

SEMI ANNUAL PERFORMANCE REPORT

USAID Grant No. 294-G-00-00-00066-00

Utah State University and Arab American University Jenin – Linkage Program

USAID Activity Name: USU-AAUJ

Report Period: July 15, 2000 – January 14, 2001

Introduction:

Utah State University (USU) applied for and received a grant from the United States Agency for International Development (USAID), West Bank/Gaza Mission (WB/G) in July 2000. The purpose of the grant is to support the activities of **Utah State University (USU)** in the development of the **Arab American University-Jenin (AAUJ)**. This University Linkage Program is planned for five (5) years and received funding for the first two (2) years.

The grant addresses one of USAID's overall goals to "build human capacity through education and training" and the activities come under the WB/G Mission's University Linkages Program (ULP). The ULP provides competitive grants to US universities that work with and assist West Bank and Gaza universities. The goal of the ULP is to increase the capability of West Bank/Gaza universities to provide quality training in technical education fields relevant to the present and future needs of the Palestinian people and others in the developing economies in the region.

Goal of the USU/AAUJ Linkage Program Grant

To provide support to development of AAUJ through academic and administrative assistance from USU, leading to the establishment of a viable educational institution, including a College of Agriculture.

The main features of the program are:

- Overall mentoring of AAUJ.
 1. A senior level Administrator Advisor from USU will assist the President and the administration for two years
 2. Assist AAUJ with policy and systems development and modification in needed areas
 3. Train AAUJ staff and faculty in University Development and fund raising.
- Academic and Scholarly Activities
 1. Academic and Research cooperation
 2. Distance Education
 3. Sabbatical Leave(s)
 4. Professorial Exchanges

- Consultants
 1. Surveys of educational needs and development of curriculum
 2. Provide expert guidance in establishing educational and research laboratories.
 3. Teaching of short courses and participating in workshops.
- Seminars and Conferences
 1. One seminar each year
 2. One Conference
- Long Term Linkages
 1. USU plans to develop long-term linkages in nine areas of mutual interest in the faculty of agriculture.

Goals for this reporting period: (July 14, 2000 – January 14, 2001)

1. Grant personnel travel to post and settle in housing and offices.
2. Provide advise to AAUJ administration on development
3. Coordinate Exchange activities and Grant Sponsored Consultants between AAUJ and USU
4. Meet with PA Ministry of Higher Education and the Ministry of Agriculture about the establishment of a College of Agriculture at AAUJ
5. Review current data and confirm the need for a College of Agriculture at AAUJ
6. Sabbatical Professor Squires to prepare and teach Freshman Level Biology classes, and participate in the administration of the Biology Department and the College of Arts and Sciences

Accomplishments for this reporting period:

1. Travel to Post

Dr. James H. Thomas, Associate Dean of Agriculture and Associate Director of International Programs and Studies at USU, and Dr. Lorin Squires, Professor of Biology at USU accepted assignments at AAUJ prepared to travel to post.

Mrs. Carolyn Squires, dependent wife of Dr. Lorin Squires and their dependent son David traveled to AAUJ in June 2000. Mrs. Squires was contracted by AAUJ to teach a TOEFL preparatory English class at AAUJ during a pre-opening session. Their travel was paid by AAUJ (the grant was not active until July 14, 2000). Dr. Lorin Squires and dependent daughter Julia arrived at post September 1, 2000. The Squires were housed in an apartment in the town of Zababdeh on a temporary basis until the Faculty Housing Apartment Building was completed.

Dr. Thomas and his dependent wife Marilyn arrived at post August 1, 2000 and also took temporary housing in Zababdeh.

The AAUJ Faculty Housing building was complete September 15, 2000, but both the Squires and the Thomas's opted to remain where they were. AAUJ pays the rent and utilities for both apartments as part of their match to the grant.

2. Advisement to AAUJ Administrators

For purposes of the grant, it was agreed that the advisor would act specifically as advisor to the President of the Arab American University-Jenin and generally as advisor to the senior administrators of the Colleges and Departments. The advisors' official title is Senior Adviser to the President.

