening programs. In essence, the act mandated equal participation between the land-grant and "other eligible" universities and the USAID in foreign agricultural and rural improvement efforts.

With these mandates in place, institutional involvement in foreign development activities has grown steadily. It has also become more collaborative and cooperative in nature. Thus, different disciplines and their respective professionals have become involved but to varying degrees (U. S. International Development Cooperative Agency, 1981). Annual reports of the USAID to the Congress since 1977 indicated there have been substantial changes and progress due to the Title XII Programs. New directions, changes, experiences, and progress have marked the international activities of agencies, institutions, and professions within the United States of America (U. S. International Development Cooperation Agency, 1981).

The provision of equal partnership between agricultural institutions and the USAID as mandated by Title XII has made it possible for the agricultural teacher education profession to become committed to
and involved in the international development process. However, the Provisions of Title XII have made the profession an integral part of the global process of development. Therefore, the central question is: What has been the response of the profession in this regard? The remainder of the chapter will be devoted to answering this question.

Activities of Agricultural Teacher Educators in International Development

In 1981 Thuemmel and Welton reported that 72 teacher educators had indicated their involvement in international activities. A study by Meaders (1982) revealed that 53 teacher educators had been involved in international development activities abroad. However, a comprehensive review of literature revealed less than 30 articles and papers which document activities of agricultural teacher educators in international development. Reports on projects in which teacher educators have been involved in developing countries in particular appear to be available at the institution level. These reports were basically technical papers. It seems very few of such papers have been available to the larger membership of the agricultural teacher education profession.

The reports that are available cover a fairly wide range of activities from field tours to youth leadership development, and to consultation.

Weigers (1954) reported on his consultative activities in the then Belgian Congo (now Zaire and Congo Brazaville). Two teacher educators reported of their involvement in a total of three projects in the 1960s. Meaders (1963) was on assignment to Taiwan, where he began a longitudinal study that evaluated graduates of the secondary school system. Also, Christiansen (1967) became involved in program evaluation activities in Costa Rica. Again, Meaders (1968) returned to Taiwan to
continue his study and produced a report on education and development in that country.

The 1970s showed an increase in the number of available reports. Eleven of them were prepared. Cushman (1972) reported on his activities in manpower training and development in the South Pacific. As a result of his extensive involvement in that region, he co-edited a textbook on teaching agriculture in the Phillipines (Barile, Cushman, & Santos, 1973). Diamond's (1973) activities in Southern Chad resulted in a report on pit silos. The construction and use of pit silos were also reported later by Diamond (1977). Bobbitt (1975) prepared a report on his activities in Lesotho. The goal of his assignment was to help determine the need to expand agricultural education in Lesotho. Non-formal education activities in Afghanistan have been reported by Bobbitt (1976). Meaders (1978), in continuing his study initiated in the early 1960s, prepared a comprehensive evaluative report on Taiwan's vocational and technical programs in agriculture.

Bobbitt (1978) reported on a survey of the manpower needs of Botswana. The technical agricultural competency needs of Latin America's secondary students were studied and reported by Harzman (1978). Bobbitt later (1979) reported on his involvement in faculty development activities in one university in Indonesia.

Between 1980 and early 1984 eight international activities were reported by agricultural teacher educators. Brown (1980) reported on developing a Request for Proposal (RFP) for the transfer of agricultural technology for Ecuador. Crawford (1983) reported on his five years of institution-building activities in Costa Rica. A report has been made by Hedges (1983) of his activities in India as a member of a team, which
helped to transfer the concept of vocational agriculture to high schools of India. However, most of his activities were undertaken in the 1960's. In 1983 Meaders conducted a study tour to Taiwan for his summer class and subsequently reported on that trip. Iverson's (1984) activities in Saudi Arabia were strictly consultative. Although he was hired as an expert on across-the-board vocational education and charged with developing curriculum materials for technical engineering education, his report included an assessment of the potential role of the agricultural teacher educator in the development of Saudi agriculture.

In conclusion, these reports seem to indicate that literature is available on past activities of members of the profession on the international scene. The number of project reports thus far available point to the central problem of this study: the available information is not only scanty and incomplete, but also fragmented. This evidence points to the need for the consolidation of the data and information.

Views of Agricultural Teacher Educators on International Development

A number of agricultural educators have discussed issues and concerns relating to international development. Six major issues have been identified.

First, there appears to be consensus among teacher educators with international experience that the growing spirit of internationalism within United States institutions has serious implications for the agricultural teacher education profession (Bristol, 1975; Key, 1978; Matteson, 1978; Gonzales, 1979; Howell and Gonzalez, 1979; Matteson, 1979). Unfortunately, however, some of these teacher educators seem to
express serious concerns over how the profession, as a whole, has thus far responded. They perceive a relatively passive attitude in the leadership and general membership of the profession (Riley, personal communication, February 14, 1984; Thuemmel, personal communication, February 29, 1984). The perceptions of a number of concerned teacher educators is a challenge to the profession to declare a definitive and solid position on its commitment or non-commitment to developmental change in developing countries (Riley personal communication, February 14, 1984; Thuemmel, personal communication, February 29, 1984).

Second, many of the teacher educators with experience in international activities share the common belief that the United States agricultural education profession has become committed to and involved in the international processes of development under the auspices of Title XII. Scanlon (1983) described the institution-USAID joint effort as a "symbiotic" relationship. Williams and Martin (1983) identified linkages between agricultural education and economic development, one of the primary goals of USAID for Third World development.

There are agricultural teacher educators who believe agricultural institutions of the United States of America are inexperienced in planning for rural clientele of developing countries. Matteson (1978) and Hannah (1966), a renowned agricultural economist, pointed out that teacher educators, as opposed to agricultural scientists, are the most suitably qualified professional group for such undertakings. . . . planning and executing projects for rural farmers. Hannah (1966) reminded agricultural institutions of the underlying philosophy of the First Morrill Act of 1869 which emphasized basic education in agricultural production. He argued that what rural farmers in
developing countries need is not sophisticated technical know-how but the basic principles of agricultural production.

Bradfield (1964) and Loret (1978) expressed deep concern over the type of training foreign students receive in agricultural curricula in the United States of America. They contended that these training programs rarely reflect the basic needs of the home countries of the students. Hence, the graduates return to their home countries only to become largely ineffective. It is, therefore, reasonable to assume that the profession would serve developing countries much better by preparing agricultural personnel within the host nations.

Matteson (1979) and Boucher (1979) suggested the involvement of generalists such as vocational agricultural teachers and extension agents in international agricultural education. They pointed out that the merit of such involvement on the grounds that these professional groups possess skills and competencies in dealing with the poor, isolated rural farmer. This point is a reinforcement of Castillo's (1976, p. 48) contention that farmers in developing countries need "doers," who are, capable of interpreting technical agriculture into lay language for their understanding.

Third, some agricultural teacher educators are of the opinion that nonformal approaches to the transfer of agricultural technology are most effective (Befecadu, 1979; Matteson, 1979, 1978, Loret, 1978; Gingerich, 1968). Educators in both teacher and extension education professions, they believe, are most capable of delivering the desired agricultural technological packages to the rural agrarian populations in developing countries using non-formal approaches to education.
Fourth, the agricultural education systems and delivery structures in the Third World are perceived as highly dysfunctional and largely irrelevant. As a result, they prepare incompetent agricultural personnel. Martens' (1972) analysis of vocational training programs in these countries revealed that curricula in agricultural education, for example, were largely irrelevant and pitifully theoretical. An attendant problem with agricultural education was the lack of suitable and adequate curricular materials and textbooks according to Martens (1972) and FAO (1970). The agricultural teacher educator has the requisite expertise to design and develop instructional materials as he/she has demonstrated through the production of numerous curriculum guides and textbooks used in the United States of America.

Hill (1964) criticized existing institutions in developing countries. He pointed out that these institutions have not served the agriculture of Third World. Four major plausible explanations for this poor performance are outlined below. Jensen (1976) observed that agricultural educators are not honoured as their counterparts in research. Taylor (1976) pointed out that graduates from agricultural institutions are usually unwilling to serve in rural areas. Matteson (1979), Lindley (1975) and Kingshotte (1974) criticized developing countries for placing emphasis on the preparation of high-level, theory-oriented agriculture personnel. These nations, they pointed out, need competent middle-level agricultural manpower. The lack of trained vocational and technical instructors in agriculture has been identified as another very serious constraint to agricultural improvement in the Third World (FAO, 1970).
Fifth, the agricultural manpower base in most developing countries is believed to be very weak. Analysts and critics often identify incompetence of the graduates of agricultural programs as one of the leading causes of underdeveloped agriculture. This problem has been identified in Colombia (Bradfield, 1964), Kenya (Maxwell, 1970), Brazil (Matteson, 1971), Nepal (Stitt, 1972), the Kingdom of Tonga (Beckner, 1975), Jamaica, Guyana, Sierra Leone (Swanson & Tucker, 1978), (Swanson, 1979), Belize (Faulkner, 1980) and Saudi Arabia (Iverson, 1983).

Sixth, and finally, there is the recognition of the need for interdependence among nations of the world. This is particularly true in the context of transfer of agricultural technology from the more developed to the developing nations. Key (1978) admonished the profession of its role in the international development process in his article, "No Man is an Island." His main point was that the profession will be abnegating its responsibility by not participating in the process. A relevant question here is: Who can be more instrumental in transferring what Goulet (1975) referred to as "person-oriented technology" in agriculture than the agricultural teacher educator?

Position Papers Based on Empirical Research

Since 1960 there have been several opinion papers and articles on the role of the agricultural teacher educator in international development. Also, a number of project reports on the subject has been presented in very recent years, particularly at the AVA conventions. However, there have been only three empirical studies on international agricultural education. They were all complete census surveys.
The first of these studies by Thuemmel and Welton (1981), later reported as Thuemmel, McCreight, and Welton (1983) was a national assessment of the activities of the profession in international development. Three important findings were reported. First, only about one-third of the agricultural education departments or programs reported involvement in international activities abroad, home, or both during the 1960s and 1970s. More than three-quarters of the respondents also expressed interest for such involvement. Secondly, in the two decades under study, 54 overseas assignments were undertaken in 36 countries. Thirdly, about 86% of all the teacher educators with international experience and/or interest in such experience also indicated interest in future assignments.

Meaders (1982, p. 1) compiled an inventory on "selected information about the agricultural teacher educators who are interested in and/or have participated in international agricultural education activities." The primary objective of his survey was to facilitate information sharing among teacher educators with like interests and concerns. Thirty-four institutions and over 100 agricultural educators participated in the study.

Finally, bin Yahya, et al., (1983) reported findings of a study examining the overall posture of the profession (including teacher and extension educators) on major issues, problems, and probable solutions bearing on agricultural and rural improvement in the Third World. The researchers found that about one-third (N=54; 33.1%) of these educators have been involved in international agricultural activities. An equally important finding was that nearly 60% (N=96) of the respondents expressed interest in future international assignments. The study also
revealed that teacher educators were on assignments in 60 developing countries.

In summary, these studies revealed that the agricultural teacher educator: (1) has been involved and (2) is highly interested in international agricultural activities. One major concern is, however, quite evident. There is great need for information sharing within the profession. Of course, such accumulated knowledge needs to be shared with others outside of the profession.

Therefore, a need remains for: (1) unifying available information and data on the past role and contributions of the agricultural teacher educator in the national development process particularly of the Third World and (2) a programmatic research scheme on international agricultural teacher education.

A Summary Statement

Development appears to defy attempts at a common conceptual or definitional base. It has been used with a variety of meanings based on the definer's orientation. Growth, with GNP as a basis, employment, poverty, basic needs, international trade, agriculture, human-capital (i.e. education), and grassroots orientations all have their proponents, advocates, and practitioners as well as critics. Whatever the orientation or strategy, the primary goal of development in the Third World seems to center around improving the well-being of the vast majority of the peoples. In furtherance of this goal, agriculture, which is the main economic sector and the rural communities, which contain almost 60% of the populations of the Third World, need to receive the greatest attention.
Response to this dual need by the international community has been immense in terms of fiscal and manpower aid to nations of the Third World. Since the early 1950s, the government of the United States has provided leadership in foreign aid to these countries. The response has been channelled mainly through academic institutions. In that regard many professionals from different disciplines have become involved in Third World development. Expertise from the agriculture-related disciplines from these institutions has been utilized in the general form of either formal or informal education in agriculture.

Agriculture teacher education is a component of the much broader, all-encompassing education in agriculture. The agriculture teacher education profession of the United States has contributed in some degree to the development efforts in the Third World. The future role of this profession in the international development process is considered vital. Members of the profession have written on the role they can and should assume in international development. Support for the need of this role also comes from outside of their professional circles. Curle (1970, p. 158) made an implicit but strong case for the involvement of agriculture teacher educators in international development when he listed as an objective for economic growth: "to study and promote the teaching of science and agriculture at various levels of schools" in developing countries. The report of the Presidential Mission (1980) on the Caribbean Basin also pointed out the dire need to elevate the prominence of agriculture as a profession, and to provide opportunities and inducement to young people to study agriculture.

The teaching of agriculture in the Third World requires the supply of qualified, competent, and dedicated teachers of agriculture who are
practically minded as they are theoretically adept. This supply factor definitely demands expertise of the agricultural teacher education profession. Furthermore, it indicates the importance of the human resources strategy to development.

Therefore, it seems evident that the role of the agricultural teacher education profession in the national development efforts of food-shortage countries is important. The question that apparently remains is: What has been the exact role of the profession in the context of global development since the enactment of the Title IV in 1950?
CHAPTER XII

METHODOLOGY

This chapter describes the research methods and procedures used in the study. There are seven major sections in the chapter and they are as follows:

1. The population
2. Identification of the population
3. The research design
4. Instrument construction
5. Data collection
6. Data preparation for analysis
7. Data analysis, synthesis, and reporting

The Population

The population of the study consisted of all faculty members with 51% or more of their responsibilities accounted for within the Department or Section of Agricultural Education in the universities and colleges of the United States and who had served on foreign assignments in international development prior to April 30, 1984. Excluded from the study were retired agricultural teacher educators with international experience. Also excluded were agricultural extension educators in departments designated as Department of Agricultural and Extension Education and the faculty members of the Department of Vocational Agricultural Education at Louisiana State University-Baton Rouge Campus where the study was conducted.
Identification of the Population

Six sources were used to identify members of the target population. They included five reference publications and a survey sheet. Three of these were studies by Thuemmel and Welton (1981), Meaders (1982), and bin Yahya et al. (1983). They respectively identified 72, 53, and 65 agricultural teacher (and extension) educators with experience in agricultural and rural development activities abroad. Since there were inconsistencies in the numbers for the same population as identified by these researchers, a survey of all teacher education programs in the United States (excluding Puerto Rico) was conducted.

This researcher attempted to identify all previously unidentified members of the population. Ninety-three universities with teacher education programs were identified and of this number, 91 were listed in the fourth major source, the Directory of Agricultural Teacher Educators (Rogers, 1983-84). The program in the University of Hawaii was not listed in this directory. Information about it was given to the researcher by Moore (personal communication, February, 1984). The other unlisted program was at the Mid-American Nazeren College, Olathe, Kansas. This is a two year program whose graduates transfer to the Kansas State University program. It was listed in the directory prepared by Meaders (1982). Another source for identifying members of the population was the AATEA Newsletter. All the issues for 1983 and January 1984 to July 1984 issues of the Newsletter were used to identify teacher educators who had just had their international experience for the first time. They were also used to eliminate members of the population who had recently retired.
A survey instrument was designed by the researcher. The objective was to identify as completely as possible all members of the population. Therefore, a copy of the instrument along with a cover letter was sent to head teacher educators of the 93 programs. The names of all faculty members indicated in the directory by Rogers (1983-84) were listed for each program. Each head teacher educator was asked to provide two types of information (a) an indication of which agricultural educator had (a) at least .51 FTE of his/her responsibilities as a teacher educator and (b) experience in international agricultural development activities at foreign locations. (See Appendix A and B).

After a second mailing of the survey sheet, a 97.85% (N=91) rate of response was obtained. One of the non-respondents was identified as having a one-person department. He also had no experience in international activities at any foreign location (personal communication, December, 1983). Repeated attempts by telephone yielded no response from the remaining non-respondent. This procedure resulted in 117 teacher educators being identified as the population for this study.

The Research Design

A descriptive survey design was used in this study. The study was a census, described by Gay (1981) as a census survey. In a survey, the researcher collects "data from members of a population in order to determine the current status of that population with respect to one or more variables." (Gay, 1981, p. 155). Again, in a survey, "the researcher neither manipulates the independent variable nor the setting up of a control condition" (Meyers & Grossen, 1974, p. 175). Since
surveys are designed to basically "describe the state of affairs existent in the population at any one time," according to Meyers & Grossen (1974, p. 175), this study was most amenable to the survey technique. Too, a census survey was conducted because the population was "relatively small" (Meyers & Grossen, 1974, p. 175).

Instrument Construction

The survey instrument for this study was designed and developed by the researcher. It was validated by means of pre-testing. The primary purpose of a pretest is to help identify or determine unexpected problems (Simon, 1969; Babbie, 1973). Pre-testing requires the use of a sample, which, according to Babbie (1973, p. 207) should comprise subjects who could be described as "reasonably appropriate respondents for the questions under consideration." He continued to suggest that "If the study is aimed at a particular population, then any members of that population or any persons similar (researcher's emphasis) to that population may serve as pre-test subjects."

Since this study was a census survey of agricultural teacher educators with experience in international development activities abroad, there was no sampling of the population for subjects in the pre-test. Also, those retired teacher educators with such experience were excluded because of problems of accessibility. Hence, they were not used in the pre-test. With the two groups of educators eliminated from the validation process, this researcher had to rely on a population of "any persons similar" (Babbie, 1973) to that of the population under study. The profession similar in many respects to agricultural teacher education is agricultural extension education. However, there was a
problem in sampling members of that profession. Using foreign assignments as the principal criterion for the membership in the population, many members of the teacher education population also happened to belong to the extension education population that could have been used in the pre-test. In several institutions, agricultural teacher educators assume responsibility for teaching extension courses in departments designated as either "Agricultural Education" or "Agricultural and Extension Education." A second problem of sampling extension educators in all 93 programs nationwide was the monetary cost and time constraint. The added cost of identifying these educators was prohibitive.

Given the two problems of identifying extension educators across the country with similar professional experiences abroad as the population in this study, the validation process was undertaken within Louisiana State University - Baton Rouge campus. The panel who validated the research instrument was comprised of one agricultural teacher educator and two extension educators. All three educators had experience in development activities abroad. Members of the panel were asked to react to the instrument with respect to (a) the wording of each question (b) whether the questions solicited data and information bearing on the objectives of the study and (c) the data collection procedure to be used. They were requested to make suggestions for increasing the validity of each question and for the entire instrument.

The Instrument

There were two main parts to the instrument. Part A requested respondents to provide their (1) name, (2) present rank and/or title,
and (3) the institution with which they were affiliated. Part B contained 19 questions. Thirteen of these questions were objective in nature. Below are the items:

1. Year educator was on first international assignment
2. Number of assignments undertaken
3. Year each assignment was undertaken
4. Duration of each assignment
5. Country or countries to which assignment was undertaken
6. Sponsor of the project to which assignment was related
7. Official title of project to which assignment was related
8. Year project was initiated
9. Year project was completed
10. Primary goal of the project
11. Exact responsibilities and activities of teacher educator while on each assignment
12. Other professionals and experts who were involved in each project
13. Willingness to have name included in a proposed directory.

Respondents were requested to respond only once to items 1, 2, and 5. For each assignment undertaken, they were to respond accordingly to the remaining items. If a single assignment was completed in two or more countries, respondents were to provide information on their activities in each country. For multiple assignments during which roles were reported they were to respond only once for the country or each country involved.

The remaining six questions were more open-ended and therefore solicited information that was highly subjective and perceptual and
therefore qualitative. The first two items were to be answered for each assignment or country in case an assignment involved a multi-country target area. Item 3 through 6 were to be responded to only once. The items are as follows:

(1) Major problems encountered while on assignments abroad,
(2) Major accomplishments
(3) Suggested role of the agricultural teacher educator in international development
(4) Recommendations for solving existing problems of agriculture and rural improvement in developing countries
(5) Advice for other teacher educators interested in international development activities
(6) Critique of the data collection procedure used in this study — i.e. the use of a cassette tape by respondents to record their responses.

Data Collection

Data were collected using a largely open-ended, mailed questionnaire and blank cassette tape. The 117 members of the population were each mailed a package on August 6, 1984 which contained a cover letter, a research instrument, a blank 120-minute cassette tape, a cover page with directions and examples for responding to the questionnaire, and a stamped, self-addressed return envelope. Teacher educators were asked to respond to questions by recording their responses on the tape. They were requested to return the recorded cassette tape to the researcher by August 31, 1984.
Rationale for Using Cassette Tapes

Cassette tapes were employed in this study to gather data for the following reasons. First, it appeared there was a wide range of experiences among teacher educators in their international development assignments, activities, and locations. Therefore, the use of an instrument with forced choices would not have accurately reflected the richness from the apparent diversity. Secondly, there was the issue of the amount of information to be disclosed. This was probably the case for those teacher educators with over 10 years of experience. Since the primary purpose of the study was to provide completeness and comprehensiveness to the information on the past activities of agricultural teacher educators in international development, a pencil-and-paper questionnaire might have failed to tap the available wealth of information. Thirdly, this method would provide greater latitude for free-disclosure in a more informal manner than would a closed-ended instrument. In addition, self-disclosure permits respondents opportunity to provide information in detail and also completely (Dijkstra & van der Zouwen, 1982; Groves & Kahn, 1979; Dillman, 1978). Fourthly, with free, self-disclosure, teacher educators would be less likely to be placed in an awkward situation as in the case of forced-choice responses. It is very likely to reduce response sets among respondents, thus resulting in more valid information (Schuman & Presser, 1977).

Finally, the use of the cassette tape in data gathering seems to be considered the most viable option where voluminous, qualitative information is needed. Research methodologists have made cases for and against the different data gathering techniques in survey research.
Arguments have been made for (Orlich et al., 1975; Som, 1973; Raj, 1972) and against (Frankel & Dutka, 1983; Maclean & Genn, 1979; Som, 1973; Raj, 1972; Meyer, 1971) the use of mailed questionnaires. Finley and Key (1983), Miller (1983), Dillman (1979), Groves and Kahn (1979) recommended the use of the telephone over personal interviews and mailed questionnaires to reduce error variance, which often results from evasiveness or incorrect responses on sensitive issues (Cannell, Oksenberg, & Converse, 1979; Weissman, 1981). A case against the use of the telephone was made by Sudman (1981, p. 1) who observed that "There may be slightly higher refusal or don't know responses and shorter answers . . . because respondents' suspicions may be higher while motivations to talk are not as great."

When all the disadvantages of the other data collection methods are considered along with the kind of data to be generated in this study, the cassette tape with its three merits (Durbridge, 1981) of (1) control or directness, (2) informality, and (3) flexibility of communication seemed to be an appropriate choice. Dessecker (1975), who used the technique to gather data in her doctoral research found it relatively useful. Therefore, the cassette tape was employed to collect the desired information. The main difference between the method employed in this study and that of Dessecker (1975) and others was that this researcher used both a mailed questionnaire which contained the questions and a blank cassette tape to gather the data.

**Follow-up Procedures**

The response rate following the first mailing that ended on August 31, 1984 was 34.19% (n=40). Therefore, follow-up procedures were
pursued. A post-card was sent to all the 77 non-respondents as a reminder to respond to the questionnaire. They were to return the recorded cassette tape to the researcher as soon as possible. An additional rate of response of 35.04% (n=41) was achieved on September 26, 1984.

On September 28, 1984 a second follow-up was made. The 36 non-responding teacher educators were each served a reminder letter. In addition, a copy of the research instrument and a token of goodwill (a magnetic paper holder) were also enclosed for their use. This activity yielded a response rate of 8.55% (n=10). The 26 non-respondents were each sent a second reminder letter on October 23, 1984. Again, they were requested to respond and return the recorded information to the researcher as soon as possible. This procedure yielded 7.70% (n=9) rate of response. Then on November 9 through November 13 the 17 remaining non-respondents were contacted by telephone. They were asked whether or not they were willing to respond to the survey instrument. This follow-up activity yielded a response rate of 11.11% (n=13). All the respondents who provided information were sent a note of appreciation on November 14, 1984. The final total response rate was 96.58% (N=113).

Seventeen of the 113 responses were not usable. Nine (7.69%) of these came from teacher educators who were misidentified as having had professional experience abroad. Three (2.56%) teacher educators returned the cassette tapes and instruments to the researcher but flatly refused to respond to the questions. There were two (2.61%) inaccessible cases because the teacher educators were on assignments abroad. Two (2.56%) other teacher educators retired hence were no
longer qualified as members of the population. One (0.85%) teacher educator was deceased.

