Research Agreement
(SSIF Funding)(B3 Collaboration)

Schedule

<table>
<thead>
<tr>
<th>The New Zealand Institute for Plant and Food Research Limited a Crown Research Institute established under the Crown Research Institutes Act 1992 (&quot;PFR&quot;)</th>
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<tbody>
<tr>
<td><strong>Universidad Nacional de Colombia, The Faculty of Agricultural Sciences, Bogotá (UNIVERSIDAD NACIONAL DE COLOMBIA) (Research Provider)</strong></td>
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<tr>
<td><strong>PFR Contact:</strong> Mark Bullians</td>
</tr>
<tr>
<td><strong>Physical Address:</strong> 120 Mt Albert Road, Sandringham, Auckland 1025, New Zealand</td>
</tr>
<tr>
<td><strong>Postal Address:</strong> Private Bag 92169, Auckland Mail Centre, Auckland 1142, New Zealand</td>
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<tr>
<th>UNIVERSIDAD NACIONAL DE COLOMBIA DETAILS: Professor Elena Brochero</th>
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<tr>
<td><strong>Research Provider Contact:</strong> Elena Brochero</td>
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<tr>
<td><strong>Physical Address:</strong> Carrera 30 # 45 - 03, Edificio 500, Oficina 210, campus Bogotá D.C., Colombia, South America</td>
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<td><strong>Fax:</strong></td>
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<tr>
<td><strong>Postal Address:</strong> Carrera 30 # 45 - 03, Edificio 500, Oficina 210, campus Bogotá D.C., Colombia, South America (111321)</td>
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PFR and the Universidad Nacional de Colombia wish to enter into an Agreement to work together to better understand the opportunities for mass trapping thrips (Thysanoptera).

This agreement records the terms and conditions that will apply to PFR and and the Universidad Nacional de Colombia to undertake this work.

**PROJECT DETAILS**

The aim of the project is to better understand the opportunities for mass trapping thrips (Thysanoptera) in protected cropping by means of review of international literature and industry best practice. This work will be carried out by Andres Ricardo Peraza Arias as part of his PhD project at the UNIVERSIDAD NACIONAL DE COLOMBIA under supervision of Prof. Elena Brochero (UNIVERSIDAD NACIONAL DE COLOMBIA) and co-supervision from Dr. David Teulon (PFR).

- **Project Title:** A review of mass trapping for thrips (Thysanoptera)
- **Project Leader:** David Teulon
Description of Project: Andres Ricardo Peraza Arias will undertake an international literature and industry best practice review for mass trapping of thrips in protected crops. This review will be completed as a publication ready report provided to PFR on the agreed date. It is intended that any peer reviewed publication resulting from this project would be jointly authored by UNIVERSIDAD NACIONAL DE COLOMBIA and PFR. It is intended that this review will become part of the PhD thesis for Andres Ricardo Peraza Arias. PFR will provide expert supervision and support as is appropriate.

Description of Research:
- UNIVERSIDAD NACIONAL DE COLOMBIA to develop an agreed manuscript outline with PFR including identification of the main areas for literature review for mass trapping of thrips.
- UNIVERSIDAD NACIONAL DE COLOMBIA to summarize literature into a state suitable for publication in a international peer reviewed manuscript.
- UNIVERSIDAD NACIONAL DE COLOMBIA to summarize industry best practice for management of thrips in protected crops.
- UNIVERSIDAD NACIONAL DE COLOMBIA to synthesize literature and industry best practice to identify potential options for thrips mass trapping.
- PFR to provide regular (e.g. bimonthly) feedback to UNIVERSIDAD NACIONAL DE COLOMBIA.
- UNIVERSIDAD NACIONAL DE COLOMBIA to provide drafts (for feedback) and a final report (publication ready) to the PFR project leader.

WORK PLACEMENT DATES
Commencement Date: 1 November 2019  Completion Date: 30 April 2020
Location: Universidad Nacional de Colombia, Bogotá

UNIVERSIDAD NACIONAL DE COLOMBIA DETAILS
Course of Study: PhD in Agricultural Sciences with emphasis on Entomology.  Degree: PhD
Universidad Nacional de Colombia supervisor: Prof Elena Brochero

MILESTONES/DELIVERABLES/REPORTING DATES
<table>
<thead>
<tr>
<th>No</th>
<th>Date</th>
<th>Milestone/Deliverable/Reporting</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>November 2019</td>
<td>Sign agreement</td>
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<tr>
<td>2</td>
<td>November 2019</td>
<td>Agree to report outline</td>
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<tr>
<td>3</td>
<td>Noviembre 2019</td>
<td>Write draft report</td>
</tr>
<tr>
<td>4</td>
<td>January 2020</td>
<td>Submit draft report</td>
</tr>
<tr>
<td>5</td>
<td>February/March 2020</td>
<td>Update draft report</td>
</tr>
<tr>
<td>6</td>
<td>30th April 2020</td>
<td>Complete and submit report</td>
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FEES TO BE PAID BY PFR
Invoice Date(s):  Amount (excl. GST):  TOTAL FEES (plus GST): 30/01/2020 NZD $5,000 NZD $5,000

Executed on the later of the two dates written below.

