JOB DESCRIPTION

Vacancy Ref: A2674-R

<table>
<thead>
<tr>
<th>Job Title:</th>
<th>Research Associate in Crop Resource Use Efficiency</th>
<th>Present Grade: 6</th>
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<tbody>
<tr>
<td>Department/College:</td>
<td>Plant &amp; Crop Sciences, Lancaster Environment Centre (LEC)</td>
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<td>Directly responsible to:</td>
<td>Prof. Ian Dodd &amp; Prof. Mariana Rufino</td>
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<td>Supervisory responsibility for:</td>
<td>PhD and Masters students working in WP3 of the RECIRCULATE project</td>
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Other contacts

Internal:
Research staff and PhD students within the Plant Water Stress and Soil & Land Systems Research Groups

External:
Collaborating scientists within the GCRF-funded RECIRCULATE project, including staff & students of LEC and CSIR (Ghana)

Major Duties:

You will conduct glasshouse and field experiments within the context of WorkPackage 3 (Water & Food) of the GCRF-funded RECIRCULATE project, aimed at evaluating physiological mechanisms determining interactions between crop water and nutrient status. Field work will apply different crop management techniques including deficit irrigation and (organic) soil amendments to rice and tomato crops. Opportunities exist for short research visits at partner institutions within the RECIRCULATE project.

Execution of controlled environment-, glasshouse- and field-based experiments. Project will require work at Lancaster, to support the development of crop management (irrigation and fertilisation) techniques suitable for application in Ghana and other African countries.

Routine measurements of plant performance such as gas exchange and growth analysis, canopy temperature measurements, leaf water relations and xylem sap collection, and assessing soil water status. Experience in measuring greenhouse (GHG) gas soil and plant fluxes under field and/or lab conditions. Plant nutrient and agronomic (crop yields and components) measurements of harvested products.

Experience with the installation / troubleshooting of automated irrigation systems; development of irrigation scheduling techniques in consultation with field-based staff and quantifying irrigation volumes will be considered an additional asset. Training of field-based staff in implementing these techniques.

Writing and publication of scientific papers and trade press articles

Presentation of experimental data at RECIRCULATE consortium meetings and appropriate national/ international conferences.

Liaison with departmental technical staff

Assisting undergraduate project, Masters and PhD students