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**UNIVERSITY OF MARYLAND EASTERN SHORE
(UMES)**

**BRIEF HISTORY AND ACCOMPLISHMENTS
IN INTERNATIONAL ACTIVITIES AND
EXPERIENCES IN DEVELOPMENT**

By:

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Overview: The Decade Of The 1980's:

The UMES international development experience began in June, 1980 with a multi-year award to UMES by the Agency for International Development (AID) for the Title XII University Strengthening Grant Program. This six year grant (1980-1986) was a faculty and staff preparedness program designed to get them ready to undertake technical assistance on behalf of AID in developing countries. The grant was predicated on the potential of UMES. This potential bore fruition eighteen months later in December, 1981 when UMES became a member of a University Consortium composed of Southern Illinois University-Carbondale (SIUC) and University of Illinois Urbana-Champaign (UIUC), in a contract awarded by AID to UIUC. The contract was for an agricultural research and extension project in Zambia (called ZAMARE) which lasted over nine years.

Four primary activities emerged during the decade of the 1980's:

1. long-term overseas project technical assistance;
2. faculty educational exchanges, long-and short-term;
3. short-term overseas technical assistance activities; and,
4. participant training.

The geographical focus of the decade was principally Sub-Sahara Africa.

Trend A: Long-Term Overseas Project Technical Assistance

UMES provided the soybean breeder specialist (two faculty over a six year period), and by arrangement, the Chief-of-Party for the agricultural research/extension project in Zambia, during the first five years. During the project's life, several opportunities arose which facilitated overseas exposure for UMES faculty and staff and the genesis of an internationalizing the campus. Short-term expertise was provided to the project in library networking; management problem solving; and tailored hands-on workshops and field observations by four Agriculture faculty. Biennial Executive visits brought the President and the Vice President for Academic Affairs to the field for observation. Eight participant trainees obtained their B.S. degrees in Agriculture and one in General Studies from UMES. The project was cited in two AID Congressional Presentations as a success story in Africa.

The UMES presence in Zambia encouraged two private firms to subcontract with UMES for a Human and Institutional Resources Development project in Zambia between 1986 and 1989 (called HIRD). This second project, non-agricultural manpower training, was social and economic science-based.

The UMES experience in Zambia, in research, institution building and training, and the partnership with educational institutions all contributed to the design of an unsolicited proposal in agricultural development for West Africa. After several years of refinement, this proposal emerged in August 1986 as Tropical Root and Tuber Food Crops Research Project (ROTREP). The five year project (1986-1991), with UMES leading other Consortium participants Alabama A&M and Florida A&M universities, was the first AID long-term technical assistance project consisting solely of 1890 institutions, and the largest single AID award at the time to an HBCU institution.

UMES has provided the chief of party and the tissue culture/root crops specialist on the project, and short-term technical assistance to the field by seven agriculture faculty, staff and administrators.

The year 1986 also brought University of Illinois into closer union with UMES as the Joint Memorandum of Understanding partner under the successor AID faculty/staff preparedness program, the Program Support Grant (1986-1992).

Trend B: Faculty Educational Exchanges:

A second overseas experiential trend of the 1980's, besides development assistance, was faculty educational exchanges under the Fulbright-Hays programs. Between 1983 and 1989, nine faculty went abroad, six for an academic year, and three for a summer, primarily to Africa, the Middle East and Asia. The majority of these faculty were from departments in the Schools of Arts and Sciences and Professional Studies.

By the late 1980's, faculty professional travel and study, independent of development activities, were reaching into Western Europe, Eastern Europe and the former Soviet Union, Taiwan, and the People's Republic of China. Host governments and the USDA were the major sponsors of these ventures.

Trend C: Short-Term Overseas Technical Assistance:

Independent of the long-term project assistance were other short-term development activities occurring by the mid-1980's. These were an HBCU Research Program grant on groundnut conducted in Senegal and Togo (1984-86), and administrative consultations for the AID missions in Cameroon (1986), and Burkina Faso (1988). These activities strengthened the West African geographical connection.

