
UAEU
RESEARCH TRENDS IN THE UAEU
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 College of Food and Agriculture
 United Arab Emirates University

United Arab Emirates







 جامعة الإمارات العربية المتحدة
 United Arab Emirates University
UAEU www.uae.ac.ae
 ESTABLISHED IN 1976, AROUND 13,000 STUDENTS
 UNITED ARAB EMIRATES UNIVERSITY IS ACCREDITED BY THE WASC SENIOR COLLEGE AND UNIVERSITY COMMISSION (WSCUC),
 QS RANKING 385 (2014)




Colleges in the UAEU

- College of Business & Economics
- College of Education
- College of Engineering
- College of Food & Agriculture
- College of Humanities & Social Sciences
- College of Information Technology
- College of Law
- College of Medicine & Health Sciences
- College of Science

Research Centers in the UAEU

- Zayed bin Sultan Al Nahyan Center for Health Sciences
- Khalifa Center for Genetic Engineering and Biotechnology
- Roadway Transportation & Traffic Safety Research Center
- UAEU Center for Public Policy and Leadership
- Emirates Center for Energy and Environment Research
- National Water Center
- Date Palm Development Research Unit Department

Research Focus areas

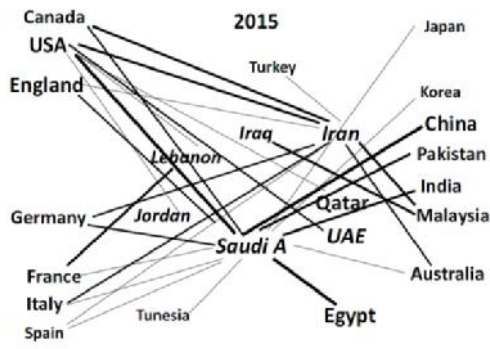
- Health,
- Education,
- Energy,
- Water,
- Space,
- Transportation,
- Technology

Funding Opportunities

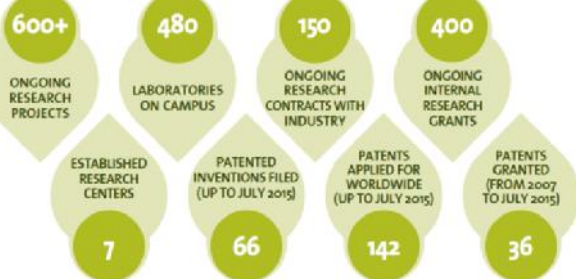
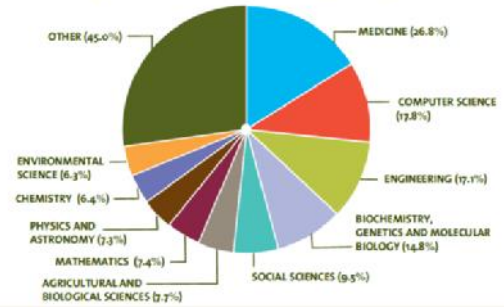
- UAEU Center-based Research (UCBR) Grant
- UAEU Program for Advanced Research (UPAR) Grant
- UAEU Startup Grant
- UAEU Joint Collaborative Projects with Other Institutions
- Consultations

UAE Spending on Scientific Research

- In 2011, UAE spent 0.49% of its GDP (2.5 \$bn) on research and development (Canada spent 1.6% (25.7 \$bn))
- In UAE, 0.03 % of its GDP on scientific research, which is significantly below the 0.2 % average that Arab countries spend on scientific research.
- In Canada, Science and technology spending by federal departments and agencies reached its highest level in 2010/2011 at \$12.0 billion (0.66% of GDP).