Signed by The New Zealand Institute for Plant and Food Research Limited
Signed by Universidad Nacional de Colombia

Name: MACK BOLLERT  Name: Dolly Montoya Castaño
Position: BUSINESS MANAGER  Position: Rector
Research Plan

Project description
The aim of the project is to better understand the opportunities for mass trapping thrips (Thysanoptera) in protected cropping by means of review of international literature and industry best practice. This work will be carried out by Andres Ricardo Peraza Arias as part of his PhD project at the UNIVERSIDAD NACIONAL DE COLOMBIA under supervision of Prof. Elena Brochero (UNIVERSIDAD NACIONAL DE COLOMBIA) and co-supervision from Dr. David Teulon (PFR).

Andres Ricardo Peraza Arias will undertake an international literature and industry best practice review for mass trapping of thrips in protected crops. This review will be completed as a publication ready report provided to PFR on the agreed date. It is intended that any peer reviewed publication resulting from this project would be jointly authored by UNIVERSIDAD NACIONAL DE COLOMBIA and PFR. It is intended that this review will become part of the PhD thesis for Andres Ricardo Peraza Arias. PFR will provide expert supervision and support as is appropriate.

Budget
Student stipend (Andres Ricardo Peraza Arias) NZ $5,000
Definitions

1. In this Agreement:

   "Agreement" means this Agreement and the Schedule to this Agreement.

   "B3 Collaboration" means the collaboration PFR has entered into with seven other parties with interconnected interests in the development and uptake of science solutions for better border biosecurity in New Zealand as detailed in a Better Border Biosecurity (B3) Collaboration Agreement.

   "Background IP" means any Intellectual Property belonging to a party or which a party may otherwise have rights to use, existing prior to the Commencement Date of this Agreement or subsequently developed by a party independently of this Agreement, that is used in the provision of the Services.

   "Business Day" means any day of the week other than a Saturday or Sunday or regional holiday, on which the New Zealand trading banks are open for business.

   "Commencement Date" means the commencement date set out in the Schedule.

   "Completion Date" means the completion date set out in the Schedule.

   "Confidential Information" means any information relating to the businesses or financial affairs of either party, the existence and contents of this Agreement and any information that arises in relation to this Agreement or the Services.

   "Funding" means the SSIF funding that MBIE has agreed to pay to PFR in accordance with the Strategic Science Investment Fund – Programmes Investment Contract between MBIE and PFR.

   "Intellectual Property" means any property right constituted under The Patents Act 1953, The Designs Act 1953, The Trade Marks Act 2002, The Copyright Act 1994, The Plant Variety Rights Act 1987, as well as any like right constituted by an rule of law or by legislation, either in New Zealand or in any other country. This includes rights in data, know-how, confidential information, trade secrets, unregistered trade marks and any pending right based on an application for registration of such right.

   "Invoice Date(s)" means the invoice date(s) set out in the Schedule.

   "Key Personnel" means the Research Provider's personnel set out in the Schedule.

   "Location" means the location specified in the Schedule.

   "MBIE" means the Ministry of Business, Innovation and Employment as the successor to the Ministry of Science and Innovation.

   "Milestones" means the milestones set out in the Schedule.

   "Project IP" means all Intellectual Property that is created or arises in the course of providing the Services or otherwise in relation to this Agreement.

   "Reporting Dates" means the reporting dates set out in the Schedule.

   "Service Period" means the period from the Commencement Date until the Completion Date.

   "Services" means the services detailed in the Schedule that the Research Provider has agreed to provide to PFR and any product that is developed in the provision of the Services.

Appointment

2. The Research Provider will perform the Services and fulfill all other obligations relating to the Research Provider as detailed in this Agreement.