The Senior Advisor to the President developed a working relationship with the President and other Administrators at AAUJ with the following goals:

- Guide AAUJ policy and develop procedures to ensure that AAUJ will be characterized and recognized as an "American" university with American articulation and transferability of credit.
- Assist AAUJ with curriculum planning for all Colleges and develop procedures for changing the curriculum to meet changing demands while complying with PA regulations.
- Meet with Deans, Department Chairs, and Program Directors on a regular basis to assist with the establishment of University Programs.
- Provide Liaison with Utah State University, California State University - Stanislaus, and other American Universities
- Interact with the Government of Israel and the Palestinian Authority to obtain work and residence permits

When the Advisor arrived, The AAUJ administration was already moving ahead with establishment of an administrative system similar to other Middle Eastern Universities. Some progress has been made to change the "system" to be more American in character but this will take a long time now that much of it had already been set in the "Middle East" mode. Most of the business of the university is, of necessity, done in Arabic even though the classes are all taught in English. This makes change even more problematical, but there is a slow and steady increase in the overall use of English as the "language" of the students in everyday situations.

The President appointed the Senior Advisor to the Deans Council, the University Council, the Promotion Committee, the committee to develop a Medical Center and a the College of Information Technology and Communication development committee. The Advisor works with the teacher evaluation process, and University Development (fund raising). He has also been appointed as secretary and a voting member to the Council of Advisors (See Appendix #2)

3. Coordinate Grant Sponsored Activities between AAUJ and USU

Personnel supported by the grant during this quarter were limited to the two long-term USU faculty members at AAUJ. Dr. Thomas, in the advisors role, and Dr. Squires as teacher of Biology, and Department Head of Arts and Sciences.

Dr. Thomas is supported by the grant at 60 percent of salary (AAUJ pays the other 40%). Dr. Squires is supported by the grant at 20 percent of salary (Utah State University pays the other 80 percent).

On campus activities at USU were:

- Identification of qualified consultants to assist with the establishment of the College of Agriculture. Two were identified and will provide technical services before the start of the next academic year. (Dr. Deloy Hendricks, Food Scientist and Dr. Donald Snyder, Agriculture Economist and Administration.
- Recruitment of long-term faculty for the academic year 2001-2002 at AAUJ. Dr. Deloy Hendricks will come to AAUJ and teach Food Science and Nutrition for the year 2001-2002.

Also Dr. Haven Hendricks is seriously considering coming this fall to help with a series of technical workshops that will lead to the establishment of a local area Agriculture extension service.

- Providing of logistical support for travel to and from West Bank by the long-term advisors/teachers and their dependents.
- One administrative visit was made by Dr. Rodney Brown, Dean of the College of Agriculture at USU. He attended the AAUJ Inaugural Event held September 28, 2000. He was appointed to the AAUJ Council of Advisors. The grant paid his air ticket (as budgeted); no other costs were charged.
- In compliance with the terms of the grant, USU purchased one laptop computer for use at AAUJ as part of the match at no cost to the grant. This computer is under the supervision of Dr. Thomas.
- Required financial reports have been submitted to USAID.

Project (grant) activity supported by AAUJ

AAUJ is complying with the agreement and provides office space, housing for the advisor and sabbatical professor, and essential transportation. AAUJ also provides recreational weekend transportation for expatriates to travel in West Bank and Israel.

The costs of travel to leave Israel to renew visas and return is also paid by AAUJ for grant supported faculty and dependents.

The vehicle that AAUJ agreed to provide for official use by grant personnel has not been purchased.

4. Discussions with the Ministry of Higher Education and the Ministry of Agriculture.

Drs. Thomas and Brown met briefly with the Minister of Agriculture on September 28, 2000 at AAUJ. The Minister encouraged AAUJ to plan for a College of Agriculture at AAUJ and to coordinate with the academic programs at An Najah National University to avoid duplication. The other universities offering degrees in Agriculture were not mentioned.

September 28th was also the beginning of the *Intifada* and plans to meet with the Ministry of Higher Education regarding Agriculture did not materialized until he made a personal visit to the campus in April 2001. At that time a lengthy discussion was held about the need for Agriculture professionals in WB/G and the strengths and weaknesses of the present curriculum at the four universities offering degrees in agriculture. The Minister was anxious to avoid duplication but was agreeable to having a full discussion of the issue of Post Secondary Training in Agriculture.