The final "real" population, defined as only those teacher educators who have been involved in development activities at foreign locations and were accessible comprised 102 (87.18%) tentative population. Therefore, the final usable response rate was 94.10% (N=96).

Data Preparation for Analysis

Data were provided on two main media: recorded cassette tapes and sheets of paper. Sixteen of the teacher educators who provided information wrote their responses on either the questionnaire or on separate sheets of paper. Another form used by three of the teacher educators was the curriculum vita, which served as the only source of additional information. Data from both media were transcribed.

Each of the recorded cassette tapes was played back. The information was carefully transcribed as completely as possible. Similarly, information from copies of the returned questionnaire was transcribed. However, data from the curriculum vitae and the other sources were carefully reviewed and included only when directly related to a question on the questionnaire.

Next, the transcribed data were reviewed with emphasis placed on duplications and recurrences especially with responses bearing on countries involved, sponsorship, specific activities, other experts involved, problems encountered, suggested roles and recommendations, and
advice. The transcribed information was partially summarized before being subjected to analysis and synthesis.

Data Analysis, Synthesis, and Reporting

Since this was a complete census, it was inappropriate to use inferential statistics. Therefore, only descriptive statistics such as frequency counts were employed. The data were analyzed and subsequently synthesized and reported in both aggregate form and commonalities. Burstein (1975) suggested data aggregation as a viable option when analyzing massive databases at the individual level. Adams (1981) and Kennedy (1984, p. 6) raised the question of credibility of qualitative data. The former suggested that researchers should "focus on critical issues arising" from qualitative data. These viewpoints lend support to the researcher's decision to analyze and synthesize the information based on commonalities. Each commonality was identified for analysis as it related directly to one of the eight specific objectives of the study. The commonalities bearing on the role of each teacher educator were as follows:

1. Primary goal of project and/or assignment
2. Exact responsibilities and activities while on assignment
3. Major problems encountered while on assignment
4. Major accomplishments that resulted from assignment(s)
5. Other professionals and/or experts who were involved in project or assignment
6. Future role of the agricultural teacher educator in international development activities
7. Recommendations for solving existing problems of agriculture
and rural development in developing countries

(8) Advice to agricultural teacher educators interested in international development activities.

For background information on the findings of the study, additional commonalities were analyzed. These were:

(2) Number of assignments by decade as in (1) above
(3) Average duration of each assignment
(4) Countries to which assignment was undertaken
(5) Sponsorship for each project to which assignment was undertaken

In addition to his suggestion that qualitative research be analyzed and synthesized with critical issues in view, Adams (1981, p. 7) noted that "In qualitative reports it is useful to continue to remind the reader of the methodology used throughout the report, not just in the methods section." (p. 7). This researcher followed this advice in the next two chapters.
CHAPTER IV

PRESENTATION AND DISCUSSION OF FINDINGS

There are two major sections in this chapter. Presented in the first section is the background information on involvement of agricultural teacher educators in development activities abroad. Next, in the second major section, findings bearing on each of the eight specific objectives of the study are presented.

Background Information

The data revealed that agricultural teacher educators have been involved in international development activities since 1952. These educators reported of their involvement in international activities abroad between 1952 and mid-1984. Involvement in the 1950s was light. Only six teacher educators went on assignments abroad. However, in the subsequent decades of 1960s and 1970s, there was a large increase in involvement. In each of the two decades more than 20 educators were involved in development activities abroad. In the first four years of the 1980s alone 18 agricultural teacher educators have already undertaken a variety of assignments in foreign countries.

In the past 32 years agricultural teacher educators have served on a wide range of professional assignments to 78 different countries throughout all the continents except Australia. Twenty-five of these countries were in Africa, 23 in Asia, 26 in the Americas, and four in Europe. The list of countries is presented in Table 1.
<table>
<thead>
<tr>
<th>Country by Continent</th>
<th>Frequency of Assignments</th>
<th>Country by Continent</th>
<th>Frequency of Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. AFRICA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Azores</td>
<td>1</td>
<td>15. Micronesia</td>
<td>1</td>
</tr>
<tr>
<td>2. Botswana</td>
<td>4</td>
<td>16. Pakistan</td>
<td>4</td>
</tr>
<tr>
<td>3. Burkino Faso</td>
<td>1</td>
<td>17. Saudi Arabia</td>
<td>2</td>
</tr>
<tr>
<td>(Formerly Upper Volca)</td>
<td>1</td>
<td>18. Taiwan</td>
<td>1</td>
</tr>
<tr>
<td>5. Cape Verde</td>
<td></td>
<td>20. Thailand</td>
<td>5</td>
</tr>
<tr>
<td>6. Chad</td>
<td>2</td>
<td>21. Turkey</td>
<td>1</td>
</tr>
<tr>
<td>7. Congo Brazzaville</td>
<td>1</td>
<td>22. Western Samoa</td>
<td>2</td>
</tr>
<tr>
<td>8. Egypt</td>
<td>1</td>
<td>23. Yemen Arab Republic</td>
<td>2</td>
</tr>
<tr>
<td>9. Ghana</td>
<td>3</td>
<td>Subtotal</td>
<td>24</td>
</tr>
<tr>
<td>10. Guinea</td>
<td>1</td>
<td>C. EUROPE</td>
<td></td>
</tr>
<tr>
<td>11. Kenya</td>
<td>6</td>
<td>1. Holland</td>
<td>1</td>
</tr>
<tr>
<td>12. Lesotho</td>
<td>2</td>
<td>2. Romania</td>
<td>1</td>
</tr>
<tr>
<td>13. Libya</td>
<td>1</td>
<td>3. Yugoslavia</td>
<td>1</td>
</tr>
<tr>
<td>14. Mali</td>
<td>6</td>
<td>4. Greece</td>
<td>1</td>
</tr>
<tr>
<td>15. Mauritania</td>
<td>2</td>
<td>Subtotal</td>
<td>4</td>
</tr>
<tr>
<td>16. Niger</td>
<td>1</td>
<td>D. THE AMERICAS</td>
<td></td>
</tr>
<tr>
<td>17. Nigeria</td>
<td>9</td>
<td>1. Argentina</td>
<td>2</td>
</tr>
<tr>
<td>18. Senegal</td>
<td>2</td>
<td>2. Barbados</td>
<td>1</td>
</tr>
<tr>
<td>19. Sierra Leone</td>
<td>3</td>
<td>3. Belize</td>
<td>1</td>
</tr>
<tr>
<td>21. South Africa</td>
<td>1</td>
<td>5. Brazil</td>
<td>10</td>
</tr>
<tr>
<td>22. Sudan</td>
<td>5</td>
<td>6. Chile</td>
<td>3</td>
</tr>
<tr>
<td>23. Tanzania</td>
<td>7</td>
<td>7. Columbia</td>
<td>7</td>
</tr>
<tr>
<td>25. Uganda</td>
<td>2</td>
<td>9. Cuba</td>
<td>1</td>
</tr>
<tr>
<td>Subtotal</td>
<td>66</td>
<td>10. Dominican Republic</td>
<td>6</td>
</tr>
<tr>
<td>B. ASIA</td>
<td></td>
<td>11. El Salvador</td>
<td>3</td>
</tr>
<tr>
<td>1. Afghanistan</td>
<td>2</td>
<td>12. Ecuador</td>
<td>4</td>
</tr>
<tr>
<td>2. Bangladesh</td>
<td>1</td>
<td>13. Caim</td>
<td>1</td>
</tr>
<tr>
<td>3. Cambodia</td>
<td>1</td>
<td>14. Guatemala</td>
<td>3</td>
</tr>
<tr>
<td>4. China</td>
<td>1</td>
<td>15. Guyana</td>
<td>1</td>
</tr>
<tr>
<td>5. Fiji</td>
<td>1</td>
<td>16. Haiti</td>
<td>1</td>
</tr>
<tr>
<td>6. Hong Kong</td>
<td>1</td>
<td>17. Honduras</td>
<td>3</td>
</tr>
<tr>
<td>7. India</td>
<td>6</td>
<td>18. Jamaica</td>
<td>26</td>
</tr>
<tr>
<td>8. Indonesia</td>
<td>5</td>
<td>19. Nicaragua</td>
<td>2</td>
</tr>
<tr>
<td>9. Iran</td>
<td>4</td>
<td>20. Panama</td>
<td>3</td>
</tr>
<tr>
<td>11. Jordan</td>
<td>2</td>
<td>22. Peru</td>
<td>2</td>
</tr>
<tr>
<td>12. Korea</td>
<td>2</td>
<td>23. St. Lucia</td>
<td>1</td>
</tr>
<tr>
<td>13. Kuwait</td>
<td>1</td>
<td>24. Suriname</td>
<td>1</td>
</tr>
<tr>
<td>14. Malaysia</td>
<td>4</td>
<td>25. Uruguay</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>26. Venezuela</td>
<td>6</td>
</tr>
<tr>
<td>Subtotal</td>
<td>112</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Grande Total**: 240

**Note**: Forty assignments were reported by one teacher educator who did not indicate the countries that were involved. Therefore, they were not included in the frequencies.
More than 240 assignments were undertaken between 1952 and mid-1984. There was an average of nearly three assignments per teacher educator. Most teacher educators went on only one assignment. But a few educators had been on over 10 assignments. One educator reported that he served on over 40 assignments to more than 20 different countries.

The frequency of assignments to each of the 78 countries is also indicated in Table 1. Jamaica was the most visited country with 24 assignments followed by Brazil with 18, Costa Rica with 10 and Nigeria with nine, Colombia and Tanzania each with seven, Dominican Republic, India, Kenya and Mali each with six and Indonesia, Paraguay, Sudan and Thailand each with five. Four or fewer assignments were made to the 62 other countries.

The findings revealed steady increases in the number of assignments undertaken by decade since the first assignment in 1952. There were only 11 assignments for the six years between 1952 and 1959. This small number of assignments reported could be due to the fact that most of the teacher educators who were involved in international development activities have retired. All retirees were excluded from this study. In the 1960s and 1970s 40 and 82 assignments were completed respectively. Between 1980 and mid-1984 62 assignments were completed. One teacher educator reported he had undertaken over 40 assignments since 1950. However, these were not grouped by decade since the educator did not provide the years they were undertaken or the countries to which was made.

Assignments abroad varied greatly in duration. The shortest lasted one week. Most of the more than 240 assignments were of the one-month
duration. The single longest assignment was 14 years, segmented into seven, 2-year periods. On the average, most assignments lasted between two and four weeks. Twenty-five assignments, however, were for one year or longer.

The professional expertise of agricultural teacher educators has been utilized by many different sponsors who funded the different programs and projects abroad. These sponsor-agencies were grouped by the researcher into nine major categories below. In parentheses is the number of sponsors or sources of fund in each category:

1. Ministries and agencies of host governments (n=60)
2. Educational institutions in host countries (n=12)
3. Departments and agencies of the government of the United States (n=9)
4. United States educational institutions (n=23)
5. Specialized agencies and organizations of the United Nations (n=7)
6. National and international agencies, organizations, councils, etc. (n=12)
7. State governments and agencies in the United States (n=3)
8. Private foundations, agencies and individuals (n=7)
9. Religious organizations (n=4)

Presented in Table 2A through Table 2G are the sponsors under each of the nine major groups. Table 2A presents host governemens who sponsored or funded programs or projects. The Governements of Brazil and Jamaica as reported each sponsored nine projects, the largest number. It was followed closely by the Government of Tanzania with
seven, the Federal Government of Nigeria with six, and Governments of Indonesia, Mexico, and Thailand each sponsored five projects or programs. Refer to table for other frequencies.

Educational institutions in developing countries also sponsored the development efforts as reported. Table 2B shows the frequencies of their sponsorship. Except for Njala University of Sierra Leone which sponsored two assignments, the rest each funded or sponsored only one project.

Shown in Table 2C are nine departments and agencies of the Government of the United States which funded or sponsored projects in the Third World. The USAID was, by far, the leading source of sponsorship. It funded or sponsored 62 development projects. The Peace Corps Volunteers was the second leading sponsor with ten projects followed by the USDA with four.

Twenty-three universities in the United States also funded or sponsored development projects in developing countries. They are presented in Table 2D. Texas A&M University, was involved in three such projects as reported. Four other universities each sponsoring two projects were Oklahoma State University, University of Minnesota, University of Nebraska (its Foundation), and West Virginia University. The rest were each involved with only one project.

Among the specialized agencies of the United Nations the World Bank led in sponsorship of development projects in the Third World. It financed five such projects followed by the FAO and ILO with three and two projects respectively. Refer to Table 2E.

In Table 2F are national and international organizations and agencies that sponsored Third World development projects. MUCIA and the
Partners of the Americas Organization each sponsored four projects. Presented in Table 2F are private and religious foundations, agencies, and organizations that also provided funding for development activities in the Third World. The Ford Foundation, Fulbright Commission, and Rotary International Foundation funded six, three and two projects respectively.

Sponsorship and funding of most projects was joint. All projects involving the USAID were jointly financed or funded by the 62 host countries. Involvement of all the universities of the United States except the University of Nebraska Foundation was through USAID contracts with governments of the host countries.

Projects to which assignments were made had varying longevity. Most projects of the 1950s were completed. Assignments associated with these early projects were all reported as having been completed. Since the 1960s, however, six of the more than 60 projects were terminated before they were completed. Four of the six were discontinued because of changes in the administration of the national governments as reported for Brazil (1969), Chad (1972), Venezuela (1979), Iran (1979). Most of the projects initiated since the mid-1970s were still on-going.

A total of 70 projects, programs and assignments was reported. These development efforts were variously designated on the basis of their mission or scope. Titles ranged from trade missions to institution building, from rural development to manpower development, and from feasibility studies to workshops. In addition, projects and assignments were directed at specific locations such as a district, region, state, or an entire country. Some projects and programs had inter-country focus. Examples of these included "Education and culture in Eastern
Table 2A
Sources of Sponsorship for International Development Programs and Projects in Which Agricultural Teacher Educators were Affiliated: Ministries and Agencies of Host Governments

<table>
<thead>
<tr>
<th>No.</th>
<th>Ministry and Agency of Host Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Government of Afghanistan (n=2)</td>
</tr>
<tr>
<td>2.</td>
<td>Government of Barbados</td>
</tr>
<tr>
<td>3.</td>
<td>Ministry of Agriculture, Government of Botswana (n=2)</td>
</tr>
<tr>
<td>4.</td>
<td>Brazilian Agricultural Development Agency</td>
</tr>
<tr>
<td>5.</td>
<td>Federal Extension Agency (EMRAPA), Brazil (n=8)</td>
</tr>
<tr>
<td>6.</td>
<td>Government of Burkina Faso (Formerly Upper Volta)</td>
</tr>
<tr>
<td>7.</td>
<td>Government of Cambodia</td>
</tr>
<tr>
<td>8.</td>
<td>Government of Cameroon</td>
</tr>
<tr>
<td>9.</td>
<td>Government of Cape Verde</td>
</tr>
<tr>
<td>10.</td>
<td>Government of Chad</td>
</tr>
<tr>
<td>11.</td>
<td>Ministry of Education, Government of Colombia (n=4)</td>
</tr>
<tr>
<td>12.</td>
<td>Government of Costa Rica (n=4)</td>
</tr>
<tr>
<td>13.</td>
<td>Government of Ecuador</td>
</tr>
<tr>
<td>14.</td>
<td>Government of El Salvador (n=2)</td>
</tr>
<tr>
<td>15.</td>
<td>The Imperial Government of Ethiopia (n=3)</td>
</tr>
<tr>
<td>16.</td>
<td>Government of Fiji</td>
</tr>
<tr>
<td>17.</td>
<td>Government of Ghana (n=2)</td>
</tr>
<tr>
<td>18.</td>
<td>Government of Guam (n=2)</td>
</tr>
<tr>
<td>19.</td>
<td>Government of Guatemala</td>
</tr>
<tr>
<td>20.</td>
<td>Government of Guinea</td>
</tr>
<tr>
<td>21.</td>
<td>Government of India</td>
</tr>
<tr>
<td>22.</td>
<td>Government of Indonesia (n=5)</td>
</tr>
<tr>
<td>23.</td>
<td>Ministry of Cooperatives and Rural Affairs, The Imperial Government of Iran (n=3)</td>
</tr>
<tr>
<td>24.</td>
<td>Ministry of Education, Government of Jamaica (n=9)</td>
</tr>
<tr>
<td>25.</td>
<td>Government of Jordan (n=2)</td>
</tr>
<tr>
<td>26.</td>
<td>Government of Kenya (n=3)</td>
</tr>
<tr>
<td>27.</td>
<td>Government of Korea</td>
</tr>
<tr>
<td>28.</td>
<td>Government of Lesotho (n=2)</td>
</tr>
<tr>
<td>29.</td>
<td>Government of Liberia</td>
</tr>
<tr>
<td>30.</td>
<td>Ministry of Agriculture, Government of Malaysia (n=2)</td>
</tr>
<tr>
<td>31.</td>
<td>Government of Mali (n=4)</td>
</tr>
<tr>
<td>32.</td>
<td>Government of Mauritania</td>
</tr>
<tr>
<td>33.</td>
<td>Government of Mexico (n=2)</td>
</tr>
<tr>
<td>34.</td>
<td>Government of Nepal</td>
</tr>
<tr>
<td>35.</td>
<td>Government of Niger</td>
</tr>
<tr>
<td>36.</td>
<td>Federal Government of Nigeria (n=6)</td>
</tr>
<tr>
<td>37.</td>
<td>Government of Panama</td>
</tr>
<tr>
<td>38.</td>
<td>Government of Paraguay (n=2)</td>
</tr>
<tr>
<td>39.</td>
<td>Government of Senegal</td>
</tr>
<tr>
<td>40.</td>
<td>Government of Sierra Leone</td>
</tr>
<tr>
<td>41.</td>
<td>Government of Somalia</td>
</tr>
<tr>
<td>42.</td>
<td>Government of Sri Lanka (n=2)</td>
</tr>
<tr>
<td>43.</td>
<td>Government of St. Lucia</td>
</tr>
<tr>
<td>44.</td>
<td>Government of Sudan</td>
</tr>
<tr>
<td>45.</td>
<td>Government of Taiwan</td>
</tr>
<tr>
<td>46.</td>
<td>Government of Tanzania (n=7)</td>
</tr>
<tr>
<td>47.</td>
<td>Government of Thailand (n=5)</td>
</tr>
<tr>
<td>48.</td>
<td>Government of The Azores</td>
</tr>
<tr>
<td>49.</td>
<td>Government of The Dominican Republic (n=4)</td>
</tr>
<tr>
<td>50.</td>
<td>Government of The Gambia</td>
</tr>
<tr>
<td>51.</td>
<td>Government of The Phillipines (n=3)</td>
</tr>
<tr>
<td>52.</td>
<td>Government of the Republic of South Africa</td>
</tr>
<tr>
<td>53.</td>
<td>Ministry of Education, Government of Trinidad and Tobago (n=2)</td>
</tr>
<tr>
<td>54.</td>
<td>Government of Turkey</td>
</tr>
<tr>
<td>55.</td>
<td>Government of Uganda</td>
</tr>
<tr>
<td>56.</td>
<td>Ministry of Agriculture, Government of Venezuela</td>
</tr>
<tr>
<td>57.</td>
<td>Government of Western Samoa (n=2)</td>
</tr>
<tr>
<td>58.</td>
<td>Government of Yemen Arab Republic (n=2)</td>
</tr>
</tbody>
</table>

Note: The number in parentheses indicates the frequency of programs, projects, or assignments sponsored or funded. Where no figure is shown the frequency was one (n=1).
### Table 2B

**Sources of Sponsorship for International Development Programs and Projects With Agricultural Teacher Educators Were Affiliated: Educational Institutions in Host Countries**

1. Federal University of Brazil, Santa Maria  
2. University of Costa Rica  
3. University of Guam  
4. Universiti Pertanian, Serdang, Selangor, Malaysia  
5. Ahmadu Bello University, Zaria, Nigeria  
6. Federal University of Technology, Yola, Nigeria  
7. University of Nigeria, Ife, Nigeria  
8. University of Nigeria, Nsukka, Nigeria  
9. Njala University, Sierra Leone ($n=2$)  
10. National Cheung-Chin University, Taiwan  
11. Major Institute for Agricultural Technology, Thailand  
12. National Institute of Cooperative Education, INCE, Venezuela

*Note: The number in parentheses indicates the frequency of programs, projects, or assignments sponsored or funded. Where no figure is shown the frequency was one ($n=1$).*

### Table 2C

**Sources of Sponsorship for International Development Programs and Projects With Agricultural Teacher Educators Were Affiliated: Departments and Agencies of the Government of the United States**

1. The USAID ($n=62$)  
2. United States Department of Agriculture, USDA ($n=4$)  
3. U.S. Office (now Department) of Education  
4. U.S. Department of Interior  
5. U.S. Department of the Treasury  
6. U.S. Information Agency  
7. Joint Commission on Rural Reconstruction (JCRR)  
8. Peace Corps Volunteers ($n=10$)  
9. ROCAP, (USAID Division for Six Central American Countries)

*Note: The number in parentheses indicates the frequency of programs, projects, or assignments sponsored or funded. Where no figure is shown the frequency was one ($n=1$).*
Table 2D

Sources of Sponsorship for International Development Programs and Projects With Agricultural Teacher Educators Were Affiliated: Educational Institutions in the United States

1. Cornell University, Office of International Development
2. Harvard University
3. Iowa State University
4. Kansas State University
5. Michigan State University
6. Mississippi State University
7. Oklahoma State University (n=2)
8. Oregon State University
9. Stanford University
10. Texas A&M University (n=3)
11. University of Florida
13. University of Southern Illinois, Carbondale
14. University of Maryland
15. University of Minnesota (n=2)
16. University of Nebraska Foundation (n=2)
17. University of New Mexico
18. University of Rhode Island
19. University of South Dakota
20. University of Wisconsin
21. Utah State University
22. West Virginia University (n=2)
23. Western Kentucky University

Note: The number in parentheses indicates the frequency of programs, projects, or assignments sponsored or funded. Where no figure is shown the frequency was one (n=1).
Table 2E

Sources of Sponsorship for International Development Programs and Projects Agricultural Teacher Educators Were Affiliated: Specialized Agencies and Organizations of the United Nations

1. Food and Agriculture Organization, FAO (n=3)
2. International Bank for Reconstruction and Development, (The World Bank) (n=5)
3. International Labour Organization, ILO (n=2)
4. Special Fund for Program Development.
5. United Nations Development Program, UNDP
6. United Nations Educational, Scientific, and Cultural Organization, UNESCO
7. United Nations High Commission for Refugees, UNHCR

Note: The number in parentheses indicates the frequency of programs, projects, or assignments sponsored or funded. Where no figure is shown the frequency was one (n=1).

Table 2F

Sources of Sponsorship for International Development Programs and Projects Agricultural Teacher Educators Were Affiliated: Other National and International Agencies, Organizations, and Councils

1. Academy for Educational Development
2. Agricultural Development Council, ADC, New York
4. Future Farmers of America, Ysleta, Texas, USA
5. International Agricultural Development Service, IADS, Arlington, Virginia
7. IRR Research Institute, Inc., New York
8. Midwestern Universities Consortium for International Activities, MUCIA (n=4)
9. Organization for the Development of Central America, ODECA
10. Pan-American Airlines
11. Southeastern Consortium for International Development, SECID
12. The Partners of The Americas (n=4)

Note: The number in parentheses indicates the frequency of programs, projects, or assignments sponsored or funded. Where no figure is shown the frequency was one (n=1).
### Table 2G

**Sources of Sponsorship for International Development Programs and Projects Agricultural Teacher Educators Were Affiliated:**

*Private Foundations, Agencies, and Individuals, Religious Organizations, and Others*

**I. Private Foundations, Agencies and Individuals:**
1. Carnegie Foundation
2. Ford Foundation (n=6)
3. Fulbright Commission (n=3)
4. Kellog Foundation
5. Near East Foundation
6. Rotary International Foundation (n=2)
7. Anonymous Donor for the Iowa State University - University of Costa Rica Project

**II. Religious Organizations**
1. Christian Committee for Services to Algeria, (CCSA)
2. Christian Reform Church, Honduras
3. Church of the Brethren, Elgin, Illinois, USA
4. Methodist Churches of Nebraska, USA

**III. State Governments and Agencies in the United States**
1. The State of Kentucky
2. Office of the Governor, State of Mississippi
3. Mississippi Cooperative Extension Service

**IV. Other National Governments**
1. The Government of Belgium

**Note:** The number in parentheses indicates the frequency of programs, projects, or assignments sponsored or funded. Where no figure is shown the frequency was one (n=1).
Presented in Table 3A, 3B, and 3C are titles of programs, projects, and assignments as reported by teacher educators. Three teacher educators reported they could not recall the exact official titles of the projects with which they were involved. In cases where two or more teacher educators were on a mission to the same project, the title of the project was not duplicated.

