



Certified Environmental Management Systems for Agriculture (CEMSA) Energy Planning and Assessment Project

The Iowa Soybean Association's CEMSA program helps producers develop and implement Environmental Management Systems (EMS) for the farm. The EMS allows producers to address the farm's resource concerns and environmental impacts in a profitable manner. CEMSA uses both ISO 14001 principles and USDA-NRCS guidelines and practice procedures to improve both a farm's management and conservation practices.

Since 2002 the United States Congress has provided funding for CEMSA through Cooperative Work Agreements with USDA-NRCS in Iowa. This funding has allowed the CEMSA program to provide in-depth technical assistance to 240 Iowa farmers and conservation assistance training to 17 Certified Crop Advisors and agronomists. The technical assistance CEMSA provides helps the farmers address nutrient, pest, soil, and water resource concerns, as well as implement better business management practices in their farming operations. It allows the farmers to implement their own evaluation and testing, make improvements to their farming operation, and document and demonstrate the progress that is achieved.

Applying the CEMSA process to energy efficiency and evaluation allows farmers to build upon previous planning and address another resource vital to their farming operations and profitability. Additionally, being able to quantify energy savings may be a significant factor in future farm programs, not to mention that it makes a powerful statement about positive environmental impact and energy security in agriculture.

A pilot project was initiated in 2007 to study methods of providing technical assistance to producers for addressing energy concerns. There is a significant amount of work done and tools available to look at energy usage around the farmstead, livestock buildings, and grain storage. However, there are few resources available to producers to help them evaluate the efficiency of their tillage operations, field passes, and nutrient applications from an energy standpoint. In 2007 the consultant group MGT Envirotec received an Iowa NRCS grant to develop a spreadsheet calculator that provides the tool farmers need to evaluate the energy efficiency of field operations and inputs. That tool in combination with the CEMSA planning process provides the technical assistance farmers need to document, evaluate, and implement informed decisions regarding energy usage in their operations.

To complete this study 9 of the CEMSA crop consultants worked with 51 of their farmer clients to evaluate the energy efficiency of their farming operations. The resulting data was then assembled and analyzed through a joint effort between ISA and Environmental Intelligence, Inc. MGT Envirotec provided technical support and training materials for the energy calculator.