

Calculators Web Application Project

Students: Sydni Curry

Faculty Advisors: Dr. Pierce

Sponsoring Organization:

U of A System Division of Agriculture Cooperative Extension Service

Supervisor Contact Information:

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Sponsor Description:

The Cooperative Extension Service is part of the University of Arkansas System, Division of Agriculture. With offices in all 75 counties, their faculty and staff provide educational programs and research-based information to the people of Arkansas. From agricultural programs to family financial management to youth education, they offer educational programs that have immediate and practical applications.

The University of Arkansas Cooperative Extension Service is very proud to have faculty in every county of the state who live and work with the citizens they serve. Extension educational programs touch all segments of our society and address a wide range of needs in both urban and rural areas. Extension works in four major educational areas.

Project Description:

To create a web application that will consist of three calculators (Ag Lime Quality, for the Animal Science department at the U of A System Division of Agriculture Cooperative Extension Service. Currently, these calculators and formulas are in Excel sheets available to the public.

Ag Lime Quality Calculator – The Ag Lime Quality Calculator allows users to compare different lime sources for quality and cost effectiveness.

Grazing Calculator - The Grazing Calculator allows users to manage grazing stocking rates and rotations for their livestock herds.

Hay Quality Calculator - The Hay Quality Calculator allows users to compare hay samples to determine if they meet nutrient requirements for beef cows, stocker calves, horses, and sheep/goats.

These calculators will be designed in a stand-alone web application similar to <https://riceadvisor.uaex.edu>.

Description of Knowledge Areas for Project

- Web Application Development Skills – Possible skills to be developed include:
 - HTML
 - CSS
 - Javascript
 - Django Framework
 - Python
- MySQL Server – Possible database skills to be developed include:
 - SQL

Ethical and Privacy Issues:

The system will be the property of the University of Arkansas Cooperative Extension Service. All information used during the design process will belong to the organization.

Tentative Project Timeline (Summer I 2020 – Fall 2020)

	Calculators Web Application (Ag Lime Quality, Grazing, Hay Quality)
Week 1	Meet with Karen DiCicco to discuss current state of project and test environment
Weeks 2-3	Meet with Project Sponsor to analyze/develop requirements document
Weeks 4-5	Meet with Project Sponsor to analyze/develop design document
Weeks 5-7	Training/Set up Security Plan/Development Environment/Version Control
Weeks 8 - 19	Software Development/User and System Guides
Weeks 20-24	Debugging/System testing with Project Sponsor
Weeks 24-25	Installation of software
Weeks 26-30	Documentation and Presentation of Project