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Salle de réunion + visioconférence Zoom

## **A META-ANALYSIS ON THE BENEFITS AND COSTS OF HOSTING SECONDARY ENDOSYMBIONTS IN SAP-SUCKING INSECTS**

par

**Enric Frago  
CIRAD-CBGP**

🔍 Many animals have evolved associations with symbiotic microbes that benefit the host through increased growth, lifespan, and survival. Some interactions are obligate (essential for survival) while others are facultative (beneficial but not essential). Not all individuals host all facultative symbionts in a population, and thus there is likely a trade-off between the cost of hosting these symbionts and the benefits they confer to the host.

🔍 Sap-sucking insects have been one of the most important models to test these costs and benefits experimentally. This research is now moving beyond the description of symbiont effects towards a greater appreciation of their role in ecological communities. I will present a quantitative and systematic analysis of the published evidence exploring this question. We found that whitefly and true bugs experience benefits through increased growth, lifespan, and fecundity, whereas aphids experience a potential trade-off with costs to their fecundity but benefits through increased resistance to natural enemies.

🔍 Our study reveals the lack of data in some sap-sucking groups, and reports variation in effect strengths and direction across host, symbiont and plant species thus highlighting the importance of considering the context dependency of these interactions.