

**ANNUAL REPORT**  
**OF THE**  
**FACULTY OF AGRICULTURAL**  
**AND FOOD SCIENCES**  
**AMERICAN UNIVERSITY OF BEIRUT**



**ACADEMIC YEAR 2006-2007**

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## **SUMMARY REPORT OF THE OFFICE OF THE DEAN**

### **Preface**

There have been a number of developments during the academic year 2006/2007. The 5 year strategic plan for FAFS was completed during this year. The target for the year was to tackle issues identified in the strategic plan that would significantly affect successful implementation of strategic objectives. Changes introduced consisted primarily of restructuring both at administrative and academic levels. Departments were restructured and aligned with academic programs, new programs were approved, and AREC was subjected to administrative changes. One new undergraduate program, Veterinary Sciences, was officially approved, while the process has been initiated to introduce a new undergraduate degree in Agribusiness. Early signs of progress and recovery are showing that the drive towards sustainability is more than possible at FAFS.

The restructuring of academic units into new departments made them better aligned to promote growth and visibility of academic programs. Two administrative changes introduced during the Spring 2007 to be effective Fall 2007/2008 were: The existing departments of Plant Sciences and Land and Water Resources were replaced by the Department of Agricultural Sciences which now offers the BSc. in Agricultural Sciences and MSc. Degrees in various disciplines. The second change was the creation of a new Department of Landscape Design and Ecosystem Management which houses the BSc. in Landscape Design and Ecosystem Management and the interfaculty MSc. Ecosystem Management program. These changes were accompanied by distribution of faculty members into the new departments according to their disciplines and contributions to the academic programs.

The Agricultural Research and Education Center (AREC) received central attention during this year. AREC administration was restructured to separate production management from AREC academic matters. A Finance officer position was created for FAFS with emphasis on AREC finances and a comprehensive proposal for improving AREC infrastructure was prepared for submission to donors. Meanwhile, pressing infrastructure improvements and management changes were introduced to improve teaching and research environment. To optimize financial expenditures, all infrastructures that were poorly maintained or non-functional such as solar system, water pumps, water reservoirs, machinery were fixed and studies evaluating the status of farm machinery and estimation of water needs and availability were completed.

To diversify student body and attract/retain students from rural areas contacts were made with international donors and the University Administration to secure full scholarships to students coming from such areas. The plan is expected to yield results in 2008.

To decrease the existing discrepancy between programs in terms of faculty to student ratio budgetary constraints were taken into consideration in faculty appointments and the process of re-allocating space according to teaching needs was started.

Nahla Hwalla  
Dean, FAFS

## 1. FACULTY

### Faculty Recruitment: 2006-2007

A total of 24 applications have been received to faculty positions advertised in the Nutrition and Food Science Department for the two positions starting September 15, 2007. After consultation with the department and the Advisory Committee, one offer was made to Dr. Lara Nasreddine as Assistant Professor of Nutrition for the academic year 2007/2008. Action on the second position was delayed.

### Faculty Numbers: 2006-2007

The total number of Full Time equivalent FTEs used in 2006-2007 is 29. The total number of Part Timers is 8.6 (2.75 FTE Professors and Lecturers and 5.85 Instructors).

Full-time faculty members were distributed as follows: Twenty Six (26) are in the Professorial ranks (Assistant, Associate and Full Professors), and Three (3) are in the ranks of Instructors.

The total number of budgeted Research Associate, Senior Research Assistants, and Research Assistants was 11.5 and all lines have been used.

Table 1 shows the number of faculty by rank. All those in the professorial ranks hold doctoral degrees; 21 from different U.S. Universities, 2 from Canadian Universities, 5 from European Universities, one from Australia and one from AUB. They represent seven different nationalities; Canada, Egypt, Germany, Lebanon, Syria, U.K. and the U.S.

**Table 1: NUMBER OF FACULTY BY RANK**

Professor Emeritus	2
Professors	17 (2 Part time)
Visiting Professor	1
Associate Professors	4
Assistant Professors	7
Senior Lecturer	1
Lecturers	4 (Part time)
Instructors	12 (3 Full time) (9 Part time)

### Department Chairpersons

Dr. Shady Hamadeh; Animal Sciences (Oct. 1, 2004–September 30, 2007)

Dr. Isam Bashour; Land and Water Resources (Oct. 1, 2004–September 30, 2007)

Dr. Imad Toufeili; Nutrition and Food Science (October 1, 2006–September 30, 2009)

Dr. Adib Saad; Plant Sciences (Oct. 1, 2004–September 30, 2007)

### Professors on Leave

Two professors were on paid research leave during the academic year 2006-2007. Dr. Salma Talhouk and Ms. Julie Weltzien were on periodic paid research leave for the Fall Semester 2006/07.

### Visiting Professors

Dr. Robert Rice, from Cal Poly, California, joined the Plant Sciences Department as Fulbright Visiting Professor of Horticulture and Crop Sciences, for one year starting January 2007.

## **Applications for promotion**

Two applications for promotion were received by the deadline of August 31, 2006. Both applications were not favorably acted upon.

## **Research Grants And Service Contracts And Publications**

Effective October 1, 2006, the University Research Board (URB) provided one year research funds for 19 faculty members with a total budget of \$93,344, while the Lebanese National Council for Scientific Research (LNCSR) provided funds for 4 faculty members including the Dean with a total budget of \$23,541. During this period, Faculty members received new funds for external projects from United States Agency for International Development (USAID), Food and Agriculture Organization (FAO), International Development Research Centre (IDRC), ACDI/VOCA, International Fund for Agricultural Development (IFAD), International Atomic Energy Agency (IAEA), University of Wisconsin, and RUAF Foundation, amounting to approximately \$673,884.

Dr. Salim Macksoud, Professor Emeritus at FAFS, submitted a donation in the amount of \$ 5,000 to support the water related activities at the Faculty. A fund was established in the name of Dr. Salim Macksoud Donation.

Total number of publications in refereed journals and books were 29 articles and 5 chapters in book divided as follows: seven publications in the Animal Sciences Department; two publications and three chapters in a book in the Land and Water Resources Department; six publications and two chapters in two books in the Plant Sciences Department; and fourteen publications in the Nutrition and Food Sciences Department.

## **2. STUDENTS**

### **Student Admissions: 2006-2007**

A total of 1557 applications for admission to the Faculty of Agricultural and Food Sciences were received out of which 506 (207 AGR; 97 FSMT; 86 LDEM and 116 NTDT) applications were issued letters of acceptance for the first semester of 2006-2007, of whom 114 students registered. A total of 282 applications for admission to FAFS for the second semester 2006-2007 were received and 92 (46 AGR; 20 FSMT; 10 LDEM and 16 NTDT) were issued letters of acceptance of whom 40 students registered.

### **Student Enrolment**

Student enrolment in the Faculty during the first semester totaled 592 (499 undergraduate students and 93 graduate students) and 601 (507 undergraduate students and 94 graduate students) during the second semester. Student enrolment during the summer session totaled 272 (240 undergraduate students and 32 graduate students).

130 students graduated during this period: Eleven with a B.Sc. in Agriculture; 8 with a B.Sc. in Landscape Design and Eco Management; 54 with a B.Sc. in Nutrition and Dietetics, 23 with a B.Sc. in Food science and management and 34 received their M.Sc. degrees in different majors.

**Table 2: STUDENT ENROLLMENT BY CLASS 2006-2007****UNDERGRADUATE AND GRADUATE STUDENT ENROLLMENT IN FAFS**

<b>Undergraduates</b>	<b>Fall 2006-2007</b>	<b>Spring 2006-2007</b>	<b>Summer 2006-2007</b>
AGR I	86	97	27
AGR II	25	17	4
AGR III	13	17	14
AGR IV	9	9	7
Special	0	0	0
<b>Total AGR</b>	<b>133</b>	<b>140</b>	<b>52</b>
<b>Undergraduates</b>	<b>Fall 2006-2007</b>	<b>Spring 2006-2007</b>	<b>Summer 2006-2007</b>
LDEM I	42	30	16
LDEM II	18	25	10
LDEM III	21	23	9
LDEM IV	6	8	3
Special	0	0	0
<b>Total LDEM</b>	<b>87</b>	<b>86</b>	<b>38</b>
ND I	36	30	11
ND II	46	57	28
ND III	50	51	19
Special	9	8	8
<b>Total ND</b>	<b>141</b>	<b>146</b>	<b>66</b>
FSMT I	55	43	14
FSMT II	56	57	28
FSMT III	27	35	42
<b>Total FSMT</b>	<b>138</b>	<b>135</b>	<b>84</b>
<b>Total UG</b>	<b>499</b>	<b>507</b>	<b>240</b>

<b>Graduates</b>	<b>Fall 2006-2007</b>	<b>Spring 2006-2007</b>	<b>Summer 2006-2007</b>
Agricultural Economics	6	6	0
Animal Science	4	3	0
Ecosystem Management	10	9	4
Food Technology	22	19	7
Irrigation	5	6	2
Nutrition	29	35	9
Plant Protection	7	8	8
Plant Science	3	2	1
Poultry Science	4	5	1
Soil & Mechanization	3	1	0
<b>Total Graduate</b>	<b>93</b>	<b>94</b>	<b>32</b>

### **3. NON-ACADEMIC PERSONNEL**

There are 11 non academic employees in Beirut (Table 3) and 37 at the AREC. Three of these stationed at AREC are budgeted under Animal Science Department, 2 are budgeted under Plant Sciences Department and 3 are budgeted under Land & Water Resources Department. This is because the major part of their work is for assisting in teaching and research in those three Departments.

**Table 3: LIST OF NON-ACADEMIC STAFF**

	<b><u>NAME</u></b>	<b><u>TITLE</u></b>	<b><u>GRADE</u></b>
<b>I.</b>	<b><u>Dean's Office</u></b>		
	Haddad, Tharwat	Students Record Officer	Above grade 12
	Hamzeh, Haifa	Secretary	9
	Haydar, Imad	Junior Clerk	3
	Khoury, Wafa	Executive Officer	Above grade 12
	Koubayssi, Rabia	Assistant for Student Services	10
	Wali, Yamama	Clerk Stenographer	7
<b>II.</b>	<b><u>Animal Science</u></b>		
	Atikian, Nesta	Senior Technician	9
	Harb, Mohammad	Animal Attendant	3
	Shukr, Talib Ali	Senior Poultry Attendant	4
	Zreik, Mohammad	Poultry Attendant	2
<b>III.</b>	<b><u>Plant Sciences</u></b>		
	Abu Samra, Elias	Greenhouse Custodian	3
	Kayyal, Hatem	Agronomy Foreman	6
	Yazbek, Ali Abbas	Assistant Agronomy Foreman	3
<b>IV.</b>	<b><u>Nutrition and Food Sciences</u></b>		
	Derboghossian, Arsine	Associate Technician	6
	Ghannam, Tania	Clerk Stenographer	7
	Tuma, Samir	Associate Technician	6
<b>V.</b>	<b><u>Land &amp; Water Resources</u></b>		
	Haidar, Naji	Assistant Mechanic	4
	Mouna, Hassan	Day &/or Night Attendant (Elect.& Boiler)	6
	Sindian, Ali	Head Mechanic	9
<b>VI.</b>	<b><u>AREC Administration</u></b>		
	El-Haddad, Nicloas	Interim AREC Manager	12
	Hajj-Hassan, Hussein K.	Sales Attendant/Store Keeper	7
	Safar, Shady	Livestock & Poultry production Supervisor	12
	Yazbeck, Bilal	Driver, Purchaser	5
	Yazbeck, Mirna	Clerk Typist	6

**Table 3: (Cont'd)**

	<u>NAME</u>	<u>TITLE</u>	<u>GRADE</u>
<b>VII.</b>	<b><u>AREC Physical Plant</u></b>		
	Ghosn, Hisham	Gateman/Watchman	3
	Haidar, Nasser	Janitor	1
	Hajj-Hasan, Fuad	Boiler Operator/Pipe Fitter	6
	Hajj-Hasan, Husain Ali	Gateman/Watchman	3
	Hajj-Hasan, Khayrieh	Maid	1
	Hajj-Hasan, Mohammad	Gateman/Watchman	3
	Hajj-Hasan, Shehadeh	Janitor	1
	Kak, Mohamad	Gateman/Watchman	3
	Masri, Ali	Gateman/Watchman	3
	Mussawi, Kuzhayyah	Gateman/Watchman	3
	Zein, Bassam	Mason	5
<b>VIII.</b>	<b><u>AREC Production</u></b>		
	Abou-Eid, Abdallah	Field Worker	1
	El-Ali, Ibrahim	Animal Attendant	3
	Hajj Hassan, Ahmed K.	Animal Attendant	3
	Hajj Hasan, Ali	Field Worker	1
	Mousawi, Abbas	Machine Operator	3
	Takash, Nayef	Machine Operator	2
	Yazbeck, Hussein	Animal Attendant	3
<b>IX.</b>	<b><u>AREC Cafeteria</u></b>		
	Hamiyeh, Walid	Assistant Cook	5
	Kayyal, Ali	Food Service Worker	1
	Rumeh, Abdul Karim	Cook	7
	Shukr, Khalil	Food Service worker	1
<b>X.</b>	<b><u>AREC Library</u></b>		
	Sleiman, Samar	Librarian	6
<b>XI.</b>	<b><u>AREC AUH</u></b>		
	Sayyed-Ahmad, Mariam	Staff Nurse	9



#### **4. FAFS VISITORS**

##### **Trustee Coffman's Visit**

Turste Coffamn visited FAFS from April 23-28, 2007. Dr. Coffman met with FAFS Strategic Planning Committee as well as the Agribusiness Committee. He also visited AREC and met with AREC students, AREC Committee and AREC administration. A meeting was also held with Dr. Raouf Youssef from USAID in the presence of Dean Hwalla, Associate Dean Hamadeh and Dr. Jurgen Diekman (Farm Manager from ICARDA) to identify USAID local agenda as related to Agriculture, Environment, Food and Nutrition for gaining some background information on recognized needs of rural areas and funding priorities from a long term player in this sector.

##### **Dr. Peter Emery**

Dr. Peter Emery, Professor of Nutrition and Metabolism and Head of the Department of Nutrition at King's College, London, visited the Nutrition and Food Science Department as a Visiting URB Scholar. Dr. Emery's visit was from May 19 till May 23, 2007. During his stay, he gave three lectures to faculty members and students. The lectures were on "Proteomic Changes in Wound Healing"; "Nutrition and Protein Synthesis" and "Metabolic Changes in Malnutrition".

**SECTION B**  
**REPORTS OF STANDING AND ADHOC COMMITTEES**

*Part 1*  
*Standing Committees*

## THE ADMINISTRATIVE COMMITTEE

### A. Membership

Chairperson:

Nahla Hwalla, Dean

Members:

Isam Bashour

Shady Hamadeh

Adib Saad

Imad Toufeili

### B. Committee Policies

The Committee followed the general guidelines outlined in the by-laws of the Faculty.

### C. Committee Actions

The committee held 7 meetings throughout 2006-2007 to discuss and act on various issues pertaining to:

1. Budget preparation for the academic year 2007-2008. Operating budget and capital budget for the various departments was reviewed and submitted for AUB Administration.
2. Appointment of graduate assistants for the first semester, second semester and the Summer Session. New criteria were developed for appointment of graduate assistants to be effective as of the academic year 2007/2008.
3. FAFS Strategic Planning. One of the objectives of Strategic planning is restructuring of departments in order to align programs with their respective departments.
4. New Departments at the Faculty. The Plant Sciences and the Land and Water Resources Departments were merged into one new department called Agricultural Sciences Department. A new department was created the Landscape Design and Ecosystem Management Department. This change of departments will be in effect as of October 1, 2007.
5. Appointment of new chairpersons for the academic year 2007-2008. Two chairpersons for the Agricultural Sciences and the Landscape Design and Ecosystem Management departments were recommended for appointment as of October 1, 2007.
6. Faculty performance and evaluation. Chairpersons were instructed to submit the annual faculty performance and evaluation for faculty members in their departments.
7. Space at FAFS. The Committee reviewed the space allocation at FAFS and recommended having part timers share same offices since FAFS does not have enough available offices. Dr. Ramy Zurayk was appointed by the Dean to submit recommendation for optimized space use at FAFS.

Prepared by  
Wafa Khoury  
Secretary

## THE ADVISORY COMMITTEE

### Membership:

#### Chairperson:

N. Hwalla

#### Members:

Y. Abou Jawdah

E. Barbour

M. Sidahmed

S. Talhouk

I. Toufeili

R. Zurayk

Dr. Abou-Jawdah was voted as the new secretary of the advisory committee. The committee met 12 times and voted on 70 issues, including approval of FAFS strategic plan, and appointment of a new Faculty member, Dr. Lara Nasreddine as assistant professor in Nutrition, renewal of contracts for faculty members, nine applications for short term faculty developments, appointment of part-timers, extension for visiting Professor Dr. Al Zubaidi, and invitation of Dr. Peter Emery as a URB visiting scholar.

Among the other major actions taken were the evaluations and recommendations for promotion of two Faculty members, and the approval of restructuring of FAFS departments:

- **The Department of Landscape Design and Ecosystem Management:** This department will house the two programs of BS in Landscape Design and Eco-Management and MS in Ecosystem Management
- **The Department of Agricultural Sciences:** This department consists of merging the PLSC and the LWRS departments in one department.

Prepared by  
Yusuf Abou Jawdah  
Secretary

## **THE ACADEMIC AND CURRICULUM COMMITTEE**

### **A. Membership**

#### Chairperson

Dean Hwalla

#### Members

Dr. Bashour

Dr. Farajalla

Dr. Haidar (Undergraduate A/G Coordinator)

Dr. Hamadeh

Dr. Kassaify

Dr. Obeid (Undergraduate ND/Coordinator)

Dr. Toufeili

Mrs. Huda Nakad (Registrar's Representative)

Mr. Walid Shaar (SRC Representative)

### **B. Committee Policies Regulations**

The Committee discussed courses offered during the fall and spring semesters and concluded the following: FAFS service courses with less than 15 students will not be offered, FAFS undergraduate electives with less than 5 students will not be offered, and graduate electives with less than 3 students will not be offered. Also, courses offered on main campus during the summer with low enrolment (less than 15) will not be offered.

Rules and regulations on Academic probation provided by the Registrar were discussed and adopted by the Committee.

The Chairperson presented and explained the new way of writing a course syllabus which should include the learning outcomes. Faculty members were to revise their outlines accordingly.

### **C. Committee Actions**

Approved the course offerings for spring 2006/07, summer 2006/07 and fall 2007/08.

Approved a new free elective course in the Nutrition and Food Science Department, NFSC 211, "Fitness: Physical Activity, Diet and Health" (3 cr.).

Approved a new free elective course in the Plant Science Department, PLSC 230 "Natural Management of Garden Pests (3 cr.).

Approved to change the title of the course NFSC 274 from "Human Nutrition" to Human Nutrition and Metabolism".

Approved to change the title and course syllabus of the course AGRL 250 from "Theory & Practice of Organic Farming" to "Organic Farming".

Approved the eligibility of 15 students in the Agriculture program and 16 students in the Landscape program to go to AREC during spring semester of 2006/07.