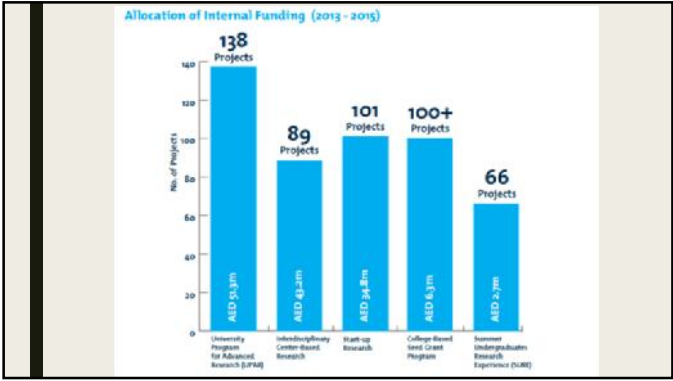
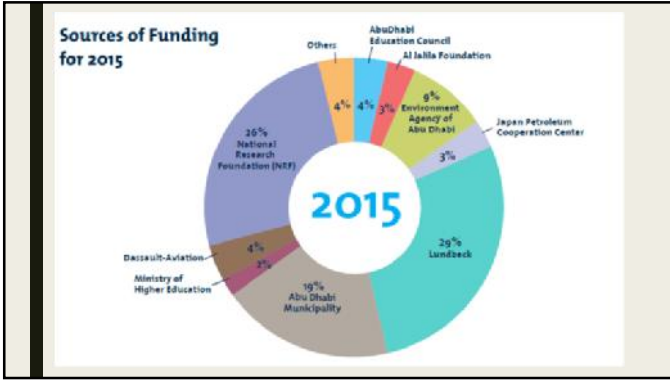


Subject Areas of Major Publications from 2009 to 2015 (Source: SCOPUS)



External Funding Support





CFA (College of Food and Agriculture)

- The only college in this field in the country
- Three programs are accredited by AIC (Agricultural Institute of Canada)
- Five Departments
- Three Experimental Sites:
 - Halophytes research farm
 - Aquaponics unit
 - Experimental farm

Graduate Programs

- Agribusiness and Consumer Science
 - Master of Agribusiness Management
- AridLand Agriculture
 - Master of Science in Horticulture
 - Doctor of Philosophy (PhD) Concentration: Horticultural Science
- Food Science
 - Master of Science in Food Science
 - Doctor of Philosophy (PhD) Concentration: Food Science
- Nutrition And Health
 - Doctor of Philosophy (PhD) Concentration: Nutritional Sciences
- Veterinary Medicine
 - Doctor of Philosophy (PhD) Concentration: Animal Science

Department of Aridland Agriculture

- Offers two programs
 - BSc., Horticulture and Animal Sciences and Marine Fisheries
 - Accredited by AIC (Agriculture Institute of Canada)
- 12 Faculty members
- Number of annual graduates is about 20

Faculty Members Research Interests

Name	Position	Research Interest
Dr. Firas Abu Elsamem	Assistant Professor and Chair	Plant Pathology
Dr. Elke Neumann	Assistant Professor	Plant Nutrition
Prof. Ahmed Hussein	Professor	Poultry Sciences
Dr. Ibrahim Belal	Associate Professor	Fish Nutrition
Dr. Shyam S. Kurup	Associate Professor	Landscape Management
Dr. Moustafa A. Fadel	Associate Professor	Protected Agriculture/ Hydroponics
Dr. Franz Helmut Lennartz	Associate Professor	Irrigation
Dr. Mohamed Salem	Associate Professor	Climate change Biology
Dr. Jaber Aldahmani	Assistant Professor	Plant Disease & Prevention
Dr. Abdul Jaleel Cheruth	Assistant Professor	Medicinal Plants
Dr. Mohamed Al-Yahya'ei	Assistant Professor	Desert Ecosystems
Dr. Dawood Al Ajmi	Assistant Professor	Animal production

VRT Application of Phosphate Utilizing DGPS and RTK

Team: Moustafa Fadel and Ahmed AlMowafy

The slide displays two maps. The left map shows a grid of points labeled 1 through 8, representing data points from a DGPS/RTK system. The right map shows a similar grid with a blue line tracing a path, likely representing a tractor's movement. A photograph of a tractor in a field is also included.

Evaluation of greenhouse microclimate performance under arid conditions utilizing wireless sensor networks

Team:

- Moustafa Fadel
- Farag Sallabi
- Arshad AlDaly

The slide features a photograph of a greenhouse with rows of young plants. Below it is a photograph of a sensor board (Libelium Waspmote) with four sensors attached. Text on the right states: "24 units of Libelium Waspmote® Gases board 2.0 were used to host four sensors to measure Co, Co₂, temperature, humidity and Ammonia and communicate with the gate way utilizing ZigBee-Pro protocol."

E- Surveillance of Commercial Poultry Farms

Team:
Moustafa Fadel
Prof. A. Hussein , Poultry sciences
Prof. Farag Sallabi, IT and telecommunications

The diagram illustrates a central database connected to three main components: Product Traceability, Web App, and GIS Mapping & Analysis. The Web App is labeled as a "Documentation System".