Findings Relating to Objectives of the Study

The subsections discussed in this major section include:

1. Primary goals of projects or assignments
2. Specific responsibilities and activities of teacher educators while on foreign assignments
3. Other professionals and experts involved in projects
4. Specific accomplishments resulting from assignments
5. Major problems encountered while on foreign assignments
6. Future role of agricultural teacher education profession in international development
7. General recommendations for achieving agricultural and rural improvement in developing countries
8. Specific advice for success in foreign assignments

Primary Goals of Projects or Assignments

Assignments and projects were basically aimed primarily at seven primary aspects of the development process. The primary goals as reported are presented in Table 4 under the following clusters (In the
### Table 3A

**Titles of International Development Projects on Which Agricultural Teacher Educators Served: Education and Training**

<table>
<thead>
<tr>
<th>I. Extension Education:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. An Agricultural Extension Education Program</td>
</tr>
<tr>
<td>2. An Agricultural Delivery Systems No. 649-0112-1</td>
</tr>
<tr>
<td>3. The Instituto Nacional de Cooperativa de Educación – Penn State Project</td>
</tr>
<tr>
<td>4. The USAID-URI-University of Azores Project</td>
</tr>
<tr>
<td>5. Methods of Strengthening Lesotho Agricultural College to Improve Agricultural Extension Education in Lesotho</td>
</tr>
<tr>
<td>6. Cooperative Extension in University of Guadelajara</td>
</tr>
<tr>
<td>7. Mali Agricultural Officers Training Project</td>
</tr>
<tr>
<td>8. Farm Advisor Program</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Agricultural Teacher Education:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pacific Basin Agricultural Education Project</td>
</tr>
<tr>
<td>2. External Examiner in Agricultural Education</td>
</tr>
<tr>
<td>3. Agricultural Education in the Partners of the Americas</td>
</tr>
<tr>
<td>4. Developing a Plan for Agricultural Education</td>
</tr>
<tr>
<td>5. Developing a Plan for Studying the Needs for Agricultural Education in Northeastern Brazil</td>
</tr>
<tr>
<td>6. Expanding and Improving the College of Agriculture in Jamaica</td>
</tr>
<tr>
<td>7. An Agricultural Education and Training Project</td>
</tr>
<tr>
<td>8. Agricultural Education in Secondary School</td>
</tr>
<tr>
<td>9. The Development of a Faculty of Agriculture at the University of Ife, Nigeria</td>
</tr>
<tr>
<td>10. Evaluation of the Agricultural Education Program at Secondary School Level in Costa Rica</td>
</tr>
<tr>
<td>11. Teacher Preparation in Vocational Agriculture and Industrial Arts</td>
</tr>
<tr>
<td>12. Vocational Agriculture and Training in the Belgium Congo (now Congo-Brazzaville and Zaire)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. Rural and Adult Education:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rural Vocational Training Program (Iran)</td>
</tr>
<tr>
<td>2. A Pilot Training Program for Future Peace Corps Volunteers</td>
</tr>
<tr>
<td>3. Rural Secondary Education Project</td>
</tr>
<tr>
<td>4. Developing a Vocational Education Program for Illiterate Adults in Remote Areas of Iran</td>
</tr>
<tr>
<td>5. Developing an Income-Oriented Nonformal Education Program for Rural Lesotho</td>
</tr>
<tr>
<td>6. Developing Recommendations for Nonformal Education in Rural Areas (Afghanistan)</td>
</tr>
<tr>
<td>7. Rural School Teachers Development Center</td>
</tr>
<tr>
<td>8. Training Trainers for Rural Development in Tanzania</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. Seminars, Workshops, and General Education:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agricultural Education Workshop for Africa</td>
</tr>
<tr>
<td>2. Workshops Designed to Improve the Teaching Skills of Agricultural Faculty in the University of Indonesia</td>
</tr>
<tr>
<td>3. Seminar on Middle-level Agriculture Education for Western Asian Countries</td>
</tr>
<tr>
<td>4. The North Nyamira Education Project</td>
</tr>
<tr>
<td>5. Developing Four Regional Colleges of Education in India</td>
</tr>
<tr>
<td>6. Education and Culture in Eastern Africa</td>
</tr>
<tr>
<td>7. The Ohio State University Education Project in India</td>
</tr>
<tr>
<td>8. Tanzania – AID/AFR-C-1551</td>
</tr>
<tr>
<td>9. Comprehensive High School Project at Ifatoro</td>
</tr>
</tbody>
</table>
### Table 3B
**Titles of International Development Projects on which Agricultural Teacher Educators Served: Agricultural Production, Resources, and Rural Development**

#### I. Developing Agricultural Production
1. Technology Transfer
2. The Jordan Valley River Authority
3. Regional Cooperative Agricultural Program
4. The Saudi Arabia Agricultural Development Project
5. Special Upper Wayaga Valley River Project
6. Food Preservation: Using Solar Food Drying and Supplementary Heat
7. Small Farmer Technology
8. Nutrition Improvement Program

#### II. Institutional, Human, and Natural Resources Development
1. Institution Building
2. A Southern Manpower Development Project (Kenya)
3. Technical Exchange Program (Yugoslavia)
4. Freshwater Fisheries Development Project (The Philippines)
5. Education and Research Development in the Federal University of Santa Maria, Rio Grande de Sol, (Brazil)
6. Consultancy to the Eastern Caribbean Institute for Agriculture and Forestry: Agriculture Teacher Education Program
7. Management Information Evaluation System for Peace Corps Volunteers (Colombia)
8. Agricultural Manpower Development (Tanzania)
9. Agricultural Education Development in the State of Panama (Brazil)
10. Strengthening Sahelian Institutional Capabilities, (SSIC)
11. Developing a Graduate Faculty with Research Capabilities at the University of Rio Grande de Sol at Porto Legero (Brazil)
12. Fulbright Fellowship: Visiting Professor (Greece)
13. Ibb Secondary Agricultural Institute Project (North Yemen)
14. A Project to Develop the Faculty of Agriculture and Veterinary Medicine, Yola (Nigeria)
15. An Elementary School on a Farm (Honduras)
16. A Rural Development Project

### Table 3C
**Titles of International Development Projects on which Agricultural Teacher Educators Served: Research Studies and Others**

#### I. Research Studies:
1. A Feasibility Study
2. Manpower Study of the Educational Manpower Needed by Botswana
3. A Baseline Study of the Agricultural Sector in Jamaica
4. Developmental Study for Secondary Programs in Agricultural Education (Jamaica)
5. The Contributions of Taiwan's Academic and Vocational Agriculture Middle Schools to the Farming and Rural Leadership Performances of Their Senior Graduates
6. The University of Nebraska Study Tour of the People Republic of China

#### II. Others:
1. A Proposal for Institutional Development and Technical Assistance
2. An Exchange of Ideas and Personnel in the Partners of the Americas Program
3. Trade Missions (Iran, Kuwait, Dominican Republic)
parentheses is the number of goals for each cluster as reported):

(1) Evaluation and assessment of on-going programs and projects (n=13)

(2) Upgrading and improvement of existing programs and projects (n=11)

(3) Expansion and strengthening of programs and projects already in progress (n=16)

(4) Training and education programs (n=32)

(5) Development-related goals (n=49)

(6) Creation and establishment of new institutions and programs (n=4)

(7) Research-related projects (n=16)

Other goals of programs, projects and assignments included promoting intercultural understanding, inter-institutional collaboration and international trade in agricultural commodities as well as serving in capacities of external examiners.

Goals that were classified as development-related were reported with the highest frequency (n=49). Examples of these goals included systems, communications systems, institutional, instructional, substitute-crops, infrastructure, and manpower and human resources development.

The second largest cluster (n=32) of primary goals related to training and education projects. Projects directed at meeting the preservice (n=11) and inservice (n=8) needs of agriculture teachers and extension agencies were the most frequently reported. General education and rural sector education each had five projects reported. Refer to Table 4.
Table 4

Primary Goals of International Development Programs and Projects
Agricultural Teacher Educators Served While on Foreign Assignments

A. Evaluation and Assessment:
1. Curriculum evaluation
2. Institutional evaluation
3. Academic program evaluation (n=4)
4. Project evaluation (n=2)
5. Needs assessment (n=6)

B. Upgrading and Improvement Efforts:
1. Program improvement (n=2)
2. Instructional improvement (n=9)

C. Expansion and Strengthening Efforts:
1. Institutional expansion (n=6)
2. Institutional strengthening (n=4)
3. Strengthening institutional research capabilities
4. Program expansion (n=5)

D. Training and Education
1. Preservice training for agriculture teachers and extension agents (n=11)
2. Inservice training for agriculture teachers and extension agents (n=8)
3. Workshops for agricultural teachers and extension agents
4. Informal or Nonformal Education
5. Rural sector education (n=5)
6. General education/educational equity enhancement (n=5)
7. Nutrition-related education

E. Development-Related Goals
1. Curriculum development (n=5)
2. Communications systems development
3. Systems development
4. Curriculum materials development
5. Instructional materials development
6. Programs development for agricultural teacher and extension educators (n=9)
7. Natural resources development
8. Substitute crops development
9. Institutional development (n=6)
10. Infrastructure development
11. Manpower/human resources development (n=16)
12. Development of cooperation (n=2)
13. Development of agriculture-related industries (n=4)

F. Creation and Establishment Efforts:
1. Institutional establishment (n=2)
2. Curriculum design
3. Creation of technological transfer systems

G. Research-Related Goals:
1. Baseline studies (n=7)
2. Feasibility studies (n=3)
3. Institutional capability studies (n=3)
4. Pilot studies
5. Demonstrational studies (n=2)
6. Research problem identification (n=2)
7. Comparative analysis of educational establishments (n=3)

H. Other Goals:
1. Promotion of intercultural understanding (n=7)
2. External examination
3. Promoting export of agricultural commodities

Note: The number in parentheses shows the frequency for each goal as reported. Where no number is shown the frequency was one.
Sixteen projects were reported to enhance the expansion and strengthening of already existing programs. Another 16 projects were research-related. Thirteen project goals emphasized evaluation and assessment activities while 13 primary goals dealt with upgrading and improvement efforts. Again, refer to Table 4.

Specific Responsibilities and Activities of Agricultural Teacher Educators

Teacher educators reported their activities using over 60 action-words. Thirty-eight of these verbs were used more than once while 24 others were used only one time. The words are presented in Table 5.

The two commonest action-words teacher educators used in their testimonies were "to assist/help" (n=24) and "to develop" (n=24). Two other verbs that were dominant in the narratives were "to evaluate" (n=17) and "to teach" (n=17). Other action-words used with significant frequency were "to administrate" (n=13), "to advise" (n=13), "to assess" (n=11), "to consult" (n=11), "to conduct" (n=10), and "to recommend" (n=10).

Activities of teacher educators were partially synthesized into 18 activity-clusters as presented in Table 6A through Table 6R. The first activity-cluster related to design and development activities bearing on curriculum, curriculum materials, instructional materials, new courses, intended studies, and new programs. Also, the activities had direct bearing on agricultural education including teacher and extension education at secondary, post-secondary, and university levels. This activity-cluster is presented in Table 6A.
Table 5

Common Action-Words Agricultural Teacher Educators Used to Describe Their Activities while on Foreign Assignments

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Administrate (n=13)</td>
</tr>
<tr>
<td>2.</td>
<td>Advise (n=13)</td>
</tr>
<tr>
<td>3.</td>
<td>Assess (n=11)</td>
</tr>
<tr>
<td>4.</td>
<td>Assist/Help (n=24)</td>
</tr>
<tr>
<td>5.</td>
<td>Cooperate (n=3)</td>
</tr>
<tr>
<td>6.</td>
<td>Coordinate (n=3)</td>
</tr>
<tr>
<td>7.</td>
<td>Conduct (n=10)</td>
</tr>
<tr>
<td>8.</td>
<td>Construct (n=2)</td>
</tr>
<tr>
<td>9.</td>
<td>Consult (n=11)</td>
</tr>
<tr>
<td>10.</td>
<td>Design (n=6)</td>
</tr>
<tr>
<td>11.</td>
<td>Determine (n=24)</td>
</tr>
<tr>
<td>12.</td>
<td>Develop (n=7)</td>
</tr>
<tr>
<td>13.</td>
<td>Evaluate (n=17)</td>
</tr>
<tr>
<td>14.</td>
<td>Examine (n=2)</td>
</tr>
<tr>
<td>15.</td>
<td>Expand (n=2)</td>
</tr>
<tr>
<td>16.</td>
<td>Identify (n=4)</td>
</tr>
<tr>
<td>17.</td>
<td>Implement (n=2)</td>
</tr>
<tr>
<td>18.</td>
<td>Interview (n=4)</td>
</tr>
<tr>
<td>19.</td>
<td>Lead (n=9)</td>
</tr>
<tr>
<td>20.</td>
<td>Manage (n=2)</td>
</tr>
<tr>
<td>21.</td>
<td>Observe (n=5)</td>
</tr>
<tr>
<td>22.</td>
<td>Organize (n=6)</td>
</tr>
<tr>
<td>23.</td>
<td>Participate (n=3)</td>
</tr>
<tr>
<td>24.</td>
<td>Plan (n=3)</td>
</tr>
<tr>
<td>25.</td>
<td>Prepare (n=5)</td>
</tr>
<tr>
<td>26.</td>
<td>Promote (n=5)</td>
</tr>
<tr>
<td>27.</td>
<td>Provide (n=9)</td>
</tr>
<tr>
<td>28.</td>
<td>Recommend (n=10)</td>
</tr>
<tr>
<td>29.</td>
<td>Recruit (n=4)</td>
</tr>
<tr>
<td>30.</td>
<td>Research/study (n=6)</td>
</tr>
<tr>
<td>31.</td>
<td>Review (n=9)</td>
</tr>
<tr>
<td>32.</td>
<td>Select (n=5)</td>
</tr>
<tr>
<td>33.</td>
<td>Supervise/oversee (n=7)</td>
</tr>
<tr>
<td>34.</td>
<td>Teach (n=17)</td>
</tr>
<tr>
<td>35.</td>
<td>Train (n=8)</td>
</tr>
<tr>
<td>36.</td>
<td>Transfer (n=2)</td>
</tr>
<tr>
<td>37.</td>
<td>Visit (n=4)</td>
</tr>
<tr>
<td>38.</td>
<td>Write (n=5)</td>
</tr>
</tbody>
</table>

Notes:
1. In parentheses are the frequencies with which words were reported.
2. Twenty-four other words which were used only once were: add, analyze, arrange, appraise, determine, collect, devise, discuss, expand, gather, improve, initiate, institutionalize, interact, introduce, orient, plan, raise, revise, share, strengthen, update, upgrade, and validate.
Table 6A

Activity-clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments: Design and Development Activities

To Design or Develop:

1. Curriculum for a 2-year agricultural education program
2. Curriculum for a 2-year home economics program
3. Curriculum for agricultural mechanics program
4. Curricula for undergraduate agricultural education programs (n=7)
5. Curricula for agricultural extension education programs (n=3)
6. Curriculum for a dairy science program
7. Curriculum and instructional materials for agricultural education programs (n=3)
8. Curriculum materials for teachers of agriculture (n=2)
9. Introductory courses in agricultural education
10. Coursework in agricultural extension education
11. The professional agricultural teacher education component of an agricultural education program
12. Student teaching component of an agricultural education curriculum
13. Program for a dairy science curriculum
14. Instruments for evaluating programs
15. A research proposal for agricultural development
16. A research training course for a university faculty
17. A pilot study for agricultural development for three East African countries
18. Design a 10-week course for agricultural extension personnel
19. The logistics associated with agricultural training programs

Note: The number in parentheses indicates the frequency with which each activity was reported. Where no number is shown the frequency is one.

The second activity-cluster comprised the action-words (a) to conduct or (b) to provide. Most of the activities were related to conducting inservice training for agriculture teachers and extension personnel. Four activities were related to seminars. Activities relating to workshops were reported. However, their number was not disclosed. Refer to Table 6B for these activities.
Table 6B

Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments:
Conduct or Provide

To Conduct or Provide:

1. Seminars on agricultural technology transfer (n=4)
2. Preservice training in agricultural mechanics for teachers of agriculture or extension agents
3. Inservice education for teachers of agriculture (n=2)
4. Inservice lessons on student follow-up strategies and techniques
5. Inservice lessons on improved teaching techniques
6. Inservice education for university faculty to improve their teaching
7. Inservice lessons for employees of a national institute for agricultural development on improving delivery techniques
8. Inservice education workshop for agriculture teachers at secondary technical schools of agriculture
9. Week-long workshop for agriculture teachers on teaching methods, developing instructional materials, writing course objectives, and revising courses
10. Classes for the faculty of a college of agriculture on teaching methodology
11. Workshops for agricultural personnel in 13 West Asian countries
12. Feasibility study for a development project
13. Background research for an on-going development project
14. Consultative activities for a planning team in vocational education
15. A mid-term evaluation of a development project
16. Field excursions to observe agricultural extension activities
17. A needs assessment study for land-grant status

Note: The number in parentheses indicates the frequency with which each activity was reported. Where no number is shown the frequency is one.

Presented in Table 6C are activities on different forms of advisement offered by teacher educators. They advised students, farm managers of government state farms, members of university faculties, university administrators, and government officials on a wide variety of issues ranging from regular academic counseling to procurement and operations of farm machinery and from long-range goals for agricultural education at the institutional level to the dissemination of agricultural information nation-wide.
### Table 6C

**Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments:**

**Advisement**

<table>
<thead>
<tr>
<th>To Advise:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Students in agricultural education programs (n=3)</td>
</tr>
<tr>
<td>2. Farm managers on procurement, operations, and management of farm machinery and equipment</td>
</tr>
<tr>
<td>3. Two educational establishments on long-range goals for agricultural education goals and implementation of agricultural development programs</td>
</tr>
<tr>
<td>4. Two educational establishments on evaluation of agricultural development programs</td>
</tr>
<tr>
<td>5. On the organization of relevant research on agricultural information and improvement</td>
</tr>
<tr>
<td>6. On the administration of relevant research on agricultural information and improvement</td>
</tr>
<tr>
<td>7. On the conduct of relevant research on agricultural information and improvement</td>
</tr>
<tr>
<td>8. On the preparation of agricultural information for rural agricultural high schools</td>
</tr>
<tr>
<td>9. On the dissemination of agricultural information to rural agricultural high schools</td>
</tr>
<tr>
<td>10. On the development of library facilities for agricultural research</td>
</tr>
<tr>
<td>11. On developing library facilities for the teaching of agriculture</td>
</tr>
<tr>
<td>12. Counterparts in a host country on how to establish goals for viable streams for agricultural education</td>
</tr>
<tr>
<td>13. On the establishment of agricultural mechanics short-course seminars for agriculture teachers and extension agents</td>
</tr>
<tr>
<td>14. On the use of audio-visuals for agriculture and industrial arts education</td>
</tr>
<tr>
<td>15. In-country counterparts on establishing goals and viable agricultural streams in four Colleges of Education.</td>
</tr>
<tr>
<td>16. Faculty of a 2-year Teacher Education Program</td>
</tr>
</tbody>
</table>

**Note:** The number in parentheses indicates the frequency with which each activity was reported. Where no number is shown the frequency is one.

Teacher educators reported providing assistance in different forms and to different groups of people. Table 6D contains the activity-cluster of such responsibilities. For example, they provided help to rural farmers on improving their output, assisted their counterparts with student advisement and helped officials of ministries (particularly agriculture and education) to strengthen, expand, or improve their capacities.
Table 6D

Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments:
Assistance or Help

<table>
<thead>
<tr>
<th>To Assist or Help:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Help rural farmers and schools in raising their agricultural production</td>
</tr>
<tr>
<td>2. Help natives to improve their home construction technologies using mud-bricks</td>
</tr>
<tr>
<td>3. Help natives to improve the conditions of their poultry houses by using bamboo as building material</td>
</tr>
<tr>
<td>4. Help natives adopt the use of mud-bricks in the construction of ovens for domestic bread-making</td>
</tr>
<tr>
<td>5. Assist in student advisement at secondary school and university levels</td>
</tr>
<tr>
<td>6. Assist in planning and organizing a comprehensive farm management training program for a host country</td>
</tr>
<tr>
<td>7. Assist in strengthening the agricultural extension function of a bureau within a ministry of a national government</td>
</tr>
<tr>
<td>8. Assist in conducting activities for youth in residential schools in a host country</td>
</tr>
<tr>
<td>9. Assist in staff development for high schools and universities through award of formal fellowships</td>
</tr>
<tr>
<td>10. Assist in selecting &quot;so-called good&quot; students for further studies in United States institutions (n=2)</td>
</tr>
<tr>
<td>11. Assist in recruiting peace corps volunteers</td>
</tr>
<tr>
<td>12. Assist in training peace corps volunteers</td>
</tr>
<tr>
<td>13. Assist in establishing the base plan for a project.</td>
</tr>
<tr>
<td>14. Assist staff of the Secretary of Education in course planning for new programs.</td>
</tr>
<tr>
<td>15. Assist staff of the Secondary of Education in planning the facility for new programs.</td>
</tr>
<tr>
<td>16. Assist in developing teacher education curriculum</td>
</tr>
<tr>
<td>17. Assist in establishing a base plan for a project in a Pacific country.</td>
</tr>
<tr>
<td>18. Help establish demonstration farms in an Asian country</td>
</tr>
</tbody>
</table>

Note: The number in parentheses indicates the frequency with which each activity was reported. Where no number is shown the frequency is one.

Teacher educators assumed responsibilities such as supervisors and managers of projects and programs. These activities are displayed in Table 6E. Teacher educators managed, or supervised other participants at development project sites. Also, they supervised, for example, data collection, personnel during farm demonstrations, student teaching, and student health, food, and housing services.
Table 6E

**Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments:**

**Management or Supervision**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Manage, Oversee, or Supervise:</td>
<td></td>
</tr>
<tr>
<td>1. Operations of workshops</td>
<td></td>
</tr>
<tr>
<td>2. Data collection during the conduct of a research project</td>
<td></td>
</tr>
<tr>
<td>3. Personnel during farm demonstrations</td>
<td></td>
</tr>
<tr>
<td>4. Teaching faculty of universities</td>
<td></td>
</tr>
<tr>
<td>5. Student food services</td>
<td></td>
</tr>
<tr>
<td>6. Student housing services</td>
<td></td>
</tr>
<tr>
<td>7. Student health services</td>
<td></td>
</tr>
<tr>
<td>8. Student teachers during student teaching</td>
<td></td>
</tr>
<tr>
<td>9. Agricultural extension personnel</td>
<td></td>
</tr>
<tr>
<td>10. (Oversee) Trainers during their first teaching lessons</td>
<td></td>
</tr>
<tr>
<td>11. (Oversee) Farm implements and machinery for a farm management training institute</td>
<td></td>
</tr>
<tr>
<td>12. (Manage) A development project</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Each activity was reported only once.

Table 6F

**Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments:**

**Teaching**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Teach:</td>
<td></td>
</tr>
<tr>
<td>1. Agricultural courses</td>
<td></td>
</tr>
<tr>
<td>2. Inservice courses to agriculture teachers (n=2)</td>
<td></td>
</tr>
<tr>
<td>3. Introductory agricultural education courses to freshmen of an agricultural college</td>
<td></td>
</tr>
<tr>
<td>4. Short courses in communications theory and skills to agricultural extension personnel</td>
<td></td>
</tr>
<tr>
<td>5. Courses in agricultural teacher education</td>
<td></td>
</tr>
<tr>
<td>6. Secondary school agriculture</td>
<td></td>
</tr>
<tr>
<td>7. Secondary school biology</td>
<td></td>
</tr>
<tr>
<td>8. Summer agricultural mechanics courses to agriculture teachers</td>
<td></td>
</tr>
<tr>
<td>9. Inservice classes on teaching methods to agriculture teachers</td>
<td></td>
</tr>
<tr>
<td>10. Methods courses to agriculture officers</td>
<td></td>
</tr>
<tr>
<td>11. Courses on farm management to rural development trainers</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Except for Item 2, each activity was reported only once.
Table 6C

<table>
<thead>
<tr>
<th>Activity-Clusters</th>
<th>Agricultural Teacher Educators Engaged in while on Foreign Assignments: Consultation</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Consult:</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>With faculty or departments of agricultural education in colleges of agriculture on their programs</td>
</tr>
<tr>
<td>2.</td>
<td>With students of agricultural education programs in colleges of agriculture on their experiences</td>
</tr>
<tr>
<td>3.</td>
<td>With officials of a host government on developing a training center in a South American country</td>
</tr>
<tr>
<td>4.</td>
<td>With officials of a host government on organizing student teaching programs in agricultural schools</td>
</tr>
<tr>
<td>5.</td>
<td>On how to design a model for program evaluation</td>
</tr>
<tr>
<td>6.</td>
<td>With local community leaders to determine needs of their people</td>
</tr>
<tr>
<td>7.</td>
<td>With 4-H leaders to determine needs of the youth of the local communities</td>
</tr>
<tr>
<td>8.</td>
<td>With leaders of a host government to determine needs of the country</td>
</tr>
<tr>
<td>9.</td>
<td>On developing instructional materials of an agricultural program</td>
</tr>
<tr>
<td>10.</td>
<td>On how to assess teaching methods at a training center</td>
</tr>
<tr>
<td>11.</td>
<td>On needs assessment</td>
</tr>
</tbody>
</table>

Note: Except for Item No. 1 which was reported twice, the rest of the items have a frequency of one.