Approved the transfer of ten students to Food Sciences & Management, ten students to Nutrition and Dietetics and one student to Landscape Design and Ecosystem Management.

The Committee approved that LDEM labeled courses will now be offered by the new department known as Landscape Design and Ecosystem. Courses in PLSC and LWRS will now be labeled AGSC and will be offered by the new AGSC department which is a merger of PLSC and LWRS.

Approved the recommendation of the Nutrition and Food Science Department to change NFSC 282 course from 2 credits to 3 credits, remove NFSC 290 course from the Food Sciences and Management curriculum, and offer NFSC 290 course only for Nutrition students effective fall 2007/08.

An approved list of FAFS electives was submitted to the Academic Development Committee of the University Senate to be considered for the General Education requirements.

Based on the probation rules and regulations as indicated in the AUB catalogue, the Committee acted to drop seven students effective June 2007 and August 2007.

#### **D. Recommendations**

The Committee recommended that the Agriculture curriculum be revised and that an Ad-hoc Committee be formed by chairpersons and chaired by the Associate Dean.

The Committee reviewed the Agribusiness program prepared by an Ad hoc committee for Agribusiness curriculum and recommended that a consultant prepare a new Agribusiness program.

The Committee recommended to the Faculty to award the B.Sc. degree in Agriculture and Diploma of Ingenieur Agricole to eleven students, the B.Sc. degree in Landscape Design and Eco-Management and Diploma of Ingenieur Agricole to eight students, the B.Sc. degree in Food Science and Management to twenty three and the B.Sc. degree in Nutrition and Dietetics to fifty four students.

Prepared by  
Rabia Koubayssi

## THE ADMISSIONS COMMITTEE

### **Membership:**

#### Chairperson:

N. Hwalla

#### Members:

M. Batal

S. Ghaddar

Z. Kassaify

M. Nimah

The Committee met two times in presence of Dr. Makhzoumi, Landscape Design and Eco-management Representative, Registrar Representative and Miss Tharwat Haddad (Secretary).

The applications and the records of transfer undergraduate applicants to FAFS were studied individually by the Admissions Committee. The cumulative average (70) for all majors except Nutrition and Dietetics major (75) was used as criterion for admission for spring 2006-2007 and summer 2006-2007. After a thorough study of the performance of each applicant, a vote was taken by the committee members to recommend to the chairman of the committee the admission or denial of the applicant.

The Nutrition and Food Sciences Department agreed to raise the transfer students' cumulative average for Food Science & Management to 75, and also did the Landscape Design & Eco-Management department to 75 as of fall 2007-2008.

The transfer applicants coming from outside AUB were recommended to the Unified Admissions Committee to be accepted as transfer students to the Faculty of Agricultural and Food Sciences for the spring 2006-2007, summer 2006-2007 and fall 2007-2008.

The decisions regarding admissions of transfer students to undergraduate programs in FAFS, and the decisions related to admissions rules and regulations were voted upon among the members of the committee (Table 1). The activities of this committee could be summarized in Table 1.

The Admissions' Committee Members suggested that the Unified Admissions Committee raise the composite scores for the three majors Nutrition and dietetics (>550), Food Science & Management (>500), and Landscape Design & Eco-Management (>500) especially as enrollment figures were very high this year.



Table 1. No. of Applicants accepted as transfer students to the four different majors in FAFS

<b>Spring 2006-2007</b>	<b>Transfer</b>	
	<b>Applications Received</b>	<b>Students Accepted</b>
UG NUTR	19	16
UG AGRI	6	3
UG LDEM	14	5
UG FSMT	13	10
<b>Summer 2006-2007</b>		
UG NUTR	13	8
UG AGRI	3	1
UG LDEM	1	0
UG FSMT	11	11
<b>Fall 2007-2008</b>		
UG NUTR	30	16
UG AGRI	15	7
UG LDEM	14	7
UG FSMT	19	7

Prepared by  
Tharwat Haddad  
Secretary

## THE GRADUATE STUDIES COMMITTEE

### A. Membership:

#### Chairperson

Dean Hwalla

#### Members

Dr. Abou Jawdeh

Dr. Kassaify

Dr. Nimah

Dr. Obeid

Dr. Sidahmed (Graduate Coordinator)

Dr. Sleiman

Admission's Representative

Registrar's Representative

### B. Committee Policies:

The Committee agreed that part-time faculty members cannot advise thesis students but can serve as co-advisors.

The Committee agreed that Departments should specify the courses that a prospective graduate student should complete in order to be considered later on as a graduate student. Graduate courses taken as part of the prospective graduate program cannot be transferred to students' graduate program.

Graduate students should submit their thesis title and program of study a year before graduating. The Committee proposed to delay students' graduation if they do not comply with such a regulation. Students' advisors should also be informed of this regulation.

Students following a thesis program are required to take a minimum of 21 graduate level course credits plus a thesis. No thesis program should include more than 3 tutorial course credits with core regular courses constituting a minimum of 12 credits excluding seminars and tutorials. A student following a non-thesis program is required to take a minimum of 33 graduate level course credits. The program should include a minimum of 3 credits and a maximum of 6 tutorial credits with at least 12 credits being from core courses in the major.

### C. Committee Actions:

- The Committee acted on a number of petitions submitted by students.
- Approved the program of study and thesis titles of 44 students.
- The Committee acted to remove 3 students from probation effective June 2007.
- The Committee acted on 98 applications that were received for the first semester 2006-07. Out of the 98 applications, 81 were accepted and 17 were denied. Of the 81 accepted 23 registered for the first semester.

- The Committee acted on 18 applications that were received for the second semester 2006-07. Out of the 18 applications, 16 were accepted and two were denied. Of the 16 accepted applicants only 7 registered for the second semester.

**D. Recommendations:**

The Committee recommended to the Faculty to award the MS degree to 5 students effective October 2006 in the following majors: 2 in Nutrition, 2 in Plant Protection and 1 in Ecosystem Management. Effective February 2007, 12 students graduated in the following majors: 1 in Soil Science, 1 in Poultry Science, 1 in Plant Science, 1 in Plant Protection, 1 in Animal Science, 1 in Agricultural Economics, 1 in Irrigation, 4 in Food Technology and 1 in Ecosystem Management. Effective June 2007, 18 students graduated in the following majors: 1 in Irrigation, 4 in Nutrition, 2 in Poultry Science, 1 in Plant Science, 4 in Food Technology, 1 in Agricultural Economics, 1 in Soil Science and 4 in Ecosystem Management.

Prepared by  
Rabia Koubayssi

## THE RESEARCH COMMITTEE

### Membership:

#### Chairperson:

S. Talhouk

#### Members:

S. Ghaddar

I. Bashour

O. Obeid

A. Olabi

The committee held four meetings during the spring semester 2007 (the committee Chair was on research leave during fall 2006-2007). All meetings were coordinated and attended by Ms. Haifa Hamze from the Dean's Office. The meetings took place in the FAFS organoleptic laboratory on February 23, March 30, April 27, and May 4.

During these meetings the committee discussed procedures for submission and review of URB proposals and the following procedural modifications:

- **Increasing the number of referees:** The committee decided to increase the number of referees for every proposal to four, including two internal and two external referees whose names will be solicited from the principal investigator of the proposal.
- **Revising the evaluation score sheet:** The committee revised the evaluation score sheet in a manner that will make it clearer to referees. The different items of the evaluation sheet will be given equal weights and items that are not scored will not be included in the final score.
- **Adopting a previously set scoring system:** The committee discussed the process of evaluation and agreed to use the previous scoring system:

Reviewers	40%
Committee Evaluation	10%
Productivity	20%
Status	20% (if assistant professor, 15% if associate and 10% for professor)
Renewal or New	10% (for new and 5% for renewal)

*Productivity will be assessed based on the number of publications, theses produced, meetings attended and other information sharing activities, such as proposals written, based on URB funding and that have occurred over the last three years.*

- **Setting a proposal submission schedule:** The committee set a submission schedule.

*March 27, 2007*      *Proposal submission deadline by faculty members to research committee*

*March 30, 2007*      *Research committee meeting for dividing proposals and sending them to reviewers*

*May 4, 2007*          *Deadline for reviewers to submit their evaluations*

*May 11, 2007*        *Revision by research committee and submission of recommendations to Dean*

- **Distributing information to faculty regarding application and evaluation procedure:** The committee distributed to faculty the submission schedule, information about the scoring system and the new evaluation score sheet. Furthermore faculty members intending to submit to URB were asked to provide information about their productivity over the last 3 years.
- **Reviewing proposals:** The committee reviewed 13 proposals. The proposals were divided between the research committee members according to their field of expertise. The committee prepared the evaluation matrix for each applicant including a short summary of the proposed research.
- **Assessing productivity related to URB funding:** The committee members tried to assess productivity and concluded that it was hard to link URB funded projects to specific papers. Accordingly, the CV's were used as the source of information for evaluating productivity for the last 3 years.
- **Acknowledging reviewers input:** The letters that will be sent to the reviewers for thanking them will be sent in September. In addition, the reviewers' comments will be sent to the principal investigators without the reviewers names.

Prepared by  
Salma Talhouk  
Chairperson

## THE LIBRARY COMMITTEE

### **Membership:**

#### Chairperson:

Y. Abou Jawdah

#### Members:

S. Ghaddar

E. Abou-Fakhr Hammad

Z. Kassaify

During this period no official meetings were held; however, the chair convened twice with the committee members who considered that after the renovation of the entrance, the addition of extra computers, and the good performance of the document delivery service for articles in journals not available in the library, the present situation is acceptable pending the construction of a new Library.

Prepared by  
Yusuf Abou-Jawdah  
Chairperson

## THE STUDENT AFFAIRS COMMITTEE

### **Membership:**

#### Chairperson:

M. Haidar

#### Members:

Z. Kassaify

A. Olabi,

J. Weltzien

R. El Rassi (SRC representative).

The Committee met several times during the period of October 1, 2006 until September 30, 2007, and voted on many items. The Committee members discussed FAFS awards and made the following recommendation to the Dean.

### **A. FAFS Awards**

#### ***1. Joana Haidar Award***

It is an annual award of \$200 given to a deserving and needy AREC student having a cumulative average of 75 and above. The student should be environmentally aware and interested in agricultural practices and development. The committee selected **Ms. Haniya Abou Khouzam** for this Award.

#### ***2. FAFS Alumni Award***

It is an annual award of \$500 given to a qualified and needy agriculture student (s) at AREC with a cumulative average of 75% or more. The committee selected **Mr. Abbas Farran** for this award.

#### ***3. Edgcombe Award***

It is a \$500 awarded to the outstanding student in the Third year Agriculture. The committee selected **Mr. George Gharios** for this award.

### **B. Dean Thomas Sutherland Prize for Graduate Excellence**

Awarded annually at graduation to outstanding graduates. For undergraduate excellence, \$500 to the recipient of the Penrose Award for the year. For graduate excellence, \$1000 to the M.S. graduate with the thesis judged best overall for design, research, presentation, and contribution to its field.

An e-mail was sent by the Chairperson to all faculty members to call for nominations for this award. Each professor was asked to nominate only one graduate student along with a copy of the thesis, resume and justification for making the nomination. Six nominations were considered and each thesis was reviewed by two outside reviewers.

Reviewer's comments (evaluation sheet) were used as criteria for selection/ranking. Ranking was based on the originality, design, research, clarity of presentation and importance to the field. The committee selected **Ms. Joyce Maalouf** for this award.

### **C. Abdul Hadi Debs Endowment Award for Academic Excellence**

It is an annual award to graduating students, preferably at the graduate level. Each Faculty will nominate one candidate with outstanding academic record, and who has demonstrated research capabilities through a paper, project or thesis deemed by the Faculty worthy of publication. The recipients will receive equally a cash award depending on the amount generated by the endowment. The maximum amount of each award shall not exceed \$ 1,000. The award will be announced during the reception preceding or following Commencement Exercises. Each student will receive a check and a certificate.

The committee established and recommended to the Dean's office written procedures for this Award. Four nominations were considered and each manuscript was reviewed by two outside reviewers. Reviewer's comments (Score sheet) were used as criteria for selection/ranking. Ranking was based on the originality, design, research, clarity of presentation and importance to field. The committee recommended **Mr. Hagob S. Atamian** for this award

### **D. Penrose Award**

Non-cash honorary awards made on the basis of scholarship, character, leadership and contribution to University life to the outstanding graduate of each Faculty.

The Chairperson sent an e-mail to all FAFS faculty members asking them to submit nominations for this award with the deadline initially set for June 15, 07. The Committee reviewed the records of 6 nominees. After reviewing them, the committee recommended to the Dean all nominees, in order of preference:

- 1. Jean-Michel Chemaly,**
- 2. Georges Gharios,**
- 3. Tatina Corban,**
- 4. Farah Baroudy,**
- 5. Reem Zebian**
- 6. Nadia Naamani**

Candidates were asked to make short presentations about their qualifications for the award during the faculty meeting of June 18, 2007. The faculty voted for **Mr. Jean-Michel Chemaly**.

Prepared by  
Mustaph Haidar  
SAC Chairperson



*Part 2*  
*Adhoc Committees*

**THE AREC COMMITTEE**  
**March 15 – October 15, 2007**

The AREC Committee was appointed by the Dean on March 15, 2007.

**A. Membership**

Chairperson:

F. Sleiman ( Chairman )

Members:

S. Hamadeh (Ex-officio)

Z. Kassaify

M. Nimah

J. Weltzein

S. Yau

**B. Functions of the Committee:**

The main function of the Committee is to advise and supervise the AREC Management on maximizing the effective use of AREC resources for the educational, research and outreach purposes of the Faculty. The Committee advises the Dean and AREC Administration on best management means to achieve feasible production and quality produce, and will report periodically on the performance of the AREC Management to the Dean.

**C. Duties of the Committee:**

1. Formulate short and long term plans for promotion of AREC activities, and the general development of AREC including a Master Plan.
2. Advise and supervise the AREC Management in implementing the best ways for AREC to carry out teaching, research, extension and production activities.
3. Advise and supervise the AREC Management in performing necessary plans for improvement of animal and crop production activities.
4. Advise the Dean and AREC Management in studying personnel needs (annual, seasonal, daily, etc...).
5. Recommend to the Dean and AREC Management necessary renovations and rehabilitation of AREC facilities.
6. Carry out various studies concerning AREC operations as requested by the Dean.
7. Follow up on AREC activities with University Administration upon the request of the Dean and in coordination with AREC Management.

**D. AREC Committee Actions:**

The following actions were Completed by the Committee as of March 2007 in order to improve AREC activities and operations:

1. Establish an AREC Vision and Mission as part of a master plan after surveying FAFS faculty.
2. Appoint Mr. Nicholas Haddad (Crop Supervisor) as an Interim Farm Manager after considering the applications received for the advertised farm manager position. Also, have Mr. Shady Safar (Livestock Supervisor) as an A/ Assistant Farm Manager.
3. Have a schedule for maintenance of AREC buildings.

4. Repair the solar system of the cafeteria and the men's dormitory.
5. Purchase a new generator that meets the power needs of AREC.
6. Establish records on production activities.
7. Establish a standard format for record keeping at AREC workshops.
8. Improve kitchen facility at men's dormitory.
9. Increase broiler production.
10. Administer a contract between ASAIL and AUB/AREC to use AREC creamery for training workshops.
11. Have a medical doctor from UHS frequently visit AREC.
12. Check and search cars entering AREC for security purpose.
13. Have a guard room (for AREC guards) separate from that used by the Lebanese policemen.
14. Prepare a job description for a Business Administrator for FAFS/AREC.
15. Approve culling and selling of some livestock animals and birds.
16. Repair and modify (change Turbines) of the Tell Well Water Pump.
17. A study on AREC machinery needs and use.
18. Conduct a study to efficiently use AREC water.
19. Purchase and install finger print device to monitor attendance of employees.
20. Purchase a cooler/freezer to store products delivered to pilot plant by transferring money from what was budgeted for the rain gun.
21. Replace the hot water tank of the cafeteria and men's dormitory.
22. Rehabilitate the studio for the LDEM students.
23. Install a wireless internet connection system at the women and men dormitories.
24. Conduct urgent and necessary maintenance work at the creamery.
25. Approve in principle the 2007-2008 cropping plan at AREC.

**E. AREC Committee Recommendations:**

The following are recommendations for consideration by the Dean and, if needed with University Administration:

1. Sell or lease the combine harvester.
2. Increase AREC production outcome from sale of dairy and/or dairy products, meat (cattle, sheep and goats) and poultry (broiler and layers).
3. Adopt a cropping plan that takes into consideration water availability in line with the water master plan study.
4. Establish a larger orchard with different types of fruit trees.
5. Establish a "hill lake" to increase the irrigated area at AREC by about 6.0-7.0 hectares.
6. Have AREC as a rural park with bed and breakfast facilities. This requires major modifications and rehabilitation of the current buildings and/or facilities.
7. Rehabilitate the underground water supply system (in phases over few years).
8. Install security surveillance cameras for security purposes and to monitor AREC field activities.
9. Rehabilitate, improve and/or replace the AREC creamery.
10. Donate the AREC Incinerator to a neighboring village (Bednaiel).
11. Establish a Vineyard (for wine production on BOT basis, if possible).
12. Formulate or have a contract for sale of AREC milk (yearly basis).
13. Approve in principle a storage place for inactive medical files for AUH.

Prepared by  
F.T. Sleiman  
Chairman

## STRATEGIC PLANNING

### **Membership:**

#### Chairperson:

N. Hwalla (Chairperson)

#### Members

M. Batal

M. Farran

Th. Haddad

S. Hamadeh (Associate Dean)

Z. Kassaify

J. Makhzoumi

Z. Musa (By invitation)

S. Talhouk

R. Zurayk

### **A. Summary of the Strategic Plan process**

The FAFS strategic planning process initiated in April 2005 was reviewed with Dean Nahla Hwalla and Associate Dean for Strategic Planning Dr. Shady Hamadeh.

### **Background:**

Revision of the strategic plan involved appointing an Associate Dean for Strategic Planning, engaging faculty, students and staff, conducting departmental consultations, soliciting inputs from the strategic planning committee, and organizing a Faculty retreat (January 24, 2007).

