

## GLOBAL PERSPECTIVES GRANT REPORT PART 2

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Project Title: Evaluating productivity and environmental impact of sustainable and organic practices in Poland as viable alternatives for Wyoming farming Part 2: Hosting an International Scientist

Duration of Project: one 14-day visit

Funds were requested to cover travel expenses (14-day trip) of Dr. Ewa Tendziagolska, Assistant Professor of Organic and Sustainable Farming, [http://www.up.wroc.pl/research/9336/departement\\_of\\_crop\\_production.html](http://www.up.wroc.pl/research/9336/departement_of_crop_production.html) visit to the University of Wyoming Plant Sciences Department (April 1<sup>st</sup>-April 15<sup>th</sup> 2011).

Dr. Tendziagolska conducts research on estimating crop production in rotations that incorporate leguminous species for green manure or forage species. Dr. Tendziagolska is an internationally recognized junior researcher in the field of sustainable agriculture and organic farming with expertise in environmental/economic and social assessment of agroecosystems based on long-term experiments and producer-scientist collaborative on-farm research. The overall goal of the visit was to solicit research and education exchange between University in Wroclaw and UW.

Specific objectives accomplished during Dr. Tendziagolska visit was:

- (1) To discuss future research and plan summer research projects
- (2) To meet with the Deans of College of Agriculture;
- (3) To meet with the Department Head of Plant Sciences Department;
- (4) To meet with Anne Alexander, The Director of International Studies Office;
- (5) To meet with faculty members from Plant Sciences Department, Renewable Resources and Botany
- (6) To meet with graduate students from Plant Sciences Department
- (7) To give two seminars:
  - a. a public seminar titled: Sustainable Agriculture Research at the University of Environmental and Life Sciences, Wroclaw, Poland
  - b. a seminar for AECL 4990 Agroecology Capstone Course (Issues in Sustainable Agriculture)
- (8) To observe college UW Agroecology teaching curriculum and research projects;
- (9) To visit SAREC and UW Greenhouse facilities
- (10) To discuss possible international engagement between the Universities to conduct joint research and student exchange

## **Introduction:**

Agriculture of the twenty first century faces increasing pressures to produce more food and fiber at progressively declining agroecosystem resource base. This issue has been long recognized in parts of the world where population growth has resulted in significant reduction of previously farmed land and intensification of agricultural production on the land that remained. Therefore, maintaining sustainability of food production and agroecosystem resources have been a high priority in many countries around the world. In fact, many countries practice sustainable agriculture as a conventional way of producing food by balancing between economic, social and environmental priorities.

Sustainable practices are critical aspects of maintaining long-term productivity of agricultural lands. Specifically, maintaining fertility in soils with low organic matter and high CaCO<sub>3</sub> contents is a major challenge for **organic and reduced input production** in the northern High Plains and intermountain regions of United States and climatically similar regions in Europe.

## **Outcomes:**

### 1. International exchange

As aforementioned, the important goal of Dr. Tendziagolska visit was to establish relationships between the two universities. A number of meetings with campus and college administration were successfully accomplished with both sides expressing an interest of pursuing the initiative. Initial documents were drafted as Memoranda of Understanding. This international project will help launch international dialog and collaboration that would assist in efforts aiming at strengthening international research priorities in program in Agroecology. This project can benefit the program of Agroecology in Plant Sciences Department College of Agriculture by initiating technology transfer and building connections between the University of Wyoming and European Union universities.

The establishment of this relationship will include summer undergraduate student exchange, semester-long academic year exchange, graduate student research exchange and faculty travel. The UW representatives involved in dialog included:

Dean Frank Galey

Dean Jim Wangberg

Dean Bret Hess

Dean Glen Whipple

ISO Director- Anne Alexander

Head of Plant Sciences Department- Steven Herbert

To accomplish some of these goals, Dr. Tendziagolska also concentrated on conducting class observations by participating in SOIL/AECL 4140 5140 Soil Microbiology lectures and labs, AECL 1000 Agroecology lectures and labs, and AECL 4190 Capstone Senior seminar "Issues in Sustainable Agriculture". This approach can assist her in performing a comparative analysis of classroom curricula offered at the University in Wroclaw and to determine the relevance and applicability of offering classes for an exchange credit.

### 2. International Research

The preliminary goal of the international research exchange is to engage the two institutions in the process of compiling research recommendations on the topic of long-term sustainable farming and

designing best assessment methodologies for comparative research, outreach and extension efforts. Dr. Tendziagolska spent a significant amount of time visiting with a number of faculties from the Departments of Plant Sciences, Renewable Resources and Botany to learn about the research projects and research ideas. She travelled to SAREC, Lingle to visit with Dr. Jim Krall and to ARS NPA in Ft. Collins, CO to visit with Dr. Steve DelGrosso, Senior Scientists and Ecosystem Modeler. She also visited many labs, UW Greenhouse complex, the ACRES farm and bark beetle research site in Chimney Park.

### 3. Conclusions

One of the important outcomes of this visit was to increase the capacity of UW faculty, employees and students to appreciate cultural differences of the perception and the importance of research, education and research application to practice on sustainable agriculture and organic farming that are highly prioritized in Poland and the entire European Union. Dr. Ewa Tendziagolska's visit to UW in spring 2011 provided an opportunity for other faculty and students to interact, attend her seminars and solicit feedback for on-going sustainable agriculture research projects (located at SAREC, SREC, on-farm research in Big Horn Basin and Wheatland area). Equally important was the opportunity to learn about assessment tools developed to evaluate agroecosystem sustainability and alternative practices used in different regions of the world that can be applied in research and instruction at the University of Wyoming. I am very optimistic about the future collaboration and international student exchange possibilities for UW students and am looking forward to future engagements with the Global Perspectives program to help facilitate the process. I appreciate the program generosity to fund my travel to Europe in summer 2010 and the visit of the international scientist on campus in spring 2011.

Attachments:

## **Plant Sciences Special Seminar**

***Sustainable Agriculture Research  
at the University of Environmental  
and Life Sciences, Wroclaw, Poland***

**Dr. Ewa Tendziagolska  
Assistant Professor of Agroecology**



**Wednesday, April 13<sup>th</sup>, 1:10 pm  
4041 Agriculture**