



# Baseline data of four insecticides with different modes of action for *Anastrepha fraterculus* (Wiedemann) and *Ceratitis capitata* (Wiedemann)

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## Introduction

- ✓ The repeated use of a particular insecticide exerts a strong selection pressure and this can lead to the development of resistance.
- ✓ Early monitoring is crucial for any action program.

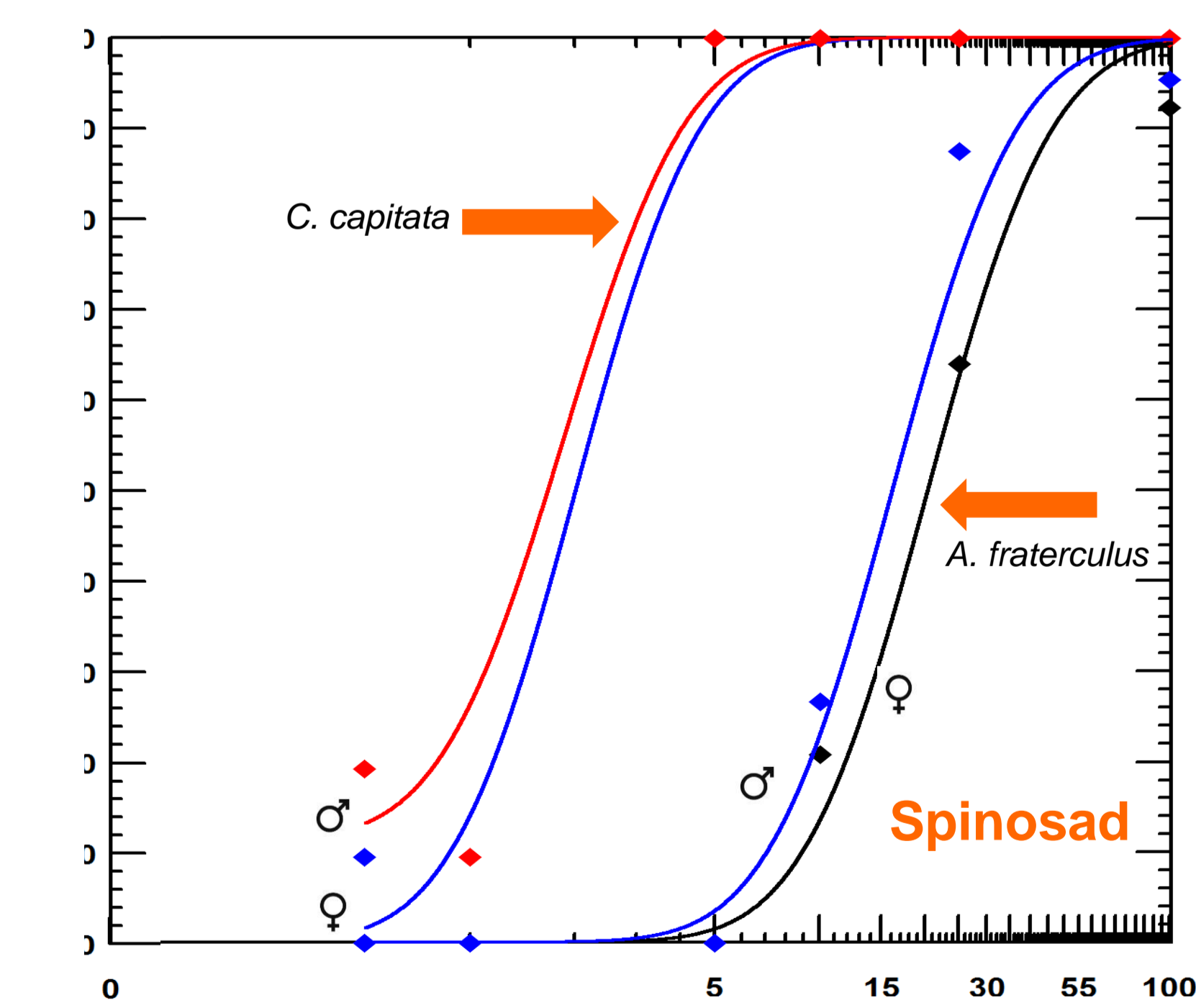
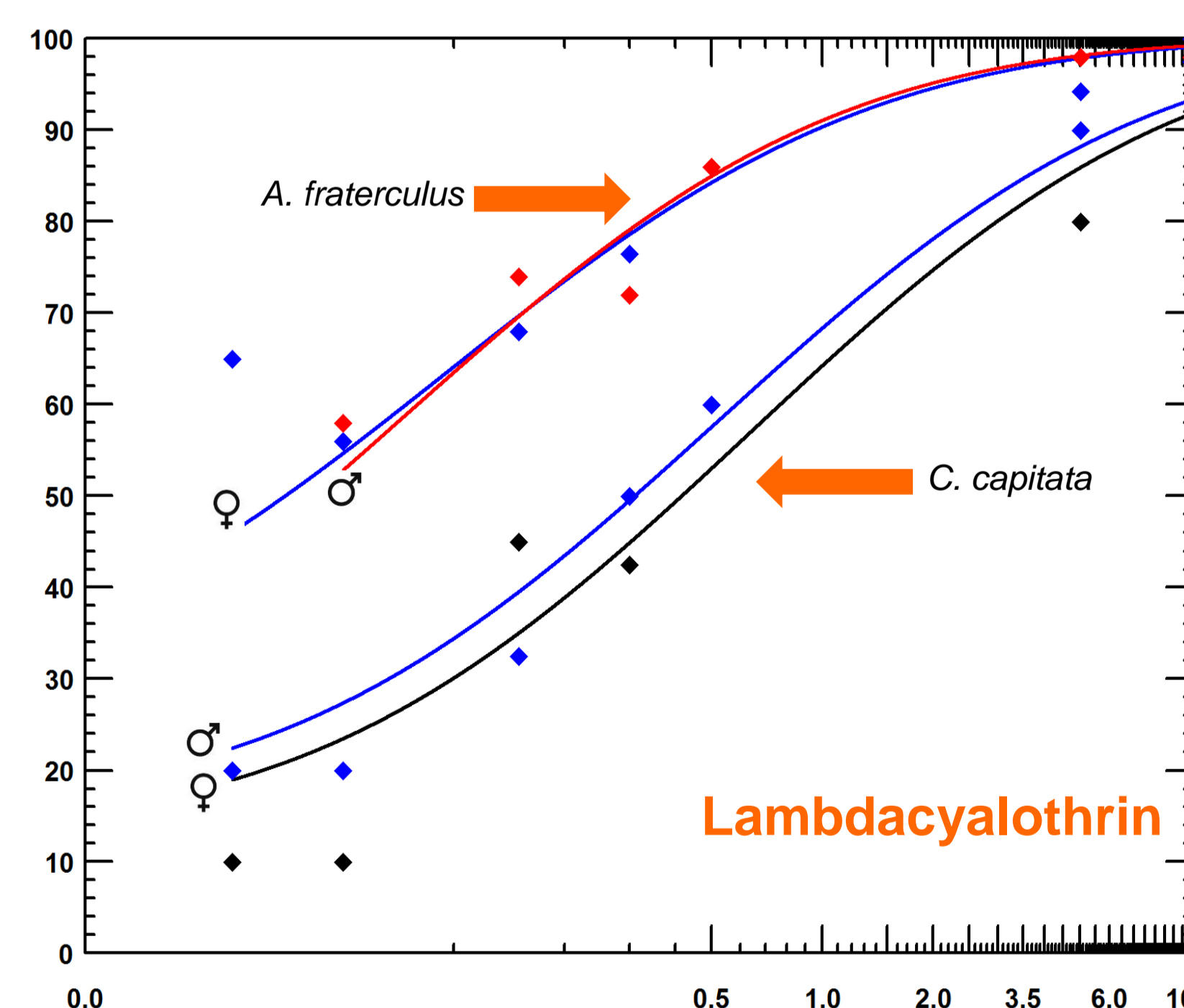
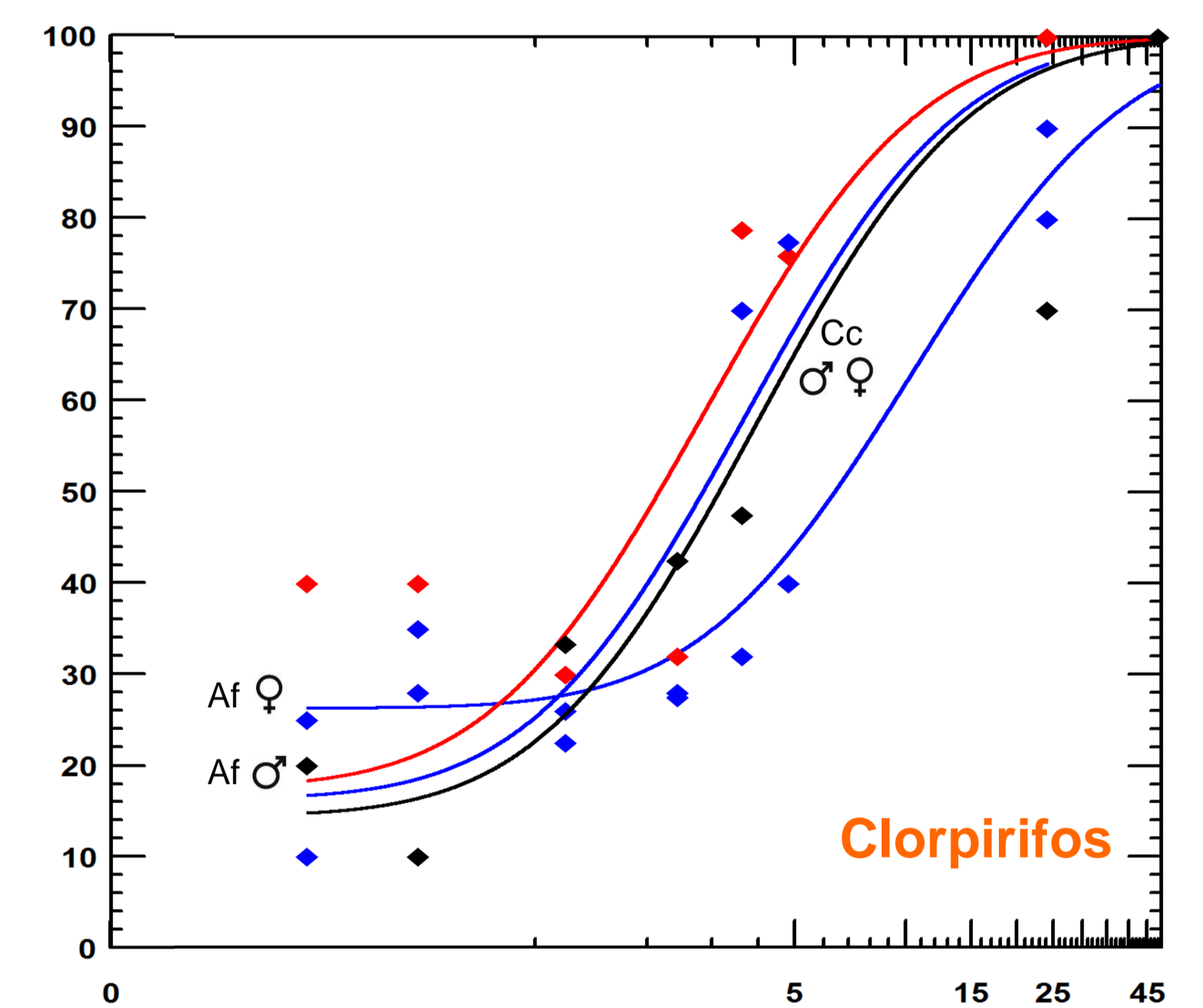
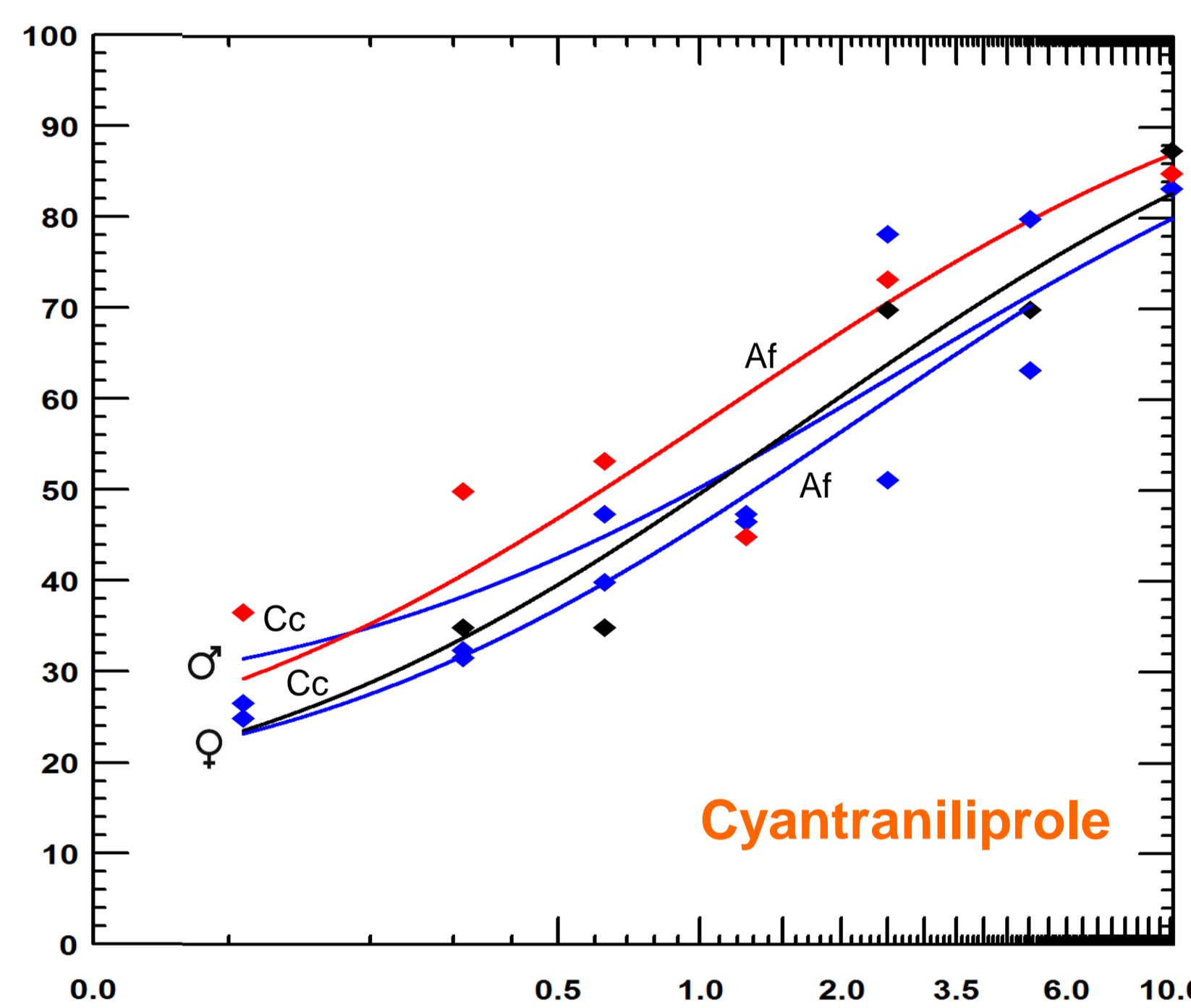


## Objective

- ✓ To determine baseline data of four insecticides with different action mechanisms through laboratory bioassays.

## Materials and Methods

- ✓ **Products:** commercial formulations of cyantraniliprole, chlorpyrifos, lambdacyalothrin and spinosad.
- ✓ In each replicate 10 individuals of each sex were evaluated for each concentration with three to four replicates.
- ✓ **Data analysis:** The LC50 was estimated with a dose-response curve analysis.



## Results

- ✓ Cyantraniliprole and chlorpyrifos were equally susceptible for males and females of both species.
- ✓ For lambdacyalothrin the LC50 of *A. fraterculus* was significantly lower than that of *C. capitata*.
- ✓ For spinosad, the LC50 of *A. fraterculus* was significantly higher than that of *C. capitata*.

## Conclusions

- ✓ These results generate reference values for Argentina that will contribute as baseline for field surveys of natural populations.
- ✓ It also provides valuable information at the time of choosing active ingredients and rotation schemes.