### **Highlights of the revised strategy:**

1. Faculty engaged in process of revision
2. Students and staff feedback solicited
3. All academic programs represented in strategic planning committee
4. SWOT analysis revisited to clearly and openly address FAFS weaknesses
5. Administrative restructuring (Departments and AREC) implemented to facilitate development of strategic plan
6. Planned initiatives focused on addressing weaknesses
7. Strategic goals aligned with SWOT

### **Major FAFS Goals for the coming 3-5 years**

Goal 1: Attracting students: A relevant and diverse education for success

Goal 2: Steering change: Revisiting programs, curriculums and departments

Goal 3: Embracing Sustainable Alternatives: An entrepreneurial approach

Goal 4: Leading the way: FAFS as a center of excellence

## **Major FAFS Initiatives for the coming 3-5 years**

### **Goal 1: Attracting students: A relevant and diverse education for success**

- a. Target scholarships to students from rural Lebanon and the region
- b. Revisit curricula to respond to market needs in the region and advertise them (allocate human and physical resources to strengthen program image)
- c. Exchange students with other universities

### **Goal 2: Steering change: Revisiting programs, curriculums and departments**

- a. Introduce New Undergraduate programs: *B.Sc. Veterinary Science; B.Sc. Agribusiness*
- b. Introduce and/or revise graduate programs to respond to job market needs: *M.Sc. Rural Community Development; M.Sc. Landscape Design and Eco-Management; PhD Nutrition*
- c. Seek accreditation for all programs
- d. Integrate “AREC Dimension” in all programs
- e. Align programs with departments: *New department of Landscape design and ecosystem management; Merge the departments of Plant sciences and Land and Water*

### **Goal 3: Embracing Sustainable Alternatives: An entrepreneurial approach**

- a. Segregate academic from operational activities at AREC
- b. Allocate resources to align with the strategic changes introduced by the school in terms of academic programs and research agendas
- c. Ensure professional development, and transparent evaluation and reward system: Enforce submission of the annual performance review by all administrators; establish a monthly open forum to address on regular basis all issues and to keep Faculty well informed about all University decisions
- d. Optimize AREC operations and develop business plans: Seek to outsource losing operations at AREC; improve student facilities such as dormitory, food services, recreational facilities, and IT services to encourage use by various academic programs, AUB alumni, and implement a good neighborhood strategy
- e. Develop and institutionalize fund raising strategy: Establish a center at AREC for sustainable development (ESDU) to solicit funding; develop incentive system to promote research proposal writing and fundraising by Faculty
- f. Develop process to involve alumni and private sector: Organized meetings, seminars and workshops; establish a graduate student profile database accessible to the private sector and establish support base for job placement of graduates; build a strong internship program for all sectors catered by FAFS

### **Goal 4: Leading the way: FAFS as a center of excellence**

- a. Process for update of infrastructure
- b. Establish new centers of excellence and consolidate existing ones: *Center for Zoonotic Diseases; Food Safety and Applied Nutrition Center*; provide services through FAFS centers
- c. Prioritize recruitment to meet critical mass: Allocate adequate teaching support to faculty members catering to a large number of students
- d. Expand and revitalize FAFS advisory board

## **B. AREC**

The Agricultural Research and Education Center (AREC) received central attention all along the strategic planning process. A strategic plan for AREC was developed, and an ad hoc AREC Committee was formed. The AREC plan and operations were further reviewed by Trustee Bill Coffman and Dr. Jürgen Diekmann, ICARDA farm director, and their input was incorporated in the final Plan.

The following is a summary of the major strategic initiatives that were accomplished at AREC, in addition to the future tasks that still need to be performed, grouped by Strategic objectives.

### **❖ *Reshaping AREC as a regional showcase for sustainability***

- *Segregate academic from operational activities at AREC:* AREC administration reorganization was initiated. An AREC academic coordinator and an interim AREC manager were appointed
- *Optimize AREC operations and develop business plan:* An internal auditor evaluation was completed and an ad hoc AREC Committee was created. Efforts are already in process and will be pursued for outsourcing costly operations, establishing a data management system, upscaling profitable operations, maximizing integration and value addition and seeking sustainable energy alternatives. Preliminary signs of deficit reduction were recorded by the third quarter of 2007.
- *Reinvent AREC as a multifunctional resource for AUB and alumni (teaching, research, training, leisure):* Improving AREC infrastructure, establishing a Bed and Breakfast facility, and establishing a CEC satellite in partnership with REP and other faculties are already in process.
- *Develop and institutionalize an AREC fund raising strategy:* Establishing a center for sustainable development and fundraising is being explored with various development actors. In addition, modalities to recover indirect costs from sponsored projects using AREC are being discussed with the Office of Grants and Contracts.

### **❖ *Emphasizing synergies: teaching, research extension & outreach***

- *Establish new units of excellence:* A proposal was submitted for the establishment of a Forage and Machinery Unit for extension services and outreach and funding is expected.

## **C. Future Plans**

Improving AREC operations and seeking supportive funding was the main focus of the past year initiatives. In the future, efforts will target to achieve a greater role of AREC in FAFS activities in particular, and AUB at large. Improving AREC infrastructure and involving the AUB community in AREC will be sought in parallel. The following are the major initiatives projected for AREC.

### **❖ *Reshape the role of AREC vis-à-vis other programs***

- *Integrate an “AREC Component” in all programs*
- *Develop modular AREC courses to meet student needs*
- *Encourage faculty presence at AREC*
- *Use AREC to attract rural students*

## CAREER CENTER COMMITTEE

### **Membership:**

#### Chairperson:

I. Bashour

#### Chairperson:

Th. Haddad

M. Nimah

F. Sleiman

I. Toufeili

### **A. Introduction**

The FAFS Career Center Committee was formed by the Dean to collect information about FAFS alumni and learn about the companies and organizations in which they work.

The attached lists (alumni and organizations) were collected from:

- FAFS alumni
- Development office at AUB
- And personal contacts with faculty alumni and organizations

The names and addresses of last year's students are included in the alumni list. A form was developed and placed at the Dean's office to be filled by all FAFS exiting students. The career center lists will be updated annually.

The FAFS alumni association was very helpful by sending email messages to all members and only those who reconfirmed their addresses are included in the survey list.

This Compilation of Information aims to facilitate communication between FAFS students, faculty and alumni by providing an online database. Once this information becomes available online, it will allow companies to post job vacancies and receive applications.

However, for companies which prefer to remain anonymous; traditional recruitment methods are available.

### **B. ALUMNI**

Table 5 shows the number of graduates from FAFS since 1956 which includes the Technical Vocational Training (TVT) program that was started in 1954 funded by USAID and discontinued in 1971. FAFS has graduated a total of 4291 students from its regular instructional programs: 2556 with the B.S. degree in the 4 undergraduate majors (Agriculture, Landscape Design & Eco Management, Nutrition and Dietetics, and Food Sciences and Management) and 1310 students with the M.S. degree in 11 different majors. The table also shows that our graduates came from 57 countries and that most of these are from the Middle East, South Asia and North Africa.

**FAFS GRADUATES BY COUNTRIES**  
**1956-2007\***

<b>1956-2007*</b>	<b>BS</b>	<b>MS</b>	<b>TVT**</b>	<b>Total</b>
Aden	5	1	0	6
Afghanistan	16	38	60	114
Algerian	1	0	0	1
American	23	8	0	31
Argentina	0	1	0	1
Australian	4	2	0	6
Bahrain	6	0	0	6
Bangladesh	1	44	0	45
Bolivian	3	3	0	6
Brazilian	4	2	0	6
British	9	3	0	12
Canadian	8	2	0	10
Chinese	0	1	0	1
Costa Rica	1	1	0	2
Cypriot	12	17	22	51
Danish	1	0	0	1
Egyptian	5	3	0	8
Ethiopian	1	1	92	94
French	8	2	0	10
German	1	0	0	1
Ghana	1	0	0	1
Greek	8	6	0	14
Indian	1	3	2	6
Indonesian	1	0	0	1
Iranian	61	46	19	126
Iraqi	12	12	0	24
Jordanian	110	102	20	232
Kenyan	1	0	0	1
Kuwaiti	5	1	0	6
Lebanese	2014	649	4	2667
Lesotho	1	0	0	1
Libyan	2	0	17	19
Maldives	2	0	0	2
Mexican	1	0	0	1
Moroccan	12	4	0	16
Nepalese	6	9	44	59
Nigerian	3	0	0	3
Omani	1	0	0	1
Pakistani***	15	229	89	333
Palestinian	48	26	0	74
Qatari	1	0	0	1
Romanian	1	0	0	1
Saudi Arabia	8	1	4	13
Sierra Leone	2	0	0	2
Somalia	0	2	24	26
Sirilankan	0	1	0	1



<b>1956-2007*</b>	<b>BS</b>	<b>MS</b>	<b>TVT**</b>	<b>Total</b>
Sudanese	18	25	23	66
Sweden	0	1	0	1
Swiss	1	0	0	1
Syrian	67	39	0	106
Tanzanian	0	1	0	1
Togo	0	1	0	1
Tunisian	2	0	1	3
Turkish	8	10	0	18
Venezuelan	6	3	0	9
Yemen	7	2	4	13
Yugoslavian	0	1	0	1
Unknown	21	7	0	28
<b>Total</b>	<b>2556</b>	<b>1310</b>	<b>425</b>	<b>4291</b>

\* As of June 2007.

\*\* The Technical Vocational Training (TVT) Program was terminated in August, 1971.

\*\*\* Includes Bangladesh up to 1973.

Prepared by  
Dr. Isam Bashour

**SECTION C**  
**REPORTS BY DEPARTMENTS AND PROGRAMS**

## DEPARTMENT OF ANIMAL SCIENCES

**Shady K. Hamadeh, Chairperson**

### **A. SUMMARY OF PROGRAMS**

The Department finalized the logistic preparations for the Veterinary Science Program. The Program was approved by the BOT and officially registered in the New York State Education Department. In addition, description of the Program and the curriculum were included in the 2007-2008 AUB catalogue.

The Department Chairman, Dr. Shady Hamadeh, was designated Associate Dean for strategic planning.

Dr. Elie Barbour initiated contact with LaSalle-Institut Superieur d'Agriculture de Beauvais (ISAB) in France, leading to a visit by LaSalle-ISAB's Dean Dr. Francis Willequet to FAFS which included an introductory lecture by Dr. Willequet entitled: "LaSalle nature of cooperation with Universities around the world". Finally, an agreement was signed between FAFS and LaSalle-ISAB for future cooperation and student exchange, with Dr. Barbour as designated coordinator of this agreement, representing FAFS.

The Department offered 11 core courses, 6 electives and 5 graduate courses, in addition to 6 graduate tutorials. A total of 8 Master students graduated whose work was supervised by the Department faculty.

The Department was also active in research sponsored by internal and external funding. Research publications totaled 10 papers (In press or published), 1 abstract and 1 book.

### **B. PERSONNEL**

#### **1. Faculty members**

Barbour, Elie	PhD	Professor of Veterinary Microbiology
Farran, Mohamed	PhD	Professor of Poultry Science
Hamadeh, Shady	PhD	Associate Dean, Chairman, Professor of Animal Physiology
Sleiman, Fawwak	PhD	Professor of Dairy Science.

#### **2. Research Assistants /Associates**

Uwayjan, Michel	M.S.	Research Associate
Jaber, Lina	M.S.	Research Assistant
Rawda, Nadim	M.S.	Research Assistant, on grant
Shaib, Hussam	M.S.	Research Assistant, on grant

### 3. Graduate Assistants

El-Hakim, Rindala	Kaadi, Marc <sup>3</sup>
Karnib, Mona <sup>2</sup>	Obeid, Youssef
Rayya, Edward	Rifai, Omar
Sawaya, Rana <sup>1</sup>	

<sup>1</sup> Fall 2006 only

<sup>2</sup> Spring 2007 only

<sup>3</sup> Summer 2007 only

### 4. Non-Academic Staff

Nesta Sagherian	Senior Technician
Taleb Shukr	Senior Poultry Attendant
Mohammad Harb	Animal Attendant
Mohammad Zreik	Poultry Attendant
Shady Safar	Livestock and Poultry Production Supervisor

## C. TEACHING

### Number of graduating students

	<b>Fall 2006</b>	<b>Spring 2007</b>	<b>Summer 2007</b>
M.S. Animal Science	1		1
M.S. Poultry Science	1	2	
M.S. in other disciplines*		2	3
		(Eco. Mgt., Plant Sc.)	(Eco Mgt.)
<b>Total</b>	<b>2</b>	<b>4</b>	<b>4</b>

\*Under main or co-supervision of Animal Science Dept. Faculty

### Number of enrolled graduate students

	<b>Fall 2006</b>	<b>Spring 2007</b>	<b>Summer 2007</b>
M.S. Animal Science	4	3	
M.S. Poultry Science	4	5	1
M.S. in other disciplines*	3	3	1
	(Eco. Mgt., Plant Sc.)	(Eco. Mgt., Plant Sc.)	(Eco Mgt.)
<b>Total</b>	<b>11</b>	<b>11</b>	<b>2</b>

\*Under main or co-supervision of Animal Science Dept. Faculty

### Student enrollment in courses

	<b>Fall 2006</b>	<b>Spring 2007</b>	<b>Summer 2007</b>
Core Courses	59	16	30
Electives	12	8	53
Courses numbered 300 and above (other than thesis)	13	21	2
Thesis/Project	2	4	2
<b>Total</b>	<b>86</b>	<b>49</b>	<b>87</b>

#### Number of credit hours offered

	<b>Fall 2006</b>	<b>Spring 2007</b>	<b>Summer 2007</b>
Core Courses	13	8	5
Electives	5	3	9
Courses numbered 300 and above (other than thesis)	11	10	
<b>Total</b>	<b>29</b>	<b>21</b>	<b>14</b>

#### **D. RESEARCH/DEVELOPMENT**

##### ***Elie Barbour***

1. Avian Influenza viruses carried by domestic and migrating birds across the Lebanese territory (Completed). Funding Agency: URB.
2. Extension: Relationship of Water Deprivation–Stress to Immunity in Awassi Ewes of Lebanon (Completed). Funding Agency: LNCSR.
3. Evaluation of Mentofin® against avian respiratory diseases (Completed).
4. The effect of essential oils against *Candida albicans* (Completed). Funding Agency: IBSAR.
5. The effect of essential oils against *Propioni acne*. Funding Agency: IBSAR.

##### ***Mohamed Farran***

1. Nutritional values of de-hulled safflower meal for poultry. Funding Agency: LNCSR.
2. The effect of supplementing laying hen diets with local crop oils on performance, yolk lipid and fatty acid profile, and quality of fresh and stored eggs. Funding Agency: LNCSR.

##### **Submitted proposals:**

3. Substitution of De-hulled Safflower Meal for Soybean Meal in Animal Diets. Submitted to Arab Science & Technology Foundation.
4. Upgrading the Genetic Base of the Lebanese Local Goat Breed through Crossing with Shami Bucks (in preparation). Submitted to Task Force for Reconstruction and Community Service (AUB).

##### ***Shadi Hamadeh***

1. The Wild edible plants project. Funding Agency: IDRC.
2. Communication for Development: Regional Capacity Building. Funding Agency: FAO.
3. Communication for Development: Regional Portal. Funding Agency: FAO.
4. Outcome Mapping: Regional Capacity Building. Funding Agency: IDRC.
5. Differences in digestibility, blood and urine parameters between water and feed restricted Awassi ewes (Completed). Funding Agency: URB.
6. Fat mobilization and some hormonal changes in dry Awassi ewes in response to water stress and vitamin C supplementation (renewed). Funding Agency: LNCSR.
7. Urban Agriculture: Regional focal point for MENA. Funding Agency: RUAF-IDRC.

##### ***Fawwak Sleiman***

1. Feeding Agricultural by-products to livestock animals (Completed).

## **E. OTHER STAFF ACTIVITIES**

### **1. Thesis supervision/Master Project**

#### ***Elie Barbour***

Edward Rayya: Avian Influenza in migratory and domestic birds and impact of therapeutic molecules against poultry viruses (Poultry Sc.). Completed.

Danyelle Gerges: Anti-*Candida albicans* properties of essential oil indigenous herbs in Lebanon (Animal Sc.). Completed.

Rindala El-Hakim: Natural and synthetic molecules against dairy and poultry diseases (Poultry Sc.). Completed.

Rana El-Hajj: Impact of war-induced oil spill in the Eastern Mediterranean on microbial contamination in oysters (Ecosyst. Mgt.). Completed.

Alia Sabra: Oil spill contaminants in selectde vertebrates and invertebrates of the Eastern Mediterranean sea (Ecosyst. Mgt.). Completed.

Fouad Mastori: Experimental study of the effect of Nutrient Synergy on E. coli infection in poultry (Poultry Sc.) In Progress.

Marc Kaadi: Evaluation of Colinex LA against colibacillosis in poultry (Poultry Sc.) In Progress.

Ryan Yaghi: Experimental study of the effect of Nutrient Synergy on E. coli infection in poultry (Poultry Sc.) In Progress.

#### ***Mohamed Farran***

Akram Kadi: Performance and egg quality of laying hens fed mineral proteinates or amino acid chelates (Poultry Sc.). Completed.

#### ***Shadi Hamadeh***

Elias Ghadban (Co-advisor): A modified sustainability model (IDEA) to compare organic and conventional agricultural systems in the Bekaa plain of Lebanon (Plant Sc.). Completed.

Mona Karnib: Stress alleviation in water and/or feed restricted Awassi ewes (Animal Sc.). In Progress

Rana Sawaya: Livestock systems in highly urbanized areas: the case study of Mount Lebanon (Ecosyst. Mgt.) (Master Project). Completed.

#### ***Fawwak Sleiman***

Omar Rifai: Use Ultra Sound as a mean to identify open cows and detect early pregnancy (Animal Sc.). Completed.

Youssef Obeid: Apparent digestibility, rumen degradability, and performance of sheep fed potato- chips leftover (Animal Sc.). In Progress.

### **2. Services**

#### ***Elie Barbour***

##### **AUB:**

1. Member of Advisory committee
2. Procedures for the initiation of the Veterinary Sc. Program at FAFS
3. Member of the executive Committee of IBSAR
4. Member of the Research and Patent Committee of IBSAR

##### **Other:**

1. Services to 70 organic poultry farms in Jezzine area
2. Services to sheep flocks in Baalbek area suffering from Enterotoxaemia

### ***Mohamed Farran***

#### **AUB:**

1. AREC Director till Feb.28, 2007.
2. Member on FAFS Strategic Planning Committee.

#### **Other:**

1. Advisor to the Minister of Agriculture, Republic of Lebanon till November 11, 2006
2. Member of Board of Administration, Lebanese National Council for Scientific Research, October 14, 2003 to date.
3. Member of the Scientific Advisory Committee, CIHEAM
4. National Project Director on the SFERA Project, Joint project between the Ministry of Agriculture (MOA) and FAO
5. Vice President for World Poultry Science Association, Lebanese Branch
6. Consultation activity for the animal private sector, July 2007
7. Advisor to the Minister of Agriculture, Aug. 1, 2007 to date.
8. Reviewed two full length manuscripts and one chapter in a book.

### ***Shadi Hamadeh***

#### **AUB:**

1. Associate Dean
2. Chairperson
3. Advisory Committee
4. Administrative Committee
5. Academic and Curriculum Committee
6. Ex-Officio AREC Committee
7. Coordinator of the Environment and Sustainable Development Unit (ESDU)
8. Coordinator of the National Training Unit under the NEMTA project supported by IFAD.

#### **Other:**

1. Member of the Board of directors of the National Accreditation Council of Lebanon.
2. Executive Board member RUAF.
3. Senior advisor to the ASAEL project

### ***Fawwak Sleiman***

#### **AUB:**

1. University Disciplinary Committee
  2. Advisory committee
  3. Graduate studies committee
  4. Due Process Monitor
- Chairperson of AREC committee (as of March 15, 2007)

#### **1. Conferences and Travel**

##### ***Elie Barbour***

1. Lectures related to pets and risk factors at LaSalle University, Beauvais, France. October Oct. 21-27, 2006.
2. The Ministry of Environment-Greenpeace and local NGOs conference at Meridien-Comodore Hotel. My presentation was entitled: "Oil Spill Contaminants in Selected Vertebrates and Invertebrates of the Eastern Mediterranean Sea". The Conference theme was: "Disaster of oil pollution on Lebanese shore: What are the treatments and what are the conclusions and future plans". March 31, 2007.

