

# Effect of hosts and diet on the reproduction in *Nabis americanoferus*, a potential biological control agent of the tarnished plant bugs in greenhouse.

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## Introduction

Tarnished plant bugs (TPB), *Lygus lineolaris* (Hemiptera: Miridae) and aphids are important pests of greenhouse crops. Generalist predators can be a biological control solution to tackle multiple pests. The bug *Nabis americanoferus* is a main predator of TPB and aphids. However, the rearing parameters of this insect must be optimized.

## Objective

**Measure the impact of diet and host on the egg-laying behavior of *N. americanoferus*.**

## Methods

### In-cage tests



25°C;  
60 r.h.;  
16:8 L:D)

1 couple



3 to 7  
days of  
age



14 days for  
egg laying



Counting nymphs  
on day  
14, 21 & 28

## References

- [1] Braman & al. (1984) Ann Entomol Soc Am 77:592-596

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## Diet

- *Artemia* cysts
- *Ephestia* eggs
- *Lygus* nymphs
- Aphids (*Myzus*)

Eggplants were offered as a standardized host.

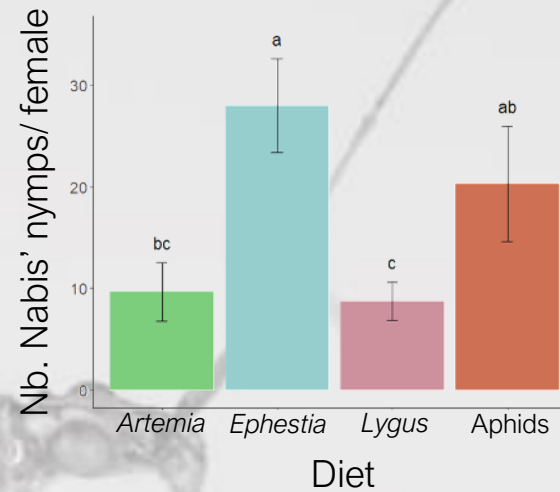


Fig 1. Number of Nabis' nymphs per female over a 14-day period in function of the diet during oviposition.

- *Ephestia* is the best artificial prey and the best diet overall ( $p < 0,0001$ );
- A diet of aphids is more suitable than a *Lygus*-based diet.

## Host

- Eggplant
- Canola
- Buckwheat

*Ephestia* eggs were offered as a standardized diet.

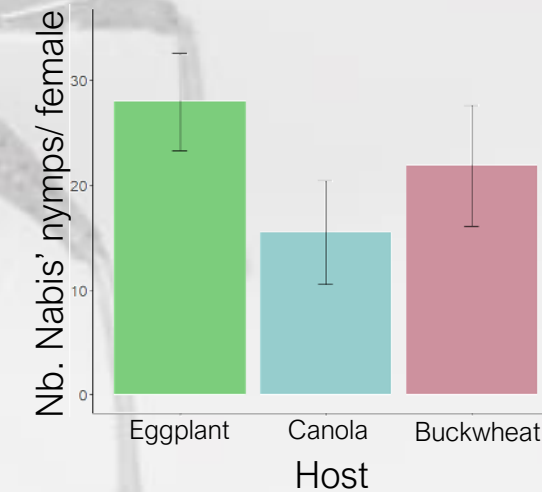


Fig 2. Number of Nabis' nymphs per female over a 14-day period in function of the host.

- No significant difference were observed among the tested hosts ( $p = 0,06$ );
- Eggplants tends to be more reliable host (lower variation coefficient).

Under our lab conditions, Nabis' eggs take ~10 days to hatch [1].