Trend D: Participant Training:

The fourth primary activity of the 1980's was the building of a capability in participant training. From the early to mid-1980's, there were only a handful of short-term and program trainees at UMES.

By the end of the decade, the number of trainees was increasing as well as the range of country of origin (besides Sub-Sahara Africa--the Middle East, Asia, Eastern Europe and the Caribbean). The scope of activities included intensive subject matter programs, observation/study tours and field trip sites for USDA-Washington-based short courses.

Between 1980 and 1993, there over 87 sponsored short-term trainees at UMES, and over 115 scientists, technicians and administrative support staff have participated in short-term workshops conducted by UMES at project field sites in Zambia and Cameroon.

A similar evolutionary pattern paralleled the experience with the degree program trainees. By 1989, their scope of training expanded to include graduate education, as well as undergraduate education, in fields such as environmental science, computer science, marine science, hotel and restaurant management. The country of origin expanded beyond Africa to encompass the regions of the Middle East and Central America/the Caribbean. Twenty participant trainees have received degrees from UMES since 1986.

Overview: The Decade Of The 1990's:

By 1989-90, the patterns of the 1980's in varying degrees appeared to roll forward into the decade of the 1990's.

There are five noticeable patterns for the 1990's:

1. the Agricultural Sciences continue to be the major focus of the long and short-term overseas project technical assistance and participant training;
2. non-agricultural related project activities are emerging and the range of individual countries for project or training activity is broadening;
3. faculty educational exchange has increased;
4. formal and informal linkages are being established with African, Middle Eastern and Asian higher educational institutions; and,
5. internationalizing of the campus is being pursued.

A. International Agriculture

The ROTREP Project in Cameroon was extended through calendar year 1994.

Between 1989 and 1992, Agriculture and Human Ecology faculty provided short-term technical assistance to the Faculty of Agriculture at three Egyptian Universities (Cairo, Ain Shams and Suez Canal) on four projects funded under the AID/U.S.-Egyptian Universities Linkages Program. The UMES Library staff conducted workshops for the library staff of three Egyptian Universities. These initiatives with Egyptian Universities are expected to continue to expand under Phase II of the U.S.-Egyptian Universities Linkage Project.

UMES was also a training sub-contractor for the major university consortia (CID/MUCIA/SECID) under the AID funded General Agricultural Training Program.

B. Other Short-Term projects

UMES completed, by 1993, a Fisheries Resource Stock Assessment project in Namibia, funded under the AID/HBCU Research Grant Program; an African Languages project focussing on selected Western and Southern African countries, funded by the National Security Agency; and a Needs Assessment Study of an agricultural college and outreach programs in the Republic of Transkei, South Africa, funded by the Ministry of Agriculture.

C. Faculty Educational Exchange

Since 1990, six faculty from departments in the Schools of Arts and Sciences and Professional Studies have participated in educational exchange under the Fulbright-Hayes Programs, for an academic year or summer in Sub-Saharan African countries and Japan.

D. Linkages

Linkage agreements initiated by UMES in the early to mid-1980's were generic (eg, Hefei Polytechnic University, People's Republic of China) or project-specific (eg, with a government ministry and with an International Agricultural Research Center like International Institute of Tropical Agriculture (IITA), in support of the UMES Root and Tuber Project in Cameroon).

The linkages created between 1988 and 1993 were in Zambia, with the University of Zambia; Transkei, South Africa, with Tsolo Agricultural College; Namibia with the University of Namibia, and in Egypt with Cairo and Ain Shams Universities. These linkages, all involving higher educational institutions, are where feasible, including disciplines and fields besides agriculture, such as computer science and hotel restaurant management, marine and fisheries sciences, and academic support services. These linkages, for short-term technical collaboration, exchanges and training, are strengthening a African/Middle Eastern region geographical connection. Future linkages are planned with universities in the People's Republic of China.

E. Internationalizing of the Campus

Steps were taken by 1989 to increase the level of internationalization of the campus beyond the earlier efforts of building institutional infrastructure and faculty/staff capabilities. In 1989, UMES became an affiliate International Visitors Center of the statewide International Visitors Center of Maryland. Since 1989, over seventy professionals from all regions of the world, with interests in agriculture, rural/regional development and the environment, have visited UMES and the Lower Eastern Shore of Maryland.

