



Intellectual Property and Agricultural Innovations in Egypt

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What are the Challenges?

The main features impacting the food production-consumption gap in Egypt are:


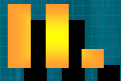

- ◆ **A limited arable land base**
- ◆ **One source of water supply; the Nile river**
- ◆ **Large Population Growth**

Agricultural Sector Development

Strategic Goals

- I. Optimizing crop returns per unit of land and water consumed.
- II. Enhancing sustainability of resource use patterns and the protection of the environment.
- III. Bridging the food gap & achieving self reliance.

Opportunities for deploying modern Biotechnological approaches

-  Producing transgenic plants resistant to indigenous biotic and abiotic stress.
-  Reducing the use of agrochemicals & pesticides & their environmental risks.
-  Improving the nutritional quality of food crops.



**Agricultural Genetic Engineering
Research Institute**

ARC - EGYPT

MISSION

Promote agricultural sustainability for Egypt

VISION

Develop biotechnology products in biotic , abiotic stress and other traits that are valued by businesses

OBJECTIVES

Organizational Continuity

Research Excellence

Stable & Adequate Funding

FUTURE OUTLOOK

Human Resources Development

Scientific Development

Infrastructure Upgrade

Commercial Orientation

Current IPR Status in Egypt

New Egyptian IPR law # 82 / June 2002

for the protection of:

- ◆ **Patents and Utility Models, Layout-Designs for Integrated Circuits, and Undisclosed Information**
- ◆ **Marks, Tradenames, Geographical Indications and Industrial Designs**
- ◆ **Copyright and Related Rights**
- ◆ **Plant Varieties**



OTTIP

**OFFICE OF TECHNOLOGY TRANSFER AND
INTELLECTUAL PROPERTY RIGHTS**

Scope of Duties:



- ◆ Intellectual Property Policy.
- ◆ Intellectual Property Disclosure Agreements.
- ◆ Confidentiality and Non - disclosure Agreements.
- ◆ Material Transfer Agreements.
- ◆ Exclusive License Agreements.
- ◆ Profit Sharing Agreements.



The background of the slide is a photograph of an ancient Egyptian temple interior. The walls are covered in hieroglyphs and large statues of pharaohs wearing nemes (headdresses). The lighting is dramatic, highlighting the textures of the stone and the details of the carvings.

COMMERCIALIZATION
FROM
LABORATORY TO MARKETPLACE

The case of

AGERIN®

PATENTS AT AGERI

Egypt

USA

Subject:

Bt derived
bioinsecticide
against a wide
range of insects

Bt isolates with
broad spectrum
activity

File #:

1994030126

5178-3

Filing date:

March 2, 1994

Jan 10, 1997

Patent #

019797

5986177

Date

Jan 11, 1996

Nov 16, 1999

The case of **AGERIN**[®]

Idea

With potential for commercial application as a biopesticide

IPR

Related to this idea (patent)

EGYPT

USA

Pilot

Small scale manufacturing of AGERIN (5-15 liters)

Private Investor(s)

Convinced with the idea and willing to fund industrial production

The case of **AGERIN**[®]

Partnership

Joint venture: (PPP)
Private investor(s) & AGERI/GESU

Fermentation Expertise

To support large scale AGERIN
production (10m³ and above)

Facilities for Industrial Production

On lease basis (Egypt)
QC/ bioassays by AGERI

Marketing & Sales

BIOGRO INTERNATIONAL INC.

EGYPT

BIOGRO INTERNATIONAL S. A. E.

Egyptian Joint stock company

Established in Accordance with the provisions of law # 8 / 1997

**Commercial register # 116987 on
November , 11, 1997**

USA

BIOGRO INTERNATIONAL INC.

**Established in the state of Delaware , USA
on March 11, 1997**

**Headquarters : P.O. Box 621 TIOGA.
Texas 76271 - USA**

AGERIN

An Environmentally Friendly Biopesticide



Benefit Sharing



**NOT FOR PROFIT
RESEARCH
ORGANIZATION**

INTERFACE

**COMMERCIAL
PRIVATE
COMPANY**

GESU

Genetic Engineering Services Unit



PIONEER

AGERI

Collaboration

A Public - Private Partnership

ACHIEVEMENTS

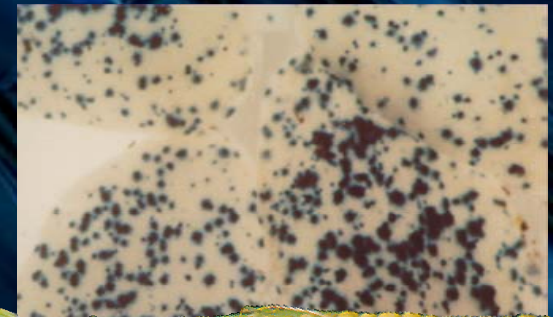
A Patent application filed in the
USA for 4 novel corn promoters
with AGERI trainee as co-inventor.

File #: PCT/US99/28081

Filing date: Oct 5, 1999

Patent # US 6,504,083

Date Jan 7, 2003





AGERI



Monsanto



Collaboration



Bt-COTTON IN EGYPT

OBJECTIVE

Develop insect resistant long staple GIZA-BOLLGARD II cotton varieties via crossing of Egyptian elite germplasm to Bollgard II (Monsanto)



Field trial GIZA-BOLLGARD II



PROJECT BENEFITS



- ◆ Minimize the use of chemical insecticides
- ◆ Increase in economic value through the improvement of yield, productivity and fiber quality
- ◆ Pave the way for the acceptance of transgenic cotton in Egypt and neighboring African and Asian countries

Patents at AGERI

Egypt

Subject: Chitinase gene with anti-fungal and insecticidal activities

File #: 893 **Filing date:** July 11, 2000

Subject: New Egyptian dehydrin gene for drought tolerance in plants

File #: 1152 **Filing date:** Sept 11, 2000

Subject: Biological insecticide for Locust control

File #: 70770 **Filing date:** July 2, 2002

Subject: Modified bacterial biopesticide

File #: 40335 **Filing date:** April 12, 2003

A bouquet of approximately 12 pink tulips with green leaves is arranged in a white, modern-style vase. The flowers are set against a dark, textured blue background. The tulips vary in their stage of bloom, with some fully open and others still as buds. The lighting is soft, highlighting the delicate petals and the smooth surface of the vase.

Thank You