

## **Amany Abd EL-Mohsen Mohamed Metwally**



**Office Address:** Department of Agricultural Engineering  
Collage of Agriculture, Zagazig University,  
Zagazig, Egypt

**Tel:** +2 (055)232-8264 - 00201064497733

**E-mail address:** amany\_ghonem@yahoo.com

**Nationality:** Egyptian

**Date of birth:** 26/02/1983

### **Employment:**

- 1. (30/9/2014- present)** Agricultural Engineering Lecturer at Zagazig University.
- 2. (24/2/2007- 29/9/2014)** Agricultural Engineering Assistant Lecturer in Zagazig University
- 3. (5/11/2003-23/2/2007)** Agricultural Engineering Instructor in Zagazig University

### **Education:**

- 1. PhD in Bioengineering Science**, Clausthal University of Technology 2009-2014

**Thesis Title:** Energy conservation during the ensiling process for improving methane production from sugar beet.

### **Brief Synopsis of Research:**

Sugar beet is a promising substrate for biogas production, but short storage capability and seasonal availability lead to apply the “ensiling” as a conservation process. As the ensiling is a biological fermentation process, a loss of carbon and energy occur. In this study procedures are

investigated to minimize energy loss in the ensilaging for enhanced methane production.

**2. M. Sc in agricultural sciences** (Agricultural engineering) 2007 faculty of agricultural, zagazig university – Egypt.

**3. B.SC. in agricultural sciences** (Agricultural engineering) in June 2003, faculty of agricultural, zagazig university.

### **Research Interests:**

My current research center around Benefits of Renewable Energy Use

- Wastewater and sludge treatment: process and reactor development
- Recovery of valuable materials: Biogas production
- Adapted technologies for developing countries: waste management, recycling, waste treatment, landfill technology.
- Solar energy: solar cell, Solar Collectors, Solar Water Heating, water distillation.

### **Skills:**

General skills in research project management and data analysis. Specific expertise and interests in:

### **Computing Skills:**

- Applications: Microsoft Office Suite, Internet Explorer, AutoCAD and several e-mail packages.
- ICDL (International Computer Driving Licence).
- Operating Systems: Windows Vista, Windows XP, Windows 8.

### **Teaching Skills:**

- Postgraduate Demonstrator. Regularly supervise practicals for undergraduate students.
- Have lead several seminars for undergraduates **in Bioengineering Science.**

### **Other skills:**

- The Goethe-Zertifikat B1
- Test of English as a Foreign Language (International TOEFL)

## **Publications/Conference Papers**

### **Published:**

- A. Metwally, O. Schläfer, M. Sievers. Energy conservation during the ensiling process for improving methane production from sugar beet. 4 th Central European Biomass Conference.
- El-Shal, M. S., Abdel Wahab, M. K., Kishta, A. M., and A. A. Mohamed (2006), Mechanization of Taro Crop under Egyptian Conditions. Zagazig journal of agricultural research. Vol 34 pp. 133-145

### **Under Review:**

- A. Metwally, O. Schläfer, M. Sievers. Influence of ensilage and silage additives on methane production from sugar beet.
- A. Metwally, O. Schläfer, M. Sievers. The preservative effect of lactic and acetic acid fermentation in the course of ensiling on methane production from sugar beet.

### **References:**

#### **Prof. Dr. -Ing. Otto Carlowitz**

Institut für Umweltwissenschaften  
TU Clausthal  
Agricolastraße 4 D-38678 Clausthal-Zellerfeld  
Tel.: +49 5323 72-2927  
Skr. +49 5323 72-3582 (Frau Bock, vormittags)  
Fax.: +49 5323 72-3534  
E-mail: otto.carlowitz@tu-clausthal.de

#### **Dr. -Ing. Michael Sievers**

Abwasserverfahrenstechnik  
CUTEC Institut an der TU Clausthal  
Leibnizstraße 21 + 23  
D- 38678 Clausthal-Zellerfeld  
Tel. +49 (0)5323-933243  
Fax +49 (0)5323-933100  
E-mail: michael.sievers@cutec.de

#### **Dr. rer.nat. Ottmar Schläfer**

Abwasserverfahrenstechnik  
CUTEC-Institut GmbH

Leibnizstrasse 21+23  
38678 Clausthal-Zellerfeld  
Tel.: +49 (5323) 933 244  
Fax.: +49 (5323) 933 100  
E-mail: [ottmar.schlaefer@cutec.de](mailto:ottmar.schlaefer@cutec.de)