In January 1990, the UMES long-range plan for International Programs was formally approved, which outlines possible international directions and activities to be pursued by the campus in its process of internationalization.

Lastly, an International Faculty and Administrators Association of the University of Maryland System was formed in 1990 to open up dialogue, options and initiatives for international activities among the system campuses through group participation. UMES was a founding member of the organization.

LINKAGES

UMES strives to develop Memoranda of Understanding (MOU) or Linkage Agreements (LA) with international organizations to facilitate relationships for continuing international development activities. The purpose of such agreements is to provide the mechanism for other collaborative activities beyond the life of a given project. Listed below are linkage agreements that have been developed with international and domestic institutions to facilitate international research and development.

Domestic Linkages

- Memorandum of Understanding (MOU) with USDA/OICD for collaborative international development and scientific cooperation.
- Collaboration with OICD to provide technical assistance in support of the Policy Analysis, Research and Technical Support (parts) and the African Emergency Locust/Grasshopper Assistance (AELGA) Projects of the Agency for International Development.
- MOU with the University of Illinois at Urbana-Champaign for international agricultural development.
- MOU with Florida A&M (FAMU) and Alabama A&M (AAMU) Universities to implement the ROTREP Project in Cameroon.

International Linkages

- Protocol Agreement with the Ministry of Higher Education and Scientific Research of Cameroon in 1986 to implement the ROTREP Project.
- MOU with the International Institute of Tropical Agriculture, Ibadan, Nigeria, in 1988, to provide collaboration in agricultural research, training, and related activities in tropical root and tuber crops.
- MOU with the University of Zambia in 1986 for collaborative research and educational exchange in 1988.
- Collaboration with the Center for Environmental and Estuarine Studies of The University of Maryland System to implement linkage agreement with the University of Namibia. The linkage agreement is for exchange, research and training, with emphasis in the agricultural, environmental and marine sciences.

- Linkage agreement with Ain Shams University, Egypt for educational, training and research activities.
- Linkage agreement with Cairo University, Egypt for educational training and research activities.
- MOU with Hefei Polytechnic University, of The Peoples Republic of China for scientific and technical exchange.
- Linkage agreements are currently being reviewed for collaboration with Tsolo college in Transkei, South Africa and University of the Peoples Republic of China.

CAMEROON

TROPICAL ROOTS & TUBERS RESEARCH PROJECT (ROTREP)

SOURCE OF FUNDING: USAID and Cameroon Government
FUNDING LEVEL: \$13.1 million
DURATION: 1986-1994

Mode of Implementation: Cooperative agreement with University of Maryland Eastern Shore (as lead institution), with sub-agreements with Alabama A&M and Florida A&M Universities.

Project Goal & Objectives

The goal of ROTREP is to contribute to the improvement of Cameroon farmers' socio-economic welfare through increased productivity of Root and Tuber Food Crops.

The objectives of ROTREP are to:

1. Develop locally acceptable variety of cocoyam which is resistant to Root Rot Disease in Cameroon.
2. Develop feasible (technical and economical) Seedstock Multiplication System(s) for Yam, Cassava and Cocoyam.
3. Study the nature and magnitude of post harvest losses of root and tuber food crops systems and recommend researchable problems and opportunities for improving the system(s).
4. Assist in the Institutional Development (Human and Physical) of the Institute of Agronomic Research for root and tuber food crops research.

Major Accomplishments

Breeding

- ◆ An international germplasm collection of cocoyam has been collected & preserved in Cameroon.

- ◆ It has been confirmed that cocoyam root rot disease is not a complex but is caused only by the fungus **Phythium myriotylum**.
- ◆ Laboratory and field phytopathological screening of the cocoyam germplasm has been completed and 12 accessions of white cocoyam tolerant against the cocoyam root rot disease have been identified.
- ◆ Isolates of the fungus (P. Myriotylum) have been successfully collected from different ecological zones and used for screening cocoyams for resistance and tolerance.
- ◆ Cameroon cocoyams have been characterized through electrophoretic, protein, ash and moisture content analyses.
- ◆ Clonal evaluations of potentially tolerant/Resistant cocoyam varieties have been conducted at three locations to select for tolerant accessions.

