Among other duties (Act 4/2009), IRTA is responsible for organising scientific and technical training programmes within the scope of its strategy, alone or in collaboration with other entities and bodies, in particular with Catalan universities, professional agricultural organisations and sector groups or associations.

Given that within the framework of the research activities of the IRTA (Area Plant Production, IRTA Fruitcentre - Lleida) there exists a specific budget provision, a decision have been taken to train researchers in the program of Water use efficiency in agriculture.

As a result, it has been agreed:

1. To offer a PhD Student contract Sponsored Fellowship to participate in the project "Managing water resources within Mediterranean agrosystems by accounting for spatia structures and connectivities".

2. To approve the terms of employment attached as a schedule.

3. To manage this offer and to resolve any disputes which might arise, and administering the resources allocated.

Caldes de Montbui (Barcelona), December 3rd 2019

Mrs. Montserrat Satorra
Human Resources Manager - IRTA

The IRTA is a pioneeering agriculture and food research institute in Catalonia, founded on 1985, with a tear of over 600 personas performing its activities with the clear vocation of a public service. It has 10 work centres of its own on locations.
1. **Scope of application**

The specific scope is:

Research into: "Managing water resources within Mediterranean agrosystems by accounting for spatial structures and connectivities".

This PhD deals with the use of energy balance models to estimate crop evapotranspiration in different heterogeneous crops. Particularly, the PhD will help to develop innovative tools for observation and numerical representation of tree spatial structures and connectivities using 3D radiative transfer models and photogrammetry.

The TSEB model will be used to estimate actual crop evapotranspiration and water status in orchards with different spacing distances and orientations using both airborne and Sentinel 2 and 3 imagery. Then, eddy-covariance data will be used to validate the results.

**Tutor:** Dr. Joaquim Bellvert (Efficient use of water in agriculture)

**Place where the PhD Student contract will be carried out:** IRTA-Fruitcentre (Lleida)

2. **Requisites for applicants**

The fellowship may be requested by candidates meeting the following requisites:

2.1. Candidates must hold one of the following degrees: Engineering or Physics Degree.


2.3. Candidates must provide documentary proof of having been admitted onto a doctorate programme regulated under the Spanish Royal Decree 778/1993, of 30 April, or a doctorate regulated under the Spanish Royal Decree 1393/2007 of 29


October, or provide a signed letter declaring their undertaking to register on a
doctorate programme within the Catalan university system.

2.4. Any prior experience in matters of crop evapotranspiration and agronomy is an
asset, good numerical skills and literacy in programming the Language Python will
be viewed positively. A good standard of written and spoken English is required.
Finally, to have availability to do a secondment in UCAM (Marrakesh) for few
months in the framework of the ACCWA project.

2.5. Candidates who have been chosen for an interview with the Selection
Committee, should bring -for the interview- a certified copy of the degree and/or
master, as well as the academic record showing the marks of all subjects studied.

2.6. Foreign candidates who have been chosen for an interview with the Selection
Committee should bring -for the interview- a certified copy and certified translation
of the degree and/or master obtained at a foreign university, as well as an academic
record showing the marks of all subjects studied.

3. Duration

Notwithstanding the provisions of Point Nine of this offer, IRTA will subscribe with
training research staff holding the Master’s a temporary employment agreement
linked to a specific service by virtue of which the researcher will be employed by the
IRTA, with both parties assuming the contractual obligations arising therefrom and
which, in any case, will be in line with the content of the application.

The duration of the PhD Student contract will be for one year, extendible by yearly
periods, subject to the issuance by the doctoral candidate of the report
corresponding to the yearly period completed. Under no circumstances may the
accumulated duration of the initial PhD Student contract plus the extensions exceed
four (4) years.

4. Suspension of the PhD Student contract

The suspension of the PhD Student contract on the grounds established under
articles 45 of seq. of the Workers’ Statute will not imply any extension to the
duration of the PhD Student contract except for situations of temporary incapacity,
risk during pregnancy, maternity, adoption or fostering, risk while breastfeeding and
paternity during the duration of the PhD Student contract, which will interrupt the
calculation, pursuant to the provisions of Article 11.1.b) of the Consolidated Text of
the Workers’ Statute Act.

5. Financial remuneration

The financial remuneration for the PhD Student contract will be €1,212.15/gross per
month (€16,970.05/gross per annum) for the first and second years. For this third year, it will be €1,298.72/gross per month (€18,182.19/gross per annum) and for the fourth year it will be €1,623.41/gross per month (€22,727.75/gross per annum) which will be subject to the corresponding withholdings, pursuant to prevailing regulations, and to the collective employment agreement of IRTA.

