1. Project Title
IFAS Fertilizer Rate Research

2. Senate Sponsor
Jim Boyd

3. Date of Request
03/25/2021

4. Project/Program Description
UF/IFAS will be conducting research to assess, update and validate recommended fertilizer application rates and practices for the Florida agriculture industry. This research will provide modernized, science-based fertilizer application rates ensuring farmers can protect the environment while growing food for the nation. UF/IFAS will develop an artificial intelligence (AI) database on nutrient recommendations to update recommendations for current and future crops.

5. State Agency to receive requested funds
Department of Agriculture and Consumer Services

State Agency contacted?  No

6. Amount of the Nonrecurring Request for Fiscal Year 2021-2022

<table>
<thead>
<tr>
<th>Type of Funding</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>3,363,688</td>
</tr>
<tr>
<td>Fixed Capital Outlay</td>
<td>0</td>
</tr>
<tr>
<td>Total State Funds Requested</td>
<td>3,363,688</td>
</tr>
</tbody>
</table>

7. Total Project Cost for Fiscal Year 2021-2022 (including matching funds available for this project)

<table>
<thead>
<tr>
<th>Type of Funding</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total State Funds Requested from question #6</td>
<td>3,363,688</td>
<td>96%</td>
</tr>
<tr>
<td>Matching Funds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>State (excluding the amount of this request)</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Local</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>147,000</td>
<td>4%</td>
</tr>
<tr>
<td>Total Project Costs for Fiscal Year 2021-2022</td>
<td>3,510,688</td>
<td>100%</td>
</tr>
</tbody>
</table>

8. Has this project previously received state funding?  No

9. Is future funding likely to be requested?  Yes

   a. If yes, indicate nonrecurring amount per year.  2,965,288

   b. Describe the source of funding that can be used in lieu of state funding.

   None

10. Has the entity requesting this project received any federal assistance related to the COVID-19 pandemic?  Yes
11. Details on how the requested state funds will be expended

<table>
<thead>
<tr>
<th>Spending Category</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Administrative Costs:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive Director/Project Head Salary and Benefits</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Other Salary and Benefits</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Expense/Equipment/Travel/Supplies/Other</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Consultants/Contracted Services/Study</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>Operational Costs: Other</strong></td>
<td>Four Support Teams in Four Regions made up of a Res Ast Scientist, 2 BioScietist II, 2 OPS/region, 2 student envoys, X 4 regions. One Economics Post-doctoral Associate AI Post-doctoral Associate</td>
<td>1,384,688</td>
</tr>
<tr>
<td>Expense/Equipment/Travel/Supplies/Other</td>
<td>Soil samples, soil analysis, sequential analyses, tissue analyses, sample shipping, field supplies, Lab supplies, Field equipment, Travel, Ufarm fees,</td>
<td>1,979,000</td>
</tr>
<tr>
<td>Consultants/Contracted Services/Study</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>Fixed Capital Construction/Major Renovation:</strong></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Construction/Renovation/Land/Planning Engineering</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td><strong>Total State Funds Requested (must equal total from question #6)</strong></td>
<td></td>
<td>3,363,688</td>
</tr>
</tbody>
</table>

12. Program Performance

a. What specific purpose or goal will be achieved by the funds requested?

Due to requirements of recently passed legislation, there is a pressing need to assess, update and validate, recommended fertilizer application rates and application practices for the agriculture industry, while balancing the needs of producers and environmental impacts.

b. What activities and services will be provided to meet the intended purpose of these funds?

Initiation of a network of data sources evaluating crop nutrient needs, including traditional academic research plots, on-farm trials utilizing cooperative growers willing to share their data, and compilation of all available public data sources (e.g., FDACS, WMDs, NRCS) regarding nutrient applications (including data from previous research, state and federal agency sources, and grower data). Using Artificial Intelligence (AI), these data sources will be used to build a database that can be continually updated and utilized to provide optimized crop nutrient recommendations and develop recommendations for new crops.

c. What direct services will be provided to citizens by the appropriation project?

More efficient food production and reduced impact to water quality and the environment.

d. Who is the target population served by this project? How many individuals are expected to be served?

Initially, farmers in the areas located in and around Gadsden, Live Oak, Hastings, Plant City and Immokalee will benefit from this research. Eventually, the project will expand their findings to benefit agriculture around the state.

e. What is the expected benefit or outcome of this project? What is the methodology by which this outcome will
be measured?

More accurate nutrient rates will enable agriculture producers to become more efficient in fertilizer use reducing impacts to the state’s environment and water quality. The success will be measured by the reduced nutrient runoff from agriculture operations.

f. What are the suggested penalties that the contracting agency may consider in addition to its standard penalties for failing to meet deliverables or performance measures provided for the contract?

Standard penalties.

13. The owners of the facility to receive, directly or indirectly, any fixed capital outlay funding. Include the relationship between the owners of the facility and the entity.

None
14. Requestor Contact Information
a. First Name  
Scott  

b. Organization  
University of Florida Institute of Food and Agricultural UF/IFAS  

c. E-mail Address  
jangle@ufl.edu  

d. Phone Number  
(850)270-4010 "Ext."  

15. Recipient Contact Information
a. Organization  
University of Florida Institute of Food and Agricultural UF/IFAS  

b. Municipality and County  
Alachua  

c. Organization Type  

☐ For Profit Entity  

☐ Non Profit 501(c)(3)  

☐ Non Profit 501(c)(4)  

☐ Local Entity  

☐ University or College  

☐ Other (please specify)  

d. First Name  
Scott  

Last Name  
Angle  

e. E-mail Address  
jangle@ufl.edu  
f. Phone Number  
(850)270-4010  

16. Lobbyist Contact Information
a. Name  
Mary Ann Hooks  

b. Firm Name  


c. E-mail Address  
mgsa@ufl.edu  

d. Phone Number  
(850)681-0000  

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