

Project Update: March 2019

After my last update, crops of tomatoes and eggplant were prepared, as planned with the farmers, so the next experiment could be done. Figures one and two show the preparation of the crops of tomatoes and eggplant respectively.





Fig 1: (Top four photographs) - Tomatoes crop development. Fig 2: (Bottom four photographs) - Eggplant crop development

On 21st February 2019, I began the experiment on eggplants. The experiment was going very well, but it took longer than expected due to the negative influence of *Cariama cristata* (Fig. 3). They were very curious about the bag wrapping the flowers and usually destroyed and threw them to the ground. Of the 39 flowers monitored to pollinator visit, only 14 could develop fruit without the interference of the birds. That also occurred with the flowers wrapped for the autopolinisation treatment. Of the 67 flowers wrapped, only four could develop fruit. Because of the interference of the *C. cristata* and consequently the time spent on the first part of the experiment, only the expedition without the introduction of hives could be done. The crop got older, higher and unfortunately predated, weak and sick (Fig. 4). Even so the first part of the experiment is still going on and the fruit has been harvested when the time is property.



Fig 3 - Presence of *Cariama cristata* on crops



Fig 4 - Crop older, higher and unfortunately predated, weak and sick

The tomato crop wasn't as well developed as the eggplant, so this experiment was planned to be taken later. But due to unexpected cycles of rain, the tomato crop was not as good as we had hoped and the experiment will be taken on another crop. It is already been cultivated and will be grown on a semi protected green house (Fig. 5), which may be good for stop the *C. cristata* action and the cold weather.



Fig 5 - semi protected green house

Since the experiments didn't include the introduction of the hives, these will be maintained at the meliponary with the same management (feed with a supplement of honey, water and sugar every 15 days and have any necessary actions for the management of the hives carried out).



To collect data about bee diversity, a survey with pan traps was performed (Fig. 6). It consisted of 750 ml cups of three colours (white, phosphorescent blue and phosphorescent yellow), filled with soapy water and distributed on the crop in groups of three (one of each colour), 3 m apart from each other and 10 m apart from each group of cups. They stay on the field once a week for 24 hours.

Fig 6 - Pan trap experiments