Table 6H

<table>
<thead>
<tr>
<th>Activity-Clusters</th>
<th>Agricultural Teacher Educators Engaged in while on Foreign Assignments: Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Evaluate:</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Already existing agricultural education component of a project</td>
</tr>
<tr>
<td>2.</td>
<td>Curricula for agriculture teacher and/or extension education programs (n=2)</td>
</tr>
<tr>
<td>3.</td>
<td>The performance of agriculture teachers</td>
</tr>
<tr>
<td>4.</td>
<td>Publications used in agricultural education and training programs</td>
</tr>
<tr>
<td>5.</td>
<td>Instructional component of training programs (n=3)</td>
</tr>
<tr>
<td>6.</td>
<td>Entire academic programs</td>
</tr>
<tr>
<td>7.</td>
<td>Post-secondary institutes of agriculture</td>
</tr>
<tr>
<td>8.</td>
<td>The suitability of the level of teacher preparation of training programs</td>
</tr>
<tr>
<td>9.</td>
<td>Development projects (n=2)</td>
</tr>
<tr>
<td>10.</td>
<td>Student performance</td>
</tr>
</tbody>
</table>

Note: The number in parentheses indicates the frequency with which each activity was reported. Where no number is shown, the frequency is one.
Teaching was a principal activity of teacher educators in their foreign assignments. They taught agriculture at the tertiary level. Also, teacher educators taught classes in agricultural extension. One of the educators taught biology. The teaching activity-cluster is displayed in Table 6F.

Another activity-cluster with which teacher educators were involved while on foreign assignments was consultation. Displayed in Table 6G are ten consultation activities performed by some teacher educators. They consulted not only with top-level officials of host governments on issues of national interests but also with members of university faculties, students in agricultural colleges and colleges of agriculture, and even local community leaders. Issues for consultation ranged from assessment of needs of local communities to the design of models for evaluating programs.

Evaluation-related activities constituted another activity-cluster for teacher educators. It was also a principal responsibility assumed by the educators while on project sites abroad. There were 14 reported evaluation activities bearing on curricula, teachers, students, projects, or programs as these related to agricultural education and rural development. The cluster is presented in Table 6H.

A related activity-cluster to evaluation was assessment. Seven assessment activities were identified to have been undertaken as presented in Table 6I. For example, community needs, status need for an institution, and functional and inservice needs were assessed by some teacher educators charged with such responsibility.

Training activities were undertaken by teacher educators as revealed in Table 6J. Seven training activities were reported. They
training agricultural extension personnel, agriculture teachers, Chinese interpreters, peace corps volunteers, and farm managers.

Another activity-cluster identified from the reports related to the establishment of new programs, farms, workshops, schools, and base-plans for development projects. These responsibilities are presented in Table 6K.

Seven teacher educators reported involvement in review activities. These activities are listed in Table 6L. These responsibilities were related to issues such as activities of the extension division of a ministry of agriculture, curriculum, training programs, examinations, and conditions of service for peace corps volunteers on the field.

Coordinating activities of others, plans, services, and programs constituted another cluster of responsibilities for some teacher educators. (Refer to Table 6M). Also, five teacher educators reported involved in activities such as organizing peoples, seminars, field trips, workshops, and training programs for agriculture teachers and extension agents. These activities are presented in Table 6N.

Table 60 contains activities for three clusters of participation, observation, and interviewing. Eleven teacher educators reported the involvement in participating, observing, or interviewing activities. One educator reported that he participated in group discussions and meetings involving high-level personnel of host governments and colleagues. Four educators reported observing educational processes, facilities and programs. The report by one educator indicated he conducted three interviews that involved students of agriculture, members of agriculture faculties and graduates of agriculture programs.
### Table 6I

**Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments:**

<table>
<thead>
<tr>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Needs of a post-secondary agricultural institutes</td>
</tr>
<tr>
<td>2. A need for attainment of land-grant status by a university</td>
</tr>
<tr>
<td>3. Extension functions of a ministry of agriculture</td>
</tr>
<tr>
<td>4. Extension education components of three countries</td>
</tr>
<tr>
<td>5. Inservice needs of countrywide extension education</td>
</tr>
<tr>
<td>6. The need for silos and silage technology</td>
</tr>
<tr>
<td>7. A need for changes in and additions to an ongoing agricultural education curriculum</td>
</tr>
<tr>
<td>8. Needs of an agricultural education program</td>
</tr>
</tbody>
</table>

**Note:** Each activity was reported only once.

### Table 6J

**Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments:**

<table>
<thead>
<tr>
<th>Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Farm management personnel for government state farms</td>
</tr>
<tr>
<td>2. Interviews to use Chinese in a research project</td>
</tr>
<tr>
<td>3. Peace corps volunteers in problem identification</td>
</tr>
<tr>
<td>4. Peace corps volunteers on needs assessment</td>
</tr>
<tr>
<td>5. Peace corps volunteers on how to develop activity plans</td>
</tr>
<tr>
<td>6. A native to become dean of a College of Agriculture and Life Sciences</td>
</tr>
<tr>
<td>7. Agriculture teachers and extension agents to become professionally competent</td>
</tr>
</tbody>
</table>

**Note:** Each activity was reported only once.

### Table 6K

**Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments:**

<table>
<thead>
<tr>
<th>Establishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A workshop for inservice training for agricultural extension personnel</td>
</tr>
<tr>
<td>2. A rural farm</td>
</tr>
<tr>
<td>3. An agricultural education program in a college of agriculture</td>
</tr>
<tr>
<td>4. Demonstration farms (2)</td>
</tr>
<tr>
<td>5. An agricultural college</td>
</tr>
<tr>
<td>6. An agricultural program in a comprehensive high school</td>
</tr>
<tr>
<td>7. A base plan for a development project</td>
</tr>
</tbody>
</table>

**Note:** Each activity was reported only once except Item No. 4.
While on assignments abroad six teacher educators were also charged with responsibilities of (1) identifying potential trainees, problems, and areas of mutual interests for inter-university cooperation, (2) selecting sites for educational facilities and participants for further training, and (3) recruiting employees for a university and scientists for agricultural experiment stations. This activity-cluster is presented in Table 6P. Also, six teacher educators were involved in activity-clusters relating to (1) preparing groundwork for program goals and objectives and final examination papers for students in vocational education and (2) writing a project paper, reports on observations and a proposal for establishing an agricultural education program. These activities are reported in Table 6Q.

Presented in Table 6R is a miscellany of 28 activities teacher educators undertook. They were each reported only once. Some of the activities were the promotion of sale of agricultural commodities, paying visits to schools in host countries, sharing of new ideas with partners in host countries, serving as a vice-principle in a secondary school in an African country. Others included the validation of evaluation instruments, analysis of resources needs data, construction of school buildings and facilities.

Co-Involvement With Other Experts in International Development Activities

Over 60 teacher educators reported that they co-worked with experts from other disciplines and subdisciplines while they were on foreign assignments.

After excluding duplications of professional titles and also accounting for specialties within an occupational cluster, 126 different
Table 6L

**Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments: Review Activities**

To Review:
1. Activities of the extension division of a ministry of agriculture
2. Agricultural education training programs
3. Curriculum issues
4. Examination issues
5. Examination papers
6. Existing instructional materials to determine their suitability for training programs
7. Field conditions under which peace corps volunteers worked

Note: Each activity was reported only once.

Table 6M

**Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments: Coordination**

To Coordinate:
1. Activities of a visiting team of agricultural extension personnel from host country
2. Plans for further inter-institution exchanges of faculty
3. Activities of a home university team while it was in host country
4. Student orientation programs
5. Student matriculation programs
6. Student housing, health, and food services programs
7. Internship programs for extension agents

Note: Each activity reported only once.

Table 6N

**Activity-Clusters Agricultural Teacher Educators Engaged in while on Foreign Assignments: Organization**

To Organize:
1. Peoples of rural communities to construct schools
2. A seminar on rural education
3. Field trips for agriculture students during vacations
4. Agriculture teacher and extension training programs
5. Workshops for agricultural education personnel

Note: Each activity was reported only once.
Table 60

**Activity-Clusters Agricultural Teacher EducatorsEngaged in while on Foreign Assignments:**

*Participation, Observation, and Interview*

<table>
<thead>
<tr>
<th>To Participate, Observe, or Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Participate in discussions on the formation of an agricultural extension service within a ministry of agriculture</td>
</tr>
<tr>
<td>2. Participate in a workshop on strategies for improving agricultural education in Africa</td>
</tr>
<tr>
<td>3. Participate in meetings of agricultural education technical advisors</td>
</tr>
<tr>
<td>4. Participate in a seminar on use of solar food dryers</td>
</tr>
<tr>
<td>5. Observe facilities of an agricultural college</td>
</tr>
<tr>
<td>6. Observe the different programs of an agricultural college</td>
</tr>
<tr>
<td>7. Observe processes of an agricultural college</td>
</tr>
<tr>
<td>8. Observe teaching methods used in training programs</td>
</tr>
<tr>
<td>9. Interview students of an agricultural education program about their training</td>
</tr>
<tr>
<td>10. Interview faculty of an agricultural education program about their overall program</td>
</tr>
<tr>
<td>11. Interview graduates of agricultural high school in a host country</td>
</tr>
</tbody>
</table>

*Note: Each activity was reported only one time.*

Table 6P

**Activity-Clusters of Agricultural Teacher Educators Engaged In while on Foreign Assignments: Identification, Selection, and Recruitment**

<table>
<thead>
<tr>
<th>To Identify, Select, or Recruit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify areas of mutual interests for a home university and a host institution</td>
</tr>
<tr>
<td>2. Identify persons from home institution to be involved in inter-university exchange programs</td>
</tr>
<tr>
<td>3. Identify a doctoral research problem</td>
</tr>
<tr>
<td>4. Select sites for two agriculture experiment stations</td>
</tr>
<tr>
<td>5. Select natives for training and education abroad</td>
</tr>
<tr>
<td>6. Select participants for 2-year post-secondary training in agricultural extension</td>
</tr>
<tr>
<td>7. Select participants for 3-year diploma training in agricultural extension and research</td>
</tr>
<tr>
<td>8. Recruit permanent and temporary employees for a college of agriculture</td>
</tr>
<tr>
<td>9. Recruit scientist for agricultural experiment stations</td>
</tr>
</tbody>
</table>

*Note: Each activity was reported only one time.*
| Table 6Q | Activity-Clusters Agricultural Teacher Educators Engaged in While on Foreign Assignments: Preparation and Writing |
|----------------------------------------------------------|
| To Prepare or Write:                                    |
| 1. Prepare groundwork by planning and identifying program goals and objectives |
| 2. Prepare final examinations for students of three vocational schools |
| 3. Write a sub-project document for a development project |
| 4. Write a report on observations and evaluations        |
| 5. Write a project paper                                 |
| 6. Write a proposal for agricultural education component of a broader development plan |

| Table 6R | Activity-Clusters Agricultural Teacher Educators Engaged in While on Foreign Assignments: Miscellaneous |
|----------------------------------------------------------|
| 1. To promote the sale of agricultural commodities       |
| 2. To introduce hybrid seed corn to rural farming communities |
| 3. To ensure provision of curriculum and support materials |
| 4. To plan courses for employees directly under the secretary of a ministry of agriculture |
| 5. To experience the culture and life in other countries  |
| 6. To share new ideas and common beliefs with partners in an inter-cultural exchange program |
| 7. To lead teams or portions of professionals from different (or the same) disciplines on assignments |
| 8. To transfer non-regulatory extension functions from a government ministry to a university |
| 9. To transfer the structure and functions of a 4-H organization from a government ministry to a university system |
| 10. To visit schools                                     |
| 11. To serve as a special assistant to the director of a division within a government ministry |
| 12. To serve as vice-principal of a secondary school      |
| 13. To serve as a principal of a secondary school        |
| 14. To serve as Provost for Student Affairs of a university |
| 15. To validate evaluation instruments                    |
| 16. To construct school buildings and other facilities   |
| 17. To perform administrative duties for a team on project site |
| 18. To analyze resources needs data                      |
| 19. To analyze an institution's capability to meet identified needs |
| 20. To cooperate with researchers in an agricultural university in designing and developing improved machinery and equipment |
| 21. To make recommendations following needs assessments, evaluations, and observations |
| 22. To direct agricultural training programs             |
| 23. To direct a 3-week seminar on rural youth for development |
| 24. To direct activities of an agricultural extension training school |
| 25. To administrate a development project                |
| 26. To vaccinate oxen against diseases (streplococcus and trypanosomiasis) |
| 27. To suggest the selection of teaching materials that are obtainable from the United States |
| 28. To initiate a project design process for a development program. |
titles were identified from the reports of teacher educators. These professional titles are grouped into eight major clusters which are presented in Table 7. Agriculturalists of various specialties who co-worked with most teacher educators included fish nutrition experts, plant breeders, foresters, food technologists, soil testing experts, and veterinary parasitologists. This group was the largest cluster with 56 professional titles. Next, teacher educators co-worked with administrators of a variety of organizations and agencies. As the second largest cluster of experts, this group consisted of 18 different titles including deans of colleges within university systems then former directors of extension services, experiment stations, and of peace corps volunteer outposts in two host countries, a former president of a university, a member of a board of regents of a university, and a school principal, all from the United States of America.

The third largest cluster of professional titles included educators in several different fields. The 16 titles, excluding that of the agricultural teacher educator, included the extension agent, agriculture teacher, educator in business education, adult educator, special education expert, community education specialist, English language specialist, and an educational evaluator. Three types of social scientists who worked with teacher educators were sociologists, rural sociologists, and anthropologists. Business-related and industry-related professionals were also reported to have been involved in a number of development projects and activities abroad. They were businessmen, an internal auditor of a United States regional telephone network company, a television production specialist, and an industrial technology expert. Representatives from financial institutions were
Table 7

<table>
<thead>
<tr>
<th>Titles of Non-Agricultural Teacher Educators Who Co-Worked with Agricultural Teacher Educators in International Development Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Agriculturalists:</strong></td>
</tr>
<tr>
<td>1. Agronomist</td>
</tr>
<tr>
<td>2. Home Economist</td>
</tr>
<tr>
<td>3. Nutritionist</td>
</tr>
<tr>
<td>4. Agricultural Engineer</td>
</tr>
<tr>
<td>5. Agricultural Mechanics Specialist</td>
</tr>
<tr>
<td>6. Entomologist</td>
</tr>
<tr>
<td>7. Irrigation Specialist</td>
</tr>
<tr>
<td>8. Veterinarian</td>
</tr>
<tr>
<td>9. Livestock Specialist</td>
</tr>
<tr>
<td>10. Soil Testing Specialist</td>
</tr>
<tr>
<td>11. Animal Scientist</td>
</tr>
<tr>
<td>12. Plant Breeder</td>
</tr>
<tr>
<td>13. Water Management Specialist</td>
</tr>
<tr>
<td>14. Food Scientist</td>
</tr>
<tr>
<td>15. Soil Conservation Specialist</td>
</tr>
<tr>
<td>16. Soil Fertility Specialist</td>
</tr>
<tr>
<td>17. Rain-fed Crops Specialist</td>
</tr>
<tr>
<td>18. Irrigated Crops Specialist</td>
</tr>
<tr>
<td>19. Farm Management Specialist</td>
</tr>
<tr>
<td>20. Plant Protection Specialist</td>
</tr>
<tr>
<td>21. Forester</td>
</tr>
<tr>
<td>22. Fisheries Expert</td>
</tr>
<tr>
<td>23. Fish Diseases Expert</td>
</tr>
<tr>
<td>24. Fish Nutrition Expert</td>
</tr>
<tr>
<td>25. Marine Scientist</td>
</tr>
<tr>
<td>26. Agricultural Economist</td>
</tr>
<tr>
<td>27. Agricultural Development Economist</td>
</tr>
<tr>
<td>28. Veterinary Parasitologist</td>
</tr>
<tr>
<td>29. Farm Manager</td>
</tr>
<tr>
<td>30. Cooperative Specialist</td>
</tr>
<tr>
<td>31. Food Stabilization Expert</td>
</tr>
<tr>
<td>32. Beef Cattle Specialist</td>
</tr>
<tr>
<td>33. Swine Specialist</td>
</tr>
<tr>
<td>34. Dairy Cattle Specialist</td>
</tr>
<tr>
<td>35. Horticulturist</td>
</tr>
<tr>
<td>36. Range Science Expert</td>
</tr>
<tr>
<td>37. Poultry Scientist</td>
</tr>
<tr>
<td>38. Meat Scientist</td>
</tr>
<tr>
<td>39. Plant Protection Specialist</td>
</tr>
<tr>
<td>40. Seed Production Specialist</td>
</tr>
<tr>
<td>41. Agricultural Administration Specialist</td>
</tr>
<tr>
<td>42. Food Technologist</td>
</tr>
<tr>
<td>43. Soils Resources Management</td>
</tr>
<tr>
<td>44. Animal Husbandry Specialist</td>
</tr>
<tr>
<td>45. Agricultural Journalist</td>
</tr>
<tr>
<td>46. Agricultural Curriculum</td>
</tr>
<tr>
<td>47. Pathologist (Plant)</td>
</tr>
<tr>
<td>48. Irrigation Hydraulics Specialist</td>
</tr>
<tr>
<td>49. Pasture Ecology Specialist</td>
</tr>
<tr>
<td>50. Plant Geneticist</td>
</tr>
<tr>
<td>51. Biometrician (Animal Husbandry)</td>
</tr>
<tr>
<td>52. Range Livestock Management Specialist</td>
</tr>
<tr>
<td>53. Pasture Improvement Specialist</td>
</tr>
<tr>
<td>54. Clinical Pathologist (Vet. Science)</td>
</tr>
<tr>
<td>55. Clinical Surgeon (Veterinary Science)</td>
</tr>
<tr>
<td>56. Agricultural Chemistry Specialist</td>
</tr>
</tbody>
</table>

<p>| <strong>II. Administrators:</strong> |
| 1. School Principal, a U.S. High School |
| 2. Dean, College of Fine Arts, a U.S. university |
| 3. School Administrator, a U.S. District School |
| 4. Member, Board of Regents of a U.S. university |
| 5. Former President, U.S. university |
| 6. Former Director, Experiment Station of a U.S. university |
| 7. Former Director of State Extension Service in the U.S. |
| 8. Former Vice-President, a U.S. University Extension Work |
| 9. Former Director, Peace Corps Volunteers |
| 10. Personnel of a Ministry of Agriculture in a host country |
| 11. Personnel of a Ministry of Education in a host country |
| 12. Assistant Director, Extension Service, a U.S. university |
| 13. Director, International Programs, a U.S. university |
| 14. Dean, College of Agriculture, U.S. university |
| 15. Associate Dean, College of Agriculture, a U.S. university |
| 16. Assistant Deputy Director, International Development Training, USDA |
| 17. Project Director, USDA |
| 18. Administrator, Fiscal Matters |</p>
<table>
<thead>
<tr>
<th>III. Educators:</th>
<th>9. Industrial Education Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Extension Agent</td>
<td>11. Vocational Educator (not in Agriculture)</td>
</tr>
<tr>
<td>3. Vocational Agricultural Teacher</td>
<td>12. Special Education Expert</td>
</tr>
<tr>
<td>5. Community Education Specialist</td>
<td>14. Mathematics Educator</td>
</tr>
<tr>
<td>6. High School Teacher</td>
<td>15. English Specialist</td>
</tr>
<tr>
<td>8. Adult Educator</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV. Social Scientists:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sociologist</td>
<td></td>
</tr>
<tr>
<td>2. Rural Sociologist</td>
<td></td>
</tr>
<tr>
<td>3. Anthropologist</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>V. Business Persons:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Businessmen</td>
<td></td>
</tr>
<tr>
<td>2. Internal Auditor</td>
<td></td>
</tr>
<tr>
<td>3. T.V. Production Specialist</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VI. Industrialists:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Industrial</td>
<td></td>
</tr>
<tr>
<td>Technology Expert</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VII. Financiers:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Consultant</td>
<td></td>
</tr>
<tr>
<td>2. Banker</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VIII. Others:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Elementary School Teacher</td>
<td>16. Workshop Coordinator</td>
</tr>
<tr>
<td>3. Local Priest</td>
<td>17. House Mother</td>
</tr>
<tr>
<td>4. Representatives</td>
<td>18. House Father</td>
</tr>
<tr>
<td>5. Federation</td>
<td>19. A Clinical Medicine Specialist</td>
</tr>
<tr>
<td>7. Communications</td>
<td>21. Manpower Specialist</td>
</tr>
<tr>
<td>8. Psychologist</td>
<td>22. Community and Organizational</td>
</tr>
<tr>
<td>10. Professor of</td>
<td>24. Institutional Development</td>
</tr>
<tr>
<td>History</td>
<td>25. Research Management Specialist</td>
</tr>
<tr>
<td>11. Medical Officer</td>
<td>26. Business Health Officer</td>
</tr>
<tr>
<td>12. Pathologist</td>
<td>27. Learning Resources Center</td>
</tr>
<tr>
<td>13. Economist</td>
<td></td>
</tr>
<tr>
<td>14. Peace Corps</td>
<td></td>
</tr>
<tr>
<td>Volunteers</td>
<td></td>
</tr>
</tbody>
</table>
also involved in some projects and assignments teacher educators undertook. There was a consultant from the World Bank and a banker from a United States bank.

Finally, there were more than 20 other professional titles that constituted a miscellaneous cluster. The experts in this cluster included a lawyer, a psychologist, a professor of history, a local priest, a communications specialist, an economist, a clinical medicine specialist, a manpower specialist, and peace corps volunteers.

**Major Problems Agricultural Teacher Educators Encountered**

Three main subsections are presented each addressing a cluster of major problems educators reported they encountered while on foreign assignments. First, there were location-specific problems which teacher educators encountered while on project sites. These were the obstacles arising from within the project site and among project personnel on site. Thirty-eight such obstacles were reported. There were similar themes that recurred in the testimonies by teacher educators.

In a descending order of frequency, the leading six of the 38 location specific problems were communications and logistics ($n=19$), language barrier ($n=18$), travel and security ($n=13$), unwillingness or slowness of natives to accept new concepts ($n=9$), time was inadequate ($n=9$), and lack of support materials ($n=8$). Refer to Table 8A for the remaining 32 problems as reported.

