

# RESEARCH ON THE VECTORS OF COCONUT LETHAL YELLOWING IN MEXICO

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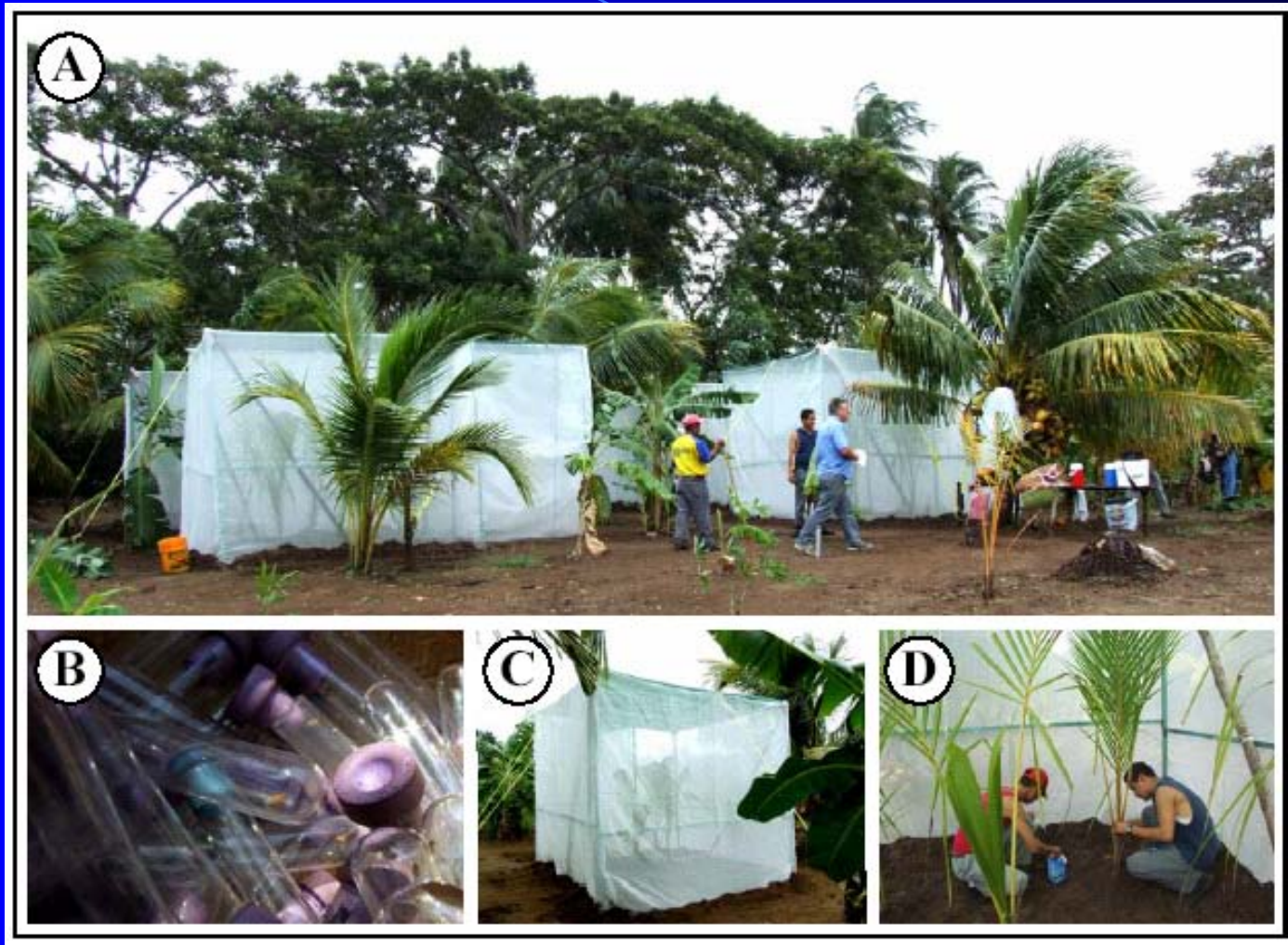
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# Introduction

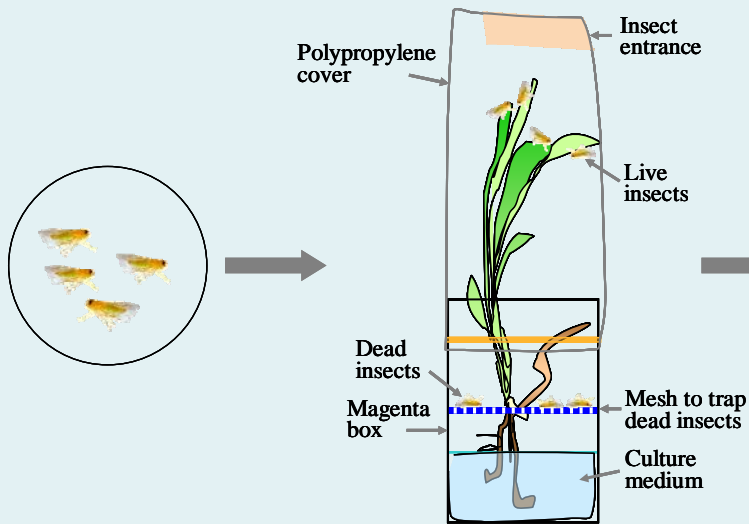
- The objective of this Project is to confirm the role as a vector of LY for *M. crudus* and find out if there are other vectors, and later, to search for resistant varieties and hopefully generate knowledge useful for developing a system for the integral management of LY.

# Cages in Pailebot, Tabasco, Mexico



Cages used for transmission experiment. (A) Lay out of cages. (B) Trapping of insects with tubes. (C) Individual cage. (D) Interior of a cage.

# In vitro transmission



## DNA analysis:

- Insects
- Plantlet



## In vitro transmission system with micropropagated plantlets

Plant	PCR detection in plant parts n positive / n samples				Positive insects	n insects introduced
	Leaves	Secondary root	Primary root	Stem		
MD-1	0/5	<b>1/2</b>	0/1	0/2	P	58
MD-2	P	P	P	P	P	73
MD-4	0/3	0/1	0/1	0/2	P	49
MD-5	P	P	P	P	P	18
MD-7	<b>1/3</b>	0/1	<b>1/1</b>	<b>2/2</b>	P	64
MD-8	P	P	P	P	P	65
MD-3	P	P	P	P	-	0
MD-6	P	P	P	P	-	0



Control (- PCR)



Treated (+ PCR)



Treated (+ PCR)

# Debate

- After 20 months we have introduced more than 44,500 *Myndus crudus* into cage 1, 2,810 *M. Skarphion* in cage 5, more than 32,000 Derbidae into cage 2 and 1250 other Homopteras into cages 3 and 4.
- As by the end of May 2008, no LY symptoms have appeared in any of the palms, and analyzes of samples from these palms by PCR have not evidenced the occurrence of phytoplasma transmission within the experiment.
- Preliminary tests for *in vitro* transmission have been positive. This system shows a lot of potential, including facilitating the cage trials.