

## **Postdoctoral Scientist – Landscape genomics and crop adaptation**

### **Introduction**

The World Vegetable Center (WorldVeg) is a non-profit, autonomous international agricultural research center with headquarters in Taiwan and regional offices in Africa and Asia. WorldVeg conducts research and development that contribute to realizing the potential of vegetables for healthier lives and more resilient livelihoods. The Center implements its science for development agenda through three outcome-oriented 'flagship programs': Safe and Sustainable Value Chains, Healthy Diets, and Vegetable Diversity and Improvement, and one cross-cutting flagship program: Enabling Impact. For more information, please visit our [website](#).

WorldVeg holds the world's largest collection of vegetable germplasm in the public domain. The Center has vegetable breeding programs in Asia and Africa, has strong connections to the seed sector, and is well-placed to develop improved cultivars with traits for tolerance to biotic and abiotic stresses, enhanced shelf life, improved nutrient content and quality. The Center is currently modernizing its research infrastructure and is strengthening its collaborations with advanced research institutions and universities.

### **Job description**

WorldVeg seeks to employ a Postdoctoral Scientist – Landscape genomics and crop adaptation.

High-throughput generation of genomic data linked to increased availability of environmental data, provides unprecedented opportunities to get insights in crop adaptation and domestication. These insights will improve the understanding of the genetic structure of plant populations and genebank collections and the adaptation of vegetable crops and their wild relatives to specific environmental conditions.

The person will carry out research to reveal geographic patterns of genomic variation of vegetable crops and to identify genomic regions implicated with crop adaptation to environmental factors such as heat, drought, flooding, or salinity. This research will help to understand the interactions between crop genomes, the landscape, and human selection.

The research will be carried in the context of the Taiwan Africa Vegetable Initiative (TAVI) and the open science agenda of the World Vegetable Center. TAVI will explore, collect endangered vegetable landraces and wild relatives in the identified hotspots in Africa, genotype and develop adaptation strategies to address malnutrition and climate change in the continent.

The Postdoctoral Scientist will be based at WorldVeg headquarters in Shanhua, Tainan, Taiwan and report to the Genebank Manager of WorldVeg.

### **Key job responsibilities**

- Compile genomic, environmental data and geographic information of the selected vegetable crops.
- Apply and develop landscape genomics analysis to understand geographic patterns of crop diversity, dispersion, adaptation and domestication of selected vegetable crops and their wild relatives.
- Develop and apply models to identify genomic adaptation patterns to specific environmental factors of selected vegetable crops.
- Participate in a yearly capacity building event in Southern Africa to train partners and students in genomic and phenotypic diversity analysis of African vegetables.
- Publish research results in peer-reviewed journals.
- Contribute to concept notes, proposals and project reports in collaboration with internal and external partners.
- Perform any other duties as required by the needs of the Center and as directed by the supervisor.

## **Skills and requirements**

Candidates must have a PhD degree in computational biology, population genetics, molecular ecology or a related field and have strong skills in statistics and use of geographic information systems, R-programming and scientific writing. The person must have strong communication skills in spoken and written English. The candidate must be able to work with multidisciplinary teams in a multicultural and multinational environment.

## **The Reward**

This is an Internationally Recruited Staff (IRS) position with a competitive pay and benefits. The initial appointment is for 2 years with a possibility of an extension for one more year, depending on funding and need for the position.

## **How to Apply**

Applicants should submit a letter of application explaining their suitability for and interest in the position along with a curriculum vitae, names and addresses (including telephone/ e-mail) of three referees, and date of availability to [human.resources@worldveg.org](mailto:human.resources@worldveg.org) before the 28<sup>th</sup> of March 2021. Please mention the position title in the subject line.