Rapid Seedstock Multiplication System

- ◆ Growth media have been successfully developed and tested for cocoyam, Yam and cassava.
- ◆ Media for rooting have been developed for Yam and these have increased the efficiency and multiplication ratio of the yam cultures.
- ◆ A medium has been developed which is suitable for Cassava shoot-tip regeneration.
- ◆ Subculturing of developed Cassava plantlets have been perfected to provide a reliable means of additional rapid multiplication for Cassava.
- ◆ Secondary buds on Cocoyam Rhizome have been used directly as source of explants; this has enhanced mass rapid multiplication since each large Rhizome produces between 600 and 800 buds depending on age.
- ◆ 6000 tissue culture derived Cocoyam plants have been field tested and found to perform better in general growth and earliness in tuberization.
- ◆ Tissue culture derived cassava plants have been field tested. The plants showed as much robust growth and higher yield as their non-tissue culture relatives.
- ◆ Commercial Yam, Cocoyam and Cassava have been successfully regenerated through tissue culture techniques.

Economic Analyses

The following economics studies have been completed:

- ◆ Productivity Analysis of Small-Holder Yam Production in the Fako Division.
- ◆ An Analysis of the Structure, Conduct and Performance of Yam Marketing Systems in Fako Division of Cameroon.
- ◆ Productivity analysis of Root Crop Based Farming Systems in Southwest, Northwest and Western Provinces of Cameroon.
- ◆ The Economics of Rapid Seed Multiplication of Cocoyam through Tissue Culture.
- ◆ Estimation of Production function for Yams, Cocoyams and Cassava in Cameroon.

Institutional Development

- ◆ An Ultra Modern Biotechnology Laboratory has been constructed at Ekona Research Centre. The construction and furnishing of the equipment and facilities were completed in a record time.
- ◆ ROTREP technical assistance team and their Cameroonian counterparts have provided on-the-job-training to junior level staff in genetics, plant breeding, tissue culture, plant pathology, agricultural economics and administrative management.
- ◆ Several Cameroonians have received short term training (Technical and Administrative), through project funds, in the U.S.A, IITA, Nigeria and Cameroon.
- ◆ Four Cameroonian researchers have received M.Sc. (3) AND Ph.D (1) degrees from American Universities.
- ◆ Currently, three Cameroonian counterparts are studying for M.Sc. degrees in American Universities.
- ◆ ROTREP has also served as a training ground for students from Dschang University Centre and other Agricultural training colleges in Cameroon.

1993

EGYPT

The University of Maryland Eastern Shore has been participating in the USAID funded Egyptian Universities Linkage Program since 1990. During Phase I of the program, UMES signed four Research Grant Agreements with the Egyptian Supreme Council of Universities in Cairo Egypt totalling \$300,000. UMES Faculty and Staff provided technical assistance on the following projects.

Cairo University, Cairo, Egypt

"Improving Oilseed Production In Newly Reclaimed Land in Egypt for Small-Scale Farmers." 1990-1992.

Ain Shams University, Cairo, Egypt

"Use of Non-Classical Ingredients In Ration Formulas for Farm Animals." 1990-1992.

Suez Canal University

"The Role of Rural and Dedwen Women in Development." July 1, 1991 - June, 1992.

"Improving the Production and Utilization of Oilseed Crops in the Sinai." June 1991 - June 1992.

All projects in Phase I have been successfully completed.

A library training program was conducted using funds from each project.

Phase II

UMES has developed plans to strengthen its linkage relationship with both Ain Shams and Cairo University during the Phase II of the Universities Linkage Program. UMES is also collaborating with the National Agricultural Research Project to develop long-term projects and is preparing a linkage agreement with the Ministry of Agriculture. In accordance with procedure for awarding grants during Phase II. UMES scientists have collaborated with their

counterpart in Egypt and developed the following concept papers for mini-projects which are currently being reviewed.