As a result of his visit, and at his request, a "Proposal" was prepared as a starting point of discussion. It is attached as appendix No. 3. The Minister promised to act quickly to convene a discussion group (workshop) before the end of the present academic year. AAUJ officials will be included in the workshop.

The Dean of Agriculture at An Najah University – the physical location is at Tul Karim - visited AAUJ in November of 2000 to discuss coordination of academic degree offerings by An Najah and AAUJ. Attempts to have further discussions with him and the faculty there have been prevented by the security situation in and around Tul Karim. Further bilateral discussions are planned with all the Agriculture Colleges but will be postponed until the Minister of Higher Education convenes the workshop mentioned above.

No contact has been made with the Colleges of Agriculture in, Jerusalem, Hebron, or in Gaza.

5. Review and confirm the need for a College of Agriculture degree at AAUJ

Current available data indicates that in 1999 there were only 478 students registered in Agriculture at the four universities offering agriculture degrees. Most of the students (72 percent) were studying Plant Production and Protection. Fifteen (15) percent were in Animal Science and 12 percent were in Food Manufacturing. Al-Quds Open University offers a program in Rural Development but there were no students registered in it. Forty (40) percent of all Agriculture students in WB/G were at Al Quds Open University, 25 percent each at Al Azhar and An Najah and 10 percent at Hebron. Hebron and An Najah in West Bank offer Animal Science programs but only An Najah has any students. Al-Azhar has the only students in Food Manufacturing (See Appendix #1, Table 1).

In 1999 there were 67 graduates in Plant Production and Protection, 32 in Animal Science and 13 in Food Manufacturing in WB/G. (See Appendix #1, Table 2). Al Quds Open University has the most students but An Najah graduates a greater number

in Agriculture each year. There is general consensus that the programs at Al Quds Open University and at Hebron University are not of high quality and perhaps do not meet the training expectations of potential employers.

Of the 20,780 students entering university in 1999 only 139 (0.67 percent) registered in the four colleges of Agriculture. This is a decline from 1998. There were 125 men and 14 women. These data indicate that most high school graduates do not presently view Agriculture as a suitable career choice.

Employment Supply and Demand Data Unavailable A significant amount of time was used looking for available reliable employment figures in the Agriculture Sector. Travel restrictions impacted this as well as what appears to be a general lack of information about the status of employment in WB/G. The search will continue or a consultant will be brought to collect data through a survey.

Possible AAUJ Subject Matter Offerings in Agriculture

Given the above information it is probable that AAUJ can offer a number of Agriculture related degrees that will not conflict with the offerings at the other WB/G universities. AAUJ will therefore make application to the Ministry of Higher Education of the Palestinian Authority for permission to start classes in some of the following disciplines.

- Food Science and Nutrition
- Soils and Plant Nutrition
- Pomology
- Post Harvest Technology
- Agriculture Extension and Rural Development
- Agriculture Technology
- Agriculture Biotechnology
- Horticulture and Greenhouse Management
- Agriculture Economics.

6. Activities of Dr. Lorin Squires – Sabbatical Professor

Dr. Squires taught the beginning Biology Courses during fall semester, and is now teaching the second course in the series. He has served as Head of the combined departments of Biology, Chemistry, and Physics for this first year. As student numbers increase, probably in 2001-2002, the combined departments will be divided. Dr. Squires has been involved in establishing procedures, providing specifications for instrumentation in equipping the laboratories and in calibrating the instruments.

Dr. Squires has served on the AAUJ curriculum and scheduling committees. He has provided ad hoc guidance to many of the programs at AAUJ, and acted as advisor to all the students who registered as life science majors. His sabbatical term will terminate at the end of the summer session 2001 at which time he will return to USU.

