



## Repercussions of *Eucara macrognatha* (Hymenoptera: Apidae) duration of visit on the pollination rate and yields of *Abelmoschus* *esculentus*

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### 1 SUMMARY

Field experiments were conducted in Domayo (Maroua-Cameroon) to determine whether the duration of a visit of a wild bee *E. macrognatha* affected the pollination rate and the productivity of *A. esculentus* (Okra). Random samples of 30 experimental plants were used. The experiment included flowers having benefited from a single bee visit. Linear regressions were established between the duration of *E. macrognatha* visit and parameters related to Okra production such as pollination rate and number of normal seeds. Another correlation was established between the pollination rate and the fruit length. Results showed that the pollination rate and the number of normal seeds per fruit increased with increasing duration of the wild bee visit. Thus, the pollination rate ( $R^2 = 0.55$ ;  $n = 30$ ;  $df = (1; 28)$ ;  $P < 0.001$ ) and the number of normal seeds ( $R^2 = 0.44$ ;  $n = 30$ ;  $df = (1; 28)$ ;  $P < 0,001$ ) were positively correlated with the duration of a wild bee visit. In addition, the fruit length of Okra was correlated with the pollination rate ( $R^2 = 0.53$ ;  $n = 30$ ;  $df = (1; 28)$ ;  $P < 0,001$ ). Therefore, the duration of *E. macrognatha* visit is important to the pollination and influences both the seed yield and the fruit length of *A. esculentus*.

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