Secondly, teacher educators encountered two types of problems external to the project sites. The first type encompassed problems related to governments, peoples, and institutions of host countries and the second set of problems stemmed from the United States or other sponsors of projects. Twenty-nine specific problems bearing on host
Table 8A

Major Problems Agricultural Teacher Educators Encountered While on Foreign Assignments: Location-Specific

<table>
<thead>
<tr>
<th>Problem</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remoteness of location - inaccessibility</td>
<td>(n=2)</td>
</tr>
<tr>
<td>Lack of facilities</td>
<td>(n=8)</td>
</tr>
<tr>
<td>Lack or shortage of equipment</td>
<td></td>
</tr>
<tr>
<td>Lack or shortage of support materials</td>
<td></td>
</tr>
<tr>
<td>Un-met secretarial needs and staff services</td>
<td>(n=3)</td>
</tr>
<tr>
<td>Over-worked host country counterparts</td>
<td></td>
</tr>
<tr>
<td>Over-crowded curricula in Agricultural programs</td>
<td></td>
</tr>
<tr>
<td>Low prestige of Agricultural Extension work as perceived by local communities</td>
<td></td>
</tr>
<tr>
<td>Lack of knowledge as to what was available on site</td>
<td>(n=3)</td>
</tr>
<tr>
<td>Lack of vacancies for qualified students</td>
<td></td>
</tr>
<tr>
<td>Lack of land for demonstration work</td>
<td></td>
</tr>
<tr>
<td>Failure on part of students to understand need for and importance of &quot;hands-on work&quot;</td>
<td></td>
</tr>
<tr>
<td>Failure on part of natives to understand need for and importance of &quot;hands-on work&quot;</td>
<td></td>
</tr>
<tr>
<td>Shortage of counterparts with whom to work in host country</td>
<td></td>
</tr>
<tr>
<td>Overcoming deeply rooted beliefs and superstitions of the natives.</td>
<td></td>
</tr>
<tr>
<td>Buildings not specifically designed for project</td>
<td></td>
</tr>
<tr>
<td>Lack of instructional materials in native language</td>
<td></td>
</tr>
<tr>
<td>Lack of instructional materials at level of students</td>
<td></td>
</tr>
<tr>
<td>Unwillingness on part of counterparts to act</td>
<td></td>
</tr>
<tr>
<td>Time, &quot;We needed more of it.&quot; (n=9)</td>
<td></td>
</tr>
<tr>
<td>Conflict between goals of project as written and actual needs of local community (n=5)</td>
<td></td>
</tr>
<tr>
<td>The diversity in the number of responsibilities of the agricultural educator</td>
<td></td>
</tr>
<tr>
<td>Lack of technical resources needed on site</td>
<td></td>
</tr>
<tr>
<td>Frustration of farmers because extension personnel were less knowledgeable</td>
<td></td>
</tr>
<tr>
<td>Difficulty on part of natives in grasping new concepts which called for change (n=9)</td>
<td></td>
</tr>
<tr>
<td>Difficulty on part of expatriates in winning confidence of natives as to the value of new concepts (n=4)</td>
<td></td>
</tr>
<tr>
<td>Lack of formal training of instructors in an Agricultural Officers Training Institute</td>
<td></td>
</tr>
<tr>
<td>Problem with the exact scope of work for most projects (n=6)</td>
<td></td>
</tr>
<tr>
<td>Difficulty in traveling to and from location of project (n=13)</td>
<td></td>
</tr>
<tr>
<td>Difficulty on the part of expatriates to implement projects whose objectives they did not help formulate</td>
<td></td>
</tr>
<tr>
<td>Problem of replacements of personnel who went on vacation</td>
<td></td>
</tr>
<tr>
<td>Difficulty in developing planning committees</td>
<td></td>
</tr>
<tr>
<td>Difficulty in selecting candidates or participants for further training or education</td>
<td></td>
</tr>
<tr>
<td>Inadequate evaluation procedures for development programs and projects</td>
<td></td>
</tr>
<tr>
<td>Unwillingness on part of natives who were project officials and staff to accept responsibility when things went wrong</td>
<td></td>
</tr>
<tr>
<td>Problems of &quot;scape-goat hunting&quot; on the part of natives working on projects</td>
<td></td>
</tr>
<tr>
<td>Language barrier (n=18)</td>
<td></td>
</tr>
<tr>
<td>Communications and logistics (n=19)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Figures in parentheses indicate the frequency of reporting. Where there is no figure the frequency was one.
countries were reported. Fifteen testimonies blamed host governments for lack of support of projects. There were 14 testimonies that indicated that problems encountered related to travel and general insecurity within country. A third major source of problems that influenced the effectiveness of the teacher educator while on foreign assignment was excessive bureaucracy (n=8). Two other problem sources reported were slowness on the part of the natives to accept new ideas (n=6) and inter-ministry conflicts (n=5). These obstacles are listed in Table 8B.

External problems arising from outside of host countries as reported related to actions and decisions or indecision on the part of the Government of the United States, educational institutions in the United States, and other aid donors such as the World Bank. Nine problems were reported and they included government red-tape, (n=8) problems with the transportation of supplies, equipment, etc. (n=7), unrealistic scope of many of the projects, conflict between goals of most projects and the actual needs of the people for whom the projects were intended to help, and difficulties with foreign currency exchange. Refer to Table 8C.

Finally, there was a third group of problems which was communications-related or personal. Among the problems of communications reported were language barriers since most teacher educators did not understand the dialects of the local communities, lack of communications between some educators and their families who were in the United States, and dependence on interpreters who either were not agriculturally oriented or were not motivated about the project. As already reported in Table 8B, there were five testimonies bearing on
Table 8B

Major Problems Agricultural Teacher Educators Encountered While on Foreign Assignments: External-Local and National in Scope

1. Travel and security (n=14)
2. Lack of host government support (n=15)
3. Problem with political appointees who tended not to be professionally competent (n=3)
4. Difficulty in shifting from project-oriented activities to those that are programmatic
5. Problem of motives: natives questioning the motives of expatriates
6. Slowness to change, adopt, innovate on part of peoples of host countries (n=6)
7. Absence of effective, long-term planning
8. Impatience of officials of host government as they demand immediate results
9. Absence of specific plans designed to secure spare parts for equipment, machinery, vehicles
10. Over bureaucratization in governments (n=8)
11. Terrorism and instability of national governments of host countries
12. New governments terminating projects initiated by old governments
13. Less commitment by officials of host country governmental agencies and ministries
14. Less commitment of officials of educational institutions in host countries
15. Lack of motivation on part of top officials in government of host countries
16. Problem of collecting up-to-date statistics in host countries
17. Problem of conceptualizing time by the peoples of host countries
18. Problem of replacing books, journals, magazines
19. Lack of funds for developing and/or securing teaching materials
20. Conflict between economic and political goals and expectations
21. Failure to design and develop context and culture-specific programs
22. Reluctance of ministries and agencies of governments of host countries to release employees for further training or education
23. Unrealistic scope of development projects
24. Reluctance on part of host governments to formulate legislation to transfer schools, agencies, or certain functions from one ministry to another even when this is demonstrated to be most appropriate.
25. Lack of follow-ups to determine impact of projects
26. Local customs
27. Problems arising from local, institutional and national politics
28. Poor communication between project site and other locations in and outside of host country.
29. Conflict of interest between ministries of education and agriculture in host countries (n=5)

Note: Numbers in parentheses indicate the frequency problem was reported. Where no number is shown, the frequency was one.
conflicts of interest between different ministries or parastatal agencies of host governments. Inability to understand the culture of the people posed barriers to effective communication between teacher educators and the natives.

Personal problems were also reported by nearly all teacher educators. There were reports of adaptation to food, housing, and other living conditions. Retrospectively, there were testimonies on failure to understand the cultural differences initially. Consequently, there were reports of culture-shocks. Another important personal problem that related the physical health of teacher educators. Refer to Table 8D for these constraints.

There were thirteen testimonies which indicated that no serious major problems were encountered. However, there were reports of minor problems. This group of educators were basically on short-term assignments. Refer to Table 8D.

Specific Accomplishments Resulting From Activities of Agricultural Teacher Educators

Accomplishments of agricultural teacher educators in the development efforts of emerging nations were also reported. Eight broad categories of achievement were identified: (1) institutional establishment and development, (2) program establishment and development, (3) curriculum and curricular issues, (4) training and education, (5) manpower development, seminars, and workshops, (6) advisement, recommendations, proposals, and research, (7) personal, and (8) miscellany. These achievement-clusters are presented in Table 9A through Table 9H.
Table 8C

Major Problems Agricultural Teacher Educators Encountered
While on Foreign Assignments: External-The United States
Government and Educational Institutions

1. U.S. State Department regulations which sometimes counter those of
host governments
2. Slowness and red-tape in Washington (n=8)
3. Problems with foreign currency exchange
4. Problems with transporting supplies, equipment, etc. (n=7)
5. Problems of conflict in goals of projects on paper and actual needs
of local communities
6. Insistence on part of sponsors to use an approach which was
inappropriate for the situation and context
7. Absence of specific plans designed for procurement of spare parts as
with the case of some USAID projects
8. Unrealistic scope of projects
9. Failure to design and develop projects that are context-and culture-
specific

Note: The numbers in parentheses indicate the frequency of reporting of
each source of problems. Where no number is shown, the frequency was
one.

Table 8D

Major Problems Agricultural Teacher Educators
Encountered while on Foreign Assignments:
Communications and Personal

I. Communications:
1. Language barrier*
2. Communication gap to and from location affecting logistics
   and travel plans for project personnel
3. Inter-agency communication gaps within host governments*
4. Lack of communications with family back in the United States
5. Use of interpreters posed problems many times
6. Inability to understand the "culture" of the people posed
   barriers to effective communication

II. Personal:
1. Problem of adapting to the food and living conditions
2. Problem of replacing books, magazines, etc. in personal
   library while on assignments abroad
3. Problem of physical health
4. Problem of securing a visa
5. Poor housing conditions
6. Culture shocks
7. Failure to understand cultural differences

Note: The symbol * denotes that same frequencies for these
problem-sources were reported in Table 8B. The rest of the problems
were each reported only once.
<table>
<thead>
<tr>
<th>Table 9A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Accomplishments Resulting From Activities of Agricultural Teacher Educators in International Development: Institutional Establishment and Development</td>
</tr>
</tbody>
</table>

1. Helped to establish 17 schools in a South American country (Honduras)
2. Helped to erect rural schools in a South American country (Honduras)
3. Helped to institute a viable extension system for fisheries
4. Assisted university faculty develop teaching skills through further studies in United States institutions (Costa Rica)
5. Assisted a federal university to write a proposal to start M.S. degree programs in Agricultural Education and Rural Engineering in a South American country (Brazil)
6. Established an information distribution center at a Center of Rural Sciences in a South American country (Brazil)
7. Helped to build three Agricultural High Schools
8. Helped to expand and improve an Agricultural College in an African country (Botswana)
9. Provided leadership for a University to attain full land-grant status in a U.S. territory (Guam)
10. Helped to establish a faculty of agriculture with graduate program in an African university (Nigeria)
11. Established a teacher training center (Naij)
12. Established a teacher education faculty in Agriculture for Brazilian university.
13. Established a Department of Agricultural Education in an African university (Nigeria)
14. Helped to secure four, 3,000 acres-tracks of land for experiment stations for an African university (Nigeria)
15. Served in university committees including: Student Welfare, Faculty Senate, School Staff, Interview Panels for Staff Recruitments, Matriculation and University Opening, Food Contract Awards, University Staff Housing, University Research, Library, Interview Panel for Recruiting Agriculture Faculty (Nigeria)
16. Served as Dean and Coordinator, Student Affairs in an African University (Nigeria)
17. Developed liaison between a national university and home institution in the United States (Romania)
18. Built nine schools
19. Helped to establish a 4-year Agricultural College (Kenya)
20. Helped to establish two new agricultural high schools
21. Established for the first time a rural school teacher training center for an Asian country
22. Established an agricultural school the first of its kind in this Arab country (Yemen Arab Republic)
23. Indigenized to about 90% the faculty of agriculture and veterinary medicine in an African university (Nigeria)
24. Helped to create and established four regional training colleges in an Asian country
25. Established a rural development institute for a Caribbean country
26. Helped to establish and operate a more productive hatchery (The Philippines)
27. Established an agricultural education department in a college (Ethiopia)

Note: Each accomplishment was reported only once.
Institutional Establishment and Development

Twenty teacher educators reported they were involved in activities resulting in establishing elementary schools, vocational schools, rural training centers, institutes, teaching faculties, and universities. There were seven testimonies on the development and expansion of colleges of agriculture and in the creation of agricultural research stations and extension systems. These achievements are listed in Table 9A.

Program Establishment and Development

Ten accomplishments constituted this cluster. Seven of the accomplishments were related to specific projects reported only once. The remaining three were a synthesis of common achievement of several teacher educators. Included in this achievement-cluster were the development of plans which led to the establishment of new vocational education programs, the addition of vocational agriculture to an existing agricultural curriculum, establishment of a national extension program, and the creation of a nation-wide artificial insemination program for cattle. The achievements are presented in Table 9B.

Curriculum and Curricular Issues

Presented in Table 9C are 12 accomplishments which comprise this achievement-clusters. As reported, several teacher educators were involved in developing or preparing curriculum or curriculum materials for education and training programs at various levels from elementary schools through the universities. These products were designed to meet the needs of general agricultural training in the secondary schools, for professional preparation of agriculture teachers and extension
Table 9B

Specific Accomplishments Resulting From Activities of Agricultural Teacher Educators in International Development Program Establishment and Development

1. Added Vocational agriculture to an agricultural program
2. Established 20 village programs for rural vocational training in auto mechanics, general mechanics, electricity, etc. (Iran)
3. Included agriculture as a subject in the Cambridge Syndicate Examination in an African country (Kenya)
4. Initiated the establishment of an agricultural teacher training program in an African country (Kenya)
5. Helped establish a national extension program in an African country
6. Helped establish a national research program in an African country
7. Developed plans for the establishment of vocational education programs
8. Established vocational agriculture in elementary and secondary schools in an Asian country
9. Established school farms with student plots (India)
10. Started an artificial insemination program in a Caribbean country (Haiti)

Note: Each accomplishment was reported only once.

Table 9C

Specific Accomplishments Resulting From Activities of Agricultural Teacher Educators in International Development: Curriculum and Curricular Issues

1. Developed curriculum for vocational agriculture secondary school programs
2. Developed curriculum materials for secondary school agriculture
3. Secured over 400 complementary publications for a school library in a Mediterranean country (Greece)
4. Developed a more complete curriculum guide for lyceum in a Mediterranean country (Greece)
5. Developed agricultural mechanics curriculum for an African university
6. Developed agricultural mechanics curriculum for an agricultural training center in an African country (Somalia)
7. Prepared a 10-week course in agricultural extension for a South American country (Venezuela)
8. Developed a comprehensive curriculum for secondary schools in an East African country (Ethiopia)
9. Assisted in securing a large volume of curriculum materials for agricultural programs in three East African countries
10. Assisted native counterparts in an African country to revise the curriculum for extension training
11. Prepared curriculum for a two-year agricultural program in an East African college (Tanzania)
12. Prepared curriculum for a four-year agricultural program in an East African college (Tanzania)

Note: Each accomplishment was reported only once.
Table 9D

**Specific Accomplishments Resulting From Activities of Agricultural Teacher Educators in International Development: Training and Education**

1. Trained 40 agricultural extension agents (Venezuela)
2. Taught undergraduates in a Brazilian agricultural education program for nearly three years
3. Conducted in-service training for Brazilian agricultural teachers for nearly three years
4. Developed a list of possible student learning activities for practical courses in selected areas of production agriculture (Greece)
5. Developed a list of audio-visual aids for practical courses in selected areas of production agriculture for lyceum (Greece)
6. Developed a set of competencies for a new course outline in nursery management for a lyceum (Greece)
7. Developed a student record-book for expenses and receipts for an agricultural program in a lyceum (Greece)
8. Conducted short courses for adults on diffusion and adoption of new ideas (Greece)
9. Trained individual farmers Somalia on the correct application of good tillage and cultural practices.
10. Helped operate a fish hatchery in the Phillipines more efficiently and productively
11. Taught 168 hours of classes in horticulture to Venezuelan agricultural teachers.
12. Conducted three, all-day trips for extension agents in (Venezuela)
13. Helped agricultural teachers in Venezuela to improve their teaching skills
14. Selected 16 students for each of Agricultural Education and Rural Engineering programs in a Brazilian university
15. Graduated eight of 32 students enrolled in two M.S. degree programs in Agricultural Education and Rural Engineering a Brazilian university
16. Trained 20 Peace Corps volunteers for a Middle East country (Iran)
17. Trained 20 agriculture teachers in the use of the discovery method in teaching (Trinidad and Tobago)
18. Trained 63 Nigerians at graduate and undergraduate levels in foreign agricultural institutions

Table Continues
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<tbody>
<tr>
<td>19</td>
<td>Provided training and guidance for two Central Americans to earn M.S. degrees in agricultural education</td>
</tr>
<tr>
<td>20</td>
<td>Established 12 farm demonstration teams (India)</td>
</tr>
<tr>
<td>21</td>
<td>Graduated two classes in agricultural teacher and Extension Education in The Phillipines</td>
</tr>
<tr>
<td>22</td>
<td>Assisted more than 20 agriculture teachers and extension agents in The Phillipines to improve their pedagogical and andragogical skills</td>
</tr>
<tr>
<td>23</td>
<td>Trained agriculture teachers (Yemen Arab Republic)</td>
</tr>
<tr>
<td>24</td>
<td>Trained agriculture extension agents (Yemen Arab Republic)</td>
</tr>
<tr>
<td>25</td>
<td>Trained agriculture technicians (Yemen Arab Republic)</td>
</tr>
<tr>
<td>26</td>
<td>Trained more competent agricultural teachers at about one and one-half less the cost of such training in the past (Iran)</td>
</tr>
<tr>
<td>27</td>
<td>Persuaded the Ministry of Education of Iran to establish student teaching centers in rural communities</td>
</tr>
<tr>
<td>28</td>
<td>Supervised off-campus student teaching centers for agricultural education programs in a Pacific Basin country</td>
</tr>
<tr>
<td>29</td>
<td>Selected and trained students in agricultural programs for a Pacific Basin country</td>
</tr>
<tr>
<td>30</td>
<td>Taught natives to construct ovens using mud-bricks (Chad)</td>
</tr>
<tr>
<td>31</td>
<td>Introduced hybrid seed corn to rural peoples (Honduras)</td>
</tr>
<tr>
<td>32</td>
<td>Introduced the concept of constructing poultry houses from bamboo to rural peoples (Chad)</td>
</tr>
<tr>
<td>33</td>
<td>Introduced horse-power in crop cultivation to rural peoples (Chad)</td>
</tr>
<tr>
<td>34</td>
<td>Introduced rabbits as a source of protein in the people of rural peoples (Chad)</td>
</tr>
<tr>
<td>35</td>
<td>Introduced new teaching methodologies in three agricultural officers training centers (Mali)</td>
</tr>
<tr>
<td>36</td>
<td>Taught agriculture teachers to prepare instructional materials and visual aids</td>
</tr>
<tr>
<td>37</td>
<td>Helped agricultural teachers acquire skills in the revision of courses they teach</td>
</tr>
<tr>
<td>38</td>
<td>Prepared a set of transparency masters for an agricultural program in an East African college</td>
</tr>
<tr>
<td>39</td>
<td>Prepared specific laboratory exercises for agricultural students in an East African College</td>
</tr>
<tr>
<td>40</td>
<td>Introduced furrow irrigation to rural farmers (India)</td>
</tr>
<tr>
<td>41</td>
<td>Assisted teachers at an agricultural institute improve their teaching techniques (Sudan)</td>
</tr>
<tr>
<td>42</td>
<td>Assisted teachers at an agricultural institute to improve their student follow-up techniques (Sudan)</td>
</tr>
</tbody>
</table>
personnel, or for the vocational needs of under-privileged groups in rural communities.

Training and Education

Forty-two specific accomplishments are presented in Table 9D. Each was reported only once. Teaching, training, and instructions-related achievements were reported. Teacher educators reported teaching or training agriculture teachers, extension agents, farmers, peace corps volunteers, adults, agricultural technicians, and secondary school students. A variety of subject-matter competencies and skills were taught during the sessions (Refer to Table 2D). Similarly, other achievements included helping extension agents and agriculture teachers to improve their delivery skills, teaching teachers ways to prepare improved instructional materials, assisting teachers prepare specific laboratory exercises for agriculture students, and teaching farmers to use the horse as a draft animal in cultivation. Also, achievements pertained to introducing furrow irrigation to farmers, adopting poultry housing and management practices in rural communities, introducing hybrid seed to increase farmers' output, and teaching rural people to construct mud-brick ovens for baking bread. In some cases, teacher educators were responsible for selecting trainees for advance degree training programs, conducting field trips and short-courses, for establishing demonstration farms and plots, for supervising student teaching components of teacher training programs, and for conducting in-service training programs.
Teacher educators also reported conducted workshops with the primary goal of training agricultural extension agents and teachers of agriculture. Specific individual accomplishments included the establishment of a local tax-base to generate funds for rural development in an East African village, development of appropriate infrastructures to promote youth development in a Caribbean country, initiation and establishment of a national association for teachers of agriculture in an East African country, and completion of a study on agricultural manpower needs of an East African country as presented in Table 9E.
### Table 9E

**Specific Accomplishments Resulting From Activities of Agricultural Teacher Educators in International Development:** Manpower Development, Seminars, and Workshops

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Developed an appropriate infrastructure for youth development (Jamaica)</td>
</tr>
<tr>
<td>2.</td>
<td>Helped establish a local tax-base for village that embarked on community development projects (Kenya)</td>
</tr>
<tr>
<td>3.</td>
<td>Initiated establishment of a national association of agricultural teachers (Kenya)</td>
</tr>
<tr>
<td>4.</td>
<td>Helped create and strengthen the manpower development division of a ministry of education (Tanzania)</td>
</tr>
<tr>
<td>5.</td>
<td>Conducted nine seminars on teaching skills (Indonesia)</td>
</tr>
<tr>
<td>6.</td>
<td>Conducted workshops for agricultural extension agents and agriculture teachers (Indonesia and Costa Rica)</td>
</tr>
<tr>
<td>7.</td>
<td>Completed a study on the agricultural manpower needs (Botswana)</td>
</tr>
</tbody>
</table>

*Note: Each of the accomplishments was achieved through team effort.*

### Table 9F

**Specific Accomplishments Resulting From Activities of Agricultural Teacher Educators in International Development:** Advisement, Recommendations, Proposals, and Research

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Wrote Requests for Proposals (RFPs) for agricultural education (Indonesia, Thailand, Ecuador, and Jamaica)</td>
</tr>
<tr>
<td>2.</td>
<td>Prepared an action paper for consideration by a funding agency</td>
</tr>
<tr>
<td>3.</td>
<td>Wrote proposals for agricultural program development and expansion and establishment of schools (n=3)</td>
</tr>
<tr>
<td>4.</td>
<td>Identified and advised on areas of common interests for a home university and a university in Romania</td>
</tr>
<tr>
<td>5.</td>
<td>Advised doctoral students on their dissertation research (Brazil, Greece, and Haiti)</td>
</tr>
<tr>
<td>6.</td>
<td>Made recommendations for agricultural development at the national level in several countries (n=7)</td>
</tr>
<tr>
<td>7.</td>
<td>Made recommendations for personnel of the extension division of a ministry of agriculture to become familiar with existing research findings from the agricultural university in a Pacific Basic country</td>
</tr>
<tr>
<td>8.</td>
<td>Conducted research on performance levels of students from agricultural high schools and urban schools (Brazil)</td>
</tr>
<tr>
<td>9.</td>
<td>Conducted research on the performance level of implements and machines designed for tillage and harvesting (India)</td>
</tr>
<tr>
<td>10.</td>
<td>Conducted longitudinal studies comparing leadership traits of graduates from agricultural and non-agricultural secondary schools (Taiwan)</td>
</tr>
<tr>
<td>11.</td>
<td>Advised a Tanzanian agricultural college as the need to establish a seminar and short course in agricultural mechanics</td>
</tr>
</tbody>
</table>

*Note: Except for Items 1, 3, 5, and 6, each was reported only once.*
Advisement, Recommendations, Proposals, and Research

Table 9F reveals 10 accomplishments related to this achievement-cluster. Two teacher educators performed advisory roles helping doctoral students. A teacher educator reported assisting two universities in identifying areas of mutual interests. Seven teacher educators reported they made recommendations pertaining to agricultural training and development at the national level. There were four testimonies regarding written proposals for development projects. Research activities were reported by three teacher educators. The first study determined and compared the performance levels of students from two different tracks of high school education. The second study assessed the performance level of locally designed farm implements and machinery. The third was a longitudinal study comparing graduates from two different tracks of secondary education on leadership in agriculture in Taiwan.

Miscellaneous Achievements

A number of other accomplishments as reported by some teacher educators included: the introduction of pit silos technology to rural communities of Chad, helping to raise more than $US 100,000.00 for a rural development program in Haiti, the promotion of the export of agricultural commodities of a state within the United States, the provision of basic education for homeless children in a Central American country, and the learning foreign language such as Arabic, French, Farsi, Spanish, Portuguese, or Malay. This achievement-cluster is presented in Table 9H.
Table 9G

Specific Accomplishments Resulting From Activities of Agricultural Teacher Educators in International Development: Miscellaneous

1. Promoted export of agricultural commodities from a state in the United States to three different countries (Kuwait, Iran, and The Dominican Republic)
2. Designed and successfully tested seed and fertilizer drilling machines and implements (India)
3. Identified and recommended treatment for a wide belt of zinc-deficient soils (India)
4. Provided general education for homeless and underprivileged children (Honduras)
5. Introduced silage preparation to rural people (Chad)
6. Introduced pit silos technology to rural people (Chad)
7. Helped raise over $US 100,000 for rural development (Haiti)
8. Learned foreign languages---Farsi, Spanish, Portugeese, Malay, French

Note: Each accomplishment was reported only once except Item No. 8.

Table 9H

Specific Accomplishments Resulting From Activities of Agricultural Teacher Educators in International Development: Personal Achievements

1. "I have greatly benefited from the trip with respect to understanding my graduate students from developing countries."
2. "I have a better understanding of the role of international education in the University of Nebraska."
3. "I have learned to appreciate different cultures."
4. "I had self-satisfaction as an outsider."
5. "I've a better understanding of myself."
6. "Acknowledgement that basically all cultures are the same---that human needs are the same."
7. "I've become semi-educated. If I keep working at this, I will sooner or later lose my amateur status. This is my way of saying that, I think that, I have learned a great deal. But I am not sure that I've helped anyone else very much."

Note: Each achievement was reported only once.
Personal Achievements

Seven direct quotations are presented in Table 9H to reveal the fundamental disposition of teacher educators who responded to this study. Since the researcher did not seek permission to quote any of the educators in this report the quotations are blind. The common theme of all seven centered around promoting a better understanding of a process, a phenomenon, people, or even self.