Planned activities for the next reporting period

(January 15 – August 14, 2001)

1. Dr. Thomas, Senior Advisor, will continue to provide counsel and assistance to AAUJ administration. Emphasis will be on refining established procedures for the various administrative systems for students, faculty, and staff.
2. He will also initiate and hold meetings with the Ministers of Agriculture and MHE and their advisors to identify present and future manpower needs for Agriculture graduates in both the public and the private sectors of WB/G.
3. Grant personnel will meet with the MHE in a general workshop to determine future direction and needs for manpower
4. Dr. Squires will finish teaching second semester Biology for all students at AAUJ and continue as Department Head. He will finish his work at AAUJ and return to his position at USU approximately August 15, 2001.
5. Dr. Deloy Hendricks, Professor of Food Science and Nutrition at USU, will provide expert services to AAUJ for three (3) weeks beginning approximately May 19. He will review the Human Nutrition curriculum planned for second year students in the various disciplines and begin preparation to teach those classes during a sabbatical leave at AAUJ, which will start approximately August 15.

He will also evaluate the need for and possibility of providing Community and Personal Nutrition short courses at AAUJ, Jenin, and/or the surrounding villages during the 2001-2002 academic year.

6. Dr. Donald Snyder, acting Dean of Agriculture and Professor of Agriculture Economics at USU, will provide expert services to AAUJ for approximately one month beginning September 15, 2001. He will study the agriculture sector markets and manpower needs, and make recommendations for appropriate curriculum. He has tentatively agreed to a sabbatical at AAUJ beginning in January 2002. His consulting time in WB will assist him in preparing to teach classes in markets and forecasting, econometrics, and resource economics during his sabbatical (Jan-Dec. 2002)
7. The Campus Coordinator will visit AAUJ in August or September 2001. The purpose of his visit is to become acquainted with AAUJ and its operations so better service can be provided in the future. This visit was planned for October 2000, but it was postponed because of the DOS travel advisory.

Significant Events that impacted grant activities.

The effect of the Israeli-Palestinian conflict.

The so-called “current situation” or Intifada started September 28, 2000 – the day the University Inauguration was held. Classes started the next week, and, to the credit of the students and faculty at AAUJ, have continued basically uninterrupted. There were, at the beginning, a few classes missed when students left to attend funerals to show support for the Palestinian cause. Otherwise AAUJ has been open.

One of the major impacts on the grant activities has been the inability of grant personnel to travel in West Bank and Gaza. The task of establishing an Agricultural College to serve students from WB/G, as per the goal of the grant, required significant interaction with officials and key individuals in the Palestinian Authority. It would have been important to meet with the PA Agriculture Extension Service located in the Gaza, as well as the PA researchers involved in agriculture production, processing, and marketing. Visits with farmers and other producers were planned and would have provided needed information on development of the curriculum.

Travel to any area of West Bank other than the area around the University appeared to be very dangerous. This precluded any significant contact with the Ministries in Ramallah, and travel to Gaza was out of the question.

Secondly, the various Ministries that we would need to meet with have been totally occupied with the situation. It has proven impossible to meet with them. The Faculty of Agriculture at An Najah University is located at Tul Karim and proposed visits to see the facilities and discuss the status of agriculture education with them have never been allowed.

The initial surveys and evaluations by the proposed consultants were to have taken place in the fall term of 2000. These were not performed partially because consultants could not have performed the needed travel, and partially because no one would come.

At least one scientific/educational seminar was planned for the 2000-2001 academic year. With the intifada closing the area, it was impossible to hold such an event. Furthermore, the hotel that was under construction in Jenin, anticipating the arrival of many visitors after Independence, has not been finished due to the strife. It would have been impossible to host a seminar without this type of accommodation.

Under normal circumstances expatriate grant personnel and their dependents would receive residence and work permits from the Occupational Administration at Bet El if requested by the PA. As a result of the hiatus in communication and cooperation the permits have not been issued. Expatriate personnel have had to cross into, leave, and then re-enter Israel to obtain a new visitors/tourist visa. This has been a time consuming and frustrating process because at best a new visa will allow staying in Israel for 90 days. Some employees and dependents are given on 14 or 30-day visas. Each renewal costs a significant amount in transportation, exit and entrance fees from

Israel and the foreign country visited. This may be solved in the future as discussions are being held with the Israeli Ministry of Interior Ombudsman Office to get relief, but there are no guarantees. We recently received some indication that the IDF will assist us with this problem directly – as apposed to going through the PA – by the end of June 2001

In summary, there has not been any work lost, but the timetable for establishing the College of Agriculture has been delayed. The sabbatical teaching and advisement will continue during the next 6 months and if the situation improves a new timetable can be established.

