Population dynamics of caterpillars on three cover crops before sowing cotton in Mato Grosso (Brazil)

**Methods**

A linear pattern was used (Fig. 1).

Three cover crops (Poaceae) were monitored with the help of a wooden frame (1 m²):

- **Cover 1 (M):** pearl millet (Pennisetum glaucum)
- **Cover 2 (E):** finger millet (Eleusine coracana)
- **Cover 3 (S + B):** ruzigrass (Brachiaria ruziziensis), in association with sorghum.

**Results and conclusions**

*S. frugiperda* caterpillars were found on all cover crops with mean population around 37 caterpillars/m² on pearl millet (fig. 2). On the sorghum, it was noted at lower densities in March 2006 (fig. 3). *Diatraea saccharalis* was only found on sorghum (fig. 4) as was *Spodoptera eridania* in 2006 at densities lower than 1 larva/m² (fig. 5). *Mocis latipes* was observed on finger millet (*E. coracana*), and on pearl millet (fig. 6). Parasitoids (Braconidae) were observed on *M. latipes*.

Caterpillars were collected on low plants growing under the herbicide-dried cover crops.

The recommendation is that cotton should be sown at least one month after the herbicide spray on dry mulch formed by the residue from dried cover crops.

For future works, problems have to be solved with this type of assessment:
- uniform soil coverage;
- access to the same height or even biomass for the lepidopteran adults, sowing dates have to be adjusted.

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**References**


Mocis latipes (Say), 1824. On several levels of cotton (2005).

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**Fig 1. Experimental design.**

**Fig 2. Dynamics of *S. frugiperda* on cover crops in 2005.**

**Fig 3. Dynamics of *S. frugiperda* on sorghum.**

**Fig 4. Dynamics of *S. frugiperda* and *D. saccharalis* on sorghum.**

**Fig 5. Dynamics of *S. frugiperda* on cover crops in 2006.**

**Fig 6. Dynamics of *M. latipes* on cover crops.**

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