Role of the Agricultural Teacher Education Profession in Future International Development Activities

Teacher educators were asked to suggest roles or activities agricultural teacher educators should assume in future international assignments. This question resulted in more than 90 different suggested roles or activities. They are contained in Table 10A through Table 10F in six role or activity-clusters, which are as follows: (1) pre-service and in-service training and curricular activities, (2) problems identification, needs assessment, and evaluation, (3) research, consultation, and advisement, (4) adult, rural, youth, and institutional development, (5) management and administration of development programs and projects, and (6) miscellaneous roles.

Pre-Service and In-Service Training and Curricular Activities

Twenty-eight roles or activities were identified for this cluster as shown in Table 10A. Curriculum-related roles were most dominant. Also, the role of, for example, a team teacher, institutional and programs developer, in-service trainers, designer and developer of appropriate instructional methods and technologies, student advisors,
Table 10A

Role of the Agricultural Teacher Education Profession in Future International Development Activities: Pre-Service and In-Service Training and Curricular Activities

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1.</td>
<td>Advocate introduction of agriculture in lower secondary and upper elementary schools.</td>
</tr>
<tr>
<td>2.</td>
<td>Teach agriculture skills and management of husbandry skills.</td>
</tr>
<tr>
<td>3.</td>
<td>Become co-teachers in agricultural institutions abroad.</td>
</tr>
<tr>
<td>4.</td>
<td>Assist in developing instructional methodology and materials for institutions in developing countries. (n=13)</td>
</tr>
<tr>
<td>5.</td>
<td>Provide graduate-level courses appropriate for international students.</td>
</tr>
<tr>
<td>6.</td>
<td>Serve in counterpart role when on assignments abroad.</td>
</tr>
<tr>
<td>7.</td>
<td>Determine workable universal principles for agricultural teacher and extension education for developing countries.</td>
</tr>
<tr>
<td>8.</td>
<td>Help develop agriculture subject-matter for institutions and programs in developing countries. (n=9)</td>
</tr>
<tr>
<td>9.</td>
<td>Conduct area workshops in the different regions of the Third World.</td>
</tr>
<tr>
<td>10.</td>
<td>Develop appropriate and workable teaching methods for agricultural institutions in developing countries.</td>
</tr>
<tr>
<td>11.</td>
<td>Provide hands-on learning experiences for agricultural teachers in developing countries.</td>
</tr>
<tr>
<td>12.</td>
<td>Provide in-service courses for rural agricultural teachers on teaching skills. (n=7)</td>
</tr>
<tr>
<td>13.</td>
<td>Become involved in short-term teaching assignments serving only as counterparts.</td>
</tr>
<tr>
<td>14.</td>
<td>Help design and develop instructional methods.</td>
</tr>
<tr>
<td>15.</td>
<td>Help design and develop instructional technologies.</td>
</tr>
<tr>
<td>16.</td>
<td>Offer in-depth courses in the change process with both international and national slants for students in home institutions.</td>
</tr>
<tr>
<td>17.</td>
<td>Work with and advise foreign students.</td>
</tr>
<tr>
<td>18.</td>
<td>Help international students in home institutions identify research problems related to their countries.</td>
</tr>
<tr>
<td>19.</td>
<td>Assist technical experts on matters of arranging instructional units.</td>
</tr>
<tr>
<td>20.</td>
<td>Train agricultural teachers in developing countries in the need for effective methodology and educational philosophy.</td>
</tr>
<tr>
<td>21.</td>
<td>Involve in student recruitment.</td>
</tr>
<tr>
<td>22.</td>
<td>Train native agricultural educators in developing countries to develop skills and competencies in program planning, implementation, evaluation, and revision.</td>
</tr>
<tr>
<td>23.</td>
<td>Help develop curricula for agricultural institutions. (n=21)</td>
</tr>
<tr>
<td>24.</td>
<td>Help develop competency-based curriculum for all levels of agricultural education for developing countries.</td>
</tr>
<tr>
<td>25.</td>
<td>Help develop curriculum materials. (n=13)</td>
</tr>
<tr>
<td>26.</td>
<td>Assist technical experts in the design and development of agriculture curriculum.</td>
</tr>
<tr>
<td>27.</td>
<td>Develop audio-visual materials for instructions in agriculture</td>
</tr>
</tbody>
</table>

Note: Numbers in parentheses indicate the frequency with which each role was identified. Where no number is shown the frequency was one.
student recruitment officer, were among the list for this future-role cluster. Also, teacher educators expressed a need for activities such as helping to identify and develop universal principles for teacher and extension education in agriculture for developing countries, teaching basic skills in agriculture especially husbandry skills, assisting foreign students in identifying relevant research problems, and training agriculture teachers in developing countries to fully recognize the need for and use of effective methodology and educational philosophy.

Problems Identification, Needs Assessment, and Evaluation

In the opinions of the teacher educators, the agricultural teacher education profession needs to be involved in assessment of needs, evaluation activities, and in the identification of problems of development. Reported in Table 10B is this cluster of future roles and activities, which included assisting in the definition of goals for agricultural development programs and projects, approaches, techniques and methodologies, as well as conducting follow-ups, evaluation, and short courses when on short-term assignments. Other suggestions as future activities included reviewing goals of existing development programs and projects, acquiring skills in the identification of skills and competencies needed by agriculture students in each developing country, and becoming aware of what agricultural education really is in developing countries.

Research, Consultation, and Advisement

A total of 25 testimonies suggested that the profession could help developing countries through research, (n=15) consultation, (n=6) and advisory activities. Presented in Table 10C are the 12 suggestions.
### Table 10B

**Role of the Agricultural Teacher Education Profession in Future International Development Activities:** Problems Identification, Needs Assessment, and Evaluation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Become aware of what agricultural education is like in developing countries.</td>
</tr>
<tr>
<td>2.</td>
<td>Assist in defining goals of agricultural development programs and projects.</td>
</tr>
<tr>
<td>3.</td>
<td>Become competent and skilled in the needs assessment process.</td>
</tr>
<tr>
<td>4.</td>
<td>Help in the identification of skills and competencies needed by agriculture students in each country.</td>
</tr>
<tr>
<td>5.</td>
<td>Become members of teams that prepare project identification papers.</td>
</tr>
<tr>
<td>6.</td>
<td>Become members of teams that write proposals for development projects.</td>
</tr>
<tr>
<td>7.</td>
<td>Identify with tasks of development that are much broader than those perceived by colleagues in U.S. institutions and international agencies.</td>
</tr>
<tr>
<td>8.</td>
<td>Review critically goals of development programs and projects.</td>
</tr>
<tr>
<td>9.</td>
<td>Evaluate educational programs.</td>
</tr>
<tr>
<td>10.</td>
<td>Help counterparts in host countries to evaluate development projects, programs, approaches, techniques, and methodologies.</td>
</tr>
<tr>
<td>11.</td>
<td>Conduct evaluations, follow-ups, and short courses while on short assignments.</td>
</tr>
<tr>
<td>12.</td>
<td>Help in the assessment of needs</td>
</tr>
</tbody>
</table>

**Note:** Each role was identified only once.

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### Table 10C

**Role of the Agricultural Teacher Education Profession in Future International Development Activities:** Research, Consultation, and Advisement

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Conduct research to identify educational principles that would have universal application.</td>
</tr>
<tr>
<td>2.</td>
<td>Serve on baseline study teams working to include agricultural education in the development process. (n=5)</td>
</tr>
<tr>
<td>3.</td>
<td>Conduct surveys on skill clusters essential for program implementation in host countries.</td>
</tr>
<tr>
<td>4.</td>
<td>Conduct research on how all parties involved in development activities perceive development issues.</td>
</tr>
<tr>
<td>5.</td>
<td>Create situations on site conducive for all parties to become informally involved in discussing development issues.</td>
</tr>
<tr>
<td>6.</td>
<td>Disseminate research findings in ways that protect individuals involved in development activities.</td>
</tr>
<tr>
<td>7.</td>
<td>Integrate application of technical agriculture with needs of developing countries.</td>
</tr>
<tr>
<td>8.</td>
<td>Serve as consultants on development of appropriate technologies. (n=6)</td>
</tr>
<tr>
<td>9.</td>
<td>Determine whether international agricultural education should be a key element of the total role of U.S. agricultural education.</td>
</tr>
</tbody>
</table>
| 10. | Offer workable advice to developing countries for "developing countries can't afford mistakes."
| 11. | Help in manpower development studies. |
| 12. | Become researchers (n=5) |

**Note:** Numbers in parentheses indicate the frequency with which each role was identified. Where no number is shown, the frequency was one.
In the opinion of some educators, there is need to conduct research in basic, universal education principles for international agriculture; to identify skill-clusters essential for program implementation, and to identify ways of involving all parties committed to development in discussing issues and problems of concern. There were also suggestions that members of the profession become involved in the integration of needs of developing countries with technical agriculture and serve on baseline study teams working to incorporate agricultural education into much broader national development programs. Six teacher educators suggested the need for members of the profession to serve as consultants in the development of appropriate methods and to offer workable advice on demand to developing countries, who cannot afford mistakes. One very distinct role suggested under this cluster was the need for the profession as a whole to determine the status of international agricultural education in relation to the overall mission of the profession in the United States.

Adult, Rural, Youth, and Institutional Development

Eight suggested roles and activities were identified for this cluster. They are listed in Table 10D. Eleven teacher educators believe members of the profession should be involved in rural development activities. Youth development (n=5) and adult education (n=3) activities were also suggested.

Other suggestions included helping to develop leadership in native counterparts to sustain agricultural development and occupational experience programs for each country. A teacher educator believed the concept of supervised occupational experience (SOE) programs
characteristic of vocational agriculture in the United States should be transferred to and adapted in developing countries.

Management and Administration of Development Programs and Projects

Displayed in Table 10E are 19 suggested roles or activities the teacher educators believed the profession should assume in future international assignments. The cluster relates to managerial and administrative roles and activities. Sixteen teacher educators believed members of the profession should be involved in all phases of the development effort. In the opinion of five of them, members of the profession should conduct long-range planning. Three educators summed the future of the profession in international development as "work oneself out of a job." Too, members of the profession are urged to become involved in the administration of agricultural institutions both within the United States and in host countries, promote rapport between and among the various ministries within host governments to avoid inter-ministry conflicts of interests, assume management role of agricultural programs and projects, and also be involved in all stages of development programs and projects.

Miscellaneous Roles and Activities

There were 16 general suggestions offered by teacher educators as essential activities or roles of the profession in future international assignments. These are presented in Table 10F. They included the need
**Table 10D**

Role of the Agricultural Teacher Education Profession in Future International Development Activities: Adult, Rural, Youth, and Institutional Development Activities

| 1. | Assist in manpower planning and development activities. |
| 2. | Become involved in youth development activities. (n=5) |
| 3. | Become involved in adult education. (n=1) |
| 4. | Become involved in institutional development by training natives to become leaders of their home institutions. |
| 5. | Become involved in rural development activities. (n=1) |
| 6. | Involve natives in development activities and allow them to be leaders. |
| 7. | Help develop occupational experience programs for each country. |
| 8. | Advocate the adoption and adoption of the supervised occupational experience programs (SOEs) characteristic of vocational agriculture in the United States. |

**Note:** Numbers in parentheses indicate the frequency for each suggested role. Where no number is shown, the frequency was one.

**Table 10E**

Future Role of the Agricultural Teacher Education Profession In International Development: Management and Administration of Development Programs and Projects

| 1. | Be synthesizers rather than analysts of development issues. |
| 2. | Conduct follow-ups to programs and projects initiated. |
| 3. | Serve on home university committees to promote and assist the international development cause. |
| 4. | Assume leadership in designing and planning projects for developing countries. |
| 5. | Conduct long-range planning for development. (n=5) |
| 6. | Write and submit to home university administrations proposals on international agricultural development. |
| 7. | Concentrate activities in countries with English language capacity. |
| 8. | Become involved in administration of agricultural institutions. |
| 9. | Help promote rapport between ministries of education and agriculture in developing countries. |
| 10. | Become involved in all stages of programs and projects—planning, implementation and evaluation. (n=16) |
| 11. | Conduct orientation courses for home university personnel preparing for assignments abroad. (n=2) |
| 12. | The need for members to do theory-oriented homework on international development since the professional training received is "not a good one." |
| 13. | Assume management role of agricultural programs and projects. |
| 14. | "Work oneself out of a job." (n=3) |
| 15. | Encourage only educators with deep interest in and tolerance of other cultures to become involved in international development activities. |
| 16. | Provide support to host country counterparts. |
| 17. | Serve as mediators between the technical experts and the local communities and leaders of host governments. |
| 18. | Become coordinators of activities of development programs and projects. |
| 19. | "Train the natives of these countries to become trainers so as to provide continuity." |
| 20. | Differentiate between development and modernization. |

**Note:** Numbers in parentheses indicate the frequency for each suggested role. Where no number is shown, the frequency was one.
Table 10F

Role of the Agricultural Teacher Education Profession in Future International Development Activities: Miscellaneous Roles

<table>
<thead>
<tr>
<th>Role</th>
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<tbody>
<tr>
<td>1. Become involved in all practical-oriented programs for the needy peoples of developing countries.</td>
</tr>
<tr>
<td>2. Make a determined effort to understand other cultures.</td>
</tr>
<tr>
<td>3. Learn the working language especially so if long-term foreign assignments are desired.</td>
</tr>
<tr>
<td>4. Train peoples in the host countries through training and consultative missions.</td>
</tr>
<tr>
<td>5. Understand the religious and ethnic standards of the peoples in these other cultures.</td>
</tr>
<tr>
<td>6. Employ non-traditional delivery methods by utilizing middle-level technical manpower supported by electronic equipment.</td>
</tr>
<tr>
<td>7. First, acquire experience in international agriculture before attempting to train others.</td>
</tr>
<tr>
<td>8. Provide good curricula to train agricultural leaders for international work.</td>
</tr>
<tr>
<td>9. Acquire better understanding of international trade, markets, money exchange, traditions, and even other educational systems</td>
</tr>
<tr>
<td>10. Identify components of existing and educational programs and use them as framework for future plans and activities.</td>
</tr>
<tr>
<td>11. Secure funds to develop educational materials.</td>
</tr>
<tr>
<td>12. Help organize agricultural education programs from elementary through tertiary levels of education.</td>
</tr>
<tr>
<td>13. Plan project outcomes appropriate to existing levels of technologies.</td>
</tr>
<tr>
<td>14. Allow those with relatively long periods of experiences with the situations or problems to develop programs.</td>
</tr>
<tr>
<td>15. Become involved in program and/or project improvement, upgrading, and updating.</td>
</tr>
<tr>
<td>16. Leave behind positive impressions in host countries.</td>
</tr>
</tbody>
</table>

Note: Each role was identified only once.
to be involved in all practical-oriented programs for the needy peoples of the Third World, understand other cultures of the world, learn the working language as it relates to the location of the project or assignment in question, acquire experience in international agriculture before attempting to train others, secure funds for the development of educational materials, help organize agricultural education programs for all levels of education, and leave behind positive impressions in host countries following an assignment.

Other suggestions under this cluster were that future activities and roles of teacher educators should include providing the necessary support to counterparts in host countries, becoming coordinators of development activities, training natives to become trainers, helping prepare home university teams for foreign assignments, and conducting orientation courses for home university personnel on international development.

**Recommendations For Improving Agriculture and Rural Well-Being in Developing Countries**

Agricultural teacher educators were asked, "What recommendations would you make for solving existing problems of agriculture and rural development in developing countries?" to which they offered 96 suggestions. Their recommendations are presented in Table 11A through Table 11C in two main clusters (1) responsibilities of host governments, and (2) responsibilities of aid donors and sponsors. There is also a cluster for general recommendations is presented in Table 11C.

**Responsibilities of Host Governments**

Four sub-clusters presented in Table 11A are discussed in the following paragraphs. First, governments of developing countries were
urged to seriously address issues related to education in agriculture (n=38) in more realistic and concrete terms. The need to introduce of agricultural education programs at elementary and secondary levels of education was identified. Educating the masses to become aware of the scope of problems of agriculture was also recommended by some teacher educators. One teacher educator stressed the need to educate school children about the problems of agriculture through social studies textbooks. Other recommendations included emphasizing vocational education over classical education, developing long-range programs for agricultural education, training large cadres of agricultural teacher educators, and conducting needs assessment for agricultural education and in-service training for extension agents and teachers of agriculture.

Secondly, teacher educators recommended that host governments formulate and implement policies bearing on education for the underprivileged such as adults, farmers, and ruralites (n=30). Included in this sub-cluster of 13 recommendations were the designing of projects for the "small guys on small acreages", providing sound agricultural education for the rural communities, and appropriate agricultural technology, involving the local people in the identification of problems that they encounter and finding solutions to them, and developing effective delivery systems for disseminating agricultural information where it is needed the most. Commitment on the part of the local peoples and government agricultural personnel to the development process, the provision of basic education for the entire population, particularly farmers, and the acceptance and application of the
grassroots philosophy of development were also perceived by some teacher educators as part of the responsibility of each host government if sustainable agricultural development is to ensue.

Thirdly, a sub-cluster of roles and activities related to youth development and general education was also identified (n=14). These roles and activities are also listed in Table 11A. Governments of host countries were urged to provide appropriate and adequate occupational and career choices for the large numbers of school "dropouts." They were also urged to provide basic education (n=5) for all and to emphasize both the basics in education and practical education at all levels of the educational system. One teacher educator strongly urged governments of host countries to formulate policies to help retain the educated in agriculture, particularly farming.

Finally, there were 21 recommendations which were much broader in scope as reported in Table 11A. They related to institutional development and national policies on development as a whole. Host governments were urged to develop national guidelines for purchasing agricultural equipment and machinery, to develop and maintain "true market systems," to provide and improve basic infrastructural facilities, and to commit resources to agricultural development.

Also, teacher educators (n=4) expressed concerns over lack of agricultural research efforts on the part of host governments. Consequently, they urged that governments of developing countries embark on, for example, the design, development, and maintenance of knowledge-centers to serve agricultural extension. Too,
Table 11A

Recommendations by Agricultural Teacher Educators for Agriculture and Rural Improvement in Developing Countries: Responsibilities of Host Governments

### I. Education in Agriculture

1. Introduce vocational agriculture in early grades of formal educational systems.
2. Develop textbooks in social studies that focus on agricultural problems.
3. Train a large cadre of agricultural teacher educators interested in training agriculture teachers. (n=2)
4. Provide in-service education for agriculture teachers. (n=212)
5. Conduct needs assessment bearing agricultural development. (n=4)
6. Develop long-range programs for agricultural education. (n=6)
7. Identify and sustain a secured link between extension and education components of ministries.
8. Develop the agricultural extension component of ministries of agriculture. (n=3)
9. Place greater emphasis on vocational education in school curricula than on classical education.
10. Place emphasis on secondary level agricultural training. (n=5)
11. Educate people to become aware of the scope of the problems of agriculture.

### II. Adult, Farmer, and Rural Education:

1. Design projects for the "small guys on small acreages."
2. Familiarise users of mechanical devices on their proper use, maintenance, and repair.
3. Promote local manufacturing of machinery and equipment.
4. Minimise monopoly in the distribution of agricultural machinery and equipment.
5. Work on site and within system as an agricultural educator.
6. Provide sound, effective agricultural education to rural communities. (n=6)
7. Provide training in appropriate agricultural technology. (n=3)
8. Educate producers and consumers on techniques of food preservation. (n=3)
9. Involve the local people in problems identification and in solving problems.
10. Accept and apply the grassroots philosophy of development. (n=2)
11. Develop more effective delivery systems for disseminating agricultural information. (n=7)
12. Accept and use the concept of "demonstration method" in extension activities. (n=2)
13. Provide basic education for the entire population especially farmers, enhance ability to read and communicate.

### III. Youth Development and General Education

1. Provide appropriate and adequate occupational and career choices for the large numbers of "dropouts" from the educational system. (n=2)
2. Provide basic education for all. (n=5)
3. Emphasize practical education at all levels of the educational system. (n=3)
4. Devise ways and means of retaining the educated in agriculture and farming.
5. Develop commitment to create a broad-based cadre of educators. (n=2)
Table 11A Continued

IV. Institutional Development and National Policies

1. Develop institutions for the development of agriculture.  
   (n=11)
2. Train natives to work as agricultural leaders in their home countries.
3. Coordinate research, local manufacturing, ministries of agriculture facilities, and resources.
4. Develop national guidelines for purchasing agricultural equipment and machinery.
5. Formulate policies to ensure low food prices.
6. Develop and maintain "true market systems."  
7. Help train competent people but not pour in money.
8. Devise solutions for the population problems.
9. Formulate realistic, workable agricultural research policies.
10. Prioritize agricultural research problems and issues that affect the ultimate producer.
11. Localize approaches to disseminate research findings.
12. Design, develop, and maintain knowledge-centers to serve agricultural extension.
13. Formulate agricultural policies with built-in incentives for agricultural producers and personnel.
14. Encourage qualified agricultural personnel to be involved at local levels away from the ministries.
15. Emphasize in-country agricultural research.  (n=2)
16. Formulate policies and devise solutions to address land tenure issues.
17. Provide and improve basic infrastructural facilities.
18. Develop a commitment to allocate adequate resources to agricultural development.
19. Develop commitment to and rewards for efficiency.
20. Realize that government planning for development is critical.
21. Give top priority to increased food production.

Note: Numbers in parentheses indicate frequency of each recommendation.  
Where no number is shown the frequency was one.
recommendations were directed at the need for agricultural research issues and problems to be prioritized in accordance with their impact on the ultimate producer, the farmer. Other recommendations included formulating policies for realistic, workable agricultural research policies, localizing approaches for disseminating research findings, and emphasizing in-country agricultural research.

Responsibilities of Aid Donors and Sponsors

The 37 recommendations in this cluster are sub-clustered into two groups as presented in Table 11B. The first of the two groups relating to roles and activities of agricultural institutions of the United States contains 27 recommendations. Teacher educators stressed the need for follow-ups to projects and assignments to determine their impact \((n=5)\), the application of appropriate principles similar to those employed in vocational agriculture in the United States, and provision of long-term, on-going teams to assist developing countries achieve their national goals of development \((n=8)\). There were recommendations on the need to undertake long-term development projects \((n=11)\).

Another important recommendation \((n=1)\) was the need for the establishment of university faculty exchange programs of two or three years duration between universities of the Third World and those in the United States. Too, the need to design and implement projects to survive changes in the administrations of national governments was recognized.

Universities in the United States were urged by teacher educators \((n=5)\) to provide for continuity in programs and projects they help establish or create. The planning and conduct of short-term study
Table 11B

Recommendations By Agricultural Teacher Educators
For Agriculture and Rural Improvement in Developing Countries:
Responsibilities of Aid Donors and Sponsors

I. Agricultural Institutions of the United States

* 1. Conduct follow-ups to assignments and projects. (n=5)
2. Include agricultural education in all existing and future development programs to reduce the dependence rate on experts from the United States.
3. Apply appropriate principles as employed by vocational agriculture programs in the United States. (n=3)
* 4. Provide long-term on-going teams to assist developing countries achieve their national goals. (n=8)
5. Train agriculture teachers and extension agents of developing countries in United States institutions. (n=3)
6. Plan and conduct short-term study tours for agriculture teachers of developing countries to visit vocational agricultural programs in the United States.
7. "Take the teachers (agricultural educators) to the students (in developing countries) by conducting regional seminars and workshops."
8. Undertake short-term consultancy assignments for periods of 2-weeks to several months. (n=3)
9. Establish university faculty exchange programs of two to three years duration.
10. Conduct long-term development activities. (n=11)
11. Design and implement projects that survive changes in the administrations in national governments. (n=3)
13. Provide more education for the "front-liners" while trying to convince the "higher-ups" of the value of this approach.
14. Make provision for continuity once programs are established. (n=4)
15. Make concerted efforts to understand agricultural education in developing countries. (n=2)
16. Seek stable financial support while on foreign assignment.
17. Recognize agricultural teacher educators in developing countries as counterparts rather as "former students" or "subordinates." (n=3)
18. Involve more agricultural teacher educators in training and development activities abroad to enhance their ability to advise their foreign students. (n=2)
19. Make concerted efforts as agricultural teacher educators and sponsors of projects to first understand the politics and educational climate in developing countries.

Table Continues
Table 11B Continued

20. Promote a better image for education in agriculture in host countries.
21. Abstain from imposing Western value systems and agriculture on developing countries—try to understand the whys and hows.
22. Transfer the adapted form of the concept of vocational agriculture as adopted in the United States. (n=2)
23. Become aware that "The extension model of the U.S. land-grant university is a failure in Africa."
24. Become aware of the three biggest problems in the development process: problems identification, communications problem, and lack of basic education.
25. Subscribe to and practice the basic development philosophy of "help people to help themselves."
26. Include "our best experts" in development teams.
27. Recruit and hire educators willing to be on long-term assignments.

