Long-term Assessment of *Miscanthus* Productivity and Sustainability

LAMPS is a field-based approach to address the challenges facing *Miscanthus* establishment and production. We use the non-invasive sterile clone *Miscanthus × giganteus* to answer the questions farmers are asking about the agronomy of *Miscanthus*.

**Activities – Fall 2015**

Physiological data
- We are making photosynthetic response curves to light and CO₂ levels
- Additionally we will begin survey measurements to assess maximum photosynthesis and chlorophyll fluorescence

Phenological and morphological data
- We are staging and assessing leaf area index regularly
- This information will provide insight on how N rate effects Miscanthus development through the season

**Preliminary results**

Physiological data - Photosynthesis
- Some correlations have emerged between N rate and photosynthetic responses to light and CO₂ levels

Phenological and Morphological data
- Utilizing the BBCH scale for phenology and , we will compare development of Miscanthus which received different rates of fertilizer, this is ongoing.

**Talk to us!**
- View our website for upcoming field days, and for more information about LAMPS: [http://faculty.agron.iastate.edu/heaton/NewsEvents.html](http://faculty.agron.iastate.edu/heaton/NewsEvents.html)
- LAMPS is led by Emily Heaton, Nicholas Boersma and Catherine Bonin at Iowa State University
- For more information, or if you have inquiries please contact us:
  - Nicholas Boersma, PhD, Director of LAMPS — nboersma@iastate.edu
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Southeast Research Farm plot map

Split plots are different N rate treatments within each year (0 to 400 lbs N acre⁻¹)
Total field area = 6.4 acres
  Total Miscanthus plot area = 4.5 acres
  Total Miscanthus plot area per year = 1.5 acres
  Total corn area = 1.9 acres
(More corn in years 1 and 2, as 'fallow' Miscanthus areas are planted to corn)