

Effects of elevated CO₂ concentrations on host finding behavior of corn leaf aphids *Rhopalosiphum maidis*

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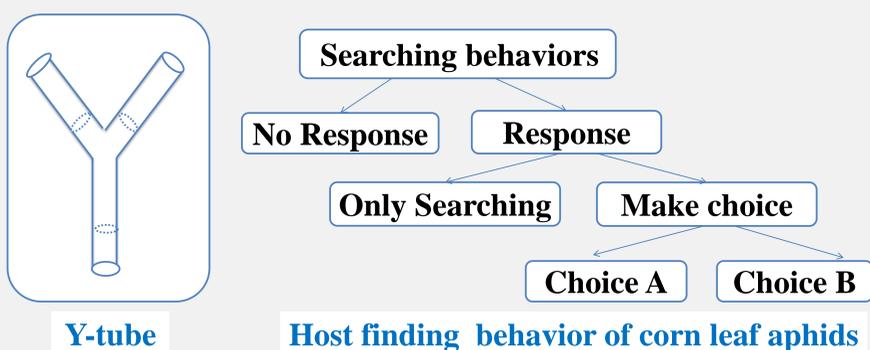
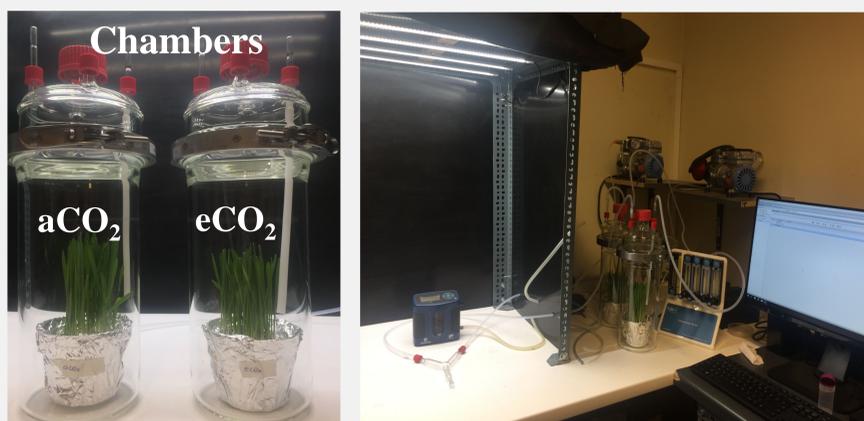
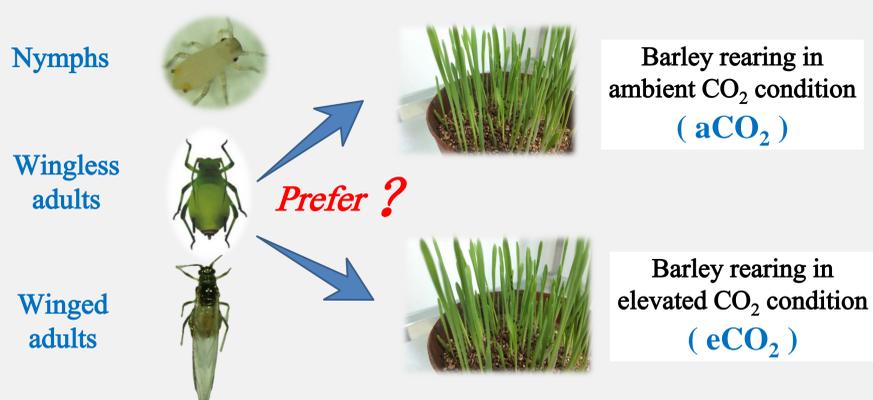
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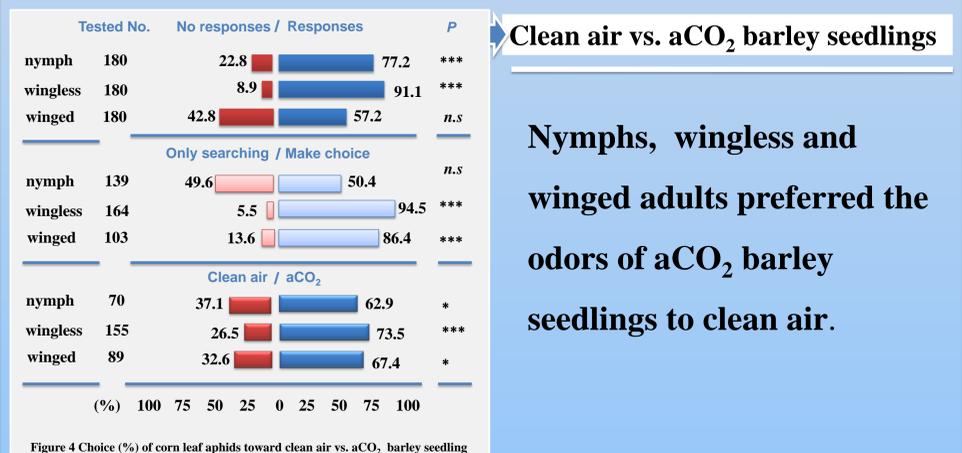
Objectives

We aim at evaluating the impact of elevated CO₂ concentrations on host searching behavior of nymphs, wingless and winged corn leaf aphids to barley seedlings.

Methods



Results

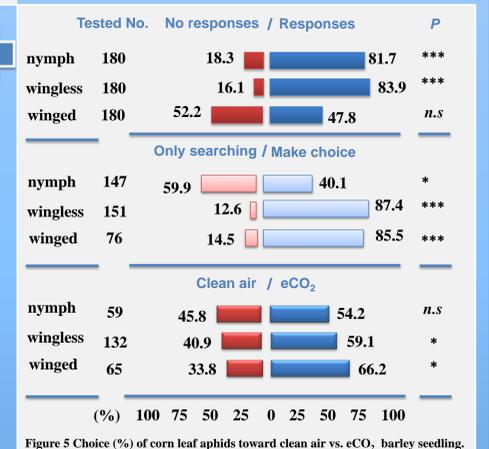


Clean air vs. aCO₂ barley seedlings

Nymphs, wingless and winged adults preferred the odors of aCO₂ barley seedlings to clean air.

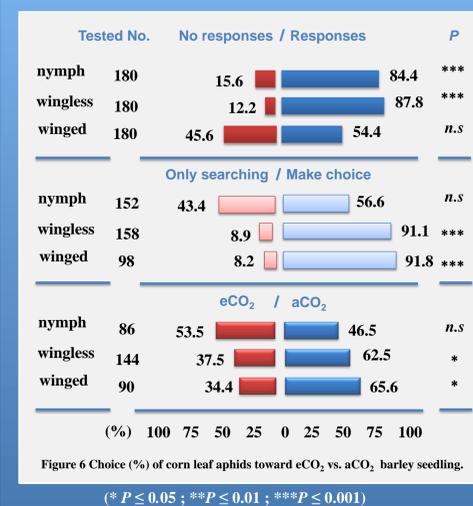
Clean air vs. eCO₂ barley seedlings

Wingless and winged adults like choosing the odors of eCO₂ barley seedlings when tested against clean air.



eCO₂ vs. aCO₂ barley seedlings

Wingless and winged adults were more attracted by odors from aCO₂ barley seedlings than eCO₂ barley seedlings.



Conclusion and Discussion

Winged and wingless adults preferred the odors of aCO₂ barley seedlings when tested against eCO₂ barley seedlings or clean air. Nymphs preferred searching in the Y tube and hard to make a choice, probably because their antenna sensing systems haven't well developed and could not distinguish the odors clearly.