Job Title

Postdoctoral Research Associate in Crop-Climate Modelling

Position Description

A Postdoctoral Research Associate position is available in the Department of Plant and Soil Sciences at Texas Tech University (Lubbock, TX). The research focus is on crop-climate modelling, aimed at identifying and classifying target population of environments based on soil and climatic parameters. This position requires understanding of crop physiology, as it deals with identifying key trait combinations that will help increase climatic yield potential and tolerance to abiotic stresses in grain crops, with a primary focus on grain sorghum. The position requires integration of IPCC based climatic scenarios, identify sorghum ideotypes (or trait combinations) that would be sustainable under future climatic conditions and ascertain the dynamic changes in the Southern High Plains cropping systems based on historical and future climate.

This is a three-year position with an available start date of September 1, 2021; however, the start date can be flexible. Applicants must utilize the Texas Tech University job portal to apply. Inquiries can be sent to Dr. Krishna Jagadish (kjagadish.sv@ttu.edu). Please use "Postdoc position for Crop-Climate Modelling" in the subject line.

Major/Essential Functions

The selected candidate will be responsible for assembling extensive soil and climatic information from a wide range of publicly available sources (including satellite-based images) and develop tools to integrate crop traits that would allow for increased yield and stress tolerance depending on target locations. In addition, performing data analysis using historical and future climatic conditions, drafting peer-reviewed scientific publications, and actively contributing to developing proposals are other key considerations.

Required Qualifications

A Ph.D. in agronomy or crop physiology, with a major proportion of the PhD dealing with crop-climate modelling. The selected candidate should have a strong background in crop modelling and positioned to independently operate, test, validate model outputs, identify gaps and improve prediction accuracy by integrating new datasets generated to address identified gaps. The candidate should have the desire to address challenging hypothesis related to crop-climate modelling and willing to work across different disciplines to address ground-based complex problems by developing solutions through modelling. Should have a strong intention to publish in highly reputed peer-reviewed journals, develop proposals, and be willing to apply some of the modelling techniques on others aspects that the graduate students or researchers are working in the team.

The candidate must be able to establish and maintain positive and effective working relationships with other team members, faculty at TTU and collaborators from other universities. The candidate must be willing to work in a multi-cultural atmosphere, ready to operate as a team including field work during peak summer months and open to mentoring graduate students and visiting scholars on operation of crop and climate models in crop science.

Preferred Qualifications

Having extensive hands-on experience and first author publications in dealing with major crop models, including but not restricted to APSIM, DSSAT or others will be preferred. Have demonstrated through publications in reputed peer-reviewed journals, candidates with the ability to integrate historical climatic conditions to ascertain crop performance under future climatic scenarios such as water-deficit and/or heat stress will be highly preferred.

Does this position work in a research laboratory?

Yes. In addition, the candidate is expected to carry out field experiments to support model outputs

Special Instructions to Applications

Applicants must utilize the Texas Tech University job portal to apply.

Required attachments

- Cover letter
- CV
- Research statement
- Unofficial transcripts from BS, MS, and/or PhD degrees
- Contact information for three professional references

Note – Applications without a research statement will not be considered in the evaluation process

Job Type

Full Time

Pay Basis

Monthly

Pay statement

Compensation is commensurate upon the qualifications of the individual selected and budgetary guidelines of the hiring department, as well as, the institutional pay plan. For additional information, please reference the institutional pay plan on the Human Resources webpage.

Travel Required

Up to 25%

Shift

Day

Grant Funded?

Yes

EEO Statement

As an EEO/AA employer, the Texas Tech University System and its components will not discriminate in our employment practices based on an applicant's race, ethnicity, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, genetic information or status as a protected veteran.