3. Presented research at the American Veterinary Medical Association Convention at Washington DC, USA). July 13-July 20, 2007.
4. “Pathologic and immunomodulatory effects of a specific nutrient synergy against avian flu virus”, by Barbour et al., was presented by Dr. Steve harakeh at Paris Anti-Influenza, 2007. June, 2007.
5. Research related to Echinacea extracts in fight of E. coli infection in poultry, will be presented by Dr. Winnie Meermans, at the XV Congress of the World Veterinary Poultry Association, Beijing, China. Sep. 12- 18, 2007.

#### ***Mohamed Farran***

1. Attended a workshop on Avian Influenza organized by FAO in Amman, Jordan. October 30-November1, 2006.
2. Attended the Scientific Advisory Committee meeting, CIHEAM in Zaragoza, Spain. November 7-11, 2006.
3. Attended several Board of Administration meetings (LNCSR). Different dates.
4. Attended several meetings on prevention of avian influenza with staff from FAO, WHO, and MOA. Different dates.
5. Attended the Scientific Advisory Committee meeting, CIHEAM in Chania, Greece. March 17-21, 2007.
6. Organized the inception workshop of the SFERA Project on Avian Influenza with a lecture presentation in Crowne Plaza Hotel, Beirut, Lebanon. April 11, 2007. Interim Emergency Assistance for Avian Influenza in Lebanon. (Special Lecture in the Above Workshop).
7. Organized a joint workshop between WPSA and FAO on “Recent Development of Avian Influenza with emphasis on the Middle East Region”. with a lecture presentation in Crowne Plaza Hotel, Beirut, Lebanon. April 25, 2007. Current Status of the Poultry Industry in Lebanon and Avian Influenza Preventive Measures (Special Lecture in the Above Workshop).
8. Attended two meetings on vaccination against Brucella in livestock animals with staff from MOA, FAO, OIE, NGO’s, Syndicate of Veterinarians, and farmers. August 2007.
9. Attended the Scientific Advisory Committee meeting, CIHEAM in Bari, Italy. September 15-19, 2007.

#### ***Shady Hamadeh***

1. World Congress on Communication for Development, Rome. Oct. 25-27, 2007.
2. Attended RUAF Executive board meeting, the Netherlands. Feb. 13-14, 2007.

### **F. Publications**

#### ***Elie Barbour***

1. **Barbour, E.K.**, Abou Chakra, N. S., Jaber, L., Nehme, P. A., Shaib, H., Usayran, N., Sadek, R. and Gali-Muhtasib, H. 2007. Hematological parameters, plasma polypeptide profile and anti-cancer bioactivity of *Testudo graeca* and *Testudo horsfieldii* tortoises. *Chelonian Conservation and Biology Journal*. In Press.
2. **Barbour, E.K.**, El-Hakim R.G., Kaadi M.S., Shaib H., Gerges D. D., Nehme P. A. and Harakeh S. 2007. Pathology of the Respiratory System in Essential Oil-Treated Broilers Following a Challenge with Mucosal Bacterium and/or a Haemagglutinating Virus. *The Journal of the American Holistic Veterinary Medicine Association*. In Press.
3. Ghanem, A.M. Jaber, L.S., Abi Said, M.A, **Barbour, E.K.**, Hamadeh, S. Physiological and chemical responses in water-deprived Awassi ewes treated with Vitamin C. *Journal of Arid Environments*. Available online.
4. **Barbour, E. K.**, Rayya, E. G., Shaib, H. A., El Hakim, R. G., Abdel Nour, A. M., Niedzwiecki, A. , Harakeh, S. and Rath, M. 2007. Holistic efficacy of specific nutrient



synergy against avian flu virus: pathology and immunomodulation. *Veterinaria Italiana*, 43(1):43-54.

5. **Barbour, E. K.**, Rayya, E. G., Shaib, H. A., El Hakim, R. G., Abdel Nour, A. M., Niedzwiecki, A., Rath, M. and Harakeh, S. 2007. Alleviation of histopathologic effects of avian influenza virus by a specific nutrient synergy. *International Journal of Applied Veterinary Medicine*. 5(1):9-16.
6. **Barbour, E.K.**, El-Hakim R.G., Kaadi M.S., Shaib H., Gerges D. D. and Nehme P. 2006. Evaluation of the hispathology of the respiratory system in essential oil treated broilers following a challenge with *Mycoplasma gallisepticum* and/or H9N2 influenza virus. *International Journal of Applied Veterinary Medicine*. 4(4): 293-300.
7. **Barbour, E.K.**, Shaib H.A., and Rayya E.G. 2007. RT-PCR based surveillance of type A influenza viruses in wild and domestic birds of Lebanon. *Veterinaria Italiana*, 43(1):33-41.
8. Tayeb, I.T., Nehme, P, Jaber, L, and **Barbour, E.K.** 2007. Development of an Enzyme-Linked Immunosorbent Assay for quantification of *Salmonella* Enteritidis-specific antibodies in egg yolk. *Brazilian Journal of Poultry Science*, 8(4):257-263.
9. Tayeb, I.T., Nehme, P.A., Jaber, L.S. and **Barbour, E.K.** 2006. Competitive exclusion in chicken layers against *Salmonella* Enteritidis by yoghurt microbiota: Impact on egg production, protection, and yolk-antibody and cholesterol levels. *Journal of Applied Microbiology*, 102(5):1330-1336.

#### ***Shady Hamadeh***

1. Ghanem, A.M. Jaber, L.S., Abi Said, M.A, Barbour, E.K., **Hamadeh, S.K.** 2007. Physiological and chemical responses in water-deprived Awassi ewes treated with Vitamin C. *Journal of Arid Environments*. Available online.

#### **Abstracts**

1. Haidar, M.,C. Gharib, **F.T. Sleiman**, M. Sidahmed. Effect of Sheep Rumen Digestion on Germination and Viability of Common Weed Seeds of Lebanon. Presented at the 2007 WSSA annual meeting, February 4 - 8 in San Antonio, Texas. Proceedings in press.

#### **Books (Chapters in books)**

##### ***Elie Barbour (editing & reviewing)***

1. "Plurithematic Issue of the Scientific and Technical Review", December 2006, Office International Des Epizooties, World Organization for Animal Health, Paris, France, pp. 873-1181.
2. "Animal Production: Food Safety Challenges in Global Markets". August 2006, Office International des Epizooties, World Organization of Animal Health, Paris, France, pp. 473-860.
3. *Veterinaria Italiana*, Vol. 42 (4), pp 293-485, 2006.

#### ***Shady Hamadeh***

1. **Hamadeh, S. K.**, Haidar, M., and Zurayk, R. 2006. Research for Development in the Dry Arab Region (Arabic Version). Arab Scientific Publishers, Beirut, 160pp.

#### **G. Future Development**

The Department will be preparing for the new Veterinary Sc. Courses (a total of 10), that will be offered as of Fall 2008. In addition, the recruitment process of new part-time Faculty for the Veterinary Sc. Program will be initiated. Departmental capacities and infrastructure will be developed towards the establishment of a Center for Food Safety and Zoonotic Diseases.

## DEPARTMENT OF LAND AND WATER RESOURCES

Isam I. Bashour, Chairperson

### **A. SUMMARY OF THE PROGRAM**

The members of the faculty at the LWRS belong to different academic backgrounds, agricultural economics, irrigation and water resources management, hydrology, soil science and farm mechanization. They pursue a variety of research activities covering the wide range of their academic backgrounds and interests. The LWRS Department performed well during last year in all aspects of teaching research and community service.

The variation in the scientific fields and the applied research activities strengthens the department as a support unit to other departments at FAFS, university extension & development programs and to the farming community in Lebanon at large.

Student enrollment in the undergraduate and graduate courses was close to last year's number.

Twenty five courses were offered, fifteen undergraduate and ten graduate. A total of seven students earned a Master of Science degree, one in irrigation, three in ecosystem management, and three in economics. Published research included eleven refereed articles and eleven conference papers. Also many technical reports were written by the LWRS faculty members and several seminars to farmers were offered at AREC/Bekaa, South, Akkar, North and other regions of Lebanon.

### **B. PERSONNEL**

#### ***1. Full Time Faculty***

Bashour, Isam	Ph.D.	Professor of Soil Science
Darwish, Ragy	Ph.D.	Associate Professor of Agriculture Economics
Farajalla, Nadim	Ph.D.	Assistant Professor of Environmental Hydrology & Water Resources
Nimah, Musa	Ph.D.	Professor of Irrigation and Water Resources Management
Sidahmed, Moatasim	Ph.D.	Professor of Mechanization
Zurayk, Rami	Ph.D.	Professor of Soil Science

#### **Part Time Lecturer**

Al-Khalil, Youssef	Ph.D.
Kharrat, Antoine	Ph.D.
Shibl, Youssef	Ph.D.

#### **Departmental Research Assistant**

Yanni, Sandra	M.Sc.
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#### **Visiting Scholar on Sabbatical**

Al-Zubaidi, Ahmed	Ph.D.
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## **C. PUBLICATIONS**

### ***1. Publications in Refereed Journals & Proceedings***

- **Darwish M.R.**, M. Sharara, **M. Sidahmed** and M. Haidar. 2006. "The Impact of a Storage Facility on Optimality Conditions of Wastewater Reuse in Land Application: A Case Study in Lebanon". *Journal of Resources, Conservation and Recycling*. Elsevier. (doi:10.1016/j.resconrec.2006.09.002). Available online
- **Nimah M.N.**, S.N. Moukarzel, **M.R. Darwish**, **N. Farajalla**, and **I. Bashour**. 2006. Water Productivity a basic tool for sustainable Irrigation. *Transaction of Wessex Institute of Technology: Sustainable Irrigation management, Technologies, and policies*. WTPress Ed. G. Iorenzini & C.A. Brebbia, pp. 127-137.
- **Nimah, M.N.** 2007. Cucumber yield under deficit Irrigation and mulching treatments. *ACTA Horticulturae # 731*: 189-195

### ***2. Abstracts and Papers Presented in Scientific Meetings***

- Alameddine. A.Y., **I. Bashour**. 2007. Ammonium Hydroxide and Hydrogen Peroxide amendments for the control Root-Knot Nematodes. 58<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy 2007. February 25 – March 2, 2007, Chicago, Illinois.
- **Farajalla, N.S.**, and P. I. Saoud, 2006. "Aquaculture: The Potential for Multiple Usages of Water Resources to Increase Water Value Index" The 3rd International Conference on the "Water Resources in the Mediterranean Basin" - WATMED 3, Tripoli, Lebanon November 1 – 3, 2006.
- Saoud, I.P. and **N.S. Farajalla**, 2006. "Multiple Usages of Freshwater Resources Increase Water Value Index while Conserving Limited Supply". Arab Academy of Science's Symposium on Integrated Water Resources Management in the Arab Region, Beirut, Lebanon December 14 -16, 2006.
- **Nimah, M.N.** 2007. Potato response to water stress at different growth stages. Workshop on production and certification of seed potato. MERC USAID, Tiznit, Morocco, March, 21 – 26, 2007.
- **Nimah, M.N.** and **N. Farajalla**. 2007. Fresh water issues in Lebanon. Cornell University, American University of Beirut and American University of Cairo workshop held in Cairo, Egypt on March 18 – 20, 2007.
- **Nimah, M.N.** and S. Moukarzel. 2007. Water Productivity: A new concept for improving irrigation water use efficiency. International Conference of the ASABE held in June 2007 in Minnesota, USA.
- **Nimah M. N.** & I. Saoud. 2006. Impact of Post war on Fisheries and Agriculture. NDU and Ministry of Electricity and Water Conference, October 4<sup>th</sup>, 2006.
- **Sidahmed, M.** 2007. Cone Index before and after Ploughing of Stony Clay Soil as a Function of Depth and Moisture. ASABE Annual International Meeting, June 17-20 Minneapolis, USA.
- Gharib, C., M.A. Haidar, F.T. Sleiman, and **M.M. Sidahmed**. 2007. Germination and Viability of Dodder Seeds after Digestion in Sheep Rumen. 9<sup>th</sup> World Congress of Parasitic Plants to be held June 3 – 7, 2007.
- Haidar, M.A., C. Gharib, F.T. Sleiman, and **M.M. Sidahmed**. 2007. Effect of Sheep Rumen Digestion on Germination and Viability of Common Weed Seeds of Lebanon. Proceedings of the 47<sup>th</sup> Weed Science Society of America, Abstracts # 254. February 5 – 8, 2007, Texas, USA.

### 3. *Books and Chapters in Books*

- **Bashour, I.** and M. El-Fouly. (2007). Soil and Plant Tissue Sampling Methods. Chapter 3 in Near East Fertilizer-use Manual, FAO, Rome, Italy. pp. 7 – 14.
- Sayegh, A. and **I. Bashour**. (2007). Fertilization of Calcareous, Gypsiferous, and Salt-affected Soils. Chapter 5 in Near East Fertilizer-use Manual, FAO, Rome, Italy. Pp. 19 – 25.
- **Bashour, I.** (2007). Chapters 8-11-13-17 &18 in Near East Fertilizer-use Manual, FAO, Rome, Italy. pp. 43 – 50; pp. 63 – 69; pp. 75 – 89; pp.125 – 144 & pp. 145 – 148.

### 4. *Reports & Extension Papers*

- **Darwish M. R.** Maximizing Monetary Returns to Farm Communities Using Storage Facilities in Wastewater Reuse Management: The Case of Tyre Region, Lebanon. Arab Academy of Science's Symposium on Integrated Water Resources Management in the Arab Region, Beirut, Lebanon December 14 -16, 2006. (Workshop)
- **Darwish M.R.** Analysis of Production Costs and Determination of Product Prices, Training Manual and workshop presentation for farmers in North Lebanon, November 2006. (Workshop)
- **Farajalla, N.S.**, 2006. "Integrated Development of Wadi Systems in Lebanon". Arab Academy of Science's Symposium on Integrated Water Resources Management in the Arab Region, Beirut, Lebanon December 14 -16, 2006. (Workshop)
- **Farajalla, N.S.** 2007. "War and Water Resources" in Lebanon Rapid Environmental Assessment for Greening Recovery, Reconstruction and Reform – 2006. Edited by R. Khoury, UNDP. (Report)
- **Farajalla, N.S.** 2007. "War and the Soil Medium" in Lebanon Rapid Environmental Assessment for Greening Recovery, Reconstruction and Reform – 2006. Edited by R. Khoury, UNDP. (Report)
- **Nimah, M.N.** 2006. Challenges for Irrigated Agriculture: Coping With Water Scarcity. Integrated Water resources management in the Arab region. Organized and sponsored by Arab Academy for Science, ISESCO, UNESCO, UNEP and AUB. December, 15 – 16, Beirut, Lebanon. (Workshop)
- **Nimah, M.N.** Localized and/or Trickle Irrigation. In the Proceedings of The ACSAD Training Workshop "Designing, Evaluating and Installing different Irrigation Systems: For trainees from English-speaking African countries". Nov. 5 – Dec. 6, 2006, Douma Syria. (Workshop)
- **Zurayk, R.** 2006. Participate to the "réunion de réflexion sur Assurer la sécurité alimentaire quantitative et qualitative dans les pays méditerranéens" in France, on November 2-3, 2006. (Workshop).

## **D. RESEARCH PROJECTS**

### ***Dr. Bashour***

1. URB – Non Nutritive Trace Elements content of Synthetic Fertilizers in Lebanon (5,569 USD budget).

### ***Dr. Farajalla***

1. URB – Emerging Contaminants in the Environment in Lebanon: Antibiotics and Growth Hormones from Poultry and Dairy Operations (5,425 USD budget) – Principal Investigator.

2. “Assessment of the Chemical Composition of Rainwater in Lebanon after the July 2006 War on Lebanon” for United Nations Environment Programme (UNEP). November 10, 2006 – July 31, 2007 (14,000 USD budget) – Principal Investigator.
3. Biodiversity Assessment and Monitoring in Palm Island Nature Reserve, Lebanon (IUCN/MoE) January 2007 – June 2007 (25,000 USD budget).

***Dr. Nimah***

1. URB – Effect of deep root irrigation, and strip irrigation on yield and irrigation efficiency (4,644 USD budget).
2. LNCR - Modeling the effects of deficit irrigation and depth of root wetting on irrigation water saving, crop yield and quality, and water productivity.

***Dr. M. Sidahmed***

1. URB – Development and Testing of Spray Hazard Classification System for the Developing Countries (3,741 USD budget)

***Dr. R. Zurayk***

1. Biodiversity conservation through use: Laurel soap to enhance women’s livelihoods in Aita al Shaab. 2006-2007. Post-war reconstruction effort, Funders: SEAL-USA. Value: \$15,000. Status: Manager.
2. Mobile Rural Community Development Centre. 2006-2007. Management of a mobile community development center to serve the South in the post war period. Funders: SEAL-USA and Heinrich Boell Foundation, Germany. Value: USD \$45,000. Status: Manager.
3. Regional Training and Knowledge Sharing in Urban Agriculture for the Middle East and North Africa – 2005-2006. Offering a regional training course on Urban Agriculture. Granting agency: Cities Feeding People Initiative of the International Development Research Center. Value: CAD 471,980. Duration: 2005-2006. Status: Project Manager.
4. Cities Farming for the Future. Granting agency: RUAF Foundation. Value: USD \$36,937.60. Duration: March 1, 2006 - Dec. 30, 2006. Status: Coordinator.
5. Understanding Water, Understanding Health: The Case of Bebnine. Granting agency: IDRC. Value: USD 340,981.02. Duration: Dec. 27, 04- Dec. 26 07. Status: IGESP director.
6. Regional Training and Knowledge Sharing in Urban Agriculture for the Middle East and North Africa – 2005-2006. Granting agency: Cities Feeding People Initiative of the International Development Research Center. Value: CAD 471,980. Duration: 2005-till present. Status: Project manager.
7. Global Environment Outlook (GEO 4). Granting agency: United Nations Environment Program. Value: USD 10,000. Duration: 2005-2007. Status: Project manager.

**E. SCHOLARS ON SABBATICAL**

**Dr. A. Al-Zubaidi.** On sabbatical leave from University of Baghdad, working on Potassium status in Lebanese soils in cooperation with Dr. Bashour. His sabbatical was renewed for an additional year till September 2008. They have conducted several field experiments on potassium in North Lebanon and at AREC. A paper on Potassium status in Lebanese soils was submitted for publication to the Lebanese National Council Science Journal.