II. Government Agencies and other Organizations

1. Conduct follow-ups on projects initiated. (n=4)
2. Improve management techniques for agricultural programs and projects.
3. Provide long-term on-going teams to help achieve goals of development in developing countries.
4. Prioritize issues and problems of agricultural research so as to produce maximum effects on capabilities of the ultimate producers.
5. Help localize the research information dissemination systems.
6. Help developing countries design, develop, and maintain knowledge-centers to serve extension personnel.
7. Help developing countries formulate agricultural policies with built-in incentives to motivate and reward producers, and agricultural personnel.
8. Design, develop, and implement long-term development programs and projects.
9. Design programs and projects that will survive changes in administrations in national governments of developing countries.
10. Recognize that "The need is to train people not pour in money"

Note: Numbers in parentheses indicate the frequency of the recommendation. Where no number is shown, the frequency was one.
* A repeated recommendation
tours \( (n=1) \) for agriculture teachers from developing countries to vocational agriculture programs in the United States and offering short-term consultancies \( (n=3) \) to host countries bearing on development issues and problems were among the recommendations. One teacher educator believed that United States institutions need to differentiate between development programs and projects on the one hand and modernization activities on the other hand. Relatedly, another advised these institutions and their representatives to refrain from imposing their values, value systems, and agriculture on developing countries. Also, one teacher educator pointed out that "The extension model of the U.S. land-grant university is a failure in Africa."

One recommendation had philosophic slant: one teacher educator, for example, cautioned universities of the United States were cautioned to remember and apply the basic philosophy of cooperative extension of "helping people to help themselves." There were also recommendations which addressed the need for these institutions to be fully sensitive to and assist in such areas of concern for Third World development as problems identification, communications problems, and lack of basic education. One teacher educator believed aid donors would be most effective if they recruited and hired educators willing to be on long-term assignments. In the opinion of another educator United States institutions should include only "our best experts" in development teams. Refer to Table 11B.

Also reported in 11B is the second sub-cluster of recommendations directed at governments and international organizations that provide
funds for and sponsor development activities in developing countries. Again, the need for follow-ups to projects initiated was recognized by some of the educators (n=4) responding to the study. In addition, attention was drawn to the need to improve management techniques for agricultural programs and projects, provide long-term, on-going teams for programs and projects, and prioritize agricultural research problems and issues to meet the needs of the farmer. Other recommendations were that other governments and international organizations help developing countries design, develop, and maintain knowledge-centers to serve extension services in these countries. The need for the design, development, and implementation of long-term programs and projects that are non-partisan was also recognized. One educator summed up his thoughts this way, "The need is to train people, not pour in money."

**General Recommendations**

Presented in Table 11C are more general recommendations that could be helpful to development professionals and experts, administrators of development programs as well as government officials in both developing and aid-donor nations. The first recommendation pertained to project life, which one teacher educator suggested should be at least 10 years. Two of these general recommendation were that all who partake in development activities be good listeners to the people they hope to help and the dangers that attend wholesale transfers to developing countries of concepts and programs, particularly those from the United States. In the words of two of teacher educators "There are no quick
Table 11C

Recommendations By Agricultural Teacher Educators
For Agriculture and Rural Improvement in Developing Countries: General Recommendations

1. Plan projects with life of ten or more years.
2. Listen carefully and try to understand these other cultures in order to be able to help.
3. Establish networks to help communicate and exchange ideas, philosophies, and issues of common interest bearing on development.
4. Evaluate the status of everybody involved in international agricultural education and extension education.
5. Request host countries to establish procedures for counterpart matching for expatriates serving on development projects. (n=3)
6. Realize the dangers of wholesome transfers to developing countries of concepts, ideas, and programs from the United States. (n=5)
7. Recognize the fact that "There are no quick fixes" for international development. (n=2)
8. Be cautioned by the adage: "It isn't so much our ignorance that harms us as it is what we think we know."

Note: Numbers in parentheses indicate the frequency of each recommendation. Where no number is shown, the frequency was one.
fixes" for problems of international development because, as they pointed out, the process of development is a long one.

Advice From Agricultural Teacher Educators To Their Colleagues With Expressed Interest in International Development Activities

This major section is presented and discussed in two parts on terms of responsibilities. First, a cluster of responsibilities is presented relating to pre-departure decisions and activities. Secondly, the activities and responsibilities necessary for survival and hopefully success while on assignment are also presented. The two major subsections are presented in Table 12A and Table 12B respectively. Most of the statements in both tables were direct quotations as reported by the educators. However, they are presented without reference to specific individuals to ensure anonymity.

Pre-Departure Responsibilities

Table 12A contains 37 decisions, activities, or responsibilities necessary for initiating possible successful assignment for the "first-timer." They included issues and matters that were personal, related to the family, or were professional in nature. Most of the issues are direct, but blind, quotations.

On personal matters, teacher educators with interest in international assignments were advised to ask themselves the question: "How did I get interested?" The advice was perceived to be critically important. One such wrong reason suggested by a teacher educator was "running away from your head of department." Other personal issues on which the experienced teacher educators gave advice to those with
interest included securing a passport and a travel visa, consulting with your physician, getting innoculated, and possessing many positive personality traits. The personality traits they suggested included "must like people," "must be able to get along with all kinds of people," must "be patient and have persistence and perseverance."

Teacher educators interested in foreign assignments were also advised by those with such experience not to raise their expectations too high, but be prepared for set backs (n=8). Rather, they were cautioned to prepare for the unexpected, for frustrations, for culture shocks, and for the worst. As one teacher educator put it, "It is entirely normal to face culture shock" and another summed up such experiences in a philosophical tenor thus: "Expect the unexpected, which becomes the normal." Refer to Table 12A.

Some advice was also related to decisions concerning the families of those teacher educators with interest but no experience in foreign assignments. The first of these is to decide whether or not the spouse or the entire family is going to be unhappy or even adversely affected if an assignment were undertaken. Similarly, questions bearing on the age of the children and their education. Refer to Table 12A.

In the professional realm, pre-departure responsibilities range from learning a foreign language (n=4) to learning a specific working language (n=3) and from seeking out travel information on the country of interest to studying that country in great detail about its history, geography, climate, peoples and their cultures, and the educational system (n=9). Teacher educators with the assignment of interest were
Table 12A

Advice From Agricultural Teacher Educators To Their Colleagues With Expressed Interest In International Development Activities: Pre-Departure Responsibilities

1. Ask yourself whether or not "your wife and family are going to be happy."
2. Consider the age and education of your children.
3. Reflect very critically on the question, "How did I get interested?"
4. Ask yourself whether or not you are committed, dedicated, and motivated enough.
5. Ask yourself whether or not "you are running away from your Head of Department."
6. "Be sure you are not going for the wrong reason."
7. "Think through very carefully if that is what they really want to do."
8. They "must have a true missionary spirit to be effective."
9. "Learn the language." (n=3)
10. "Learn a foreign language." (n=4)
11. Study the country extensively: its climate, geography, cultures, educational system. (n=9)
12. Visit with and learn from your international students.
13. "Seek out all travel information" about the country or countries.
14. "Visit with those who completed assignments in the country you plan to visit."
15. "Get a passport."  
16. "Get a visa."
17. "Get yourself inoculated."
18. "Secure medical advice from your physician."
19. Get a health check. (n=2)
20. Decide whether or not to take your family including children along.
21. Become very clear of your exact responsibilities while on assignments.
22. Be sure you have a secured position in the United States upon your return.
23. Avail yourself with suitable reference materials and resources.
24. "Think of the contribution of vocational agriculture to U.S. agriculture and how much it could help developing countries."
25. "Don't build hopes too high."
26. "Be prepared for setbacks in the cultural, social, and political situations" in these countries.
27. "Be prepared for the unexpected."
28. "Be prepared for culture shock."
29. "Be prepared for frustrations."
30. "Be prepared for the worst."
31. "It is an unprecedented opportunity to get to know other people."
32. "It is entirely normal to face culture shock."
33. "It takes more time to be accustomed to mores, customs, etc."
34. "Expect the unexpected, which becomes the normal."
35. "Three qualifications are (1) must like people, (2) must be able to get along with all kinds of people, and (3) must want to do it."
36. "Three virtues: (1) be patient, (2) must have persistence, and (3) must have perseverance."
37. "Read broadly on the field of international development."
38. "Don't build hopes too high." (n=2)
39. Prepare for setbacks due to the cultural, social, or political situation. (n=8)
40. Get involved. (n=2)

Note: The number in parentheses indicate the frequency of each advice. Where no number is shown, the frequency was one.
also advised to visit with others who have been on assignments to the country or even project in question. They were also cautioned to be sure to have a secured position to return to the United States prior to leaving on assignment \( (n=1) \). These responsibilities are presented in Table 12B.

**Responsibilities While On Assignment**

Discussed in this subsection are four clusters of responsibilities teacher educators interested in foreign assignments were advised to assume while in a given host country. They are presented in Table 12B. The first set of 23 responsibilities pertained to the technical and professional dimensions of foreign assignments. Among these responsibilities were the need to: be technically competent, use workable principles, be objective in the analysis of situations and in decision-making, refrain from providing quick solutions to problems, and to avoid prescribing solutions. "First-time" international agricultural teacher educators were advised to assume the role of consultants, cooperate with other experts on the project in question, be "down-to-earth", and desist from making baseless assumptions about situations. Some of the experienced teacher educators cautioned their interested but inexperienced colleagues on a number of issues, thus "Become a part of the team---don't think the people are not smart," "You are there to give advice not to take over. Be cautious with how you do so," and "Find out why they do things the way they do before deciding on a course of action."
Table 12B
Advice From Agricultural Teacher Educators To Their Colleagues With Expressed Interest In International Development:
Responsibilities While in Host Countries

<table>
<thead>
<tr>
<th>I.</th>
<th>The Professional-Technical</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>Be familiar with subject-matter and be technically competent.</td>
</tr>
<tr>
<td>2.</td>
<td>Use &quot;workable principles.&quot;</td>
</tr>
<tr>
<td>3.</td>
<td>Be &quot;down-to-earth.&quot;</td>
</tr>
<tr>
<td>4.</td>
<td>Be prepared to introduce technology appropriate to the specific context of development.</td>
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<tr>
<td>5.</td>
<td>Make concerted efforts to consider the implications of the programs you helped develop for the given culture.</td>
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<tr>
<td>6.</td>
<td>&quot;Be objective in your analysis and decision-making.&quot;</td>
</tr>
<tr>
<td>7.</td>
<td>&quot;Refrain from quick answers.&quot;</td>
</tr>
<tr>
<td>8.</td>
<td>&quot;Don't prescribe&quot; solutions.</td>
</tr>
<tr>
<td>9.</td>
<td>&quot;Don't force an agenda on yourself.&quot;</td>
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<tr>
<td>10.</td>
<td>Don't make &quot;groundless assumptions.&quot;</td>
</tr>
<tr>
<td>11.</td>
<td>&quot;Be a consultant.&quot;</td>
</tr>
<tr>
<td>12.</td>
<td>Cooperate with other experts involved in the project or program.</td>
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<tr>
<td>13.</td>
<td>Take with you &quot;professional books, magazines, and journals.&quot;</td>
</tr>
<tr>
<td>14.</td>
<td>Keep in mind you are first, &quot;a reservoir of knowledge, then a fountain.&quot;</td>
</tr>
<tr>
<td>15.</td>
<td>Establish and help maintain a library for the people.</td>
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<tr>
<td>16.</td>
<td>Don't expect the U.S. land-grant concept to have immediate success.</td>
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<tr>
<td>17.</td>
<td>Try and attend the Annual National Agricultural Education Research Meeting.</td>
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<tr>
<td>18.</td>
<td>&quot;Find out why they do things the way they do before deciding on a course of action.&quot;</td>
</tr>
<tr>
<td>19.</td>
<td>&quot;You are there to give advice not to take over—be cautious with how you do so.&quot;</td>
</tr>
<tr>
<td>20.</td>
<td>&quot;Become a part of the team—don't think the people are not smart.&quot;</td>
</tr>
<tr>
<td>21.</td>
<td>&quot;Assure yourself that sufficient on-site opportunities are provided—negotiate for them.&quot;</td>
</tr>
<tr>
<td>22.</td>
<td>&quot;Use the farming systems approach. Work with what's available and adjust to their situation.&quot;</td>
</tr>
<tr>
<td>23.</td>
<td>&quot;Don't become another 'ugly American.' You are there as a consultant to help their leaders. And if you can initiate the idea with their educational and agricultural leaders and let them receive the credit, then the project would probably continue and become very worthwhile, if you are the one who wants to grab the glory and do everything in your name, as you leave, the project will be forgotten.&quot;</td>
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<table>
<thead>
<tr>
<th>II.</th>
<th>Perceptions and Values of the Other Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Make a concerted effort to &quot;understand and feel the culture.&quot;</td>
</tr>
<tr>
<td>2.</td>
<td>Try and understand the problems of the people.</td>
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<tr>
<td>3.</td>
<td>&quot;Be prepared to learn more than you offer.&quot;</td>
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<tr>
<td>4.</td>
<td>&quot;Get to the grassroots and apply yourself.&quot;</td>
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<tr>
<td>5.</td>
<td>&quot;Don't impose your values and lifestyle on the people.&quot;</td>
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<tr>
<td>6.</td>
<td>&quot;Avoid the provincial and parochial attitude of most agricultural teacher educators.&quot;</td>
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<tr>
<td>7.</td>
<td>&quot;Study and understand the local customs and agriculture of that country.&quot;</td>
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<tr>
<td>8.</td>
<td>Mingle and interact freely with the people.</td>
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<tr>
<td>9.</td>
<td>Visit homes of the local people while in the country.</td>
</tr>
<tr>
<td>10.</td>
<td>Use Maslow's hierarchy of needs.</td>
</tr>
<tr>
<td>11.</td>
<td>Find out what the host government's position is on the project</td>
</tr>
<tr>
<td>12.</td>
<td>Don't attempt to uncritically translocate the success stories of the United States into these other countries.</td>
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<tr>
<td>13.</td>
<td>&quot;You must enjoy with people to enjoy in a cross-cultural environment.&quot;</td>
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<tr>
<td>14.</td>
<td>&quot;Learn to be friends with all levels of the people.&quot;</td>
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<tr>
<td>15.</td>
<td>&quot;Attend social and cultural events.&quot;</td>
</tr>
<tr>
<td>16.</td>
<td>&quot;Learn from the people.&quot;</td>
</tr>
</tbody>
</table>
Table 12B Continued

III. The Time Dimension and Communications

1. "First of all leave your wrist-watch and calendar in the U.S. In most countries time is not of the essence as it is in the U.S."
2. "Don't be overly concerned with timelines, deadlines, bottom-lines, and logistics. Be prepared to go at a slower pace.
3. Remember that "change is a slow process." (n=3)
4. Accept a relatively short-term assignment to first familiarize yourself with the culture.
5. "Plan to stay at least four years. I think a 2-year assignment is to) get your feet wet. And by the time the two years (are) up, you are just then preparing to get effective. I think you have to stay longer to make a real impact."
6. Take time and review the social and economic policies and direction of the national government to help you communicate more effectively.
7. Study the existing obvious limitations to development in the country of interest.
8. Be sure you create a free, uninterrupted channel of communication with the U.S. while on foreign assignment.
9. Don't hesitate to ask questions.

IV. Personal and Other Relationships

1. "Be flexible."
2. "Be prepared to do a lot of things by yourself."
3. "Be patient." (n=2)
4. "Be ready to adapt to the new environment."
5. "Keep an overall personal goal in view."
6. "Keep your enthusiasm up."
7. "Check into the cost of housing."
8. "Be committed."
9. "Don't become over glamorous."
10. "Be curious."
11. "Give yourself benefits to look forward to by mingling and interacting with the people."
12. "Be a good listener."
13. Establish good relationships.
14. "Don't prescribe."
15. "Be adaptable."
16. "Must have persistence."
17. "Must have perseverance."
18. "Be yourself."
19. "Don't try to dress like 'the foreigner.'"
20. "Should remember you are a visitor. Respect the customs, habits, etc. of the people."

Note: The number in parentheses indicates the frequency of each advice. Where no number is shown, the frequency was one.
The second cluster of responsibilities, also presented in Table 12B, related to cultural differences. Three testimonies stressed that "first-timers" or those educators interested make a genuine effort to understand the other peoples and their cultures. Relatedly, they were also advised to make concerted effort to understand the real problems of the beneficiary communities, be prepared to learn more than they might offer, and desist from imposing their values and lifestyle on the natives. It is important, according to some of the experienced teacher educators, for the "first-timers" to apply themselves at the grassroots level if the development effort is to be effective. Two suggested methods were by visiting homes of the local people and to mingle and interact with them freely. In sum, as one experienced educator advised the inexperienced educators "Use Maslow's hierarchy of needs" and try to satisfy them accordingly in the interest of the local peoples.

A third cluster of responsibilities is included in Table 12B. It addresses the concept of time and communications dimension of foreign assignments. Nine essentials were suggested as advice by the experienced teacher educators to their inexperienced colleagues desiring or interested in international development activities. Time, was not of essence in most countries, one experienced educator pointed out. Therefore, as one suggested, there was no need to be overly concerned with deadlines, timeliness, and bottomlines. Three of the educators also cautioned their advisees on the phenomenon of change, which is described by most as "a slow process." Whereas there was a suggestion to accept only short-term assignments for the first time, there was a counterpoint that others believed long-term assignments of two years or longer were more effective.
Finally, advice was given with reference to personal comportment and overall personality disposition. The experienced teacher educators advised their inexperienced colleagues to be patient, flexible, adaptive, enthusiastic and committed, curious, persistent and persevering, and good listeners. In order to succeed as an international agricultural educator, the inexperienced teacher educator is advised to also be prepared to "Be yourself," "Keep an overall personal goal in view," and establish good relationships while on foreign assignments. Refer to Table 12B.
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The primary goal of this study was to answer the question: What has been the contribution of the United States agricultural teacher educator to the international development process? In order to achieve this goal, the investigation was to entail an analysis and a synthesis of data on the past involvement of members of the agricultural teacher education profession in international development activities since the implementation of Title IV of the Act of International Development of 1950. A secondary goal of the study was to identify roles the profession could assume in future Third World development activities.

Eight specific objectives were formulated to guide the researcher in the study. They focused on the identification of (1) the primary goals of each project in which agricultural teacher educators were involved, (2) exact responsibilities and activities of the educators while on foreign assignments, (3) other professionals or experts who co-worked with the educators at those foreign locations, (4) specific accomplishments resulting from activities of agricultural teacher educators, (5) major problems these educators encountered while on foreign assignments, and (6) the role of the agricultural teacher education profession in future international development activities.
In addition, two other objectives addressed (1) general recommendations necessary for solving existing problems of agriculture and rural development in the developing countries and (2) specific advice from agricultural teacher educators with experience in foreign assignments concerning professional and personal strategies for effective and successful performance of the role of the teacher educator in agriculture in the development process.

**Summary of Methods and Procedures**

The study was a descriptive census survey. One hundred and seventeen agricultural teacher educators constituted the target population. However, the true population following one mailing, three mail reminders, and a telephone call was 103 (85.47%) of which usable responses were 98 (83.76%). A mailed questionnaire together with blank cassette tapes was used to collect the data. Seventy-nine respondents recorded their responses to the 19 open-ended questions on cassette tapes. Sixteen teacher educators responded on paper. Data were also transcribed from the curriculum vitae of three teacher educators.

Data were first transcribed with each respondent serving as a unit. The data were then analyzed into common clusters. Finally, the data were partially synthesized by eliminating duplications of the various responses as they referred to a particular commonality. Since the data were largely qualitative, the results were presented descriptively.

**Summary of Background Information**

The first foreign assignment undertaken by an agricultural teacher educator as reported was in 1952. Between 1952 and mid-1984, over 240
separate foreign assignments were completed by teacher educators. Activities were undertaken by teacher educators in 78 countries. Teacher educators undertook assignments to more than 20 countries in each of Africa, Asia and the Americas. Only four European countries were involved in the foreign activities of the teacher educators.

The development programs and projects in these foreign countries with which teacher educators were affiliated were sponsored and/or funded from numerous sources. Fifty-nine national governments of aid-receiving countries were co-sponsors sponsors of most of the programs and projects. Educational institutions (n=12) provided support particularly for program and institutional development activities. Too, substantial funding came from the United States. The leading supporter of development projects was the USAID cooperating with universities (n=23) in the country. There were also other sources of aid such as extension services at the state level. International organizations, foundations, and agencies, private and public alike, provided monetary aid. They included the FAO, UNESCO, ILO, World Bank (n=5), Ford and Rockefeller Foundations, and Rotary International. Also providing funds were religious organizations such as the Christ Reform Church of Honduras, the Methodist Churches of Nebraska, and the Church of the Brethren, Elgin, Illinois.

Summary of Findings Specific to Objectives of the Study

Agricultural teacher educators were involved in foreign development activities associated with a variety of projects and programs which had a wide range of primary goals. However, seven main clusters of these goals were identified as (1) evaluation and assessment activities (n=13), (2) upgrading and improvement activities (n=11), (3) program and
institutional expansion and strengthening activities ($n=16$), (4) training and education activities ($n=31$), (5) development-related efforts ($n=48$), (6) creation and establishment of new institutions or programs ($n=4$), (7) research-related efforts ($n=16$), and (8) nine other goals.

Teacher educators used over 60 action-words to describe their exact responsibilities and activities while on foreign assignments. Those that were used most frequently were to: assist/help, develop, evaluate, teach, administrate, and advise. Some of their activities included, for example, designing and developing curricula, curricular or instructional materials; evaluating academic programs or development projects or even entire programs; selecting and/or recruiting participants or students for training; and teaching courses in agricultural teacher or extension education.

While on foreign assignments teacher educators worked along with members of other professional groups. One hundred and twenty-six different occupational titles were identified and grouped into seven major clusters. These clusters were: (1) agriculturalists ($n=56$), (2) administrators ($n=18$), (3) educators ($n=16$), (4) social scientists ($n=3$), (5) business representatives ($n=3$), (6) industrialists ($n=1$), and (7) bankers/financiers ($n=2$). Other professionals ($n=27$) who co-worked with agricultural teacher educators included community leaders, medical officers, Peace Corps volunteers, and local priests.

Teacher educators reported three major groups of problems they encountered while on foreign assignments. There were location-specific constraints ($n=39$) to their performance which included language barriers ($n=18$) remoteness of locations, time limitations ($n=9$) especially for
very short-term assignments, lack or shortage of facilities, equipment, and/or supplies (n=8), overworked counterparts, and no secretarial help (n=3) in some cases. A second set of constraints which were external were of two kinds. First, there were problems arising from the host countries themselves. For example, lack of support (n=15) from both the local people and national government in most cases was an obstacle. There were reports on lack of security and problems with travel (n=14). Red-tape stemming from (n=8) bureaucracy were reported to have slowed down project or assignment activities in some cases. Secondly, external constraints stemmed from aid donors with red-tape, and conflict of project goals and actual needs of the local peoples was considered quite problematic according to many teacher educators. Finally, there were problems that were communications-related or personal. Example of the latter included health and housing problems and culture-shock.

Activities of the agricultural teacher educator on foreign assignments resulted in an array of accomplishments. Achievement in this regard was both tangible and intangible. Tangible accomplishments were clustered into six main groups. Principally, teacher educators were instrumental or helpful in creating, establishing and developing new programs and educational institutions. Their activities resulted in expanding, upgrading, updating, and improving existing programs and educational institutions of all levels.

The accomplishments were not limited to only programs and institutions of learning. Teacher educators conducted lessons, courses, workshops, and seminars for teachers and trainers. They also designed and developed curricula and curricular and instructional materials for programs at all levels. While on foreign assignments the educators
advised students, members of university teaching faculties, officials of government ministries and agencies, and representatives of aid donors. In some instances recommendations were made and proposals and reports were prepared for development programs and projects.

Intangible accomplishments as reported by seven of the teacher educators were very personal. There were testimonies in terms of learning more about themselves and other cultures. For example, one educator reported of having gained personal satisfaction as a result of his experiences abroad.

As to what the future role of the agricultural teacher education profession in international development should be, teacher educators offered suggestions that covered several dimensions of the development process. The dimensions related to: (1) pre-service and in-service training and curricular activities, (2) problems identification, needs assessment, and evaluation activities, (3) research, consultation, and advisement efforts, (4) activities in areas of adult, rural, and youth education, and institutional development, and (5) management and administration of development programs and projects.

Agricultural teacher educators were also asked to recommend possible solutions for the existing problems of agriculture and rural improvement in developing countries. Their recommendations were clustered into two main groups. The first cluster was directed at peoples and national governments of beneficiary nations. Governments of these countries were advised to formulate realistic national policies, then design and develop context-specific programs and projects to address: (1) education in agriculture, (2) adult, farmer, and rural education, (3) youth development and general education, and
(4) institutional development. The second cluster focused on responsibilities of aid donors external to the aid-recipient countries such as colleges of agriculture in the United States, federal agencies and departments of state of the United States, and international agencies, and organizations. A principal recommendation was that programs and projects be realistic and context- or culture-specific. The philosophical slant of the recommendations in both clusters was to help the peoples so that they can help themselves.