7/13/2016 Disaster prevention and management of poultry production in the UAE Fadel M. A. and Ahmed S. Hussein

System Structure

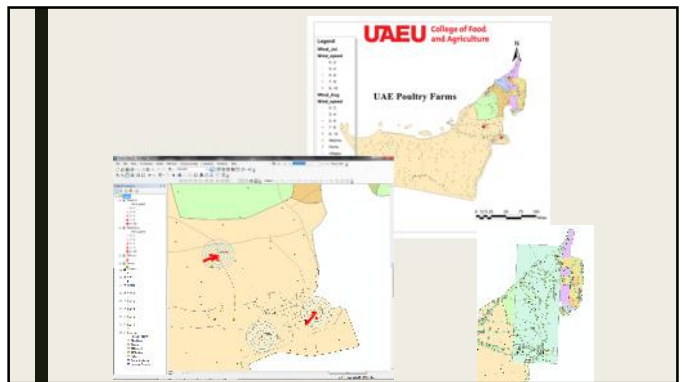
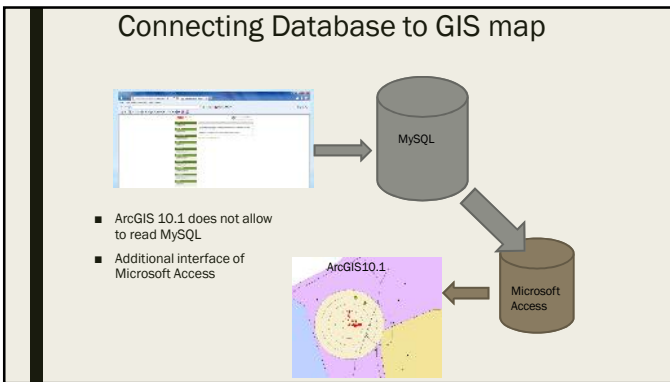
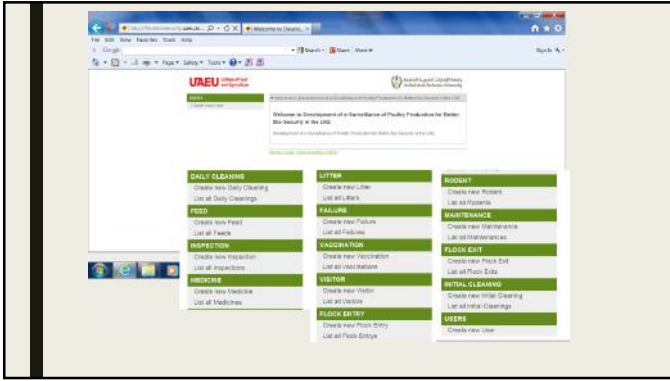
The diagram shows four interlocking gears representing the system's components: GIS map (red), Flock ID (purple), Documentation System (blue), and Traceability System (blue). Arrows indicate a clockwise flow between the gears.

Flow chart of the web-based documentation system

The flowchart shows a central database connected to several components: "Product Traceability", "Web App", "GIS Mapping & Analysis", "Flock ID", and "Documentation System". Arrows indicate the direction of data flow between these components.

