

1st GMO International Workshop in MENA Region
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***Status and experiences
related to the
implementation of GMO
Legislation in UAE***



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Agricultural Sector in UAE

Date palm

- Date tree population in UAE is **~40 millions** (8.5 m in Al-Ain).
- UAE ranked **fifth** worldwide in 2010
- In 2010, UAE produced **775,000** MT of dates and a total value of **\$465** (one of the largest exporters of dates).
- UAE exported about **62%** of the annual production.

Why Biotechnology?

- To improve and sustain the agriculture productivity and overcome major agriculture problems.
- To harbor important genes that biotechnology could use and benefit from.
- Increase productivity, and resistance/tolerance to biotic/abiotic stresses reduce the use of chemicals, and increase farmers' revenues.

The National

In the UAE, shoppers want to see GM food
labeling



Labeling..



Labeling GM foods is mandatory if the GM content is $> 0.9\%$ (according to the European Commission)

National legislations & ways in handling GMOs

- Importations to the country,***
- Trading,***
- GMOs release regulations at the national level,***
- Monitoring and evaluation procedures,***
- Biosafety measures for health and environment,***
- Biosafety regulations for the importation and testing of transgenic crops, with regulations for field tests.***

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- MoWE formed a team to conduct a national assessment on the status of biotechnology, biosafety and GMOs in UAE,***
 - Data led to a comprehensive understanding of major aspects relating to biotechnology and biosafety, identifying existing gaps and thus suggesting recommendations and the ways forward.***
 - Outcomes are highlighted in National Assessment Survey for the UAE.***

(TCP/RAB/3202)-2008

- An **FAO regional project** in NENA region
- **AIM**: Strengthening capacities towards the establishment of a regional platform for the detection of GMOs
- **Participating Countries**: Lebanon, Jordan, Syria, UAE, Yemen and Sudan.
- **Outputs** are to:
 1. Enhance regional collaboration in GMO detection to harmonize their practices/certification schemes
 2. Training package including an information exchange forum.
 3. Increase capacities of the technical staff in GMO detection
 4. An agreement for a regional platform for GMO detection in the region

BIOTECHNOLOGY IN UAE

Institutions Involved in Biotechnology in UAE

Academia		Research Institutions	
Public	Private	Public	Private
<ul style="list-style-type: none"> * UAEU * Date Palm Tissue Culture Lab. (DPTCL) 		<ul style="list-style-type: none"> • Al Wathba Marionnet Green coast nurseries * Al Rajhi Laboratory * Advanced Biotech. Center (ABC) * Dubai Biotechnology and Research Park (DuBiotech) 	<ul style="list-style-type: none"> • International Center for Biosaline Agriculture (ICBA) * APRP/ICARDA International Center for Agric. Res. in the Dry Areas

1. Micropropagation & Tissue culture of Date Palm

Date Palm Tissue Culture Lab at UAEU



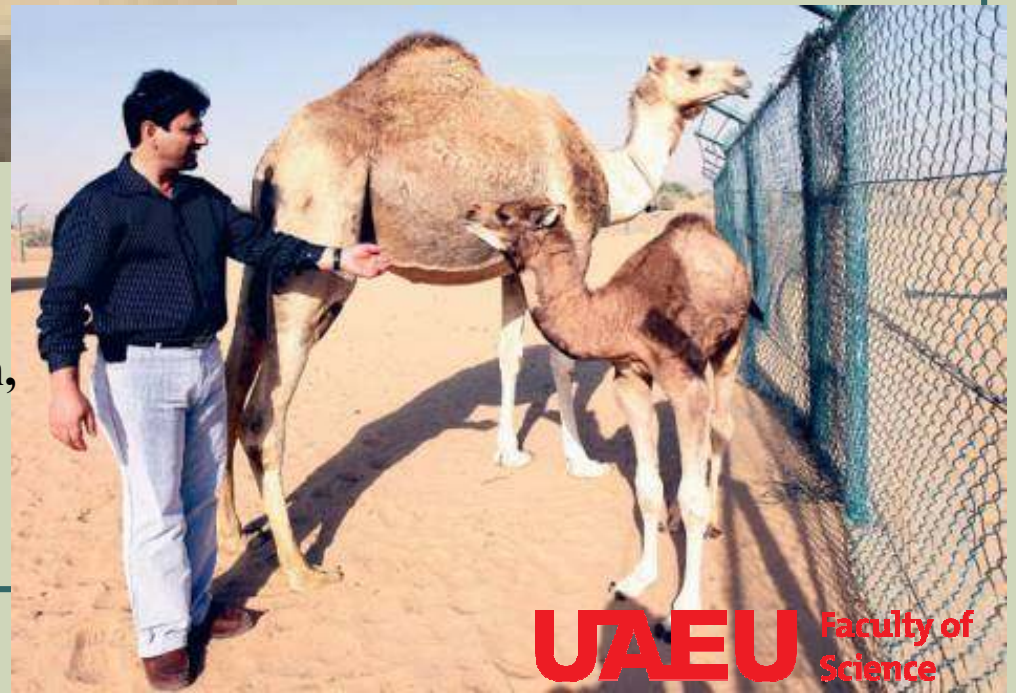
2. Molecular Markers, Genomics & Cloning

Cloning the first Race Camel



Injaz was the world's first cloned camel. The female calf was born in April, 2009.

The 2nd cloned race camel, Bin Soughan, at the Camel Reproduction Centre in Dubai. The male calf was born in February 2010.



3. Genetically Modified (GM) Crops

Biotechnology Lab, UAEU

Dr. AbuQamar's Research Group



Wt

35S:SI AIM1



0 mM



150 mM



250 mM

AbuQamar et al., Plant J. (2009)

Wt



ebr1



AbuQamar et al., *in press*



'PUSHER'

Thank you!!!!!!!!!!