The last objective of the study was to solicit advice from the experienced educators in international activities as to strategies and activities that would result in successful foreign assignments in the future. The wide array of suggestions were clustered into two main groups. First, there were the pre-departure responsibilities or issues and questions that need to be addressed prior to taking the first assignment. These centered around personal and professional reasons for becoming interested in foreign assignments, preparatory activities such as securing a passport and a travel visa, undergoing a medical check-up, and receiving the recommended innoculations for the country of interest.

Second, the experienced teacher educators advised their inexperienced but interested colleagues on responsibilities they should assume while in a foreign country. Their advice covered four main dimensions: (1) technical and professional competencies were essential, (2) receptiveness of the other culture was vital, (3) time-related issues and decisions were to be viewed cautiously because of how other cultures perceived time and effective communications was of critical importance, and (4) healthy inter-personal relationships with the people of the other cultures were basic requirements for survival.
Conclusions

Based on the findings as summarized, the following conclusions were drawn:

(1) The agricultural teacher education profession has consistently increased its involvement in the international development process since Title IV of PL535 of 1950. Involvement of the profession increased quantitatively by number of teacher educators and assignments per decade. Also, involvement of members of the profession was not restricted geopolitically in terms of regions of the Third World. Teacher educators served in countries of Africa, Asia, Central and South America, and The Caribbean.

(2) Primary goals of the programs and projects with which teacher educators involved varied greatly. However, they were all basically aimed at improving the development capabilities of the aid-recipient countries through program expansion, improvement and evaluation, training and research.

(3) Teacher educators were involved in activities that were basically specific to the training and preparation of the broad spectrum of members of the agricultural teacher and extension education professions of the Third World. They designed, developed, and evaluated curricula and curriculum materials. Also, they conducted pre-service and in-service training activities for agricultural teachers and extension personnel typical of the primary missions of these professions in the United States.

(4) Members of the agricultural teacher education profession
demonstrated that their professional expertise could be well integrated into an overall role-model in the international development process. Agricultural teacher educators were not only members of program and project teams of varying sizes and compositions, but also, in some cases, team leaders or project coordinators. They worked with experts and professionals from over 120 occupational groups both in and outside of agriculture.

(5) International development programs and projects with which the agricultural teacher educator was involved were constrained by three main kinds of problems which were both location-specific and external. They could be categorized as follows: (a) logistics related, (b) human-factor, and (c) development-theory orientation problems. Problems of logistics, transportation, and supplies within and external to the project sites were reported as evident. Human-related problems were revealed as they were associated with barriers to effective communications such as language differences and inter-personal relationships at project sites and beyond. Also encountered were problems at local, national, and international levels that reflected conflicts in philosophies or theories and, consequently, expectations of development.

(6) Despite the numerous problems teacher educators encountered while on foreign assignments, substantial accomplishments both tangible and intangible resulted from the activities of members of the profession. Substantial achievements were made in terms of the development of human, institutional, and
natural resources in concrete terms. The intangibles were fundamentally in the form of personal gratification and increased and improved inter-cultural understanding.

(7) The United States agricultural teacher education profession has had some success in the development of programs and projects to meet the basic human needs of peoples of developing countries.

(8) It appears the training of members of the profession lend their expertise towards contributing most effectively toward development through the human capital formation (i.e. education) strategy of development.

(9) Host governments of and educational institutions in developing countries are yet to focus on and emphasize the establishment and development of context- and culture-specific programs and projects that address the creation of new resources bases such as human capital and newly designed institutions in order to achieve sustainable and improved living conditions for the vast majorities of their peoples.

(10) Success in performing foreign assignments appears to be contingent upon two main clusters of conditions: (a) qualifications and (b) personal qualities. The inexperienced professional with interest in international development activities should be professionally and technically competent. Related to competence, the neophyte should be willing to learn in advance about the new environment. Also, positive personality traits and behaviors are desirable qualities for success.
The past role of the agricultural teacher education profession in international agriculture and rural development as reported in this study seems to be greater than was evident in previous, available literature.

**Recommendations**

The findings and conclusions of this study point to two sets of implications: recommended (1) practices and (2) research. These implications seem to focus on decisions and activities of a wide array of professional/specialized groups and institutions. These decisions and activities include: the agricultural teacher education profession itself, aid-donor agencies, organizations, and governments, Colleges of Agriculture, and researchers in Third World and international development.

**Recommended Practices**

Past development programs and projects have been criticized as been characterized by conflicts between goals envisioned by planners and the real needs of beneficiary cultures. Therefore, it is suggested that:

1. Colleges of Agriculture and other eligible institutions, funding agencies, organizations, and foundations together with host governments make a determined effort to narrow and possibly eliminate the goals-needs conflicts.

2. The agricultural teacher education profession of the United States should advise administrators of international
agriculture and rural development programs and projects on the critical, true needs of peoples of the Third World.

3. Funding agencies, organizations, and foundations as well as aid-recipient governments should make concerted efforts to reduce the bureaucratic red-tape which seems to seriously create problems for members of development program or project teams in Third World countries.

4. Members of the United States agricultural teacher education profession concentrate their activities in future foreign assignments on teacher education and training to promote education in agriculture in the Third World.

5. Funding agencies, organizations, and foundations, Colleges of Agriculture, and aid-recipient governments include agricultural teacher educators in teams for agricultural and rural development programs and projects designed for Third World nations.

6. Funding agencies, organizations, and foundations, and Colleges of Agriculture conduct seminars and workshops for members of project teams prior to their departure on such issues as potential problems, expectations, and "pseudo-acculturation."

7. A directory describing the past involvement of agricultural teacher educators in international agriculture and rural development needs to be compiled. Such a directory would serve a number of purposes among them would be (a) facilitating formation of project teams for foreign assignments and (b) promoting intra-profession and inter-profession consultation.
**Recommended Research**

Research in international agricultural education is a new phenomenon. Therefore, basic research is essential for the formation of a strong information base. It is, therefore, suggested that:

1. Research be conducted to specifically address the
   (a) goals (ends) of and (b) strategies or approaches (i.e. means) in international agricultural teacher education
   viz-a-viz national development in the Third World.

2. Research be conducted each decade to determine any "shifts"
   in magnitude and/or nature of involvement of the agricultural teacher education profession in international development.

While on assignments members of the agricultural teacher education worked with professionals from other disciplines. Role research on these several other professional groups such as agricultural economists, rural sociologists, anthropologists, and agronomists who have been involved in international development appears to be limited if not non-existent. Therefore, it is suggested that:

3. Research be conducted on the past role and activities of each distinct, identifiable professional group involved in Third World development.

Development is multidimensional and highly complex and encompassing a wide range of segments of each culture or society such as educational, sociological, economic, political, informational, cultural, and technological. It is obvious that no professional group of experts can work in isolation or even cooperate in partially integrated manner with a few other expert groups to foster development. Hence, the only seemingly logical approach to achieving development is through the
integrated multi-disciplinary strategies. Consequently, it is recommended that:

4. Research be conducted to address the (a) meaning of (b) theoretical and empirical bases for the concept of multi-disciplinary approach and (c) the means (i.e. alternatives) by which the concept should be operationalized to achieve development.

Finally, as development is very complex and multifacted, it implies that a better grasp of its true meaning is very critical and essential in order to identify a) its goals and objectives as well as b) the appropriate strategies to achieve them. Therefore, it is recommended that:

5. Research be conducted to address the
   a) inner meaning, goals and objectives of and
   b) means (or alternative strategies) for achieving true, sustainable development particularly in the Third World.
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APPENDICES
CONTRIBUTIONS AND ROLE OF THE AGRICULTURAL EDUCATOR IN INTERNATIONAL AGRICULTURAL AND RURAL DEVELOPMENT

A study is underway here at Louisiana State University on the above topic. The primary objective is to compile a comprehensive document on the role of the agricultural educator in international development since the inception of the Title IV Programs in 1950.

This study is being conducted by Mr. Ismail bin Yahya in partial fulfillment of his doctoral degree requirements. He is being supervised by Dr. Gary Moore.

WE would like you to assist us in the preparation of a complete and up-to-date list of all teacher educators who have had international experience. Such experience should not be restricted to assignments completed while the educator was at your institution.

In order to prepare such a list we consulted the AATEA Directory of Teacher Educators in Agriculture, 1983/84 for names of all teacher educators in the nation. Your help is needed to identify those educators with international experience. To this end the list for your department is enclosed to expedite action on your part.

While counting on your assistance and cooperation we wish to express our sincere appreciation to you in advance. Thank you.

Yours truly,

Ismail bin Yahya
(Project Executor)

Gary E. Moore
(Project Supervisor)
IDENTIFYING AGRICULTURAL EDUCATORS WITH INTERNATIONAL EXPERIENCE

A. Name of Institution: ______________________________________

B. Directions:

a) Please place an(X) mark against the names of only those faculty members who have had experience in international development activities.

b) Please place the mark on only those educators who have 50% or more of their responsibilities within the department or section of agricultural education.

c) You may want to add the names of those with such experience who are not listed below.

d) Please return the completed form to us using the enclosed envelope.

C. List (Source: AATEA Directory of Teacher Educators in Agriculture)
APPENDIX C
Dear

ROLE OF THE U.S. AGRICULTURAL TEACHER EDUCATION PROFESSION IN INTERNATIONAL AGRICULTURE AND RURAL DEVELOPMENT

The AATEA Ad Hoc Committee on International Agriculture Education seems to have raised three key questions during the AEA Convention last December in Anaheim, California. The questions centered around the "What," "Why," and "How" of international agricultural education. There appears to be a lack of empirical data on the role of the profession in international development.

A study is underway here at the Louisiana State University on the above topic. It is an attempt to answer the question of "What?" The primary objective is to compile a comprehensive document on the current role and contributions of the profession to the international development process.

You have been identified as one of over 100 agricultural teacher educators who have been involved in development activities in developing countries. We would appreciate the opportunity to learn of your experiences in and ideas on international agricultural education.

Therefore, we are requesting that you respond to the questions on the enclosed survey instrument. In order to save you time you would please respond to each item orally instead of in writing. Enclosed is a cassette tape. Please record your responses on the tape and return the tape to us by August 31, 1984. A stamped, self-addressed envelope is enclosed.

This study is being conducted by Mr. Ismail bin Yahya in partial fulfillment of his doctoral degree requirements. He is being supervised by Dr. Gary E. Moore.

Your assistance and cooperation are greatly appreciated. We therefore thank you very much.

Sincerely,

[Signature]

Ismail bin Yahya
Project Coordinator

[Signature]

Gary E. Moore
Project Supervisor

Enclosures

August 2, 1984
ROLE AND CONTRIBUTIONS OF THE U.S. AGRICULTURAL TEACHER EDUCATOR IN INTERNATIONAL AGRICULTURE AND RURAL DEVELOPMENT

PART A

Please provide the following personal information:

1. Name
2. Present Rank (Academic)/Title
3. Present Institution

PART B

Following the directions and examples on the cover page please respond to these questions. Please record your responses using the enclosed cassette tape.

QUESTION #1

When did you as an agricultural educator first become involved in international activities at a foreign location? (Please state the year).

QUESTION #2

On how many assignments have you served?

QUESTION #3

In which year was each assignment undertaken?

QUESTION #4

What was the duration of each assignment at the foreign location(s)?

QUESTION #5

Please list the developing country/countries that were involved in the project.
QUESTION #6
Who (institution, foundation, government agency, etc.) sponsored the project?

QUESTION #7
What was (is) the official title of the project?

QUESTION #8
When was the project initiated? (Please state year).

QUESTION #9
Has the project been completed? If so, when? (Please state year).

QUESTION #10
What was the primary goal of the project?

QUESTION #11
What were your exact responsibilities and activities in this project?

QUESTION #12
What other experts (e.g., entomologist, agronomist, rural sociologist, farm manager, plant pathologist, irrigation engineer, home economist, nutritionist, etc.) were/are involved in the project?

QUESTION #13
What were the major problems you encountered in conducting activities related to the project?
(a) location specific problems
(b) external problems

QUESTION #14
What were the major accomplishments (tangible and intangible) which resulted from your activities?

QUESTION #15
What roles or activities would you suggest agricultural teacher educators assume in future international projects? Please be very specific.
QUESTION #16
What recommendations would you make for solving existing problems of agriculture and rural development in developing countries?

QUESTION #17
If you were giving advice to other teacher educators with expressed interest in international assignments or actually preparing to leave on international assignment for the first time, what would you say?

QUESTION #18
Given sufficient funds we would like to compile a directory on the contributions of the agricultural education profession to the development of agriculture and improved rural life in developing countries. Please indicate if you would be willing to have your name included with a (1) yes or (2) no.

QUESTION #19
Would you have preferred providing this information using some other method? Please be specific.

Thank you very much for the cooperation and assistance.

Please return recorded cassette tape in the enclosed envelope on or before August 31, 1984 to:

Ismail bin Yahya
Department of Vocational Agricultural Education
Louisiana State University
Baton Rouge, LA 70803

July 1984.
INSTRUCTIONS

To facilitate response the following directions and examples are provided:

Directions

For each international project with which you have been involved please answer the questions on the following page.

1) If the project involved activities in several different countries please answer the questions for each country in which you have served.

2) If you have been on repeated assignments to the same country with the same role and objectives you need to answer the questions only once.

3) But if the repeated assignments in the same country involved different activities, objectives, problems, etc., please respond to the items for each assignment.

Examples

1) You had only one international assignment to, say, Turkey. Please answer the questions only once.

2) You had one assignment but it involved activities in, say, both Ghana and Ivory Coast. Please answer the questions twice, once for Ghana and once for the Ivory Coast.

3) For three years in a row you served as an external examiner for, say, an agricultural college in Malaysia. The experiences were basically the same for each of the three assignments. Please respond to the questions only once.

4) You have had two (2) international assignments -- One to, say, Mexico in 1980 and one to, say, Jamaica in 1982. Please answer the questions twice -- once for Mexico and once for Jamaica.

July 1984.
August 31, 1984

Dear

On August 2, 1984 we sent you a package of materials related to a study underway here at LSU. The enclosures in that package were a cassette tape, a questionnaire, and an instructions page. The study relates to international agricultural education. We requested that you record your responses to the questions on the tape and return it to us on or before August 31, 1984.

This card is a reminder that we are still looking forward to your response. Please return the recorded cassette to us as soon as possible.

Again, we thank you.

[Signatures]

Ismail bin Yahya
Project Coordinator

Gary J. Moore
Project Supervisor
APPENDIX G
September 28, 1984

Dear

On August 31, 1984, we sent you a postcard to remind you that we were expecting your response to a questionnaire we mailed you on August 2, 1984. Both communications relate to a study on international agricultural and rural development. We have not yet received your response but would like to.

With school in session, we are aware that your schedule is pretty hectic. But we are also sure that you are willing to provide us with the necessary input for our study. Your input is vital to the success of the investigation.

Please record your responses on the cassette tape and return it to us as soon as possible. In case you have misplaced the survey instrument and the accompanying instructions page we have enclosed a copy of each for your use.

Also find enclosed a token of goodwill. We hope you find some use for it.

With sincere regards,

Yours truly,

Cary E. Moore
Project Supervisor

Enclosures
NOTICE

SAVE THE LIFE OF A PROJECT!!!
October 23, 1984

Dear

In August we contacted you regarding a project underway here at Louisiana State University. The project is on International Agriculture and Rural Development. Unfortunately, we have not heard from you up till now. We still would like to hear from you.

Of course school is back in session and we realize that your schedule is crowded. However, we need your help to save this PROJECT because your input is vital to its overall success.

Would you please record your responses on the cassette tape and return it to us as soon as possible. We certainly will appreciate your assistance and cooperation in this regard.

Again, we thank you.

Sincerely,

Gary E. Moore
Project Supervisor
FOURTH FOLLOW-UP: PHONE SURVEY

1. Have you been on a foreign assignment as a teacher educator in agriculture?

2. Would you still be able to respond to our questionnaire?

3. We plan on preparing a directory on the role of the agricultural teacher education profession in international development. Would you want to have your name included in the directory?

4. If you want your name included in the directory could you provide us with the following information?:
   a) Full name
   b) Rank & Position
   c) Institutional affiliation
   d) Number of years of experience in international development activities?
   e) Countries of experience?
   f) Specific areas of development activities and/or involvement (examples: program development, program evaluation, needs assessment, curriculum design, non-formal education, etc.)?

November 9, 1984.
November 14, 1984.

Dear

A WORD OF GRATITUDE

Please accept our sincere thanks. They are an expression of our gratitude to you for your cooperation and support throughout the conduct of our study on international agricultural education here at LSU.

Regards.

Gratefully,

Ismail bin Yahya
Project Coordinator

Gary E. Moore
Project Supervisor
Reactions of Respondents to the Use of Cassette Tapes as the Data Collection Medium in this Study

Positive Comments

1. "I like it. It's rewarding; permitted deeper thinking"
2. "Much quicker"
3. "Most pleasant way to respond to any inquiry"
4. "My time was saved"
5. "It's alright. I would probably have written more than I said"
6. "So far as I'm concerned, this is a very good way to get a lot of information"
7. "I wouldn't have taken the time to have written all this in long hand"
8. "I think this worked Okay"
9. "This method of information referral is certainly satisfactory with me"
10. "If I had a whole lot of to say, this might have been the easier method"
11. "I have no problem with the tape recorder. It's a unique idea. I'm happy to do it."
12. "I must admit this is a very novel but time-saving way of providing this information"
13. "This is alright"
14. "I think this method is quite alright"
15. "This method appears to be a useful one for providing for these types of studies. I have no problems with utilizing the tape in giving you my response."
16. "It has loosened me up to say certain things I probably wouldn't have said if I had to write them down."

17. "No problem for me. ----. You probably have got a lot than you would have if it had been written. I like it."

18. "This method of collecting data was quite acceptable."

19. "No. I feel comfortable in using the tape. ----. I think this is a novel idea to use the tape and make a recording rather than write it down. It definitely did save me time."

20. "This suits me just fine."

21. "No. I think you had a good idea in using a tape recorder for your responses."

22. "No. This was quite quick."

23. "Method, O.K."

24. "Heck! This was a real treat. I enjoyed responding over the tape recorder."

25. "This method is fine once I took the time to sit down and do it on tape."

26. "The tape situation is O.K. I have no problems with it."

27. "Probably no. This way was O.K."

28. "No. This method of providing information was quite adequate."

29. "I'm enthused about this method. I hope that my tape is understandable. ----. But I think it is a fine medium. I've enjoyed responding by tape."

30. "The format or the tape is fine. I'm sure that you can get a lot more information as long as you can transcribe it and understand what I am saying."

31. "I do appreciate this method of data collection. And because of that I do want to cooperate fully."

32. "Okay. (However, it provided opportunity to ramble.)"

33. "O.K."

34. "I think in terms of my own case, this is a good medium."
35. "I think this is a good approach. It is unique. I have used it once in working with a blind doctoral student. I gave him all of his questions on one tape. He answered them on another. It worked out to his satisfaction and ours too."

36. "It was a different approach. It was a unique approach."

37. "This is an innovative way to provide the information. I expect to become more comfortable with it over time."

38. "My response is generally positive. I sometimes get tired of drafting memos and writing letters. This is a long questionnaire. This method of responding was probably more suitable than another writing exercise. I appreciate the cassette tape and the chance to respond in this way."

39. "I think this is a very efficient way to get information. If a person writes out his/her answers, they might be a little more condensed. But then again, they are less likely to do it."

40. "I find this method very unique. I have used something similar to this in trying to get a handle on what constitutes good teaching. This reaffirms my idea on that. This is an effective way of communicating. Research results can be compiled from tapes."

41. "This is unique idea in using the tape. I congratulate you on it."
Reactions of Respondents to the Use of Cassette Tapes as the Data Collection Medium in this Study

**Negative and Cautionary Comments**

1. "Easier using a questionnaire with a checklist."

2. "Would have preferred writing."

3. "On this paper, saved time."

4. "The only problem is one cannot easily review the responses that one has made."

5. "I prefer the method I chose." (He responded on the questionnaire).

6. "However, there will be probably some concerns if some quotes are taken out of context then used in a thesis. Normally, I would prefer putting down in writing anything that might be quoted in exactitude. If quotes are misused it could cause later problems."

7. "One thing I might be doing is just rambling on and not giving you the information that you need."

8. "You as the researcher is going to have a problem sorting out what's relevant and what isn't from this conversation."

9. "I think this might provide some difficulty for you in determining what you want to write out of this."

10. "I need to organize and write my responses. The tape recorder is time-consuming for me to use. I'd rather have my responses in writing so that I can see what I'm really presenting to you and not use a lot more words that what I'd really use. Although using a tape recorder is a good idea and is one way of hearing the persons voice as they relay their ideas and experiences to you, one of the major problems of using a tape recorder for a study of this type is that you have to interpret what the person filling out the research information form is really trying to say."
11. "Yes. Your tape was bad for some reason. I lost patience in working with it and gave up. My time is too valuable to be wasted on poor tapes. My written responses were done in 15 minutes. Sorry about your desire to have this on tape. Sometimes our best plans don't work out."

12. "I'm not sure. ---. A little frustrating to go through the countries one after another."

13. "The questionnaire developed to solicit the information on this project is very much open-ended and seems to be designed to hunt for general interesting information rather than specific information. I would much rather be able to respond to specific questions other than the generalized ones of this particular study."

14. "It required that I get a tape recorder to work to make sure that it was operating before I completed this questionnaire. If I were to answer the questions by handwriting or questionnaire, I would have probably gotten this back quicker to you."

15. "I would have preferred to have typed this rather than to have used the cassette."

16. "I guess I'm a traditionalist. A pencil-and-paper questionnaire would have resulted in quicker response, at least for me."

17. "Sorry, but I was simply unable to use the cassette as suggested. I hope this written format is acceptable."

18. "I think it would be very difficult to summarize the information."

19. "Yes. I feel that I would have been much more effective if I would have been able to express my thoughts on paper as opposed to tape. Doing this was very time-consuming."

20. "Yes. I guess I would have preferred check-off kind of response since the responses that I made would not have been what you had in mind."

21. "I think that a regular format would have been just as good in this case."

22. "As for providing the information, I might have been able to get the information to you quicker, had I not had to arrange for a tape recorder and take the time to record it. ---. (Now, that may simply have been my problem rather than the research method)."

23. "However, I do not envy you in your evaluations."

25. "I believe it would be a good way to respond but perhaps more difficult to analyze."

26. "Yes. My tape was jammed in such a manner that I have not been able to play any of it."

27. "This method is fine." (Note: He wrote his responses).

28. "----. I feel that probably using a tape could be effective in some other kinds of study. But I felt that this kind of questionnaire I could have been more effective if I had been able to express it in writing."
VITA

Ismail bin Yahya is a native of Wa, Upper-West Region of Ghana, West Africa. Born in 1947, he was raised in a large Muslim family engaged in both farming and business. He received his elementary education in Wa. In 1962, he entered the Government (now Tamale) Secondary School, Tamale, and received the General Certificate of Education (G.C.E.) Ordinary Level Certificate in Agricultural Science in 1967. The following year, he enrolled at Wesley College and matriculated with the Ghana Teachers' Certificate "A" (Post-Secondary Division) in 1970.

Mr. bin Yahya started his teaching career in September, 1970, at the Limanyiri Middle School, Wa as a general classroom teacher for two successive academic years. In October 1972, he entered the Bagabaga Specialist Agricultural Teachers' College, Tamale and graduated with a Second Class Upper Division and a Distinction in Teaching Practice in May, 1974.

From September 1974 to December 1976, Mr. bin Yahya was a member of the teaching staff of the Tamale Secondary School, Tamale. He taught agricultural science to students in five of the seven different levels in the Ghanaian secondary education structure.

In January 1977 through August 1981, Mr. bin Yahya enrolled at Clemson University, Clemson, South Carolina, receiving his B.Sc. (May
1980) and M.Ag.Ed. (August 1981) degrees in agricultural education. Mr. bin Yahya also enrolled at Purdue University, West Lafayette, Indiana, between January and August 1982 in pursuit of a M.Sc. degree with emphasis of international agricultural education and development. He completed the required coursework and expects to receive the M.Sc. degree in December 1985.

From August 1982 to May 1985, Mr. bin Yahya was a graduate research assistant in the Department of Vocational Agricultural Education, School of Vocational Education and Technology, at Louisiana State University, Baton Rouge.

Outside of academic life, Mr. bin Yahya is an ardent sportsman and an athlete. He played and coached soccer for most of his early adult life. Other sporting activities of interest to him are table tennis, volleyball, and track and field.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: ISMAIL bin YAHYA

Major Field: VOCATIONAL AGRICULTURAL EDUCATION

Title of Dissertation: ROLE OF THE UNITED STATES AGRICULTURAL TEACHER EDUCATION PROFESSION IN INTERNATIONAL AGRICULTURE AND RURAL DEVELOPMENT

Approved:

[Signature]
Major Professor and Chairman

[Signature]
Dean of the Graduate School

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Date of Examination:

APRIL 26, 1985.