Term

3. The Research Provider will provide the Services during the Service Period unless otherwise agreed in writing.

Performance

4. In performing the Services, the Research Provider will:

   4.1. Exercise the degree of skill, care and diligence reasonably expected of research providers in similar circumstances;

   4.2. Meet the Milestones on or before the relevant Reporting Date;

   4.3. Comply with all provisions of all statutes, regulations and rules of any government, local or public authority and any professional codes of conduct or practice that may be applicable to the provision of the Services and obtain and maintain all consents required to carry out or deliver the Services;

   4.4. Observe all reasonable directions of PFR in relation to the Services;

   4.5. Take all reasonably practicable steps to ensure the Services are undertaken in a safe manner including, but not limited to, complying with all relevant health and safety legislation, regulations and codes of practice and by identifying and adhering to relevant Best Practice guidelines issued by WorkSafe New Zealand from time to time; and

   4.6. Notify PFR as soon as practicable if the Research Provider knows or suspects that:

      4.6.1. A Milestone cannot be met or is unlikely to be delivered by the relevant Reporting Date;

      4.6.2. A Milestone cannot be met or is unlikely to be delivered in the manner contemplated by this Agreement; or

      4.6.3. There is or may be a change in the active involvement of the Key Personnel; or

      4.6.4. A health and safety issue has arisen in relation to the Services which has adversely affected the Research Provider's ability to perform the Services in a safe manner.

5. If the events contemplated in clause 4.5 constitute a "Change Event" under the Funding Agreement, the Research Provider will cooperate with PFR and will implement any actions or amendments that may be reasonably agreed with or imposed by MBIE under the Funding Agreement.

6. Provide reasonable access and information to PFR or its authorised agents to satisfy PFR's own obligations under health and safety legislation as a party engaged in a contract with the Research Provider.

7. The Services are to be provided primarily at the Location.

Personnel

6. The Research Provider's employees are not PFR's employees.

7. The availability of the Key Personnel to perform the Services is an essential term of this Agreement. The prior written agreement of PFR is required before the Key Personnel can be changed.

8. The Research Provider must take all reasonably practicable steps to ensure the health and safety of personal in the delivery of the Services, and must ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out as part of the contract of the Research Provider's operations in undertaking the Services.

9. The Research Provider agrees and acknowledges that PFR is relying on the skill, expertise and judgment of the Research Provider and its employees, contractors and agents (if any) in relation to the performance and completion of the Services and also in the taking of all reasonably practicable steps to ensure the Services are delivered in a safe manner.
Review and Reporting
10. PFR and the Research Provider shall meet regularly to review the Researcher's progress in providing the Services.
11. The Research Provider shall keep true, accurate and systematic records in relation to the Services, including appropriate accounting records and health and safety records, and shall make such records available to PFR as reasonably required. The Research Provider shall keep such records for at least 7 years after termination or expiry of this Contract.
12. The Research Provider shall provide PFR with a report on the results or findings of the Services on or before the Reporting Dates set out in the Schedule.
13. The Research Provider shall provide PFR with any other information reasonably required by PFR to fulfil any reporting obligations required by MBIE or any minister of the crown and will cooperate with PFR in respect of any audit, review or evaluation that may be carried out by MBIE.
14. The Research Provider shall report any health or safety hazards in relation to the performance of the Services to PFR, immediately upon such health or safety hazards occurring, having first taken all appropriate remedial measures.
15. The Research Provider and/or Key Personnel shall be reasonably available to discuss the above reports and records with PFR.

Payment
16. The Research Provider shall prepare and send to PFR, upon the Invoice Dates, invoices for the Services carried out by the Research Provider up to that Invoice Date. Invoices shall break down the fees and GST and will be effective invoices for GST purposes.
17. PFR shall pay the fee, as detailed in this Agreement by the 20th of the month following receipt of the Research Provider’s invoice.
18. PFR shall raise any queries regarding an invoice within twenty (20) Business Days receipt of that invoice. Any disputes involving an invoice will be resolved in accordance with the procedures set out in clauses 38 to 41. Once resolved, any payment then due will be paid within ten (10) Business Days of resolution.
19. The Research Provider shall provide PFR with copies of any documents MBIE may require in order to ascertain whether any expenditure incurred is reasonable.

