

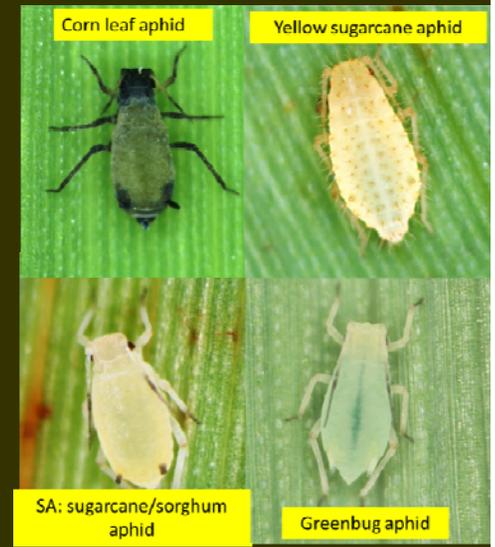
Investigating the Genetics and Phenotypic Reaction of Sugarcane Aphids to Differing Host Plants

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SCA origin, relatedness, host plants, and biotypic diversity



Greenbug cross-resistance from HPR evaluations
parental lines (differentials) used in GB
resistance



Commercial evaluations (varieties) for HPR

Live colonies of SCA for Biotype determinations

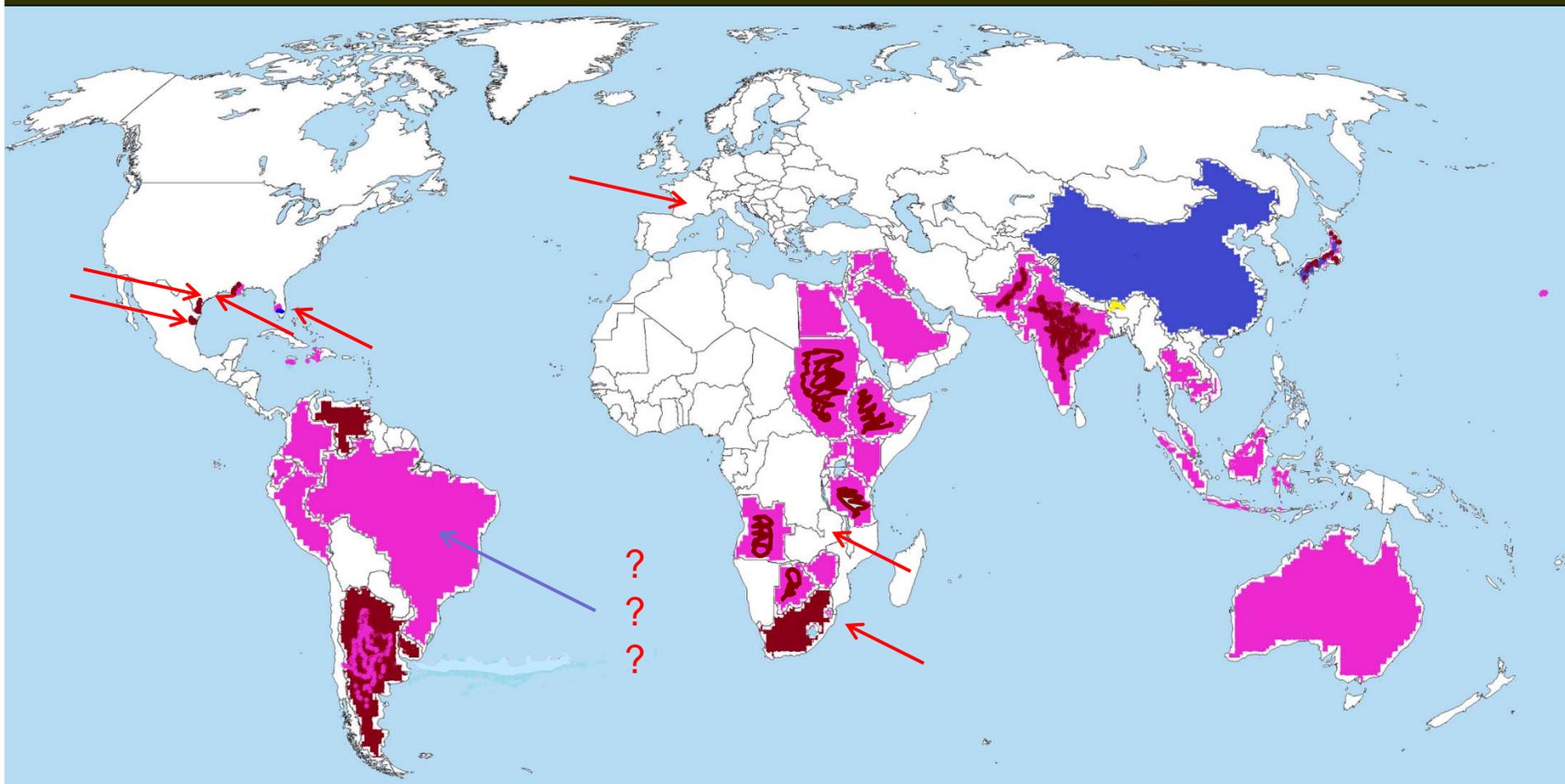
44 individual clonal colonies maintained on TX 7000
Collected from sugarcane, grain sorghum,
Johnsongrass, forage sorghum.

Florida, Louisiana, Texas, Oklahoma, Arkansas,
Mississippi, Georgia.....

Original colony from Matagorda Co. Texas (Bay City),
collected by Clyde Crumley from grain sorghum used
for all screening trials.

Genetic studies - sugarcane aphids

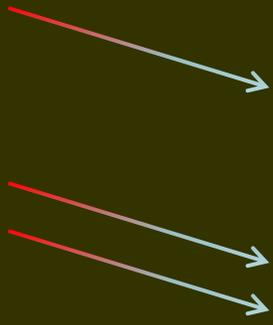
■ Sugarcane ■ Sorghum ■ Rice ■ Maiz ■ Not Present



Sugarcane aphids found on different host plants in the world. Notice that this aphid only infested one plant host species in some countries while other hosts were not affected (**Adapted from Singh et al. 2004**)

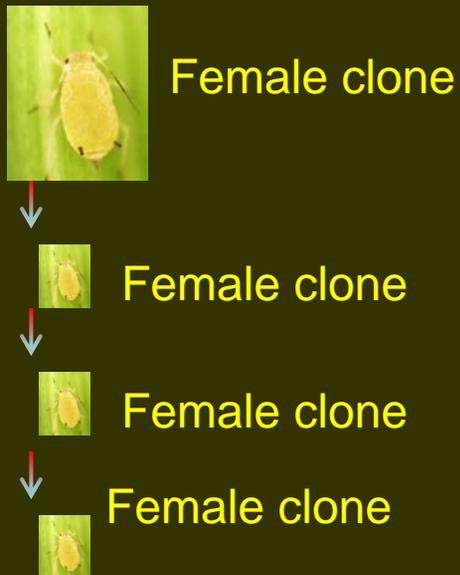
Do we Have different biotypes of the of SCA?????????

GB Colony	TX	TX	TX	PI
Selection	7000	2737	2783	550607
C	S	R	R	R
E	S	S	R	R
F			S	S
G	S	S	S	R
H				R
I	S	S	S	R
K	S	S	S	S



Greenbug biotypes –
Where do they come from
?????????

Parthenogenetic reprod. (asexual)



Sexual reprod.
Male Female



Recombinant population

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Sugarcane aphid genetics