UMES - Ain Shams University Concept Papers

1. A Design For Integrated Agribusiness Systems For The Settlement Of Rural Communities In The Sinai
2. Assessment Of Constraints And Opportunities For Increasing Productivity Of Farmers: The Case Of Graduate Farmers In Newly Reclaimed Lands Of Egypt
3. Development And Transfer Of Technology For Processing New Food Products From Grains In Egypt
4. New Integrated Technology For Increasing Productivity Of Oil Seed Crops Under Newly Reclaimed Lands In Egypt
5. Maximizing The Utilization Of Feed Ingredients In Animal Production Through The Use Of Computerized Least Cost Formulations
6. Pollution Of River Nile Near Metropolitan Areas
7. Air Pollution In Egypt And Its Impact On Crops and Humans

UMES - Cairo University Concept Papers

1. Introducing And Improving New Oilseed Crops In The Cropping Systems Of Newly Reclaimed Land In Egypt.
2. The Impact Of Liberalization Policy On Wheat Industry And Food Security In Egypt.
3. The Role of Agricultural Cooperations In Rural Community Development In Egypt.

ZAMBIA

Zambia Agricultural and Extension Project (ZAMARE)

I.

SOURCE OF FUNDING: USAID and Government of Zambia
FUNDING LEVEL: \$10,588,856
UMES SHARE: \$ 1,807,029
DURATION: 1981-1990

II. INSTITUTIONS INVOLVED:

- A. UNIVERSITY OF ILLINOIS (LEAD)
- B. UNIVERSITY OF MARYLAND EASTERN SHORE (UMES)
- C. SOUTHERN ILLINOIS UNIVERSITY (SIU)

III. UMES INVOLVEMENT:

Long Term Technical Assistance

- A. Two plant breeders (total of 6 years)
- B. One Chief of Party (5 years)

Short Term Technical Assistance

- C. Director of Library conducted needs Assessment
- D. International Programs Director served as a member of an evaluation team
- E. Three Agricultural Department faculty members conducted needs assessments and presented several workshops which included:

Research Farm Management, Farm mechanization,
Agronomic Research Methodology, Research
Station Management, and Research - Extension
Linkages

IV. PARTICIPANT TRAINING:

- a. Six training participants received the B.S. degree in Agriculture at UMES.
- b. One B.A. in general studies at UMES.

V. FUTURE LINKAGES:

Presently (1993) three Zambian students are studying for their M.S. degrees in Agricultural Extension and Education at UMES. Two are supported by the Zambian Ministry of Agriculture, and one is being supported by UMES through a research assistantship.

VI. SPECIAL FEATURES

The AID Congressional presentations for FY 1987 and FY 1989 cited the Zamare project as a "Success Story in Africa."

PROFESSIONAL EXCHANGES and STUDY ABROAD

The University of Maryland Eastern Shore (UMES) encourages its faculty and staff to participate in Professional Scholars Exchanges abroad, and it also hosts Professional Scholars. Our experiences to date include:

UMES Fulbright-Hays Scholars Abroad

- ♣ 1983-84: **Germany and Egypt** (one each to the department of English and Languages, and Education).
- ♣ 1984-85: **Singapore and Algeria** (one each to the Departments of Social Sciences, and English and Languages).
- ♣ 1985-86: **Jordan** (Department of Human Ecology).
- ♣ 1988-89: **Hong Kong** (Department of Social Sciences).
- ♣ 1992-93: **Namibia** (Department of Natural Sciences).
- ♣ 1993: **Japan** (Department of Social Sciences).

UMES Faculty Participation in the Fulbright-Hays Group Study Abroad Program

- ♣ 1987: Two faculty members (in Agriculture and English and Languages) to **Sierra Leone and Togo**.
- ♣ 1989: One faculty member (Art) to **Kenya and Tanzania**.
- ♣ 1993: Two faculty members (from Business and Economics and Education) to **Senegal and Ghana**.
- ♣ 1993: One faculty members (Political Science) and a team coordinator to **Namibia**.