**F. SERVICES**

**Dr. Bashour**

1. Chairperson of LWRS, (FAFS)
2. Administrative committee (FAFS)

3. Academic and Curriculum committee (FAFS)
4. Research Committee (FAFS)
5. Academic Development Committee (AUB)
6. Senate (AUB)
7. University Reaccreditation Committee (AUB)
8. Safety Officer, FAFS
9. FAFS representative for ASHA
10. Supervising Soil & Plant tissue Analyses at LWRS – FAFS labs

**Dr. Darwish**

1. Consultant for SRI-Lebanon for two workshops conducted in North and South Lebanon, for members of two agricultural cooperatives, Fall 2006.

**Dr. Farajalla**

1. Represented AUB in a meeting aimed at forging a cooperation agreement between AUB, AUC, LAU and UC-Davis. From November 25 – December 2, 2006, California, USA.
2. Represented AUB in a meeting aimed at forging a cooperation agreement between AUB, AUC, LAU and UC-Davis. March 21-23, 2007 Cairo, Egypt
3. Represented AUB in a meeting aimed at forging a cooperation agreement between AUB, AUC, and Cornell University. March 18-20, 2007 Cairo, Egypt
4. Represented AUB in a meeting aimed at forging a cooperation agreement between AUB and Cornell University. March 9 – 14, 2007 Ithaca, NY USA
5. Faculty Representative in the University’s Class Reunion 2007.

**Dr. Nimah**

1. Short course in Drip Irrigation in Douma, Syria November 19 – 22, 2006.
2. Lebanese Order of Engineers. Committee on Water and Dams. Order Of Engineers, Lebanon 1999 – Present
3. Senate – AUB
4. Senate Faculty Affairs Committee – AUB
5. Unified Admissions Committee – AUB
6. University Admissions Committee – AUB
7. FAFS Graduate Studies Committee – AUB
8. AREC ad-hoc committee

**Dr. Sidahmed**

1. University Financial Aid Committee – AUB
2. Advisory Committee – AUB
3. Graduate Coordinator – FAFS

**Dr. Zurayk**

1. Coordinator of the Ecosystem Management Program
2. Director of the Interfaculty Graduate Environmental Sciences Program
3. Member of the strategic planning committee for FAFS
4. Manager of the “Regional Training and Knowledge Sharing in Urban Agriculture for the Middle East and North Africa – 2005-2006” project
5. Manager of the “Global Environment Outlook” (GEO 4)

## G. Courses Offered by LWRS

### 1. Undergraduate

Semester	Course #	Course Name	Instructor
<b>Fall 06-07</b>	LWRS 215	Introduction to Soil	Dr. R. Zurayk
	LWRS 241	Farm management	Dr. Y. Al-Khalil
	ENSC 202	The Environment and Sustainable Development	Dr. R. Zurayk
	LWRS 212	Agricultural Economics, Principles and Policy	Dr. R. Darwish
	LWRS 290	Project Planning and Appraisal	Dr. Y. Shibel
	LDEM 245	Irrigation Methods for Landscape Designs	Dr. M. Nimah
	AGRL 201	Orientation to Agriculture and Food Systems	Dr. N. Farajalla
<b>Spring 06-07</b>	AGRL 250	Organic Farming	Dr. R. Zurayk
	LDEM 229	Turfgrass Culture, Machinery and Management	Dr. M. Sidahmed
	LWRS 265	Soil Fertility	Dr. I. Bashour
	AGRL 225	Rural Social Systems	DR. A. Kharrat
	LWRS 229	Water and the Environment	Dr. N. Farajalla
	LWRS 212	Agricultural Economics, Principles and Policy	Dr. R. Darwish
	LWRS 228	Irrigation Principles	Dr. M. Nimah
	LWRS 227	Surveying and Irrigation Principles	Dr. M. Nimah
<b>Summer 06-07</b>	LWRS 225	Farm Power and Machinery	Dr. M. Sidahmed

### 2. Graduate

Semester	Course #	Course Name	Instructor
<b>Fall 06-07</b>	LWRS 376	Resource and Environmental Economics	Dr. R. Darwish
	LWRS 310	Soil Physics	Dr. M. Nimah
	LWRS 324	Methods of Soil and Plant Tissue Analysis	Dr. I. Bashour
	LWRS 317	Surface Water Hydrology	Dr. M. Nimah
	AGRL 301	Statistical Methods in Agriculture	Dr. M. Sidahmed
<b>Spring 06-07</b>	ENSC 630	Natural Resources Management	Dr. R. Zurayk
	ENSC 631	Agricultural Pollution and Control	Dr. I. Bashour
	AGRL 301	Statistical Methods in Agriculture	Dr. M. Sidahmed
	LWRS 320	Project Planning and management	Dr. R. Darwish
	LWRS 309	Drainage of Agricultural Land	Dr. M. Nimah / N. Farajalla
	LWRS 316	Ground Water Hydrology	Dr. N. Farajalla

### 3. M.Sc. Students

<b>MSc student</b>	<b>Thesis title</b>	<b>Major</b>	<b>Advisor</b>	<b>Date of Graduation</b>
Alia Alameddine	Efficacy of Ammonium Hydroxide and hydrogen peroxide for the Control of Root Knot Nematode, Fusarium and Verticillium Wilt	Soils	I. Bashour (major advisor) & A. Saad (co-advisor)	Fall 2007
Rita Wakim	Selenium Levels in Selected Lebanese Soils, Grains, Vegetables and Fruits	Soils	I. Bashour	Spring 2007
Nadine Aoun	Acid Rain and Chemical Composition of Rainwater in Lebanon	Irrigation	N. Farajalla	Spring 2007
Maya Mhanna	Modeling Temperature Trends in Lebanon	Irrigation	N. Farajalla	Spring 2007
Kassem Jouni		Irrigation	M. Nimah	
Carla Jamous		Irrigation	M. Nimah	
Mirna Choueiri		Irrigation	N. Farajalla	
Rola Bashour	Not yet decided	Irrigation	M. Nimah	
Joumana Karame`h	Economic Assessment of the Agricultural Extension Service in Lebanon: Current Status And Its Role In Agricultural Development	Agricultural Economics	R. Darwish (Co-advisor)	Fall 2007
Mohamad Trabulsi		Agricultural Economics	R. Darwish	
Carine Elia		Agricultural Economics	R. Darwish	Fall 2007
Sami Khairalla		Agricultural Economics	R. Darwish	
Haya Al-Assi	The Diet of <i>Fistularia commersonii</i> alessepsian piscivore in The Mediterranean Sea	Ecosystem Management	R. Zurayk	Fall 2007
Nadine Modad	Survey & Identification of Wild Mushrooms in Lebanon	Ecosystem Management	A. Saad	Fall 2007



Rana El Hajj	Indicators of Microbial Pollution, Drug Resistance, & Heavy Metals Recovered from Different Species of Edible Oysters in the Eastern Mediterranean	Ecosystem Management	E. Barbour	Spring 2007
Grace Rachid	Evolution of Natural Resource Management in Mount Lebanon: The Case Of Batloun El- Shouf 1935-2005	Ecosystem Management	R. Zurayk	Fall 2007
Maya Yammine	The impact of land mines on natural resource management: The case of Deir el Kamar	Ecosystem Management	R. Zurayk	
Khaled Hamdan	The conservation Of Orchid Species in Lebanon: A Holistic Approach	Ecosystem Management	S. Talhouk	
Michael William Ackil		Ecosystem Management	R. Zurayk	
Rana Sawaya		Ecosystem Management	R. Zurayk	
Karen El Daher		Ecosystem Management	R. Zurayk	
Grace El Azar		Ecosystem Management	Rima Habib	
Alia Sabra	Oil spill impact on bivalves of the Lebanese coast	Ecosystem Management	E. Barbour	

#### **4. Graduate Assistants**

##### Fall 06-07

Kassem Jouni  
 Mirna Choueiri  
 Mohamad Traboulsi  
 Roula Bachour  
 Carine Elia

##### Spring 06-07

Kassem Jouni  
 Mirna Choueiri  
 Mohamad Traboulsi  
 Roula Bachour  
 Rana Bou Chedid  
 Carla Jamous

##### Summer 05-06

Kassem Jouni  
 Roula Bachour

## H. Research Assistants

<i>Semester</i>	<i>Part time (Grant)</i>	<i>Full time (Grant)</i>
<b>Fall 06-07</b>	Adonis Akl (Project Driver) Raghd El Hassan Soraya Moukarzel	Nivine Hajj Hassan Hind Farah Ziad Moussa (Research Associate) Safaa Hojeij
<b>Spring 06-07</b>	Alia Alameddine Chadi Gharib Noura Nasser	Nivine Hajj Hassan Hind Farah Ziad Moussa (Research Associate) Safaa Hojeij
<b>Summer 06-07</b>	Alia Alameddine Carla Jamous Mohamad Traboulsi Racha Moussawi Noura Nasser	

## I. Analysis of Soil and Water

The LWRS Department offers soil, water, plant tissue, and fertilizer analysis services to the Lebanese farmers and the private sector in Lebanon and neighboring countries. Chemical and physical analysis was carried out at the LWRS laboratories by the departmental research assistant Sandra Yanni and interpretation of the results and recommendations were given by Dr. Isam Bashour.

The revenue obtained from this activity was about 1 950 000 L.L. In addition, many samples were received from AREC, other departments at FAFS/AUB and graduate students. These samples were analyzed for free.

## K. Future LWRS Needs and Plans

1- It was requested on ASHA budget to establish an irrigation and soil center at AREC to be used for teaching, research and training on modern irrigation equipment and efficient water use.

2- Open a vacancy for a permanent research assistant to operate and be responsible about equipment at LWRS labs. The LWRS has advanced equipment such as microwave digester, C:N analyzer, flame photometer, spectrophotometer, Kjeldahl unit, atomic absorption spectrophotometer. We are facing difficulties due to the lack of regular maintenance, and it is recommended that a maintenance contract be signed with the companies representatives in Lebanon or with the Medical Engineering for this purpose.

3- Add to the faculty members, at the LWRS department, a soil microbiologist to complete the existing activities of the department and participate in environmental research activities at AUB.

## DEPARTMENT OF NUTRITION AND FOOD SCIENCES

**Imad Toufeili, Chairperson**

### **A. SUMMARY OF PROGRAMS**

The Nutrition and Food Science faculty members conducted their regular research and teaching activities and supervised graduate students' research. NFSC faculty members participated in international conferences and were involved in consultancies for international organizations and regional universities.

Ms. Nadine Zablith (M.S.), Instructor in Nutrition and Dietetics, joined the Department on September 16, 2006. Ms. Nadine Zablith will be teaching the course NFSC 290 (Food Service Management) plus two sections of lab. She will also be supervising interns at Rafic Hariri Hospital, St. Georges Hospital, Makassed, and possibly AUBMC.

The department appointed Mr. Joe Eid as a full time research assistant for the position of pilot plant supervisor, for a period of 12 months starting March 1, 2007 until February 29, 2008.

Ms. Amal Malek resigned from her job as a departmental research assistant effective April 30, 2007.

Total number of credits taught in the Department in the academic year 2006/2007 was 145: 62 in the Fall Semester, 60 in the Spring Semester and 23 in the Summer Term.

In order to upgrade the quality of dairy products made at AREC'S Creamery and to optimize the creamery's resources, FAFS decided to obtain the Hazard Analysis and Critical Control Point (HACCP) certification for the creamery products that will secure a bigger market for the products. For the assessment and the implementation of HACCP, an Ad Hoc Committee (Creamery Committee) was formed. The members of the Committee are: Dr. Imad Toufeili, Chairman of the NFSC Department, Dr. Zeina Kassaify, Dr. Ammar Olabi, Mr. Ziad Jaber and Mr. Joe Eid.

Members of the Committee conducted several visits to the creamery and deliberated on different issues in their meetings. The microbiological quality of the dairy products was assessed. Recommendations and progress reports were forwarded to the AREC Committee of the Faculty for further action. The layout and production at the creamery were recorded on DVD and a report prepared by Food Science students, who were supervised by Dr. Kassaify, was also prepared.

Thirteen department meetings (September 29, October 26, December 5, December 12, December 28, January 19, February 7, March 5, March 22, April 20, May 11, July 24, and August 20, 2007) were held between September 29, 2006 and August 20, 2007 and the following actions were taken:

**1. Changes in NFSC 282 Course:** To better address the needs of the FSM students and to reduce overlap between courses, the NFSC faculty members recommended the following:

1. Changing NFSC 282 course from 2 credits to 3 credits course to allow for the inclusion of the NFSC 290 topics that are not covered in NFSC 282.
2. Removing NFSC 290 course from the Food Science and Management curriculum.
3. Exempting the FSM students from taking NFSC 290 course and requesting them to take instead the new NFSC 282 course (3 credits).

4. Offering NFSC 290 course to the nutrition students only.

**2. Food Science and Management Program:** The NFSC faculty members approved raising the cut-off scores for transfer students to the FSM program from 70 to 75.

**3. Second BS in Nutrition and Dietetics:** The NFSC faculty members prepared a list of the required NFSC courses for the completion of second BS Degree in Nutrition and Dietetics. (List attached)

**4. Minor Requirements:** The faculty members updated the course requirements for FSM students intending to minor in ND.

#### **ND Minor for FSM Students**

NFSC 222	Community Nutrition	3 cr.
NFSC 240	Nutrition Status Assessment	2 cr.
NFSC 274	Human Nutrition	3 cr.
NFSC 285	Nutrition in the Life Cycle	3 cr.
NFSC 293	Therapeutic Nutrition (II)	3 cr.
Total		14 cr.

Plus, PHYL 246: Physiology for Nursing Degree students and undergraduates (4 cr.).

**5. Course Offerings:** Changes were made to NFSC course offerings for the academic year 2007/2008 in view of a new faculty member (Dr. Lara Nasreddine) joining the Department during Fall 2007/2008 and due to the leave of Dr. Malek Batal during the academic year 2007/2008.

**6. Catalogue changes:** The faculty members approved changing the title of the course NFSC 274 from “Human Nutrition” to “Human Nutrition and Metabolism”, as per the recommendation of Mrs. Nancy Hudson. This change in title is meant to better reflect the course content.

**7. Prospective graduates:** Dr. Kassaify prepared a list of the courses that need to be taken by prospective graduates in Food Technology. (List attached)

**8. Leave without Pay:** Dr. Batal will be on leave without pay during the academic year 2007-2008. Dr. Batal has been recommended for appointment as a visiting professor with the Canadian Chair on Health Education Research (Chaire de recherche du Canada en éducation à la santé) at the Université du Québec à Montréal in 2007-2008. He will be involved in research on diet diversity at FAFS during his leave in the academic year 2007-2008.

**9. Faculty Position in Nutrition:** The NFSC faculty members reviewed the CVs of the applicants for the faculty position in Nutrition and recommended Dr. Lara Nasreddine for the position.

**10. Faculty Position in Food Science / Food Engineering:** The NFSC faculty members reviewed the CVs of the applicants to the faculty position in Food Science and recommended to the Dean the following candidates:

- Rassoul Kadkhodae
- Pradyuman Kumar
- Peter Wambura

## B. PERSONNEL

### 1. Academic

Toufeili, Imad	Ph.D.	Chairman, Professor
Hwalla, Nahla	Ph.D, RD	Professor
Tannous, Raja	D.Sc.	Professor
Obeid, Omar	Ph.D.	Associate Professor
Batal, Malek	Ph.D.	Assistant Professor
Kassaify, Zeina	Ph.D.	Assistant Professor
Ghaddar, Sana	Ph.D.	Assistant Professor
Olabi, Ammar	Ph.D.	Assistant Professor
Hamadeh, Basma	M.S.	Instructor
Chamieh, Marie Claire	M.S.	Instructor
Zablith, Nadine	M.S.	Instructor
Habib, Carla	M.S.	Part-time Instructor
Nabahani Zeidan, Maya	M.S.	Part-time Instructor
Natour, Jamila	Ph.D.	Part-time professor to teach NFSC 261, Spring 2006-07.
Hussien Dib	(Ph.D.),	Part-time professor to teach NFSC 287, Spring 2006-07.

### 2. RESEARCH ASSISTANTS

Adra, Nada	M.S.	Senior Research Assistant
Malek, Amal	M.S.	Research Assistant
Bilal, Liza	B.S.	Research Assistant
Eid, Joe	B.S.	Research Assistant, Pilot Plant Supervisor
Tannous, Dalia	M.S.	Research Assistant
Mattar, Melani	B.S.	Research Assistant
Barakat, Darine	B.S.	Research Assistant
Hamzeh, Reem	B.S.	Research Assistant
Baghdadi, Omar	B.S.	Research Assistant
Daroub, Hamza		Research Assistant

### 3. Non Academic

Derboghasian, Arsine	Associate Technician
Ghannam, Tania	Clerk Stenographer
Touma, Samir	Associate Technician

### 4. Graduate Assistants

#### Fall 2006/2007

	Graduate Assistants	Major
1	Nada Hasbini	Nutrition
2	Amany Nasser El Dine	Food Technology
3	Rasha El Jundi	Nutrition
4	Nabiha Ramadan	Nutrition
5	Dana Abou Reslan	Nutrition

6	Serine Jaroudi	Food Technology
7	Bilal Kanso	Food Technology
8	Melani Matar	Nutrition
9	Rola El Rassi	Nutrition
10	Malak Rahhal	Nutrition
11	Mona Mansour	Nutrition
12	Maya Itani	Nutrition
13	Ghina El Zahabi	Food Technology
14	Pamela Abi Khalil	Food Technology
15	Kholoud Maatouk	Nutrition
16	Nour El Ouyoun Najem	Food Technology
17	Maya Tabet	Nutrition
18	Samira Sidani	Nutrition

*Spring 2006/2007*

	<b>Graduate Assistants</b>	<b>Major</b>
1	Pamela Abi Khalil	Food Technology
2	Kholoud Maatouk	Nutrition
3	Ghina El Zahabi	Food Technology
4	Krystal Oujian	Nutrition
5	Lama Ltief	Food Technology
6	Rita Rizk	Food Technology
7	Nour El Ouyoun Najem	Food Technology
8	Roula Rechmany	Nutrition
9	Malak Rahhal	Nutrition
10	Maya Itani	Nutrition
11	Amany Nasser El Dine	Food Technology
12	Bilal Kanso	Food Technology
13	Nabiha Ramadan	Nutrition
14	Rasha Al Jundi	Nutrition
15	Serine Jaroudi	Food Technology

**C. TEACHING**

*Fall 2006/2007*

<b>Course</b>	<b>Credits</b>	<b>Enrollment</b>	<b>Instructor</b>
NFSC 220	3	50	Mrad
NFSC 221	3	45	Zeidan
NFSC 222	3	28	Batal
NFSC 240	2	50	Batal /Chamieh
NFSC 261	3	58	Toufeili
NFSC 265	3	64	Toufeili
NFSC 267	2	21	Hamadeh
NFSC 274	3	46	Obeid
NFSC 277	3	53	Kassaify
NFSC 282	2	33	Kassaify
NFSC 288	3	24	Olabi, Hamadeh
NFSC 290	3	64	Zablith
NFSC 292	3	47	Ghaddar

NFSC 294	1	41	Chamieh
NFSC 296	1	15	Batal/ Kassaify
NFSC 298	0	-	Toufeili
NFSC 299	2	18	Tannous
NFSC 300 A	1	1	Staff
NFSC 300 B	2	6	Staff
NFSC 300 C	3	1	Staff
NFSC 304	3	4	Tannous
NFSC 311	3	5	Hwalla/ Torbey
NFSC 312	3	8	Ghaddar
NFSC 314	3	8	Obeid
NFSC 370	3	4	Olabi
NFSC 395	1	12	Batal
NFSC 399	Th.	4	Staff

*Spring 2006/2007*

<b>Course</b>	<b>Credits</b>	<b>Enrollment</b>	<b>Inst / Coord</b>
NFSC 220	3	52	C. Murad
NFSC 221	3	73	M. Batal / M.C. Chamieh
NFSC 261	3	52	J.Natour
NFSC 267	2	61	B. Hamadeh
NFSC 272	2	55	R. Tannous / B. Hamadeh
NFSC 278	3	46	Z. Kassaify
NFSC 285	3	67	M. Zeidan
NFSC 287	2	83	H. Dib
NFSC 289	1	78	B. Hamadeh
NFSC 290	3	60	N. Zabliith
NFSC 291	3	26	A. Olabi
NFSC 293	3	55	S. Ghaddar
NFSC 295	1	53	M.C. Chamieh
NFSC 296	1	50	M. Batal / Z. Kassaify
NFSC 298	0	-	I. Toufeili
NFSC 299	2	46	S. Ghaddar
NFSC 300 A	1	-	Staff
NFSC 300 B	2	6	Staff
NFSC 300 C	3	2	Staff
NFSC 305	3	5	O. Olabi
NFSC 306	3	11	M. Batal
NFSC 308	3	6	O. Obeid / S. Ghaddar
NFSC 310	3	8	I. Toufeili
NFSC 315	3	14	O. Obeid
NFSC 351	3	7	Z. Kassaify
NFSC 395	1	8	O. Obeid
NFSC 399	Th.	13	Staff

### *Summer 2006/2007*

<b>Course</b>	<b>Credits</b>	<b>Enrollment</b>	<b>Inst / Coord</b>
NFSC 261	3	19	I. Toufeili
NFSC 265	3	21	I. Toufeili
NFSC 274	3	21	O.Obeid
NFSC 277	3	31	Z. Kassaify
NFSC 280	1	50	R.Tannous
NFSC 296	1	3	M. Batal / Z. Kassaify
NFSC 298	0	8	I. Toufeili
NFSC 299	2	2	Staff
NFSC 300 A	1	-	Staff
NFSC 300 B	2	2	Staff
NFSC 300 C	3	1	Staff
NFSC 395	1	1	Staff
NFSC 399	Th.	10	Staff

### **D. URB VISITING SCHOLAR**

The NFSC faculty members reviewed the CVs of the applicants who may be eligible for the URB Visiting Scholar and recommended Dr. Peter Emery, Professor of Nutrition & Metabolism and Head of the Department of Nutrition at King's College, London.

