THIRD REPORT

Field Trip 03 (06 a 09/11)

Suzi Huff Theodoro
(Project Coordinator)

Between the 6th and 9th of November, 2015, a third trip was held in order to follow-up, monitor and manage the Experimental Productive Unit (EPU) in Community of *Lajedão dos Mateus*, township of América Dourada, Bahia.

During the trip, we visited the UEP, where it was ascertained the evolution of two different types of cactus (small and giant) in different blocks. Picture 01shows an overview of the area. It is possible to verify that the plants are developing in a very fast way, with regard to both growth and the amount of cladodes for each plant.

Figure 1: Overview of the UEP.

In a more detailed analysis, it was possible to verify that the plants are developing in different ways, probably due to the offering of nutrient present and available in the different blocks, since, as informed in the first report, remineralizers inputs such as cattle manure and the mixtures were added at without criteria and always with four repetitions. Besides this, the function of the control block is to show how the plant would develop without the addition of any type of input. These blocks serve as a reference.

The two types of cactus tested are presenting different forms of development as far as the amount of cladodes. This fact is probably related to the differentiated development of each variety (small and giant) and the spacing between the plants. (Figures 02 and 03)

Figure 02 – Sweet cactus´ plot (Nopalea cochenillifera (L.) Salm-Dick)

Figure 03 – Giant cactus´ plot (Opuntia fícus-índica (L.) Mill)

Although in a premature way, it could be observed that the blocks that contains remineralizers and manure presented, on average, a more expressive development and with a higher quantity of racquets, reaching up to six per plant (Figure 02)

Figure 4 - Details of the development of racquets per plant

As far as the outbreak of plants with early flowering goes, it was found that the number of plants in this situation is less significant than what was verified during the previous trip, which maybe shows that the plants were already adapted (and stress free) derived from the change of the environment.

With regard to mixture crops (maize, cowpea, pigeon pea and red bean, okra and watermelon, inserted in the lateral parts of the EPU**,** it was observed that they fulfill the function of a protective barrier (especially in case of wind) as well as a food source for the families of the community (Figure 05). It is possible to verify in the photo, in the background, that the division of the space that was occupied by the small cactus (to the right) and the giant cactus (left) is clear, indicated by the red line

Figure 05. Children of the community showing the quality of the produced maize.

The farmers reported that part of the pigeon peas and the okra that was produced was consumed by the families or sold in the fair, contributing to the family´s income, even though in a still a very incipient way.

Other than this activity, it was done, along with the farmers, the planning of the plants that would be inserted in the system (in the lateral areas) and that should compose the barrier in a more permanent way, This way, it was decided that it would be inserted papaya seedlings (Carica Papaya L) and pine or custard apple (Annona squamosa), in addition to the replantation of maize. Finally, by way of comparison, it is shown the evolution of the plants in the five months of research.

June/2015 July/2015 November/2015