Confidentiality
20. The parties will keep confidential, and will not use, or permit to be used, any Confidential Information, except to the extent that:
   20.1. The Confidential Information was lawfully in the receiving party's possession before being disclosed to it by the disclosing party;
   20.2. The Confidential Information lawfully enters the public domain;
   20.3. The party to whom the Confidential Information relates consents in writing to its disclosure;
   20.4. The information in question was independently developed by the receiving party without reference to the Confidential Information received from the disclosing party;
   20.5. The information was received in good faith from a third party, where no obligation of confidentiality is owed to the third party.
   20.6. Disclosure is required under the Official Information Act 1982, or otherwise by law, in which case the receiving party will promptly notify the disclosing party so as to allow the disclosing party a reasonable period of time to oppose such process; or
   20.7. This Agreement permits.
21. PFR and the Research Provider must ensure that their respective agents or employees who receive, or may receive, Confidential Information are aware of, and are bound by, these confidentiality provisions.
22. If either PFR or the Research Provider requires the other party to do so, that other party must obtain an undertaking from any person to whom it discloses Confidential

22.1. Have read and understood these confidentiality provisions; and
22.2. Will comply with them.

23. These confidentiality provisions are in addition to, and do not detract from, any duties of confidentiality imposed on either PFR or the Research Provider by law, equity or contract.

Background IP
24. Both PFR and the Research Provider acknowledge that neither of them has rights in the Background IP of the other party.
25. To the extent permissible, each party grants to the other party a royalty-free, non-transferable, non-exclusive licence to use the supplying party’s Background IP solely for the purposes of carrying out the Services as contemplated in this Agreement.

Intellectual Property
26. All rights in any Project IP shall vest with PFR as its sole property.
27. The Research Provider will use all reasonable endeavours to ensure that:
   27.1. It is entitled to use the Background IP supplied by the Research Provider as part of the Services without restriction;
   27.2. It has the right to grant the licences contemplated under clause 26 of this Agreement;
   27.3. All Project IP that the Research Provider develops will otherwise be free and clear of any obligation to third parties; and
   27.4. PFR will have the power and right to evaluate and commercially exploit the Project IP.
28. Where the Background IP supplied by the Research Provider is, or may be, incorporated in the Project IP, or is reasonably required by PFR in order to exercise its rights in respect of the Project IP then the Research Provider agrees to negotiate with PFR in good faith with the aim of reaching agreement on a licence to use the Background IP for that purpose.
29. PFR may offer the Research Provider a licence to use all or part of the Project IP referred to in clause 26 of this Agreement on such terms as the parties may in good faith negotiate. Any licence granted shall:
   29.1. Restrict the Research Provider from further licensing the Project IP;
   29.2. Recognise PFR's obligations as a Crown Research Institute; and
   29.3. Have regard to the normal business activities of the Research Provider.
30. Without limiting the effect of clause 28, the Research Provider will, upon request, provide access to any data and findings that may be required to be made available to the public under the Funding Agreement.
31. Notwithstanding clause 28, PFR shall keep the Executive Director of the BS Collaboration informed of any of any Background IP in which PFR has rights.

Publication
32. If PFR produces a publication relating to the Services, it shall, if appropriate, acknowledge the Research Provider’s contribution to that publication.

Termination
33. This Agreement may be terminated immediately by PFR with sixty (60) days written notice to the Research Provider.
34. This Agreement may be terminated immediately by PFR with written notice to the Research Provider in the event:
   34.1. The Research Provider breaches any provision of this Agreement and is unable to remedy such breach within ten (10) Business Days’ notice from PFR;
   34.2. The Research Provider breaches any provision of this Agreement that is not capable of remedy;
   34.3. The Research Provider commits an act of bankruptcy (or becomes insolvent if a company) or a receiver or similar officer is appointed in relation to any assets of the Research Provider;
   34.4. The Research Provider commits an act of serious misconduct which, in the opinion of PFR, bears or
34.5. If PFR believes on reasonable grounds that the Services are not being undertaken in a safe manner and/or there is any other risk to health and safety which PFR believes is not being adequately managed by the Research Provider;

34.6. The BS Collaboration is terminated or PFR ceases any or all party to the BS Collaboration;

34.7. MBIE terminates the Funding Agreement; or

34.8. MBIE withdraws all, or a substantial amount of the Funding or otherwise suspends the Funding that is relevant to the Services or the science platform that the Services fail within.

35. If this Agreement is terminated for any reason, the Research Provider must immediately:

35.1. Refund or account to PFR for all moneys paid to the Research Provider under this Agreement which have not, at the date of termination, been used or committed in accordance with this Agreement; and

35.2. Case PFR’s Confidential Information and Background IP.

36. If following termination MBIE requires repayment of the Funding used in relation to this Agreement, PFR may require the Research Provider to return all moneys paid up to the date of termination as a debt due to PFR along with any interest charged by MBIE, or where no such charge is made against PFR, then PFR may charge at its overdraft rate plus 2%.