Appendix # 1

Table 1. Academic enrollment for 1999-2000 in Palestinian Universities in Agriculture (See Table 1. Higher Education Statistical Yearbook 1999-2000)

Subjects	Al-Azhar			Hebron			Al Quds-Open			An Najah			Total Students		
	F	M	T	F	M	T	F	M	T	F	M	T	T	M	T
Plant Production and Protection (Pesticides Chemistry)	0	17	17	4	11	15	11	77	88	12	24	36	27	129	156
Animal Production	0	13	13	Offered but no students			Offered but no students			7	12	19	7	25	32
Food Manufacturing	1	24	25	Not offered			Offered but no students			Not offered			1	24	25
Rural Development	Not offered			Not offered			Offered but no students			Not offered			0	0	0
Total Yr.1999	1	54	55	4	11	15	11	77	88	19	36	55	35	178	213*
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX			XXXXXXXXXXXXXX			XXXXXXXXXXXXXX			XXXXXXXXXXXXXX			XXXXXXXXXXXXXX		
New Students in Yr. 2000 in Agric.	1	21	22	3	13	16	4	52	56	6	39	45	14	121	139

*Sum of Tables 1,5,7,8 of Higher Education Statistical Yearbook 1999-2000 for Agriculture, which are different than Table 16 of the same Yearbook e.g. The totals given below are more consistent with new admissions (139), and graduates (121).

Total Yr. 1999	5	103	108	18	82	100	11	77	88	50	132	182	84	394	478
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Table 2. 1999 Graduates in Agriculture in Palestinian Universities.

Subjects	Al-Azhar			Hebron			Al Quds- Open Univ.			An Najah			Total Students		
	F	M	T	F	M	T	F	M	T	F	M	T	F	M	T
Plant Production and Protection	-----			3	8	11	2	9	11	15	40	55	20	57	77
Animal Production	5 5			7 7			-----			1	18	19	1	31	32
Food Manufacturing	13 13			-----			----- -			-----			13 13		
Rural Development	-----			-----			-----			-----			-----		
Total Yr.1999	0	18	18	3	15	18	0	9	11	16	58	74	21	101	121

APPENDIX # 2

The Council of Advisors was organized to provide guidance to the over all academic and building efforts of AAUJ. The Council is made up of prominent educators and business executives. There are four Americans, one Canadian, two British (of Palestinian origin) and four Palestinian/Jordanians.

Name	Current Position	Nationality
Mr. Hassan Abd Al-Raham	Ambassador of Palestine to the United States	Palestinian
Dr. Nabil Ayad	Dir. Diplomatic Academy of London	Palestinian/British
Dr. Khalid Azam	Prof. Of Architecture	Palestinian/British
Dr. Rodney Brown	Dean of Ag. – USU	American
Dr. Waleed Deeb	President of AAUJ	Palestinian/American
Dr. Marvelene Hughes	President of California State Un. Stanislaus	American
Mr. Maher Irsheid,	Chairman of the Board of Directors AAUJ	Palestinian/Jordanian
Ambassador William Rugh	President Amid East Education and Training Inc.	American
Dr. Fayez Al-Tarawneh	Education Consultant	Palestinian
Dr. Gordon Smith	Education Consultant	Canadian
Dr. James H. Thomas	Senior Advisor to the President – AAUJ	American.

Planning for the Future

Post-Secondary Education in Agriculture in Palestine.

April 2001

Introduction

The establishment of a viable economic basis for the development of West Bank and Gaza (WB/G) as a sovereign country will depend to a large degree on how successfully Palestinians are able to provide and utilize the human resources and financial capital needed to develop the natural resources that are available within the borders of the new nation.