Web-based Application

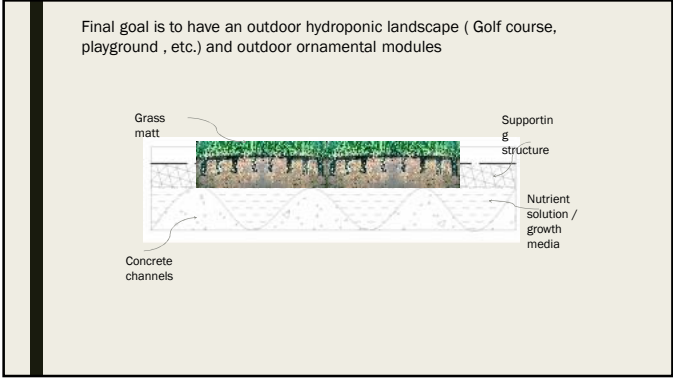
<http://farmbiosecurity.uaeu.ac.ae/>



Development of Hydroponic Garden Modules

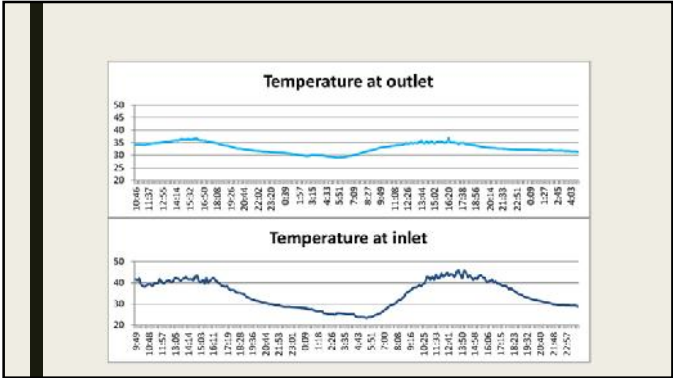
- Team:
 - Moustafa Fadel
 - Dr. Shyam Kurup
 - Dr. Elke Neumann
 - Mr. Raed (MSc Student)
 - Mr. M. AlAbdoly
 - Mr. Ismail (graduated)

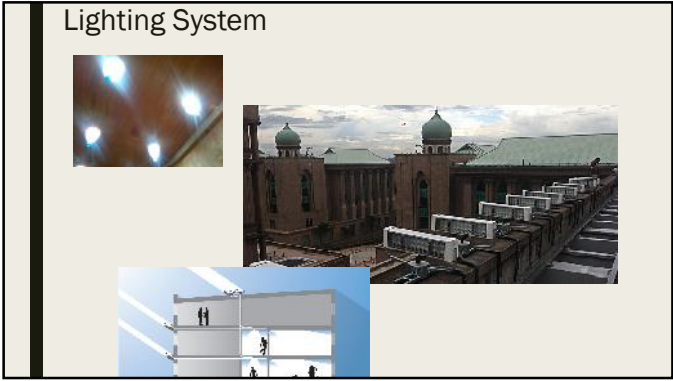
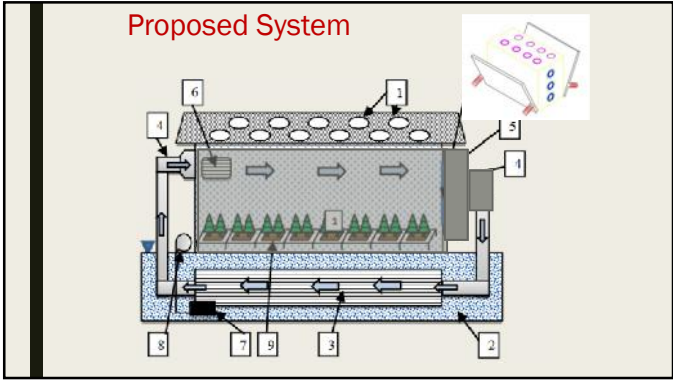




Development of a Novel Vegetable Farming Chamber Utilizing Zero-Water Cooling and Natural Lighting
“Towards a Green Organic Farming”

- Sultan Qaboos University, Sultanate of Oman
- UAE University, UAE
- Team:
 - M. Allsmaily
 - Hemanatha Jayasuriya
 - Adel Al-Mahdouri
 - Moustafa Fadel, CFA
 - M. Farag, COE
 - M. Hamdan, COE
 - S. Kurup, CFA





Salicornia production in marshlands for biofuel

Team:

- *Moustafa Fadel*
- *Arnold*

Halophyte hydroponics
Energy budget of Salicornia

Geo-spatial Analysis of Red Tide in the Arabian Gulf

Team:

- *Dr. Elhab Fadhurahman*
- *Moustafa Fadel*

- ### Other research activities at UAEU
- **Field and Remote-Sensing Assessment of Mangrove Forests and Seagrass Beds in the Northwestern Part of the United Arab Emirates.** *Fares M. Howari, Benjamin R. Jordan, Naima Bouhouche, and Sandy Wyllie-Echeverria*
 - **Investigation of Hydrocarbon Pollution In the Vicinity of United Arab Emirates Coasts Using Visible and Near Infrared Remote Sensing Data.** *F. M. Howari.* fhowari@uaeu.ac.ae
 - **Monitoring of urban growth of a desert city through remote sensing: Al-Ain, UAE, between 1976 and 2000.** *M. M. YAGOUB*
 - **Monitoring coastal zone land use and land cover changes of Abu Dhabi using remote sensing.** *M. M. Yagoub, and Giridhar Reddy Kolan*

Acknowledgment

