The primary responsibility of this position is the development and phenotypic analysis of photorespiratory bypass crops, potato, soybean and tobacco to identify plants with superior photosynthetic performance. In addition to study the sink-source relationship in cassava by the use of physiological, molecular, and phenotyping techniques. The develop of new techniques to monitor roots in the field is part of this position.

**MAJOR DUTIES AND RESPONSIBILITIES:**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>Design and implement replicated greenhouse and field experiments with transgenic lines to identify the best genes leading to optimization of photosynthetic efficiency through bypassing photorespiration.</td>
</tr>
<tr>
<td>15%</td>
<td>Perform a molecular study of the differences in cassava plants grown under elevated CO2 compared to ambient to identified new targets of study for genetic improvement.</td>
</tr>
<tr>
<td>15%</td>
<td>Perform a study that evaluates the application of the ground penetrating radar and other techniques for the phenotyping of roots in the field.</td>
</tr>
<tr>
<td>10%</td>
<td>Perform molecular genotyping of transformed lines using PCR, ddPCR, and Western blotting.</td>
</tr>
<tr>
<td>10%</td>
<td>Perform biochemical and physiological phenotyping using gas exchange, chlorophyll fluorescence and hyperspectral techniques.</td>
</tr>
<tr>
<td>10%</td>
<td>Investigate the relative growth rate of transgenic lines using high throughput phenotyping plant imaging systems.</td>
</tr>
<tr>
<td>10%</td>
<td>Communicate research progress and results to project team members and external stakeholders including publishing Publish peer reviewed publications to disseminate scientific findings as well presenting the results at scientific conferences and project meetings.</td>
</tr>
<tr>
<td>5%</td>
<td>Propagate plants from tissue culture for field trials. Maintain the collection of cassava plants.</td>
</tr>
<tr>
<td>5%</td>
<td>Maintain detailed and organized records of project data and other materials.</td>
</tr>
<tr>
<td>5%</td>
<td>Recruit, select, and supervise graduate students, academic hourly workers, and undergraduate students assisting with research activities including providing orientation and training, determining task assignments, managing performance, including evaluation and providing coaching and mentoring of independent study.</td>
</tr>
</tbody>
</table>
POSITION REQUIREMENTS AND QUALIFICATIONS:

Education:

- **Required**: PhD, Plant Science or other Biological Sciences
- **Preferred**: PhD, Photosynthesis, Plant Physiology, Plant Biology or similar fields

Experience:

- **Required**:
  - Photosynthesis research and plant physiology.
  - Biochemical and physiological phenotyping using gas exchange fluorescence and spectroscopy and root phenotyping techniques.
  - Molecular genotyping using PCR, ddPCR, and Western blotting.
  - High throughput phenotyping of photosynthetic traits.

- **Preferred**:
  - Big data handling and image analysis.
  - Designing and conducting replicated greenhouse and field experiments.
  - Training and management of graduate students or hourly undergraduate worker.
  - Previous experience using ground penetrating radar.
  - Demonstrated success in the publication of high-impact work in recognized peer-reviewed journals.
  - Substantial post-doctoral experience in photosynthetic crop research.

Training, Licenses or Certifications Required:

- **Required**: Biosafety Training
- **Preferred**: Radiation Safety Training

Knowledge, Skills, and Abilities:

- **Required**: Extensive knowledge of plant photosynthesis and biochemistry and root phenotyping, strong oral and written communication skills, ability to work in a complex and challenging environment both autonomously and collaboratively as part of a team, critical thinker and problem solver with a demonstrated ability to efficiently execute project tasks.

- **Preferred**: Statistical analysis of large datasets.

- **Environmental Demands**: Work in a laboratory setting and conducting field trials.

Salary: Commensurate with experience and qualifications

Appointment Status: Full-time academic professional, grant-supported appointment renewable annually pending continued funding and satisfactory progress within the position. Qualified
individuals will be eligible to receive vacation, sick, and personal leave; retirement through the State Universities Retirement System; and group health, dental, vision and life insurance.

**Start Date:** As soon as possible after the close date.

**TO APPLY:** Applications must be received by June 18, 2021. To apply, all candidates must submit an online profile through https://jobs.illinois.edu by the close of the posting period. Interviews may be conducted prior to the closing date; however, a hiring decision will not be made until after the closing date. Qualified candidates must upload a letter of which details qualifications noted above, resume and the names and contact information of three professional references. All requested information must be submitted for your application to be considered. Incomplete applications will not be reviewed. For further information about this specific position, Jacinda King (jkking@illinois.edu). For questions about the application process, please contact 217-333-2137.

The University of Illinois conducts criminal background checks on all job candidates upon acceptance of a contingent offer. The University of Illinois System requires candidates selected for hire to disclose any documented finding of sexual misconduct or sexual harassment and to authorize inquiries to current and former employers regarding findings of sexual misconduct or sexual harassment. For more information, visit Policy on Consideration of Sexual Misconduct in Prior Employment. As a qualifying federal contractor, the University of Illinois System uses E-Verify to verify employment eligibility.