HOST PRECONDITIONING IN MEALYBUGS (PSEUDOCOCCIDAE)

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Mealybug probing behaviour studied by means of Electrical Penetration Graphs (EPG) showed that either they do not reach the phloem or this is delayed to 9 to 20 hours. However, the phloem phase was reached earlier and more frequently when the mealybugs were reared on the same host used for monitoring. This result suggests the presence of host preconditioning similar to that found on some aphids. This study aimed to detect the effect of the previous experience on mealybugs through choice tests, development studies and probing behaviour monitoring. The citrus mealybug, *Planococcus citri* (Risso) reared on squash, citrus and coffee was used in all experiments. The choice test between coffee and citrus, showed that mealybugs reared on coffee showed a high preference to settle on coffee. When the source plant was citrus the mealybugs showed a trend, even not significant, to select citrus over coffee. Mealybugs taken from a squash culture did not show any preference neither for coffee or citrus. Insects transferred from squash to coffee or citrus, and from coffee to citrus, showed a significant reduction in the number of insects presenting the phloem phase and an increasing of the non-probing time. The proportion of mealybugs with phloem phase was not affected by transferring insects from citrus to coffee but the phloem phase was reduced. Transferring mealybugs, either as eggs or nymphs, from any host to coffee or citrus did not modify the development time, fecundity or mortality. Thus, even showing some preference for the source plant both, coffee and citrus, were good substrates for the mealybug development. These results indicate changes in responses to plants depending to the previous experience and it is necessary to consider the parents´ culture host species when working on mealybug behaviour or physiology.

Financial support: EMBRAPA/CAFÉ