Other Professional Exchanges

- ♣ 1985-86: UMES faculty member from the English and Languages Department provided English language instruction at Hefei Polytechnic University in Beijing, China. Sponsored by the People's Republic of China.
- ♣ 1981: UMES had two faculty/staff participants (from its Department of Agriculture) in a Group Projects Abroad Program to the Eastern Caribbean, to explore Caribbean-American Linkage Program. Sponsored by USIA.
- ♣ Four UMES faculty members have been on USDA supported research assignments, in Western Europe (Sweden, Denmark, Finland, and The Netherlands), and to The Peoples's Republic of China and Taiwan.
- ♣ 1990: One faculty member conducted a special study commissioned by the Republic of Transkei, South Africa.
- ♣ 1983-84: A UMES historian lectured and studied at Cambridge University, England.
- ♣ 1989: UMES Professor of Computer Science visited the former **Soviet Union** (and Eastern Europe) on invitation of the Soviet Academy of Sciences.
- ♣ 1985: UMES Professor of Computer Science visited the People's Republic of China on the subject of medical computing.

Other Visiting Scholars to UMES

Since 1980, UMES has had visiting scholar residents on campus for an average of two to four semesters, from the Near East, Africa and Asia. Among them were:

- ♣ 1982-84: Three human nutritionist/ biochemists from Cairo University (Egypt).
- ♣ 1981-82 and 1985-86: A plant pathologist from the University of Peradeniya, (Sri Lanka).
- ♣ 1990-91: A crop protection specialist from the University of Zambia.
- ♣ 1993: An agronomist from Cairo University.
- ♣ 1985-86: A mental hygienist from Ain Shams University (Egypt), a Fulbright-Scholar-in-Residence.

♣ 1989-90: An African oral literature specialist from the University of Nigeria.

Between 1986 and 1992, there were 242 recorded international professional visitors to UMES.

TECHNICAL ASSISTANCE AND TRAINING ON SMALL PROJECTS

- ▶ AID/HBCU Research Program Project, 1991-1993, on a Fisheries Resource Stock Assessment of the Kavango and Caprivi Provinces of **Namibia**. The field study was conducted in cooperation with the University of Namibia and the Ministry of Fisheries.
- ▶ Subcontractor for the USAID funded Human and Institutional Resources Development Project in **Zambia**, 1986-1989, with Roy Littlejohn Associates, Incorporated, as lead organization.
- ▶ AID/HBCU Research Program project, 1984-1986, on evaluation of the nitrogen-fixation efficiency in bambara groundnut germplasm. The field study was conducted in **Senegal** and **Togo** in cooperation with government research units. Other laboratory analysis/field trials were performed at UMES.
- ▶ A National Security Agency funded African language project, 1992-1993, to study natural texts in less commonly taught African languages (Cameroon, Gambia, Nigeria and Namibia).
- ▶ UMES is currently negotiating with USAID on the funding level for a project entitled "Farm Management Practices and their Impact on Food Crops Production in Cameroon: The Case of South West Province," through its HBCU Research Grant Program.
- ▶ Subcontractor for the USAID contract to the University of Georgia, 1988, to develop a long-range plan for the Agricultural School of the University of Ouagadougou, Burkina Faso.
- ▶ Contractor for the Ministry of Agriculture, Republic of Transkei, South Africa, 1990, for a Needs Assessment o Tsolo Agricultural College and Outreach Programs of the Ministry.

