



2021-IPR-D5-FGIV-019529

FG IV – Scientific Project Officer – Crop Growth Modelling and Yield Forecasting

POSITION FOR:

Member of the contract staff FG IV – art. 3b of the Conditions of Employment of Other Servants
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1962R0031:20110101:EN:PDF>

WE ARE:

As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: <https://ec.europa.eu/jrc/>.

The current vacancy is in the Directorate for Sustainable Resources. Its mission is to provide independent scientific evidence to support the development, implementation, evaluation and coherence of EU policies, mainly in the areas of agriculture and rural development, development cooperation, environment and climate change, blue growth and fisheries, the bio economy, industry and trade.

The vacancy is within the Food Security Unit, which contributes to the scientific development towards a more effective and efficient management of EU policies related to agriculture and food security.

WE PROPOSE:

The current position is related to agricultural crop monitoring and yield forecasting, and assessing the impacts of varying weather, extreme events, and agricultural practice on crop yields and production through advanced crop growth modelling. The incumbent will be part of a dynamic team of about 25 professionals, including agronomists, meteorologists, remote sensing specialists, and IT experts.

The successful candidate will contribute to research and further development of our MARS Crop Yield Forecasting System with focus on crop growth modelling aspects, including ensemble crop growth modelling, artificial intelligence, and other novel methodologies to improve accuracy and lead time of crop yield forecasts. The work includes the evaluation of agro-management options and impacts of pests and diseases on crop yields and production through advanced crop growth modelling methods.

The position will also act as agricultural analyst, performing analysis of growing conditions and quantitative crop yield forecasts, thus contributing to the publication of the monthly JRC MARS Bulletin for Europe and its neighbourhood along the growing season.

The post will involve work with national and international stakeholders as well as the international research community to share agronomic and biophysical knowledge and data and run relevant research programmes in the field.

The successful candidate will be in charge of:

- Contributing to the monthly JRC MARS Bulletins on crop monitoring in Europe;
- Performing R&D in crop growth modelling to improve the understanding of yield-reducing factors (e.g. excessive wetness, extreme temperatures, pests, diseases) and their simulation within the crop modelling infrastructure of the MARS Crop Yield Forecasting System;
- Researching ensemble crop growth modelling to enhance the accuracy of crop model results and reduce uncertainty in the context of crop yield forecasting;
- Dissemination/publication of the results.

WE LOOK FOR:

The ideal candidate should have completed university studies of at least 3 years attested by a diploma in agronomy, agro-meteorology, environmental sciences or a closely related discipline, and at least 5 years professional experience in a field relevant to the position, or a doctoral diploma in agronomy, biophysical modelling or a closely related field.

Essential requirements are:

- Very good understanding of biophysical and crop growth processes as well as agro-meteorological knowledge;
- Hands-on experience in running and modifying crop models as well as analysing their results;
- Proficient handling of large agronomic datasets, including profound statistical knowledge to analyse them;
- Proven experience with scientific programming languages (e.g. R, Python);
- Good communication and writing skills and the ability to work independently;
- Knowledge of English (B2).

Knowledge and experience in artificial intelligence methods (e.g. machine learning, neural networks, deep learning), cloud computing, and large-scale (regional to continental) applications are considered strong advantages. An understanding of the role of crop monitoring in the EU Common Agricultural Policy is desirable.

INDICATIVE CONTRACT'S DURATION:

36 months initial contract with possible renewals up to maximum 6 years.

PLACE OF WORK:

Ispra (IT)

ELIGIBILITY CRITERIA:

Candidates for this contract agent post shall:

- (i) have passed a valid EPSO CAST selection procedure;
- or
- (ii) be registered in the EPSO Permanent CAST https://epso.europa.eu/documents/2240_en
- or
- (iii) be registered in the specialised call for researchers <https://ec.europa.eu/jrc/en/working-with-us/jobs/vacancies/function-group-iv-researchers> (used mainly by the JRC).

With a valid application number to one of the above, you may then apply for this specific vacancy at JRC through: <http://recruitment.jrc.ec.europa.eu/?type=AX>.

RECRUITMENT POLICY:

The JRC

- Cultivates a workplace based on respect for other people and the environment.
- Embraces non-discriminatory practices and equality of opportunity. In case of equal merit, preference will be given to the gender in minority.