Dr. Emery's visit was from May 19 till May 23, 2007. During his stay, he gave three lectures to faculty members and students.

The lectures were the following:

- **Lecture 1:** Proteomic changes in wound healing.
- **Lecture 2:** Nutrition and protein synthesis.
- **Lecture 3:** Metabolic changes in malnutrition.

Dr. Emery visited the Core lab, the Central Research Science Lab, and the AREC (Bekaa). He also met with Provost Heath.

### **E. RESEARCH**

#### *1. Internal Grants*

##### **Dr. Hwalla**

Principal Investigator: Interaction between fat mass, insulin resistance, bone and the vitamin D-PTH axis in Overweight (BMI $\geq$ 85th percentile) Pre-adolescent Children and Adolescents in Lebanon. URB, 5425 USD. 2006-2007

##### **Dr. Toufeili**

Principal Investigator: Determination of Sensory Thresholds of Selected Constituents of Thyme (*Thymus vulgaris* L.) and their Antioxidant Potential in Edible Oils. URB, 6500 USD. October 1, 2005 – September 30, 2006.

##### **Dr. Obeid**

Principal Investigator: Meal pattern in male rats following diet manipulation: Effect of essential amino acids. URB, 5687 USD. October, 2006 - September 2007.

##### **Dr. Kassaify**

Principal Investigator: Determination of Aflatoxin M1 in Some Dairy Products Consumed in Lebanon: Comparison between Seasons and Sources of Milk Products. URB, 6000 USD. Oct



1, 2006 – September 30, 2007.

**Dr. Ghaddar**

Principal Investigator: Effect of Omega 3 fatty Acids on Nutrition Inflammation in Hemodialysis Patients. URB, 6300 USD. September, 2006 – September, 2007.

**Dr. Olabi**

Principal Investigator: Taste acuity before and after gastric banding and Roux-en-Y bastic bypass Surgery in morbidly obese subjects. Lebanese National Council for Scientific Research (LNCSR), 4667 USD. Grant Period: 12//06-12/07.

Principal Investigator: Designing an Arabic Version of the 9-point Hedonic Scale for Use in Acceptability Tests. URB, 5834 USD. Grant period: 10/06-9/07.

**Dr. Batal**

Principal Investigator: Wild Edible Plant Consumption and Degenerative Eye Disease in a Rural Lebanese Elderly Population: A Case-Control Study URB, 5600 USD. October, 2006 - September 2007.

## **2. External Grants**

**Dr. Hwalla**

Principla Investigator: Body fat and its relationship with metabolic syndrome indicators in overweight (BMI $\geq$ 85th percentile) pre-adolescent children and adolescents in Lebanon. IAEA, 7,200 EURO. 2006-2007

Principal Investigator: Diet and physical activity as determinants of non-communicable disease risk factors in Lebanon. LNCSR, 9,000,000 L.L. 2006-2007.

**Dr. Batal**

Principal Investigator: Risk factors for nutritional inadequacy and suboptimal food choices. Statistics Canada and Canadian Institute of Health Research, Ottawa (50,000 Can\$).2006-2007.

## **F. OTHER STAFF ACTIVITIES**

### ***1. Participation in Workshops and Conferences***

**Dr. Toufeili**

- **Chamber of Agriculture, Commerce & Industry- Beirut:** Presented a lecture entitled: *Trans Fatty Acid Contents of Snack Foods in the Lebanese Market.* Lebanese Association of Food Scientists & Technologists Meeting, Chamber of Agriculture, Commerce & Industry, Beirut, May 5, 2007.

**Dr. Obeid**

- **Arabic Center for Nutrition- Manameh, Bahrain:** Invited by the Arabic Center for Nutrition to lecture on: Iron and zinc status in neonates. November 2006.
- **Micronutrient Forum- Istanbul, Turkey:** Attended the Micronutrient forum: Consequences and Control of Micronutrient Deficiencies: Science, policy and programs-defining the issues. April 16-18, 2007.
- **AUB-Lebanon:** Presented a lecture entitled: Preconception & Maternal Nutrition at the Maternal and Infant Nutrition Symposium. Organized by the Lebanese Association for Nutrition and Food Sciences. April 28, 2007.

#### **Dr. Kassaify**

- **Balamand University- Lebanon:** Invited to give two lectures on Food Laws and Food Microbiology at the Balamand University. November 23 & 24, 2006.
- **USAID-Lebanon:** Attended a workshop for Lebanese food processors, “Exporting Processed Foods to the USA and Gulf Markets”. Sheraton Coral Beach (USAID, ACIDI/VOCA). December 14, 2006.

#### **Dr. Ghaddar**

- **K/DOQI- Dallas:** Attend the “KDOQI Anemia Workgroup of the National Kidney Foundation”. Dallas, TX. Feb 2-3, 2007 – round table discussion

### ***2. Short / Long Term Faculty Development***

#### **Dr. Obeid**

##### **Short Term Faculty Development**

*International Convention Center – Taipei, Taiwan:* Attend the Asian Congress of Nutrition that will be held at the International Convention Center, Taipei-Taiwan between September 9 and September 13, 2007. Dr. Obeid will be presenting an abstract entitled: “Prevalence of Metabolic Syndrome in Adult Lebanese Population”.

#### **Dr. Kassaify**

##### **Short Term Faculty Development**

*Institute of Food Technologists (IFT) –Chicago:* Attended the “2007 IFT Annual Meeting and Food Expo”, which was held in Chicago- USA. Dr. Kassaify was also a guest speaker in a symposium and presented a paper at the meeting (July 28 – August 2, 2007).

#### **Dr. Olabi**

##### **Short Term Faculty Development**

*Institute of Food Technologists (IFT) - Chicago:* Attended the “2007 IFT Annual Meeting and”, which was held in Chicago- USA. Dr. Olabi presented an abstract at the meeting (July 28 - August 2, 2007).

### ***3. Consultancies***

#### **Dr. Hwalla**

- **World Health Organization:** Appointed by DG of WHO as a member of the “WHO Expert Advisory Panel on Nutrition” for four years.2004-2008

#### **Dr. Batal**

- **World Health Organization:** Eastern Mediterranean Region Consultant on the creation of a health communication manual for nutrition in the Eastern Mediterranean.

#### **Dr. Olabi**

- **Vitech Inc:** Attended a 2-day Short Course on Sensory Evaluation of Food (Sponsored by the Action for Sustainable Agro-Industry in Lebanon, ASAIL conducted by Vitech Inc.). January-February 2007 (Ramlet El Baida, Beirut, Lebanon).

#### **Dr. Kassaify**

- **Mediterranean Agronomic Institute of Chania:** Instructed a postgraduate course on Food Microbiology at the Mediterranean Agronomic Institute of Chania (Chania, Greece), November 27, 2006 – December 1, 2006.
- **Vitech Inc:** Conducted a 2 days short course workshop: Food borne Pathogens and Shelf

life Determination and Extension. ASAIL office Beirut, Lebanon. April 4 and 5, 2007.

## **G. SERVICES BY NFSC FACULTY MEMBERS**

### **Dr. Hwalla**

- President of the Lebanese Association for Nutrition and Food Science
- Referee / advise on potential referees for International J of Food Science & Nutrition
- Editorial board member: Health Education Research
- Editorial board member: World Health Organization Bulletin
- Editorial board member: Annals of Nutrition and Metabolism
- Reviewer of Research Articles:
  - a) World Health Organization Bulletin
  - b) Nutrition Research
  - c) Annals of Nutrition and Metabolism
  - d) European Journal of Clinical Nutrition
  - e) Lebanese Science Bulletin

### **Dr. Tannous**

- President of the Lebanese Association for Food Scientists and Technologists
- Principal investigator of the grant from the European Union to the Ministry of Economy and Trade, for the Establishment of a Business Development Center in the Bekaa.

### **Dr. Toufeili**

- Member of the Lebanese Association for Food Scientists and Technologists
- Reviewer for the Journal of Food Science & Technology/LWT
- Reviewer for the International Journal of Food Science & Technology
- Reviewer for the International Journal of Dairy Technology

### **Dr. Obeid**

- The Lebanese Association for Nutrition and Food Science (Executive committee)
- Advisory Committee for the Syrian Diabetic Journal (Diabetic World)
- Member of the Governmental Colloquium Committee (Dietetic)
- Reviewer for Annals of Nutrition and Metabolism
- Member of the editorial board: Arab Journal of Food and Nutrition
- Reviewer for Saudi Society Journal for Food and Nutrition Sciences
- Reviewer for Jordan Journal of Biological studies

### **Dr. Olabi**

- Reviewer for the Journal of Food Science
- Reviewer for the Journal of Dairy Science

### **Dr. Batal**

- Member of the Lebanese Association of Nutrition and Food Science executive committee
- Reviewer for Public Health Nutrition.
- Organized the LANFS symposium on maternal and infant nutrition (April 2007) and spoke on “complementary feeding of infants.”
- Was a guest on 2 TV shows on Future TV to discuss the importance of dietary diversity.
- Was interviewed for Annahar, Al Afkar, The Daily Star, Main Gate on the link between biodiversity, dietary diversity and health.
- Spoke on several occasions on healthy dietary choices to combat chronic disease in several rural communities of Lebanon (Aarsal, Batloun, Hermel, Kuakh,...)

- Set up a website on the IDRC-funded research project and discussed the importance of wild plants in the diet ([www.wildedibleplants.org](http://www.wildedibleplants.org)) to be functional in June 2007.
- Speaker at the Faculty of Health Sciences seminar series for two times in 2006-2007 on breastfeeding and dietary diversity.
- Speaker at the IBSAR seminar series on the potential of wild plants in improving nutrition and health (March 2007).

#### **Dr. Kassaify**

- Member of Ministry of Agriculture Committee 'Improvement of the Poultry Industry of Lebanon including husbandry and slaughter houses'
- Member of Ministry of Agriculture National Committee for Organic Foods
- Member of UN-ESCWA Network on Agro-food Processing
- Member of EU-FAO Committee for Food Safety and Quality
- Experts Committee AUB-FAFS Representative at the Lebanese Standards Institution-LIBNOR.
- WHO expert adviser for WHO's Food borne Disease Burden Epidemiology Reference Group (FERG).
- Organized a Diabetes day to help the ND students for exposure
- Examination and Investigation on the Spoilage of Canned Processed Meats for the Lebanese Army. October 2006.
- Help FSM students to volunteer in ISO and HACCP manual preparations for the Lebanese industry to have an applied approach to the FSM relevant course.
- Reviewer for the WHO Eastern Mediterranean Health Journal.
- Reviewed 4 proposals for the URB Grants

#### **Dr. Ghaddar**

- Member of the National Anemia Expert Panel of the National Kidney Foundation.
- Reviewer of the Nephrology Dialysis and Transplantation refereed journal
- Editor of the Kidney Learning System (KLS) of the National Kidney Foundation (NKF).

### **H. OTHER ACADEMIC ACTIVITIES**

#### **Dr. Kassaify**

- Attended a seminar on Developing a teaching portfolio February 23,2007

### **I. PUBLICATIONS**

#### *Publications in International Refereed Journals*

#### **Dr. Hwalla**

- Nasreddine L, Hwalla N, El Samad O, Leblanc JC Hamzé M, Sibiril Y, Parent-Massin D. (2006).Dietary exposure to lead, cadmium, mercury and radionuclides of an adult urban population in Lebanon; a total diet study approach. Food Additives and Contaminants, 23:579-590.
- Obeid OA, Al-Ghali RM, Khogali M, Hwalla N. (2006) .Vitamins A and E status in an urban Lebanese population: A case study at Dar Al-Fatwa area, Beirut. Int J Vitam & Nutr Res, 76:3-8.
- Al Khatib L, Obeid OA, Mehio-Sibai A, Batal M, Adra N, Hwalla N. (2006). Folate deficiency is associated with nutritional anemia in Lebanese women of childbearing age. Public Health Nutrition, 9(7):921-7.
- Nasreddine L, Hwalla N, Sibai A, Hamzé M, Parent-Massin D. (2006). Food consumption

patterns in an adult urban population in Beirut, Lebanon. *Public Health Nutrition*, 9(194-203).

- Tannous Dit El Khoury D, Obeid O, Azar ST, Hwalla N. (2006). Variation in postprandial ghrelin status following ingestion of high Carbohydrate, high Fat and high Protein meals in males. *Annals of Nutrition and Metabolism*, 50:260-269.
- Obeid OA, Boukarim LK, Al Awar RM, Hwalla N.(2006). Postprandial glycogen and lipid synthesis in prednisolone-treated rats maintained on high protein diets with varied carbohydrate levels. *Nutrition*, 22:288-294.
- Bassil MS, Hwalla N, Obeid OA (2007). Meal patterns in male rats following amino acid manipulation of the diet: Effect of histidine, leucine and tyrosine. *Obesity Research*, 15: 616-623
- Bassil MS, Mrayati M, Hwalla N, Obeid OA (2007). The immediate effect of leptin and ghrelin injection on in vivo postprandial glycogen and lipid synthesis in rats. *Annals of Nutrition and Metabolism*, 51(1): 14-21.

#### **Dr. Toufeili**

- Yau, S.K., Nimah, M. and Toufeili, I (2006). Quality and Yield of Red Stigmas of Different Saffron Strains at Contrasting Mediterranean Sites. *Experimental Agriculture*, 42: 399-409.
- Haddad, Y., Haddad, J., Olabi, A., Shuayto, N., Haddad, T. and Toufeili, I. Mapping Determinants of Purchase Intent of Concentrated Yogurt (Labneh) by Conjoint Analysis. *Food Quality and Preference*, (2007), 18(5): 795-802.
- Toufeili, I. Comprehensive Review of Scientific Literature Pertaining to Nitrogen Protein Conversion Factors, International Dairy Federation, Bulletin # 405, *International Journal of Dairy Technology*, (2007), 60(3): 235-236.

#### **Dr. Obeid**

- Obeid OA, Al-Ghali RM, Khogali M, Hwalla N. (2006) .Vitamins A and E status in an urban Lebanese population: A case study at Dar Al-Fatwa area, Beirut. *Int J Vitam & Nutr Res*, 76:3-8.
- Al Khatib L., Obeid OA, Mehio-Sibai A., Batal M., Adra N., Hwalla N (2006). Folate deficiency is associated with nutritional anemia in Lebanese women of childbearing age. *Public Health Nutrition*: 9(7): 921-927.
- Tannous Dit El Khoury D, Obeid O, Azar ST, Hwalla N. (2006). Variation in postprandial ghrelin status following ingestion of high Carbohydrate, high Fat and high Protein meals in males. *Annals of Nutrition and Metabolism*,50:260-269.
- Obeid OA, Boukarim LK, Al Awar RM, Hwalla N.(2006). Postprandial glycogen and lipid synthesis in prednisolone-treated rats maintained on high protein diets with varied carbohydrate levels. *Nutrition*, 22:288-294.
- Bassil MS, Hwalla N, Obeid OA (2007). Meal patterns in male rats following amino acid manipulation of the diet: Effect of histidine, leucine and tyrosine. *Obesity Research*, 15:616-623.
- Bassil MS, Mrayati M, Hwalla N, Obeid OA (2007). The immediate effect of leptin and ghrelin injection on in vivo postprandial glycogen and lipid synthesis in rats. *Annals of Nutrition and Metabolism*, 51(1): 14-21.

#### **Dr. Batal**

- Al Khatib L, Obeid O, Mehio-Sibai A, Batal M, Adra N, and Hwalla, N (2006). Folate Deficiency Is Associated with Nutritional Anemia in Lebanese Women of Childbearing Age. *Journal of Public Health Nutrition*, 9(7): 921-927.
- Batal M and Hunter B. (2007). Traditional Lebanese recipes based on wild plants: an answer to diet simplification? *Food and Nutrition Bulletin*, 28(2) Suppl. pp. S303-S311.

- Saoud I.P, Batal M, Ghanawi J, Lebbos N. (2007). Seasonal variation in highly unsaturated fatty acid composition of muscle tissue of two fishes endemic to the Eastern Mediterranean. *Ecology of Food and Nutrition*, 46(2): 77-89.

#### **Dr. Ghaddar**

- Ghaddar, S., Dimassi H., Bank, L. (2006). Dietary Calcium intake of 1200 mg per Day may Have Negative Correlation on Percent of Body Fat: A Cross Sectional Study. *Topics in Clinical Nutrition*. 21(4):284-292

#### **Dr. Olabi**

- Haddad, Y., Haddad, J., Olabi, A., Shuayto, N., Haddad, T. and Toufeili, I. (2007). Mapping determinants of purchase intent of concentrated yogurt (Labneh) by conjoint analysis, *Food Quality and Preference* 18: 795-802.

