



CHESTNUT CHAT – Q & A
CHAT 17: GWAS
DATE: FRIDAY, OCTOBER 16, 2020

QUESTION	ASKER NAME	ANSWER(S)
We should just stress for the audience that not ALL pathogen resistance is a binary trait. Resistance to Cp is not.	Florian Carle	Live answered
If you have 10 survivor american chestnut trees and 10 trees which die early can you find the difference and change those genes from + to -.	Renee Allen	Generally, chestnuts bear nuts every year, although there is some fluctuation depending upon weather and tree age.
So in our program, we have whole populations that are at least distantly related. E.g. all Clapper trees are 3rd or 4th cousins of each other and of themselves. How do we deal with this?	Renee Allen	Live answered
would it have been better/easier to have had a referene genome from your species instead of a related species or was this not much of a problem?	Robbie Shaw	"Live answered ;
How many genomes do you need to sequence to generate a database of one million common SNPs?	Edgar	Any microwave roasting?"
Can your modeling procedures separate out the possible influences of one gene on another, e.g., a given gene might not influence a trait unless another, apparently unrelated gene, is expressed	Robbie Shaw	"Yes, you should always make sure your cast iron skillet is hot (it takes longer than for a frying pan) before cooking anything, including chestnuts
Technical q - How do you infer the other allele from the single reference comparison (e.g. your reference was A, but the altern could be G, C, T)?	Robbie Shaw	Yes. Nice to have it hot ahead of time."
Have we typed the Cryphonectria cankers on trees like Adair (e.g. pathogen difference)?	Brittany Stokes	You should not roast them out of the shell. They get very hard.



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infections require passage through a cell surface. Would it be worthwhile to focus on genes that effect the chemicals on the cell surface	Robbie Shaw	Live answered
ref: SARS CoV-2 uses surface antigens to gain entery to the cell	Rose Keville	Live answered
since genomics on the Am chestnut shows resistance to be on multiple chromosomes and as many as a dozen genes, won't this make it hard to have GWAS be applicable?	8Amishshield	There are on-line suppliers as well. Most domestic types are Chinese
sounds good'	Robbie Shaw	Alternatively, you can buy this sweet chestnut paste (Clement Faugier Creme de Marrons) from france. You can find it in cans in the US
Thank you!	8Amishshield	Live answered