At the present time there is an excess of *untrained* manpower with people seeking employment as laborers in a few industries and the agriculture sector. There is also an excess of *trained* people without employment opportunity in many traditionally chosen disciplines. But there is a significant *lack* of trained people in Palestine in many disciplines that will be essential to build an economy that can compete in the world marketplace. These include the more recently developed fields of technology, computer science, business administration and finance, medical workers, tourism, agriculture, and many others. At this time Palestinian products and expertise do not have ready access to the world markets, but in the next few years the problems caused by the political and security instability that has existed for the past 30 years will be solved, and Palestine will be able to take advantage of the regional and world demand for low cost, high quality, food, fiber and manufactured products. There will be an increased need to provide trained manpower in the disciplines that will allow economic development in the context of regional and world demand for Palestinian products.

Historically Palestine has been self-sufficient in food production, and normally has had some excess to export. This has been possible because Palestine has an abundance of the natural resources required for food production, i.e., arable land, plenty of sunshine, a climate that allows year-around production, and adequate annual precipitation for traditional production. Supplemental water supplies for irrigation are available to extend both the season and the range of crops that can be grown but these water resources are diminishing in the face of demand for potable water.

With increased political stability and security, there will be an increase of investment by Palestinians in the Agriculture sector. This will be true because Palestinians have very strong ties to the land and even urban families will be willing to invest in rural settings when the opportunities are good and the risk is low. Additionally, since there are no financial "borders" in the world today, if good investment opportunities exist in Palestine international capital will flow to them. The increase in local and regional population will further enhance the market opportunities for Agriculture products if the quality and quantity demands of the markets are met. Palestine needs to be prepared to take advantage of these opportunities when they come.

The Role of Higher Education

Some facets of agriculture production in the WB/G have not changed for centuries. Some small plots are still plowed with burros, olives are still harvested by hand, and sheep are still herded by shepherds who go with the sheep. It is successful and low cost, but is subsistence agriculture in the purest form. Fortunately the impact of these production techniques on the environment has been minimal. Other aspects of production are fully mechanized and using the latest technology. For instance, the technology of using greenhouses for year-around production has been successfully borrowed from the region; when prices are high, good profits can be made

However, if Palestine is going to make full utilization of the renewable natural resources available for agriculture production and keep it sustainable over time, there must be a cadre of agriculture professionals working in this sector of the economy. These professionals must be trained in agriculture technology, information and communication systems, agriculture economics, mechanization, marketing, post harvest technology, irrigation, manufacturing and processing, agriculture engineering, farm credit, agriculture policy, extension methods and education, and business management, as well as the basic agriculture sciences of animals, soils, and crops. The Higher Education System must provide this training through the Colleges of Agriculture.

Every developed country has a significant portion of their total work force that works in the national food supply system. For example, food is *produced* in the US by only two (2) percent of the population, but approximately 30 percent of the total jobs in the US are related to the food chain in supply, production, protection, processing, storage, transportation, marketing, and food services. Sixty five (65) percent of the farmers in the US have a bachelors degree in Agriculture and they constantly acquire new knowledge through the State Extension Services because the competition is so intense they need the latest knowledge at all times to keep in business. Similar conditions exist in Canada, Europe, and Japan. Palestine will be successful in the agriculture sector when similar professionals work in similar jobs here.

This implies that Higher Education must plan now and invest the necessary resources to prepare the needed trained professionals that can assist the development of this important resource and keep it sustainable in the future. It will be a low cost investment that can provide huge returns over the next 25 years. In addition to the return on the educational investment, such a policy will insure continued self-sufficiency in food production for Palestinians.

Curriculum must be changed, new and different degrees must be offered, and the importance of agriculture in the context of overall development must be articulated. Additionally the public image of the "agriculture professional" must be enhanced to convince young people to chose it as a career and to educate the public and the Government to support these careers by providing the needed funds.

Current Status of the Agriculture Component in Higher Education

Current available data indicates that less than one percent (0.72%) of the students in Higher Education in Palestine are enrolled in Agriculture. This number even appears to be declining slightly, i.e., there were only 139 of the total 20,780 (0.67%) of the new students in 1999 enrolled in agriculture. * These low numbers indicate that few high school graduates consider Agriculture as a suitable career choice. Undoubtedly the perceived lack of employment opportunities for graduates and the “reputation” that Agriculture has as a less than desirable way of life also deterred students. It might also reflect the low number of options that exist at the Colleges of Agriculture in WB/G.