### **J. CHAPTERS IN BOOKS PUBLISHED BY INTERNATIONAL PUBLISHERS**

#### **Dr. Hwalla**

- Lebanese Traditional Diets & Health effects. In *Wild-type Food in Health Promotion and Disease Prevention, The Columbus Concept*, De Messter, Fabien, Watson, Ronald R. (Editors), Humana Press, (2007), pp. 493-498.
- Toufeili, I. and Özer, B. Brined Cheeses from the Middle East and Turkey. In: *Brined Cheeses, Tamime*, A. Y. (Editor), Blackwell Publishing, New York, (2006), pp. 188-210.

### **K. OTHER PUBLISHED ARTICLES**

#### **Dr. Kassaify**

- A written report on the AREC Cafeteria: its GMP and Safety. March 2007
- Technical Report to Minister of Public Health on Foodborne Incidences and Control Measures for his presentation to WHO. April 2007
- A Report to the Lebanese Army on the investigation of the spoilage of canned processed meats (October 2006)

### **L. M.S THESIS STUDENTS COMPLETED (WITH TITLE AND DATE)**

#### **Dr. Hwalla**

- *Maalouf, Joyce (2007)*. Interaction between dietary calcium, exercise and leptin and their impact on musculoskeletal parameters in children and adolescents.
- *Helou, Nancy (2006)*. Effect of macronutrient composition of meals on post-prandial PYY responds in obese female subjects.
- *Nouweiry, Jamal (2006)*. Effect of metformin on weight loss and body composition in obese insulin resistant subjects fed either low carbohydrate or high carbohydrate diet.
- *Movahedi, Ariyo(2006)* . Postprandial and chronic effects of basil seed, husk of psyllium and black seed on blood parameters in female rats.

#### **Dr. Toufeili**

- *Carole Saade (2007)*. Fatty Acid Composition, Including Trans Fatty Acids, of Local and Regional Snack Foods in the Lebanese Market.
- *Yasmine Haddad (2006)*. Analysis of Factors Influencing Purchase Intent of Concentrated Yogurt (Labneh).

#### **Dr. Kassaify**

- *Hussein Hassan (2007)*. Determination of Aflatoxin M1 in Some Dairy Products

Consumed in Lebanon: Comparison between Seasons and Sources of Milk Products.

**Dr. Obeid**

- *Maya Marji, (2006)*. Liver status of rats maintained on a high-protein diet with varied vitamin B6 and fat levels.
- *Zeina Jamal, (2006)*. Hepatic fuel partitioning of copper deficient rats following starch and fructose manipulation of the diet.
- *Nadine Adel Abdel-Ahad Hasbani, (2006)*. Absorption of calcium from Arabic bread fortified with different calcium salts.
- *Manal Said ElFakhani (2007)*. Assessment of plasma copper, Zinc and selenium status in Lebanese adults

**Dr. Batal**

- *Cynthia Farhat, (2006)*. Analysis of Indigenous Nutritional Knowledge, Cultural Importance and Nutritional Content of Wild Edible Plants.

**M. FUTURE DEVELOPMENT**

- Offering R.D. from Lebanon is in progress.
- The Department is aspiring to have two more faculty members, one in Nutrition and one in Food Science.
- The NFSC Department is preparing the application for designating the Nutrition and Food Science Department as an “Associated Research Unit” with the National Council for Scientific Research to be submitted by the end of October, 2007.

## DEPARTMENT OF PLANT SCIENCES

Adib Saad, Chairperson

### **A. SUMMARY OF THE PROGRAM**

The Faculty members of the PLSC Department have different academic backgrounds and are specialized in various disciplines, including horticulture, agronomy, plant pathology, entomology, weed science and landscape design.

The usual undergraduate and graduate teaching programs by faculty members in the department continued as planned, however, a few elective courses were not offered due to low student enrollment in the general agriculture program. On the other hand, a few electives, such as “The Art of Honey Making” and the newly offered “Introductory Floriculture” courses attracted high numbers of enrolled students.

Research activities and services progressed very well and research productivity increased to compensate for the lower teaching load of some faculty members. Faculty members were very active in their participation in scholarly conferences and scientific meetings.

Information on Departmental personnel, teaching, research, professional staff activities, and publications by faculty members during academic year 2006-2007 are stated briefly on the following pages.

### **B. PERSONNEL**

#### ***1. Faculty***

Abou-Fakhr Hammad, Efat	Ph.D.	Associate Professor of Entomology
Abou Jawdah, Yusuf	Ph.D.	Professor of Plant Pathology (Emphasis Viruses and Disease Resistance)
Haidar, Mustapha	Ph.D.	Associate Professor of Weed Sciences
Husain, Sayed Ali	Ph.D.	Assistant Professor of Landscape Design
Kawar, Nasri	Ph.D.	Professor of Pesticides (Part-time)
Makhzoumi, Jala	Ph.D.	Associate Professor of Landscape
Saad, Adib	Ph.D.	Professor of Plant Pathology (Emphasis Fungal and Bacterial Diseases)
Talhouk, Salma	Ph.D.	Professor of Horticulture
Weltzien, Julie	M.A.	Assistant Professor of Landscape Design
Yau, S.K.	Ph.D.	Professor of Plant Breeding

#### ***2. Research Assistant/ Associates***

##### ***Research Associate***

Nemer, Nabil	Ph.D.	Full-time*
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### ***Research Assistant***

Bou Chedid, Shadi	B.Sc.	Part-time*
Chamoun, Roni	M.Sc.	Full-time*
Debian, Nahed	M.Sc.	Full-time (1/10/06-31/1/07)
Gharib, Shadi	B.Sc.	Part-time*
Hajjar, Shadi	M.Sc.	Full-time*
Hanna, Lucia	M.Sc.	Full-time (Plant Pathology)
Modad, Nadine	M.Sc.	Full-time (1/02/07-Present)
Moussawi, Rasha	B.Sc.	Part-time*
Nakhal, Jana	B.Sc.	Part-time*
Osman, Lynn	B.Sc.	Part time

\* On grants

### ***Lecturers***

Ollaik, Rami	M.Sc.	Part-time
Battikha, George	M.Sc.	Part-time

### ***Part-time Instructors***

Aboulhosn, Hiba  
Ariss, Balsam  
Bteich, Chadi  
Hassan, Rana  
Jaroush, Najah  
Markarian, Gamar (Assistant instructor)  
Shibli, Rabih

### ***Senior Research Assistants***

Husseini, Salma,	M.Sc.	Greenhouse Supervisor
Sobh, Hana	M.Sc.	Full-time*

### ***Graduate Assistants***

Abou Haidar, Charbel  
Bou Azza, Karma  
Chnais, Elias  
Gerges, Elvis  
Hamdan, Khaled  
Talhok, Rasha  
Tawm, Nahida

### ***3. Non-Academic Personnel***

Abu Samra, Elias	Greenhouse Technician
Kayyal, Hatem	Agronomy Foreman (AREC)
Yazbek, Ali	Assistant Agronomy Foreman (AREC)

### ***4. Visiting Scholars***

Dr. Robert P.Rice Jr., from Cal Poly, California, joined the Department as Fulbright visiting professor of Horticulture and Crop Sciences, for nine months starting January 2007.

## **C. TEACHING ACTIVITIES**

### ***1. Courses and enrollment***

	<b>No. of students</b>	<b>Core courses</b>	<b>Electives</b>	<b>Others</b>
<b><u>Fall</u></b>				
Undergraduate	133 (+87 LDEM)	10	4	0 tutorial
Graduate	11	3	0	3 tutorials 1 Seminar Thesis
<b><u>Spring</u></b>				
Undergraduate	140 (+86 LDEM)	11	5	
Graduate	10	3	0	1 tutorial 1 seminar Thesis
<b><u>Summer</u></b>				
Undergraduate	52 (+38 LDEM)	1	1	
Graduate	9	0		1 tutorial Thesis

### ***2. No. of graduate students enrolled and graduated***

	<b><u>No. of students</u></b>
<b><u>Fall</u></b>	
Enrolled	3 (Plant Science), 9 (Plant Protection)
Graduated	1 (Plant Science), 3 (Plant Protection)
<b><u>Spring</u></b>	
Enrolled	2 (Plant Science), 8 (Plant Protection)
Graduated	1 (Plant Science)
<b><u>Summer</u></b>	
Enrolled	1 (Plant Science), 8 (Plant Protection)

## **D. RESEARCH AND PUBLICATIONS**

### ***1. Research Grants with Main Investigator(s)***

- URB - Bioactivity of Selected Indigenous Plant Species against *Bemisia tabaci* and Chemical Identification of the Bioactive Extracts (\$5,862): **Dr. E. Abou Fakhir Hammad**
- URB - Cucurbit Yellow Stunting Disorder Virus: Sensitivity of Detection Methods and Development of Resistant transgenic Plants (\$4,725): **Dr. Y. Abou Jawdah**
- USDA (2003-2006) - Breeding of pickling cucumber for resistance to *Cucurbit yellow stunting disorder virus* (\$ 45,000): **Dr. Y. Abou Jawdah**
- USAID, Univ. of Wisconsin, Madison (2004-2008) - Development of tomatoes with combined resistance to *Tomato yellow leaf curl virus (TYLCV)* using both virus-derived resistance and molecular marker assisted breeding. (\$269,000): **Dr. Y. Abou Jawdah**
- LNCSR (2005-2007) Perspectives for Biological control -viral and fungal parasites of

## Lepidoptera pests in Lebanon: **Dr. Y. Abou Jawdah**

- LNCSR (2006) - Productivity improvement of the domesticated honey bee race: **Dr. M. Haidar** and R. Ollaik
- URB - Fertigation with Phosphoric Acid ( $H_3PO_4$ ) for *Orobanche ramosa* Control in Potato (\$4,721): **Dr. M. Haidar**, Dr. I. Bashour and Dr. M. Nimah
- URB - Reading Architectural Ornament in Islamic Indian Mosques of the Deccan Sultanates (\$2,708): **Dr. A. Husain**
- 2004-2007 - Integrated Management of Cedar Forests in Lebanon in Cooperation with Other Mediterranean Countries. **Dr. N. Kawar** and Dr. N. Nemer
- LNCSR (2004-Dec 2006) - Disease forecasting for management of epidemic diseases on apple and potato in Lebanon: **Dr. A.T. Saad**
- URB - Space, Nature and the Child Towards A Participatory Project in an Educational Institution in Lebanon (\$3,920): **Ms. J. Weltzien**
- LNCSR (Jan 2006 - Dec 2006) - Preliminary evaluation of conservation tillage in Lebanon Phase 1 (\$7260): **Dr. S.K. Yau, Dr. M. Haidar**, and Dr. M. Sidahmed.
- URB - Effects of Rotation: Comparing Barley Performance after a Previous Crop of Safflower, Chickpea, or Barley (\$4,322): **Dr. S.K. Yau**

## 2. *Research Projects with Main Investigator(s)*

- Development of tomatoes with combined resistance to Tomato yellow leaf curl virus (TYLCV) using both virus-derived resistance and molecular marker assisted breeding. **Dr. Y. Abou Jawdah.**
- Biological control of Lepidoptera pests in Lebanon. **Dr. Y. Abou Jawdah.**
- Biofumigation as a tool for weed management. **Dr. M. Haidar.**
- Integrated Management of Cedar Forests in Lebanon in Cooperation with Other Mediterranean Countries. **Dr. N. Kawar** and Dr. N. Nemer.
- Ecological Landscape Design as an Alternative Urban Design Approach in Lebanese Mountain Settlements: Saoufar Case Study. **Dr. J. Makhzoumi.**
- Urban floral diversity in the eastern Mediterranean: Beirut coastal landscape. **Dr. J. Makhzoumi.**
- Speciation and vegetative compatibility grouping of *Verticillium* populations in Lebanon. **Dr. A.T. Saad.**
- Bacterial wilts of potatoes in Lebanon. **Dr. A.T. Saad.**
- Disease forecasting for the management of epidemic diseases on apple and potato in Lebanon. **Dr. A.T. Saad.**

- Pathogenesis and histological manifestations of *Pseudomonas savastanoi* on buckthorn, myrtle and olive. **Dr. A.T. Saad.**
- Management of soil borne pathogens of cucumber under organic production systems. **Dr. A.T. Saad.**
- Bioprospecting in the Middle East. **Dr. S. Talhouk.**
- A Holistic Landscape Approach to Biodiversity Use in Lebanon: Partnering with Landowners. **Dr. S. Talhouk.**
- Evaluation of the distribution of orchid species in Al-Shouf biosphere and their in-vitro germination potential. **Dr. S. Talhouk.**

### 3. *Articles Published*

- Abdo, C., **Nemer, N.**, Nemer, G., **Abou-Jawdah, Y.**, **Atamian, H.** and **Kawar, N.** 2006. Isolation of *Beauveria* species from Lebanon and evaluation of its efficacy for biocontrol of the cedar web-spinning sawfly, *Cephalcia tannourinensis*. *Biocontrol* (in Press).
- Darwish M. R., M. Sharara, M. Sidahmed and **M. Haidar.** 2007. The Impact of a Storage Facility on Optimality Conditions of Wastewater Reuse in Land Application: A Case Study in Lebanon. **Resources, Conservation and Recycling** 51:175-189.
- El-Mohtar, C., Atamian, H., Dagher, R., and **Abou Jawdah, Y.** 2007. Marker assisted selection of tomato genotypes with I-2 gene for resistance to *Fusarium oxysporum* f. sp. *Lycopersici* Race 2, *Plant Disease* 91: 758-762.
- El-Najjar N, Saliba N, **Talhouk S** and Gali-Muhtasib H. 2007. Induction of apoptosis and protection against 1,2-dimethylhydrazine induced colon cancer by the extract of *Onopordum cynarocephalum*, *Oncology Reports*, *Oncology Reports*, 17(6): 1517-23.
- Ghosn, M. W., Najat A. Saliba, **S. N. Talhouk.** 2006. Chemical Composition of the Needle-Twig Oils of *Pinus brutia* Ten. *Journal of essential oil research.* 18 (445).
- Nemer, N., **Kawar, N.S.**, Kfoury, L., and Frerot, B. Evidence of sexual attraction by pheromones in the cedar web-spinning sawfly. *Canadian Entomologist* (Accepted 2007).
- Sattout, E.J., **S.N. Talhouk** and P.D.S. Caligari. 2007. Economic value of cedar relics in Lebanon: An application of contingent valuation method for conservation. *Ecological Economics.* 61(2-3):315-322.
- Stephan, J., P. Lauri, N. Dones, N. Haddad, **S.N. Talhouk** and H. Sinoquet. 2007. Architecture of the Pruned Tree: Impact of Contrasted Pruning Procedures Over 2 Years on Shoot Demography and Spatial Distribution of Leaf Area in Apple (*Malus domestica*). *Annals of Botany:* 1–11.
- Temseh, M., Hanna, L., and **Saad, A.T.** 2007. Anatomical observations of *Pseudomonas savastanoi* on *Rhamnus alaternus*. *Forest Pathology* 37: 64-72.
- Temseh, M., Hanna, L., and **Saad, A.T.** 2007. Histological Pathogenesis of *Pseudomonas savastanoi* on *Myrtus communis*. *Journal of Plant Pathology* 89: 241-249.

- Yau, S.K.** 2007. Winter versus spring sowing of rain-fed safflower in a semi-arid, high-elevation Mediterranean environment. *European journal of Agronomy* 26: 249-256.
- Yau, S.K.**, Nimah, M., and Toufeili, I. 2006. Yield and Quality of Red Stigmas from Different Saffron Strains at Contrasting Mediterranean Sites, *Experimental Agriculture* 42: 399-409.
- Zahreddine, H.G., D.K. Struve, and **S.N. Talhouk**. 2007. *Cercis siliquastrum* L., *Malus trilobata* Schneid and *Acer syriacum* Boin and Gaill water use as affected by two fertilizer rates. *Scientia Horticulturae*. 112: 99-107.
- Zahreddine, H.G., D.K. Struve, and **S.N. Talhouk**. 2007. Growth and nutrient partitioning of containerized *Cercis siliquastrum* L. under two fertilization regimes. *Scientia Horticulturae*. 112:80-88.

#### **4. Books and Chapters in Books**

- Abou Fakhr Hammad, E.M.** 2006. Botanicals: An Alternative in Pest management. In *CROPS. Growth, Quality & Biotechnology, Current Status and future prospects* (pp: 119-148). WFL Publisher, Helsinki.
- Abou Fakhr Hammad, E. M.** 2006. Insect and Mite Pests and their Natural Enemies (Parasitoids and/or Predators) in the Middle East. In John L. Capinera (Ed.), *Encyclopedia of Entomology*, 2<sup>nd</sup> edition. Vol II: 1663-1680. Kluwer Academic Publishers, Hingham (MA), USA.

#### **5. Abstracts**

- Gharib C., **Haidar M.A.**, Sleiman F.T. and Sidahmed M.M. 2007. Germination and viability of dodder seeds after digestion in sheep rumen. The 9<sup>th</sup> World Congress of Parasitic Plants, June 3-7, 2007. [Charlottesville, Virginia, USA.](#)
- Haidar M.A.**, Gharib C., Sleiman F.T. and Sidahmed M.M. 2007. Effect of sheep rumen digestion on germination and viability of common weed seeds of Lebanon. In Proceedings of the 47<sup>th</sup> Weed Science Society of America, New York, USA, **Abstract (254)**.
- Temsah, M., Hanna, L., and **Saad, A.T.** 2007. Histopathology of *Rhamnus alaternus* knots induced by *Pseudomonas savastanoi*, American Phytopathological Society (APS)/Society of Nematologists (SON) Joint meeting. *Phytopathology*, 97:S102.
- Jeambey Z, Johns T, **Talhouk S**, and Batal M. 2006. Use, consumption and Health and Medicinal Properties of Six Wild Edible Plants in the Northeast of Lebanon. First World Congress of Public Health Nutrition, Barcelona, Spain.

#### **6. Research Reports**

**Dr. S.K. Yau** finished a manuscript entitled “No-Till and Fertilization on Safflower Performance” and submitted it to the Sesame and safflower Newsletter.

