

The Leibniz Institute for Horticultural Sciences (IGZ) strives for excellence in horticultural research and related plant, environmental, and social sciences. Based in Großbeeren, close to Potsdam and Berlin, IGZ is a member of the Leibniz Association (WGL). Our mission is to provide science-based solutions that address four challenges currently threatening horticultural systems: climate change, biodiversity and pesticide reduction, healthy nutrition and food quality, and resource-efficient agricultural and food systems. Our scientific expertise covers the entire spectrum, from molecular plant physiology and biochemistry to human nutrition, food security, and horticultural production systems, thereby covering the full range from fundamental to applied research.

To contribute to the target of resource optimization in controlled environment crop production, the research group 'CEA-Controlled Environment Horticultural Systems', we look for an enthusiastic and ambitious

Scientist (f,m,d) in the area Resource-Efficient Controlled Environment Horticulture
Reference Number: 12/2026/4

Employment will be initially for three years with a three-year extension upon a satisfactory evaluation after 2.5 years according to the IGZ criteria for postdoctoral careers. The salary will be based on qualifications and research experience in accordance with the collective agreement TV-L, up to pay scale 13, and covers 100% of the regular working time. The position is suitable for part-time employment with a minimum of 32 hours per week.

The scientist will be part of the research group CEA. The group develops sensor- and model-based approaches for monitoring, decision support and optimisation of resource-efficient crop production in greenhouses, indoor farms and other controlled environment systems. Research activities of the group focus on the integration of crop physiology, environmental monitoring, sensor technologies, process-based modelling, artificial intelligence and Digital Twin concepts to improve productivity, sustainability and resource-use efficiency (RUE).

The successful candidate is expected to establish an independent research profile aligned with the research strategy of the group in resource-efficient controlled environment agriculture. The research should focus on the integration of plant experimentation, crop physiology, environmental control, sensor technologies, and process-based approaches to improve the productivity, sustainability and resource-use efficiency of horticultural production systems. Research activities may include greenhouse and controlled-environment experiments, crop monitoring and phenotyping, environmental sensing, process-based modelling, data analysis, and the development of innovative approaches for resource-efficient crop production. Active scientific publishing, acquisition of competitive research funding, and participation in national and international research collaborations are expected.

Tasks include

- building an independent research portfolio aligned with the research strategy of the group
- designing and conducting experiments in controlled environment horticulture using advanced sensors and imaging
- investigating plant responses to environmental conditions and resource management in CEA
- developing and applying process-based approaches for analysing, predicting and optimising crop performance and RUE
- integrating experimental, physiological and environmental data for improved understanding of crop production systems
- analysing and interpreting crop, environmental and production system data
- scientific publication in international peer-reviewed journals
- acquisition of national and international third-party funding
- supervision of Bachelor, Master and PhD students
- contribution to the scientific coordination and strategic development of the research group

We are looking for candidates with

- a PhD in horticultural sciences, controlled environment agriculture, plant physiology, biosystems engineering, agricultural engineering, environmental engineering, or a related discipline
- strong interest in sustainable and resource-efficient controlled environment horticultural production systems
- demonstrated ability to conduct independent scientific research
- experience in designing and conducting experiments under controlled environmental conditions
- experience with process-based modelling and scientific programming (preferably MATLAB); familiarity with sensor technologies is an advantage
- excellent communication skills in English, both written and oral
- ability to work independently as well as within interdisciplinary teams
- motivation to acquire competitive national and international research funding
- readiness to contribute to an international and collaborative research environment

We offer

- an inspiring and interdisciplinary research environment at one of Europe's leading horticultural research institutes
- the opportunity to develop an independent research profile in resource-efficient Controlled Environment Agriculture, with a focus on sustainable horticultural production systems, crop physiology, environmental control, and innovative production
- access to state-of-the-art research infrastructure, including greenhouses, fully climate controlled plant production chambers, and advanced sensor technologies
- strong support for scientific career development, publication activities and acquisition of third-party funding
- participation in national and international research projects and scientific networks
- flexible and family-friendly working time models and the possibility of mobile working (up to 50% of working time)
- VBL Ost company pension scheme for public sector employees, as well as a collectively agreed annual bonus and 30 days' vacation per year

More information on about the IGZ you can find under www.igzev.de. For questions, please contact: Dr. Oliver Körner (++49(0)33701 78 355; koerner@igzev.de)

We encourage a healthy work-life balance. The IGZ attaches great importance to equal opportunities. Applicants with disabilities will be given preference in case of equal qualifications. The IGZ embraces diversity in its workforce, and welcomes applications from all qualified candidates, irrespective of age, gender, sexual orientation, religion, belief or ethnic origin.

Please submit a cover letter outlining your motivation and research interests, a detailed CV including a list of publications, copies of your academic certificates, up to three representative publications, a max. 2-page research statement describing your planned research programme and its alignment with the research strategy of the group, and the contact details of two references.

We prefer to receive applications citing the reference number send by e-mail to bewerbung@igzev.de in pdf format by 30.09.2026. Our postal address is: Personalbüro, Leibniz Institute for Horticultural Sciences, Theodor-Echtermeyer-Weg 1, D-14979 Großbeeren.