Standard Reference Academic Benchmarks for Higher Educational Programs Compatible in the Arab Colleges of Agriculture

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Efforts of SACA in Agric. Sustainability

1-Management and Rational utilization of water resources in Agriculture (2003,Damascus, Syria).

2- Arab Agricultural Research: Present, Challenges and Requirements. (2005, Ain Shams Univ. , Eygpt).

3- Quality assurance and accreditation in higher education (2006, Mansura Univ., Eygpt).

4- Policies and regulations supportive to Arab Agricultural development under WTO (2007. Ain Shams Univ. , Egypt) agreement.

5- Arab Food Security (2009, Khartoum, Sudan)

6- Food Safety (2010, King Saud Univ., Riyadh, KSA).

7- Agriculture and Rural Development(2011) In collaboration with Saudi Agricultural Association, King Saud Univ., Riyadh, KSA).

Introduction

Examining Facts

Arab World population is annually increasing

Serious food Gap- aggravated by regional problems

Most strategic crops productivity is low

Environment is continuously deteriorating

Curricula of our Colleges are not coping with the JM

Introduction continued....

Several Developments (the last three decades)

✓of definite impact

✓sent signals to the concerned Arab authorities and professional associations.

Nature :

❖ Economical Ones

- Food gap

❖ Academic ones

- agricultural colleges - # Hiking
- Emergence of new systems: whole year → Semester → Cr Hr → modified Cr Hr

❖ Technological ones

- Emergence of new agricultural technologies:
  - ➢ shaped the agriculture sector around the world
  - ➢ with limited or no impact on the Arab agriculture

- Environmental ones
  - exhaustion of natural resources
    - worldwide calls for sustainability and biodiversity
- Socioeconomical ones
  - Increase in income, nutritional awareness
  - health conscious consumer
  - Public sector is no longer the main employer of the AGs
  - the private sector is, however with certain requirements

NOTE:

- Sudan the number of Agric. Colleges increased by ten folds from 3 to more than 30 colleges, most of them are stero-type programs.
- A similar trend is noted in most of the other Arab countries.

Yet some jobs in the Arab agric. sector are occupied by foreign experts

Probably:

- lack of coherent strategy for human resource development.
- colleges of agriculture programs were not designed to produce graduates of relevance to the job market.
- Private sector is not ready to take the burden of on-job training.

SACA Survey

Objective:

an attempt to enumerate, identify and characterize the agricultural programs in Arab colleges of agriculture.

- 2009/2010
- 37 college members.
- Presence of 119 programs.
- Differences with no significant value to the quality of the graduates.
- Imbalances:
    - Cr Hr
    - # of years 4 vs 5
    - univ. requirements
    - Faculty requirements
    - Basic sciences quata
    - specialization
    - practicals hrs
    - interactive courses
    - Attachments , internship- when, where and how many

Arab colleges of Agriculture curriculum

- set up - blend of different school of thoughts however with some deformities.

- Diversification in academic AP is not a curse but a loose diversification is.

Academic reform in ACA is inevitable

Based on the above mentioned points

SACA is trying to help the deans of the colleges of agriculture develop curricula that will:

❖ Equip our agriculture graduates with:

- Knowledge
- skills
- ethical foundations

to address the problems facing Arab agricultural sector.

How can it be done?

SACA suggested that these 119 programs could be reduced to 8 programs (Table 1).

Accordingly SACA called it´s college members for a remedy through an extensive and thoughtful academic reform that could produce quality graduates

How can we check the quality of the graduate
measurable benchmarks

Table 1: Suggested programs and options for the colleges of agriculture in AU

Major program	Options
Plant Production	1. Field crops 2- Horticulture. 3- Forest and Wood trees
Animal Production	1. Animal production 2-Poultry production. 3. Fish production
Food Sciences	1. Food industries. 2. Dairy Technology. 3. Nutrition
Plant Protection	1. Plant pathology. 2. Economical insects 3. Pesticides. 4. Weeds
Agricultural Biotechnology	1. Agricultural microbiology. 2. Breeding and Genetic Engineering 2. Biochemistry. 4. Plant tissue culture
Agricultural Economics and Social Sciences	1. Agricultural Economics. 2. Extension 3. Agro-business management 4. Rural community. 5. Home economics
Agricultural and Bio Engineerig	1. Agricultural Machineries and Power Engineering 2. Irrigation and Field drainage Engineering. 3.Biosystems Engineering
Soil, water and environmental sciences	1. Soil 2. Environment
General agriculture	-

Standard Reference Academic Benchmarks (SRAB)

SRAB objective

is to build the capacities of the agriculture students to use the basic sciences and benefits from the modern technologies for a sustainable agricultural development based on the study of :

biological
mathematical
economical and social
sciences.

SRAB is considered to be general specifications that include knowledge and skills that should be gained by the student before graduation.

SRAB should reflect the mission and vision of the college of agriculture .

SRAB identified were

1- Knowledges and Concepts

The agriculture graduate should acquire e.g the basic and practical sciences relevant to:

- Agric. concepts and elements of quality management
- Risk elements estimation in the agric. operations and
- how to deal with it
- Biodiversity concepts
- Means of preserving natural resources

- ✓ social, economical and cultural aspects in the agricultural communities and it´s relation to sustainable development
- ✓ agricultural regulations
- ✓ professional ethics with relevance to the environment and human health.

2- Mental skills

The graduate should be capable of:

❖Collecting and analyzing data that lead to the information that help solving the agricultural problem

❖Designing and running experiments that lead to logical conclusion

❖collect evidences with the aim of phenomena interpretation and risks assessment

❖choosing the best alternatives to achieve the maximum benefit for the agricultural establishment.

3- Professional skills:

The graduate should be capable of:

- ❖applying good agricultural practices to increase production
- ❖Producing wholesome food and feed for human and animals with smaller footprints on the environment
- ❖Using agricultural resources efficiently for the sake of sustainable agriculture
- ❖Planning in the light of national and international variables
- ❖Prioritizing the development of agricultural communities and urban regions
- ❖Putting discretionary budget for the agricultural projects and conduct local market analysis

4- General skills

The graduate should be capable of :

- ❖Presenting information and interpreting phenomena orally or in writing,
- ❖Communicate effectively in both languages
- ❖Use video and visual aids to present data and information
- ❖Work within a team and show group leadership skills
- ❖Acquire basic skills of administration
- ❖Use the computer to write reports
- ❖Analyze and present data
- ❖Use specialized computer applications in career fields
- ❖Use IT sources to communicate and be with the community
- ❖Show self-learning capabilities to develop career skills

Thank you