6. Applications

7. Application period

The period for submitting applications opens as of the date of the offer and ends on January 1st, 2020.

8. Assessment and selection

The selecting of candidates will be carried out by an ad hoc committee consisting of the Head of the Efficient use of water in agriculture and two researchers (level D or higher) appointed by him/her.

9. Acceptance of pre-doctoral contract and payment

When accepted, the applicant must sign a document undertaking to comply with all the conditions of the pre-doctoral contract established in these terms, and in particular, with the following:

(a) To join the centre within one month of notification and to have exclusive dedication to the training programme proposed, in accordance with the internal rules of the centre. Failure to join could be considered to be a waiver of the right to financial aid.

(b) To present to the tutor appointed by the IRTA and HR, each year, 30 days before the renewal date of the agreement, a report on the work carried out to date in accordance with the model to be provided by the HR Department.

(c) To send to the tutor appointed by the IRTA a copy of any publications, articles and studies which might arise from the training programme carried out and the results obtained.

(d) To refer, in any written production arising from the training programme carried out, to the present pre-doctoral grant.

The non-fulfilment of any of the conditions of these terms without justification may imply the revocation of the PhD Student contract.

10. Assessment and continuity of the PhD Student contract

Based on the report drawn up by the interested party (mentioned in Point 9 (b) of this offer), the tutor(s) must prepare therein a report based on the tasks performed by the doctoral candidate and recommend the continuity or revocation of the PhD Student contract for the forthcoming yearly period. In the event of a negative assessment, grounds must be given.
To proceed with the continuity of the contract it will be necessary as well to present a copy of the registration to a pertinent PhD course and the corresponding evaluation report from the Academic Committee of the PhD program or from the PhD School.

11. Intellectual property

The IRTA is exclusive holder of the intellectual and industrial property rights which might arise as a result of the activity carried out by the candidate or technologist during the training programme, notwithstanding recognition of authorship when necessary.

The publicising of any information obtained by the candidate in the form of scientific or informative articles, presentations for meetings and conferences or any other means or format may be carried out where necessary at the initiative and with the consent of the director(s) assigned by the IRTA to each of them.

12. Incompatibilities

This PhD Student contract will be incompatible with any other activity related to the research and training purpose of the same.

13. Waiver of the PhD Student contract

In the event the beneficiary should waive their right to the PhD Student contract, they must provide IRTA with a report on the tasks performed up to the time of their experimental waiver, notwithstanding the prior notice established by legal regulations. All data obtained during the training programme will be returned to IRTA.

14. Confidentiality undertaking

The beneficiary of this contract agrees to keep any data or information to which it might have access as a result of their relationship with IRTA strictly confidential, whatever the form of access to such data or information and the format in which they appear, it being totally prohibited to make copies without prior consent.

The access to and processing of data of a personal nature as a result of the relationship established with the IRTA will be carried out in accordance with the purposes established in the agreement, with the duty of secrecy continuing even after such relationship has concluded.
15. Data protection

Any data provided by candidates will be recorded in a file of IRTA in order to manage the process.

Pursuant to the provisions of the Spanish Organic Law 15/1999, of 13 December, on the protection of data of a personal nature, any interested parties may exercise their rights to and rectification before the Human Resource Department of the IRTA.

<table>
<thead>
<tr>
<th>TIMING PHD STUDENT CONTRACT:</th>
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<tbody>
<tr>
<td>Deadline: April 8th, 2019</td>
<td>Process</td>
</tr>
<tr>
<td>December 3rd, 2019</td>
<td>Publication and diffusion of the job advertisement on IRTA’s website, EURAXESS Jobs, social networks and other specific recruitment places.</td>
</tr>
<tr>
<td>January 7th, 2020</td>
<td>To send, for its study, the pre-selected CV which match eligibility criteria to the Selection Committee. To send an automated e-mail for those who have not been pre-selected and cannot continue the process.</td>
</tr>
</tbody>
</table>
| January 9th, 2020             | Selection Committee: 
|                               | . Interview with preselected candidates. 
|                               | . To send an e-mail for those who have not been selected by the Selection Committee. 
|                               | . Committee Selection Agreement with the selected candidate, giving reasons for the rest to be excluded. 
|                               | . Notification by e-mail to the candidates who have been interviewed but not selected. |
| January 10th, 2020            | To send to HR all the needed official documentation in order to make the work contract and co-ordination for establishing the start of the employment. |
| January 17th, 2020            | Start of employment. |

(1) The financial remuneration of the PhD Student contract may not be less than 56% of the salary established for the category of Research Collaborator F of the Collective Agreement of the IRTA during the first two years, 60% in the third year and 75% in the fourth (Act 14/2011 of 1 June).