The training offered by Colleges of Agriculture in WB/G at the present time is largely in the traditional subject matter areas of Animal Science, and Plant Production and Protection. One program in Food Manufacturing has a few students. Additionally, there is one curriculum offered in Rural Development but at present there are no students in that program. Of the 478 students who are studying agriculture: 72 percent are in Plant Production and Protection, 15 percent are in Animal Science, and 13 percent are in Food Manufacturing. In 1999 only 121 students graduated. *

These numbers of graduates will not satisfy the need for trained manpower in the technical fields of agriculture in Palestine nor will they prepare enough future farmers to compete for local, regional, and world markets. The current curriculum and degree offerings are not adequate in number and do not address the present needs. It is highly unlikely that they will address future needs. The current traditional curriculum needs to be revised where it is deficient and a broader spectrum of new subject matter areas should be added to make it more relevant.

Agriculture Curriculum for the Future

The course and degree offerings at the four Colleges of Agriculture at Al-Azhar, Hebron, Al Quds Open, and An Najah National universities provide a basis from which the overall level of Agriculture training can be revised and enhanced. The current curriculum can be upgraded to include the latest information and technology, and new courses can be added to train people in fields not now represented.

Some disciplines that could be added are: Horticulture and Greenhouse Management, Biotechnology, Nutrition and Food Science, Post Harvest Technology, Agribusiness, Agriculture Education and Extension, Agriculture and Irrigation Engineering, Agriculture Economics, Marketing and Finance, Agriculture Technology, Information Technology, Public Relations, Agriculture and the Environment, and Rural Sociology. Palestinian students have not been exposed to the concepts of world markets or what the “future competition” will be. A knowledge of world food crops and cropping systems will allow future agriculture entrepreneurs to identify new products and markets that can be produced and exploited thus adding to the overall agriculture base for the economy. International Food Standards need to be known and addressed in product development in order to meet market demands.

* =1999/2000 Statistical Yearbook of Palestinian Higher Education Institutions

The Need for Broader Based Training

It will probably not be feasible or necessary to offer degrees in all the areas mentioned above, but students should receive some training in one or more of these suggested fields. One way to address this need is to use a system of Majors and Minors. Students selecting one major area to study could also take a number of courses as a minor in one or two related disciplines. Graduation requirements could be changed to include these possibilities. Students in Agriculture could also take selected courses in other Colleges and Departments as approved electives, such as Business – thus broadening their knowledge base and improving employment possibilities.

Cooperation

It might be possible for Colleges of Agriculture to cooperate in offering degrees to Agriculture students. This will allow individual Colleges to specialize, which will reduce duplication and minimize costs. Articulation arrangements among the Colleges approved by the Ministry of Higher Education could permit students studying at one University to attend another university for one or more semesters to take courses offered that would enhance their individual degrees. Concurrent classes could be arranged where the Universities are located close to each other. Obviously a different approach would be needed, and the goals and regulations of such programs would need to be well established.

Next Steps

Perhaps it is time for leaders in the universities, government, and industry to begin a dialogue to assess current status and determine the future needs for trained manpower in this vital area. All the institutions of Higher Education (Post Secondary) in Palestine could participate, but those that already have agriculture degree programs and those anticipating starting degree programs in agriculture should be integrally involved in the dialogue.

It will be the responsibility of the Higher Education community and system to provide the training to meet the demand. New approaches and methodologies might be needed and the traditional systems might need to be changed, but whatever the course of action taken, it needs to be done as soon as possible.

Proposed: A Preliminary Meeting of Concerned Persons

The Ministry of Higher Education should convene a preliminary meeting to discuss the status of Post Secondary Agriculture Education and Training in Palestine and develop a proposal to address the problems. Participants should include:

- Representative(s) of the Ministry of Higher Education
- Representative(s) of the Ministry of Agriculture, (Research, Extension, Commerce)
- Deans of the four colleges of Agriculture offering degrees
- Official(s) of Universities anticipating a new College of Agriculture
- Representatives of Universities planning to offer degrees

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