Insurance

37. The Research Provider acknowledges and agrees that it will:

37.1. Carry out the Services at its own risk;

37.2. Maintain or cause to be maintained, adequate liability insurance in respect of all the Research Provider’s obligations under this Agreement;

37.3. Produce evidence as to the currency of the above insurance policies if required by PFR; and

37.4. Undertake at all times comply with the terms of the above insurance policies.

Dispute resolution

38. If any dispute arises between the parties in relation to this Agreement, then the parties will negotiate promptly in good faith in order to amicably resolve the dispute.

39. If the parties are unable to resolve the dispute within ten (10) Business Days of the dispute arising, then either party may refer the matter to mediation by giving notice to the other party. The mediator shall be one mediator to be agreed by the parties or, in the event that a single mediator cannot be agreed within five (5) Business Days after the reference, then by a mediator appointed by the Arbitrators’ and Mediators’ Institute of New Zealand Inc.

40. If a resolution cannot be reached by mediation within a further twenty (20) Business Days, then either party may commence proceedings in any court of competent jurisdiction.

41. Nothing in clauses 38 to 40 shall limit or restrict the ability of either party to seek urgent interim and preliminary relief from any court.

Limitation of liability

42. To the extent allowed by law, PFR is only liable to the Research Provider under, or in relation to, this Agreement, or the Services, for actual loss suffered by the Research Provider as the direct result of PFR’s wilful default.

43. In any event, PFR’s liability is limited to a sum equivalent in aggregate to the total fees that PFR has actually paid to the Research Provider and under this Agreement.

No assignment

44. This Agreement is personal to the Research Provider. The Research Provider cannot assign, transfer or deal in any way with this Agreement, without PFR’s prior written consent. PFR can give or withhold consent as it sees fit. Any material change in the Research Provider’s shareholding is an assignment for the purposes of this clause.

Relationship

45. Nothing in this Agreement shall make the parties joint venturers, partners or agents of each other and neither of them can bind the other in any way.

Entire agreement

46. This Agreement constitutes the sole and entire agreement between the parties relating to the Services. There are no oral or written agreements, representations, understandings or commitments of any kind, express or implied, not expressly set out in this Agreement.

 Notices

47. All notices under this Agreement shall be in writing and personally delivered or sent by prepaid post, or email to the address of the party to whom the notice is to be given as specified in the Schedule.

48. Notices shall be deemed to have been delivered:

48.1. On the third Business Day after posting in the case of notices sent by post to an address within the same country.

48.2. On the tenth Business Day after posting by airmail in the case of notices sent by post to an address in a different country.

48.3. If sent by email (which in the case of PFR must be sent to legalservices@plantsandfood.co.nz and not any other email address set out in the Schedule) then acknowledged by the receiving party by return email or otherwise in writing, except that return emails generated automatically shall not constitute an acknowledgement;

48.4. The date of delivery in the case of personal service.

49. No delivery by hand or email shall be valid unless effected between 6.00am and 4.30pm on a Business Day. Any delivery received after 4.30pm will be treated as having been delivered on the next Business Day.

Governing law

50. This Agreement shall be governed by the laws of New Zealand. The parties submit to the non-exclusive jurisdiction of the courts of New Zealand. Neither party will object to the exercise of jurisdiction by those courts, either for forum non-conveniens, or on any other basis.

No waiver

51. Any failure by either party to enforce any of the provisions of this Agreement shall not constitute a waiver of any rights to future enforcement.

Variation

52. Variations, waivers and modifications of this Agreement, shall only be valid if in writing and signed by, or on behalf of, both parties.

Reconstruction

53. Should any part or provision of this Agreement be held unenforceable or in conflict with the applicable laws or regulations of any jurisdiction, the invalid or unenforceable part or provision shall be replaced with a provision which accomplishes, to the extent possible, the original business purpose of such part or provision in a valid and enforceable manner, and the remainder of the Agreement will remain binding upon the parties.

Force Majeure

54. Neither party shall be responsible to the other for any delay or failure in performance of any obligations imposed by this Agreement, provided that such delay or failure is occasioned by fire, flood, explosion, lightning, windstorm, earthquake, subsistence of soil, court order, government interference, civil commotion, riot, war, strikes, labour disturbances, natural genetic variations of any living matter, or any cause of like or unlike nature beyond the reasonable control and without the fault or negligence of either party.

Survival of provisions

55. The provisions of this Agreement relating to confidentiality, intellectual property, limitation of liability, governing law and reconstruction shall not expire when this Agreement ends.