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# ANAIS DO X ENCONTRO SOBRE ABELHAS RIBEIRÃO PRETO

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# THE IMPACT OF POLLINATOR DENSITY OVER CANOLA (*Brassica napus* L. HYOLA 61) YIELD

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The intensification of agriculture has caused the decline of threatened natural habitats and biodiversity. The reduction of pollinators as a consequence may lead to shortage of pollinating crops. This study aimed to understand the relationship between pollinator density and production of pods in canola crops, and thus, propose management strategies aiming to reduce the deficit of pollination. We evaluated seven crops of canola cv. Hyola 61 (4-30 ha), in family farming in Guarani das Missões, RS. The methodology was adapted from the “Protocol to Detect and Assess Pollination Deficit in Crops”, using the “Landscape Context”. In each crop, there were three assessments (density) at fixed times (10:00am, 01:00pm, 04:00pm) in rotation of crops. The measurements were then carried in experimental sites (50m x 25m) in each study field, located at least 20m from the edge. For the evaluation of productivity, were collected 20 plants in four plots in each experimental area. The higher abundance of pollinator was found in study field 7 (0.235A), followed by 4 (0.231A), both at 01:00pm. The higher density of insects was obtained at that fixed time for most crops. The study field 3 had the lowest abundance of pollinators (0.148 B). Regarding productivity, the study field 7 had the highest average of pods/plant (548.70 A), followed by 6 (331.85 B). In the study field 3 (167.25 C) was again recorded the lowest average of pods/plant. As correlation measurement of the average of pollinators density and yield we found  $R=0.68$  e  $R^2=0.61$  ( $P=0.03$ ), setting an intensification in the production of pod following an increase of pollinators. The result can be related with the landscape surrounding the study fields.

**Apoio:** CNPq, Funbio, FAO, GEF.

**Área:** Biologia da polinização.

**Palavra chave:** Pollinators - Canola - Deficit - Yield - Study fields.