**INTERNATIONAL DEVELOPMENT CAPABILITIES
UNIVERSITY OF MARYLAND EASTERN SHORE**

NAME	TECHNICAL ASSISTANCE EXPERIENCE	COUNTRY OF EXPERIENCE
Emmanuel Acquah Ph.D. Agricultural Economics	Project Management (Chief-of-Party), Project Identification, Design, Implementation and Evaluation, Institutional Development, Women in Development, Sustainable Technical Assistance and Agricultural Policy.	Liberia, Kenya, Sudan, Ghana, St. Lucia, Jamaica, Egypt and Zambia.
Sarah Acquah Ph.D. Agricultural Extension Education	Project Management, Procurement Management, Extension Education and Evaluation.	Ghana, Kenya and Cameroon.
Imitaz Ahmad Ph.D. Economics	Economic Development and Project Evaluation.	Pakistan.
Carolyn Brooks Ph.D. Microbiology	Tissue Culture and Molecular Biology.	Togo, Senegal and Cameroon.
Robert Dadson Ph.D. Breeding	Breeding, Agronomy and Biotechnology.	Cameroon, Ghana, Zambia, Togo, Senegal and Nigeria.
Theresa Dadson M.S. Library Science	Library Cataloging and Acquisition.	Ghana and Canada.
Ejigou Demissie Ph.D. Agricultural Economics	Marketing, Rural Development and International Agricultural Trade.	Ethiopia, Togo, Jamaica, Barbados, Trinidad and Tobago, Costa Rica, Dominican Republic and Haiti.
Youssef Hafez Ph.D Nutrition	Nutritional Science, Biochemistry and Metabolism, Nutritional Assessments and Food Evaluation.	Egypt, Jordan, Cameroon and Sri Lanka.
Jeannine Harter-Dennis Ph.D. Animal Nutrition	Poultry Management and Feed Formulation.	Egypt, Western Europe.

NAME	TECHNICAL ASSISTANCE EXPERIENCE	COUNTRY OF EXPERIENCE
Ronnie Holden M.A. Administration	Procurement Management and Compliance Audit.	Cameroon.
Jagmohan Joshi Ph.D Plant Breeding	Agronomy(plant Breeding) Host Plant Resistance and Cultural Methods of Insect Control.	Zambia, Egypt, India and Sri Lanka.
Charles D. Ignasias Ph.D.	International Development, Administration Management, Program Planning, Project Evaluation, Microcomputer Applications in Management.	Zambia, Cameroon and Burkina Faso.
Missale Kumelachew M.S. Home Economics	Nutrition and Rural Development.	Ethiopia and Egypt.
Getachew Metaferia Ph.D. Political Science	Democratization and Public Administration.	Zambia, Namibia and Ethiopia.
Mervalin Morant Ph.D.	Micro Biology, Plant Pathology	Jamaica.
Mortimer H. Neufville Ph.D. Animal Science	Institutional Development, Project Management, Project Design and Evaluation.	Kenya, Cameroon, Egypt, Zambia, Jamaica, Malawi, Sri Lanka and Namibia.
Anugrah Shaw Ph.D. Textile Technology	Textile Testing, Protective Clothing for Pesticide Applications.	India, Western Europe.
George Shorter Ph.D. Agricultural Education	Curriculum Development, Agricultural Mechanization.	Zambia, Kenya, E. Caribbean.
Jessie Smith M.L.S.	Library Administration, Library Automation and Needs Assessment.	Zambia and Egypt.
Retia S. Walker Ph.D. Home Economics	Home Resource Management and Rural Development.	Egypt.
Percy Wilson M.P.S. Agriculture	Community Development, International Agriculture and Women in Development.	Gambia, Guinea, Senegal and Sierra Leone.

TRAINING

UMES has the experience in training International Students, for graduate, undergraduate and special short term programs from several countries. The 1993 Student population consists of 8% students from forty five different countries. The following table represents countries from which students have attended UMES.

EUROPE	AFRICA	MIDDLE EAST	ASIA	SOUTH AMERICA, CARIBBEAN and CENTRAL AMERICA
England	Cameroon	Cyprus	Hong Kong	Argentina
Germany	Gambia	Egypt	India	Antigua
Ireland	Ghana	Ethiopia	Indonesia	Bahamas
Netherlands	Lesotho	Iran	Japan	Barbados
Poland	Liberia	Iraq	Malaysia	Bermuda
	Malawi	Israel	Pakistan	Brazil
	Nigeria	Jordan	Papua (Guinea)	Dominica
	Republic of South Africa	Lebanon	People's Republic of China	Dominican Republic
	Swaziland	Saudi Arabia	Philippines	El Salvador
	Togo	Sudan	Sri Lanka	Grenada
	Uganda	Turkey	South Korea	Guyana
	Zambia	Yeman	Thailand	Honduras
	Zimbabwe			Jamaica
				Mexico
				Panama
				St. Kitts
				St. Lucia
				St. Vincent
				Trinidad
				Venezuela