#### **7. Master's Theses**

1. Atamian, Hagop. 2006. Breeding Lebanese tomato landraces for combined resistance to Tomato yellow leaf curl virus, root-knot nematode and two vascular wilt diseases. **Dr. Y. Abou Jawdah.**
2. Dagher, Rachel. 2007. Breeding local tomato for combined resistance to Tomato yellow leaf curl virus, Verticillium and Fusarium wilt diseases. **Dr. Y. Abou Jawdah.**

3. Ghadban, Elias. 2007. A modified sustainability model (IDEA) to compare organic and conventional agricultural systems in the Bekaa plain of Lebanon. **Dr. S. Talhouk.**
4. Hamdan, Khaled. 2007. Evaluation of the distribution of orchid species in Al-Shouf biosphere and their in-vitro germination potential. **Dr. S. Talhouk.**
5. Lahoud, Charbel. 2006. Physiological development of *Cephalcia tannourinensis* chevin larvae as influenced by soil properties of cedar forests in Lebanon. **Dr. N. Kawar.**
6. Modad, Nadine. 2006. Survey and Identification of Wild Mushrooms in Lebanon. **Dr. A.T. Saad.**

## **E. PROFESSIONAL ACTIVITIES AND SERVICES**

### **1. Scientific Meetings and Conferences**

- Dr. Y. Abou Jawdah** attended the USAID meeting held in Cairo, Egypt. November 11-20, 2006.
- Dr. M. Haidar** participated in the 9<sup>th</sup> World Congress of Parasitic Plants and presented a paper Entitled: "Germination and Viability of *Cuscuta* spp. seeds after Digestion in Sheep Rumen", held in Charlottesville, Virginia, USA. June 3-7, 2007.
- Dr. A. Husain** participated in a conference organized by the School of Oriental and African Studies (University of London) in association with the Center for Deccan Studies, held in Hyderabad, India. January 22-31, 2007.
- Dr. J. Makhzoumi** attended a conference entitled: "Globalization of Landscape Architecture: Issues for Education and Practice", and presented a paper entitled 'Inventing Community Spaces, Recounting Rural Identities: A Landscape Approach to Post War Reconstruction in EI Qlaile Village, South Lebanon', held in Saint Petersburg, Russia. June 3-6, 2007.
- Dr. J. Makhzoumi** participated in the 6th International Space Syntax Symposium, and presented a paper entitled "The Beirut Dozen: Traditional domestic gardens as spatial and cultural mediator", held in Istanbul, Turkey. 12-15 June 2007.
- Dr. A.T. Saad** participated in the 2007 American Phytopathological Society/Society of Nematology (APS/SON) Joint Meeting, and presented a paper entitled: "Histogenesis of myrtle knots induced by *Pseudomonas savastanoi*", held in San Diego, California, USA. July 28-Aug 1, 2007.
- Ms. J. Weltzien** attended the 2<sup>nd</sup> International Forum by the UNESCO chair in Landscape and Environmental Design, and presented a paper entitled: "Urban Landscape and well-being. Sensorial approaches to landscape evaluation" held in Paris, France. June 4-5, 2007.
- Dr S.K. Yau** participated in the 2006 ASA –CSSA-SSSA International Annual Meeting, and presented a paper entitled "Red Bean (*Vigna angularis*) Pioneering Trials in a Cool Mediterranean Area", held in Indianapolis, USA. November 11-17, 2006.
- Dr. S.K. Yau** attended the Preliminary symposium for the 5<sup>th</sup> International Crop Science Congress and presented a paper entitled: "Crop breeding achievements in increasing crop productivity", held in Jeju, South Korea. November 28-Dec 4, 2006.
- Dr. Talhouk** attended the IUCN 14th Plant Conservation Sub Committee meeting, (17-20 August 2007) in Westport, Ottawa, Canada.
- Dr. Talhouk** held a meeting with Dr. Philippe Poullaouec-Gonidec, Chair in Landscape and Environmental Design, and his colleagues in Montreal, Canada to follow up on discussions regarding prospects for collaboration between the Universite de Montreal and AUB (Aug. 2007).

## **2. Paid Research Leaves**

Ms. J. Weltzien spent part of the Fall semester 06-07 at the Ryerson University, in Toronto, Canada as a Paid Research Leave.

The Department approved to grant Dr. J. Makhzoumi a Research Leave without Pay for the Fall 2007- 2008, to be spent as a visiting fellow at the Graduate School of Design at Harvard University, USA (Oct-Nov 2007).

## **3. Workshops**

Dr. Y. **Abou Jawdah** attended a workshop on production and certification of seed potato, organized by USAID, in Tiznit, Morocco and submitted two presentations (Mar 21-26, 2007).

**Dr. Y. Abou Jawdah** organized a workshop on Integrated Management of greenhouse Crops in cooperation with USAID and Mercy Corps and gave two lectures/session, held in AREC, Bekaa, June 28 & 29 - July 5 & 6 - August 23 & 30, 2007.

**Dr. Y. Abou Jawdah** participated in five workshops on IPM principles followed by pest diagnosis and recommendation on appropriate pest management, in cooperation with AVSI-A (Italian cooperation), held in 5 villages in Western Bekaa, July 4 & 25 – August 8, 16 & 31, 2007.

**Dr. Y. Abou Jawdah** participated in two workshops on IPM of potato in cooperation with AVSI-B (Italian cooperation) held in 2 villages in Western Bekaa, August 22 & 29, 2007.

**Dr. Talhouk** participated in the workshop entitled: "Biodiversity as Food". -Regional Workshop organized by IDRC -February 3-5, 2006, AUB.

## **4. Miscellaneous Professional Activities and Services**

**Dr. Y. Abou Jawdah** participated in farmer field schools in cooperation with YMCA, in Hasbaya and South Lebanon (Markaba), July 1 & 7, 2007 and in Western Bekaa and South Lebanon, August 3 & 24, 2007.

**Dr. Y. Abou Jawdah** offered two seminars for farmers on Integrated Pest Management of Fruit Trees in Rachaya (April 2007) and in Akkar (May, 2007).

**Dr. A.T. Saad** lectured on "Fungal and Bacterial Diseases of Pome and Stone Fruit Trees" as part of a graduate course entitled "Integrated Pest Management of Mediterranean Fruit Tree Crops" at the International Center for Advanced Mediterranean Agronomic Studies (ICAMAS), in Italy (Mar 13-16, 2007).

**Dr. A.T. Saad** acted as National Consultant for UNIDO-MOE project on Methyl Bromide Alternatives and Integrated Pest Management (IPM) of strawberry cultures in Lebanon.

**Dr. A.T. Saad** was appointed as Senior Editor for *Phytopathologia Mediterranea*, Official Journal of the Mediterranean Phytopathological Union, August 2007.

**Dr. Talhouk** participated with the Hope for Lebanon project coordinated by REP and managed by OSB as expert consultant on sustainable use of biodiversity.

**Dr. S.K. Yau** reviewed and commented on one manuscript 'EURAGR 776' entitled "Rainfed wheat-based rotations under Mediterranean-type climatic conditions: Crop sequences,

nitrogen fertilization, and stubble grazing in relation to grain and straw quality" for the European Journal of Agronomy.

## **F. PLANS & FUTURE DEVELOPMENT**

The Plant Sciences Department and the Land and Water Resources Department at FAFS are two of the oldest departments of their kind in Lebanon and the region. The PLSC Department met jointly with the LWRS Department for two sessions, discussed and recommended the restructuring of the two departments into two new units: 1) **The Department of Agricultural Science** and 2) **The Department of Landscape Design and Ecosystem Management**.

In order to cope with the rapid changes that are taking place in the fields of agricultural technology, management and agribusiness it was felt that joining forces of the two departments into the Department of Agricultural Science will result in a better coordination of efforts among the different disciplines to produce professionals that are highly competitive in the job market.

The mission of the Department of Agricultural Science (AGSC) is to provide a stimulating education and prepare graduates for productive careers in agricultural technology, natural resources management, and agribusiness who are capable of serving Lebanon, the Middle East and other regions of the world.

At the undergraduate level, the department offers courses in the areas of agronomy, horticulture, soils, water sciences, entomology, plant pathology, weed science, mechanization and agricultural economics.

At the graduate level, the department offers the MS degree in six majors: Agricultural Economics and Development, Irrigation, Mechanization, Soil Science, Plant Protection and Plant Science.



**AGRICULTURAL RESEARCH AND EDUCATION CENTER  
(AREC)**

**Nicolas Haddad, AREC Interim Manager**

**AREC Management**

As of March 2007 a new management team was appointed to be in charge of AREC activities, the team was composed of Mr. Nicolas Haddad (previously crop production supervisor) as Interim Farm Manager and Mr. Shady Safar (livestock and poultry supervisor) as Assistant to the Interim Farm Manager. The new AREC management team was assisted and supervised by an AREC Committee. The following are some activities and services conducted during the year 2007 by the new AREC management:

**A. Teaching and Research**

The new management provided facilities and support for FAFS faculty members and students engaged in: Research and teaching at AREC.

**B. Production Activities**

The available production facilities at AREC were properly utilized to improve AREC income. This included the following:

- a. Proper operation of the livestock facilities (dairy, sheep and goats).
- b. Proper operation of poultry facilities (layers, broilers and slaughter house).
- c. Close supervision of the AREC creamery operation and production.
- d. Carrying out timely crop and plant farming operations.

**C. Major Alterations and Improvements**

Projects of different scales were implemented at AREC in order to improve its operations and services. The following are some of these projects:

1. Rehabilitation of domestic water supply reservoir.
2. Rehabilitation of studio for Landscape students.
3. Installation of new turbine water pump at "Tell well"
4. Activation of wireless internet connection at students dormitories and installation of LCD projectors in the classrooms.
5. Installation of a sound system at the lecture Hall.
6. Installation of a new finger print machine monitor employees attendance.
7. Installation of electrical water heaters and tanks, pumps, electrical panel boards, air-conditions and irrigation pipes, etc... to ensure that all activities are properly operational.

8. Purchase of a new generator (to replace an obsolete one).
9. proper maintenance of farm machinery and equipment.

#### **D. Outreach Programs at AREC**

AREC strengthened its outreach program by hosting several training workshops that included:

1. Milk processing workshops by ASAIL organization.
2. Poultry production workshops sponsored by Mercy Corps.
3. Dairy production and Management workshop sponsored by AVSI organization.
4. Greenhouse Production workshops sponsored by Mercy Corps.
5. Fruit trees production workshops sponsored by Mercy Corps.

#### **E. Major Events at AREC**

The following major events took place at AREC during 2007:

1. Picnic at AREC by Mathematic Department – AUB.
2. BBQ day organized by AUB students.
3. FAFS Annual Sweet Corn Day.

In conclusion, the new AREC management with support and supervision of the Dean and the AREC Committee was able to efficiently operate and utilize the different AREC facilities to improve income and reduce costs, thus reducing the total AREC expenses and deficits.

## INTER-FACULTY ENVIRONMENTAL SCIENCES PROGRAM

### Ecosystem Management

**Dr. R. Zurayk - Coordinator**

The present annual report covers the academic year 2006-2007

#### **I. Courses offered and students enrollment**

A total of three courses were taught, covering some aspects of ECOM. A total of **ten** students were enrolled during 2006-2007 in Ecosystem Management (ECOM). Among these students, **one** is newly enrolled; the others were continuing. Eight students graduated this year.

<b><u>Course Code</u></b>	<b><u>Course description</u></b>	<b><u>Semester</u></b>	<b><u>Faculty Members</u></b>
ENSC 630	Natural Resources Management	Spring 06-07	Dr. R. Zurayk
ENSC 631	Agricultural Pollution and Control	Spring 06-07	Dr. N. Kawar (Coordinator), Dr. I. Bashour
ENSC 690	Seminar in Environmental Sciences	Fall 06-07	Dr. R. Zurayk & Dr. M. El Fadel

#### **II. Meetings, Workshops and Academic activities**

- a- First Working Session on Challenges and Opportunities of the National Strategies for Sustainable Development Formulation in Athens, Greece on 3 and 4 October 2006 (Attendees: Dr. Rami Zurayk)
- b- The “2<sup>nd</sup> edition of **Terra Madre** “la Rencontre Mondiale entre les Communautés de la Nourriture” that was held in Turin” from October 26, 2006 till October 30, 2006 (Attendees: Dr. Rami Zurayk)
- c- Réunion de réflexion sur Assurer la sécurité alimentaire quantitative et qualitative dans les pays méditerranéens”in France, on November 2-3, 2006 (Attendees: Dr. Rami Zurayk)
- d- **Meeting of Core Team of the Environment Outlook for the Arab Region**, 27-29 March, 2007 in Cairo (Attendees: Dr. Rami Zurayk)
- e- International Forum of the UNESCO Chair in Landscape & Environment Design of the University of Montreal, that was held on June 4 & 5, 2007 at UNESCO’s headquarters in Paris (France) (Attendees: Dr. Rami Zurayk)
- f- Training of Trainers’ workshop on UNEP’s new training resource manual called GEO Resource Book that was held from June 11 till 13, 2007 in Manama, Kingdom of Bahrain (Attendees: Ms. Maya Yamine)

#### **III. Publications**

##### ***BOOKS, CHAPTERS IN BOOKS AND COMPENDIA***

1. Hamadeh, S., Haidar, M. and **Zurayk, R.** 2006. The Cactus Flower. Research for Development in the Dry Arab Region. **International Development Research Centre and Southbound Publishers**, Penang. 124pp.
2. Padilla, M.; Hamimaz, R.; El Dahr, H.; **Zurayk, R.**; Moubarak, F. 2006. Consumers and the Health and Environmental Quality of Products. p 201-261 in Hervieu

Bertrand (dir.); Allaya Mahmoud (coord.) **AgriMed : Agriculture, Fisheries, Food and Sustainable Rural Development in the Mediterranean Region**. Paris : CIHEAM, 2006. - 421 p. ISBN 2-8532-335-7.

#### **MANUSCRIPTS PUBLISHED OR IN PRINT**

1. Baalbaki, R., N. Hajj-Hassan, and **R. Zurayk**. 2006. *Aegilops* species from Semiarid Areas of Lebanon: Variation in Quantitative Attributes under Water Stress. **Crop Science Society of America**. Vo 46, 799-806.
2. Omeira, N., Barbour, E.K., Nehme, P.A., Hamadeh, S.K., **Zurayk, R.**, and Bashur, I. 2006. Microbiological and chemical properties of litter from different chicken types and production systems. **Science of the Total Environment**. 367 (2006) 156-162.
3. Nehme, P.A., Barbour, E.K., Sagherian, V.K., Hamadeh, S.K., and **Zurayk, R.** 2006. Baseline data on enumerated tracheal bacterial flora and drug susceptibility in chicken reared under different systems. **International Journal of Applied Research in Veterinary Medicine**, 3:372-377.

#### **IV- Grants**

##### **Dr. Rami Zurayk**

1. *Rehabilitation of the multifunctional centres of Aytaroun as instrument to promote economic recovery and strengthen the local community*'. Granting agency: UCODEP. Value: \$ 13,750. Duration: August 2007-March 15, 2008. **Status: Coordinator.**
2. *Study for the inventory of typical Lebanese products*. Granting agency: UCODEP. Value: \$ 15,532. Duration: July 1, 2007-September 10, 2007. **Status: Coordinator.**
3. *Cities Farming for the Future*. Granting agency: *RUAF Foundation*. Value: USD \$ 36,937.60. Duration: March 1, 2006 - Dec. 30, 2006. **Status: Coordinator.**
4. *Biodiversity conservation through use: Laurel soap to enhance women's livelihoods in Aita al Shaab*. 2006-2007. Post-war reconstruction effort, Funders: SEAL-USA. Value: \$15,000. **Status: Manager**
5. *Mobile Rural Community Development Centre*. 2006-2007. Management of a mobile community development center to serve the South in the post war period. Funders: SEAL-USA and Heinrich Boell Foundation, Germany. Value: \$45,000. **Status: Manager.**
6. *Regional Training and Knowledge Sharing in Urban Agriculture for the Middle East and North Africa – 2005-2006*. Granting agency: Cities Feeding People Initiative of the International Development Research Center. Value: CAD 471,980. Duration: 2005-2006. **Status: Project Manager.**
7. *Global Environment Outlook (GEO 4)*. Participation in the drafting of the GEO 4. Granting agency: United Nation Development Program. Value: USD 10,000. Duration: 2005-2007. **Status: Project Manager.**

**V- MS Theses Supervised**

<b>STUDENT NAME</b>	<b>THESIS TITLE</b>
Haya Al Assi	"The Diet of <i>Fistularia Commersonii</i> an Introduced Fish from the Red Sea"
Grace Rachid	Evolution of Natural Resource Management in Mount Lebanon: The Case Of Batloun El- Shouf 1935-2005
Maya Yammine	Impact of Landmines on the Human & Land Resources of Deir El Ahmar

**VI- Other activities**

The approval and registration of the MS in Environmental Sciences by NYSED. The MS in Ecosystem Management is now registered at the Department of Education at the State of New York.

## ENVIRONMENT AND SUSTAINABLE UNIT DEVELOPMENT (ESDU)

**Dr. Shady Hamadeh - Coordinator**

### **A. Executive summary**

In 2007 ESDU team was very busy preparing new projects and following up on old ones. New members were recruited and new friends were gained in all part of the MENA region. Three main projects were mostly accentuated this year. Communication for development with the FAO, in which other than training a portal has been launched; outcome mapping with IDRC where ESDU played a significant role in arabizing and rendering the paradigm of outcome mapping familiar to this region and lastly urban agriculture in collaboration with RUAFA and IDRC where mostly the follow-ups were happening on pilot projects from last year and on training trainers for new projects on a national and regional level.

### **B. ESDU Team**

Shady Hamadeh	ESDU director
Ziad Moussa	Capacity Building and Communication officer
Salwa Tawk	Knowledge manager
Diana Abi Said	Financial officer
Layal Dandache	Executive officer

### **C. ESDU IN ACTION 2007**

#### **1) FAO-ESDU-Communication for development: Capacity building for practitioners**

ESDU is the host of a portal on Communication Development and capacity building for the region in collaboration with FAO, and has carried out a workshop training managed jointly by FAO and ESDU. This workshop was held in Amman-Jordan and offered practical, hands-on experiential learning packages on communication at every level.

#### **2) IDRC- Mainstreaming outcome mapping in the Middle East and North Africa- MENA region**

ESDU in collaboration with IDRC conducted a project on “Mainstreaming Outcome Mapping in the MENA region”. This was implemented through capacity building and a set of activities to disseminating the concept of outcome mapping and its importance for the development projects. In addition to introducing outcome mapping as a concept, ESDU was responsible for the “contextualization” and the “arabization” of OM in the Middle East and North Africa (MENA) region through a workshop that was conducted in AUB where a significant work was done in developing the Arabic interface of OM.

#### **3) RUAFA- Cities Farming for the Future Project (CFF)**

ESDU in collaboration with RUAFA conducted a project on city farming along with training workshops. Seed funding is allocated by RUAFA to resume the publication of the Urban Agriculture Magazine in Arabic and other UA pilot activities. Three workshops were conducted this year. The first one, conducted in AUB, was the follow-up to the first phase (1999-2004) of the RUAFA core programme, in which ESDU, the seventh regional partner, supported capacity development and

participatory formulation of policies and action programmes on urban agriculture in the MENA region.

The second workshop took place in Amman, Jordan in September and was a training for trainers on multi actor policy formulation and action planning (MPAP) on urban agriculture. This training workshop discussed the why and what of an MPAP process offering a series of tools and instruments to implement MPAP related activities as well as future local and regional training events on these issues.

Lastly, and also taking place in Amman was the” Exit Workshop for the Regional Training and Knowledge Sharing on Urban Agriculture in Middle East and North Africa”. This workshop aimed at generalizing and disseminating the expertise and the outcomes that every pilot group has achieved, and to agree on a next phase of cooperation between the different countries and ESDU.