

## Expected Outcomes

### A. LEARNING OUTCOMES:

Knowledge of the effects of recurring flooding on grazing pastures and hay fields as far as:

- Soil characteristics (C and N stocks);
- Forage quality and productivity;
- GHG emissions from soils.

### B. ACTION OUTCOMES:

- Long-term projects regarding the implementation of strategies to decrease environmental impacts and increase profitability of flooded agricultural areas;
- Enhancing reach and strategies of the OH Department of Agriculture Working Lands Buffer Program.

## Inputs and Activities

### INPUTS:

- Graduate student tuition;
- Field and lab supplies;
- Student help;
- Collaboration in PhD project developed in the same areas (complementary data).

### ACTIVITIES:

- Travel to Research Station and Partnering farms;
- Field and lab work;
- Graduate student research in charge of the development of this project.

## Outputs

- 3 peer-reviewed papers: One focusing on GHG emissions, soil characteristics, forage quality and productivity in flood prone grazing fields; Second one focusing on the GHG emissions, soil conditions, forage quality and productivity in flooded hay fields; and Third one focusing on environment, discussing the effects of flooding across different animal-agricultural practices (grazing, hay and croplands);
- Extension publications will be distributed through the Center for education located in the Jackson Research Station;
- Final report for the OH Department of Agriculture with the results obtained from farms involved in the Ohio Working Lands Buffer Program and educational material and presentations to be distributed in the Council's meetings and conferences;
- All results will be incorporated into classes and journal clubs offered by the student's advisor.

## Evaluation Plan

- Working directly with OSU extensionist to evaluate our future strategies implementation;
- Number of new interdisciplinary projects development as a result of the results generated;
- Citations of our peer-reviewed papers to evaluate our outreach result in scientific society;
- Meetings with technicians from OH Department of Agriculture in order to evaluate our impact on the Ohio Working land buffer program;
- Students practical and theoretical activities will be helpful to evaluate their understanding of results and applicability.