

The Rufford Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Maria Cecilia de Carvalho Silva Ferreira
Project title	The economic importance of ecosystem services provided by meliponiculture in Brazilian temporary crops: pollination and production
RSG reference	25510-1
Reporting period	between August 2018 and January 2020
Amount of grant	£ 5,000
Your email address	mariaferreira@gmail.com
Date of this report	May 15 2020

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
quantify the economic impact of the use of wild bees on organic crop production;				I still have not analysed the data collected to prove this statement, but the specialised bibliography confirms it.
incentive traditional activities developed by rural communities;				By working with them this project helps the achievement of this goal.
motivate the use of sustainable agricultural technologies around protected areas				By working with farmers who use this kind of technologies, this project helps the achievement of this goal.
increase the profit of the activity by introducing the use of wild bees in crop production				I still have not analysed the data collected to prove this statement, but the specialised bibliography confirms it.
improve land and forest management by farmers for sustainable rural development, reduce poverty, conserving biodiversity and protecting the climate.				This is a long-term result, but this project for certain will help the achievement of this goal.

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

The biggest difficulty I had was to coordinate my need with the maintenance of crop management until the end of data collection. This was tackled with a lot of conversations and different kind of incentives. Despite having tried various forms of incentives, due to management and staff problems at the association, I have not been successful in three out of four attempts.

Besides that, I got pregnant in the middle of the data collection and had my child before analysing it at all. This is been tackled with a delay on the data analyses which will be done as soon as the academic calendar returns. Due to de Covid 19 pandemic all activities were suspended.

3. Briefly describe the three most important outcomes of your project.

1. The list of species found in the crop and the understanding of the importance of pollinators, especially native bees.
2. The development of a field guide for the non-scientific public and the dissemination and popularisation of scientific information.
3. Promote the use of pollinator-friendly practices by encouraging and disseminating sustainable practices in agricultural production aimed at conserving biodiversity and increasing the productivity and income of the families involved.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).

Local communities were involved with the crop management, beehive introduction and communication acts. The farmers benefited from the grant which helped to improve the association in different aspects, in addition to funding production and with the introduction of beehives that aroused curiosity and interest about animals. Communication acts were made in four different places disseminating information and raising awareness on the subject to about 200 people.

5. Are there any plans to continue this work?

Yes, there is. I am already planning the continuation of the project with two other professors at Federal University of Minas Gerais (UFMG) in Belo Horizonte. This continuation is still preliminary but is related with the use of the hives for environmental education and for project related with plant-Meliponini interactions in order to suggest conservation strategies for the preservation of the Cerrado.

6. How do you plan to share the results of your work with others?

I plan to share the results of this work by publishing a field guide especially developed for non-scientific public and submitting papers of this work in renowned journals of the area.

7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

The grant was from July 2018 until the publication of the field guide which will be done as soon as possible. This period was extended due to my pregnancy and the pandemic, but I consider it within the forecast if maternity leave is counted.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Tax		69	+69	I did not budget that
Booklet printing	200	866	+666	The minimal printing was higher than I budget, and I will use all the money left to print as many copies as possible
Feeding in field	850	214	-636	I did not get help of my colleagues because of the distance and because of that, did most of the data collection by myself. The budget was planned for four to six people
Displacement	700	503	-197	Due to my pregnancy and the pandemic I did not make all the displacement needed yet and will have to do it at least one more time
Fuel	750	527	-223	With less people going to data collection, had to fuel less cars
Field consumables	153	238	-85	Help the construction of the greenhouse
Laboratory Materials	400	681	+281	Due to technical problems I had to get a new computer
Beehives	885	841	-44	
1 year of financing grant for the farmers	1062	1062		
TOTAL	5000	5001	+1	

9. Looking ahead, what do you feel are the important next steps?

Publishing the field guide and analyse and discuss results for plan the improvement needs to continue this work.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did The Rufford Foundation receive any publicity during the course of your work?

I used The Rufford Foundation logo in all communication actions made during the development of the work and intend to use it on the field guide and all the presentations related to this project such as the presentation of the doctoral thesis.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Maria Cecilia de Carvalho Silva Ferreira: Project proponent and the main developer of all stages

Fernanda Helena Nogueira-Ferreira: advisor of the project and guides the experimental design, data analysis and production of scientific papers derived from the project

Jean Carlos Santos: co-advisor guides the experimental design, data analysis and production of scientific papers derived from the project

Theo Mota: professor of UFMG, partner and collaborator in the specie survey and colour preference experiment and future experiments with the beehives, guides the experimental design, data analysis and production of scientific papers derived from the project

Fernanda Alcantara: professor of UFMG, partner and collaborator in future experiments with the beehives, guides the experimental design, data analysis and production of scientific papers derived from the project

Fernando Silveira: professor of UFMG, partner and collaborator in the seed development experiment, guides the experimental design, data analysis and production of scientific papers derived from the project

Marcilio Zanetti: partner and collaborator in the seed development experiment, helping the experimental design, data analysis and production of scientific papers derived from the project

Rodrigo Mello: partner and collaborator in the contact with farmers

Luiz Quaresma: partner and collaborator in the contact with farmers

Igor Rismo: partner and collaborator on the identification of the specimens collected

Alexandre Alvarenga: partner and collaborator on the data collection

Barbara Matos: partner and collaborator on the field guide production

Nicole Cristina: partner and collaborator on the field guide production

AABD's farmers: crop production and maintenance

12. Any other comments?

I would like to excuse myself for the delay on returning this report and thank The Rufford Foundation for the grant. It was essential to develop this work.