

MA/RI-TACF Spring Quarterly Meeting 4/26/2020

Held as a Zoom Meeting using TACF account

Present:

Jamie Donalds, Brad Smith, Rich Hoffman, Michael Novack, Paul Wetzel, Brian Clark, Rufin Van Bossuyt, Mike Grames, Joshua Soojian, Kathy Desjardin, Gray Curtis, Karen Jones, John Meiklejohn, John Emery, Gary Jacobs

Kendra Collins, Mark Meehl, Dave Lent, Brian McClain, Jim Pelletier, Ray Diaz, Lisa Collins, Thomas Bertorelli, Seamus CLancy, Douglas Miner, Emily Monosson (emonosson@gmail.com)

Guests:

Brian McClain has GCO in his town, just started planting
Lisa Collins from Norfolk Aggie -- had a little damage in high winds
Thomas Pertorelli -- has been to 2 meetings, graduate student; doing dissertation on American Chestnut
Ray Diaz is an orchard volunteer
Mark Meehl GCO manager;
Dave volunteer
Seamus is a chestnut fan and is looking forward to participating
Doug Miner -- working with John Meiklejohn, possible seed orchard
Emily Monaston (knows Paul Wetzel) -- working on fungal pathogen across species book

Treasurers Report Paul Wetzel

Not as much activity this quarter as usual
Brad received a donation while speaking at a library
(Membership shares don't include March)
Expenses fairly minimal; bought
a 3-panel sign
Shed cover (Westboro)

All is in checking now; \$2-3 interest/year. Fees tend to be larger

Manton has come through. Brian believes it should cover the majority of our planting expenses this year. Includes potting expenses; he has been potting a large number of seeds
Manton is held by National and disbursed upon request so does not show up here
\$6000

Manton covers breeding program equipment and supplies

Treasurer always has to get the receipt. Bundle goes to Manton reimbursement, our Chapter then gets reimbursed.

National has a new financial person who just started close to when COVID-19 hit.

People send Paul receipts; if it qualifies, copy gets sent to National. Michael always sent in as a bundle not individually. Receipts must include info on what it was for.

Our total funds are down due to not getting Manton one year and having new orchard etc.

We have a new Treasurer, a new national financial person, and Samantha (who does grants at National) is going on maternity leave. (So we need to document and communicate clearly.)

Paul has created a reimbursement form; if we use it, that would help Paul. Includes section on travel reimbursement. It has been sent to various orchard managers.

MOTION to accept Treasurer's Report passed unanimously

Filings Federal and State Tax Returns -- Paul got Michael's info from accounts. May 15th is deadline.

These include:

Federal 990 is Electronic Postcard
MA State Form PC

Credit cards -- Jamie has one

Secretary's Report Kathy Desjardin

Membership is at 290

Insurance Policy is due soon; Kathy will scan bill and send info to Paul
Winter Meeting Minutes -- Jamie went through but needs more editing

YVONNE - to check Winter Minutes

Communication Report Yvonne

Over the last few weeks, we worked to get Chapter members more comfortable with Zoom, had two practice sessions. Thank you to everyone for being flexible and learning this new technology.

Thanks to Kendra and Linda for Zoom account support

National has postponed Spring and also Autumn meeting has been made Virtual
National is having regular webinars that are available as a recording; one is an update, another involved TACF volunteers speaking

Kendra has been doing office hours approximately weekly

We want to make our meetings as open as possible without getting zoom bombed.

Science Planning -- Mike Novack

Continuing to remove least resistant trees will end with a much better tree; environmental factors matter, in 3 generations? We would have a population with a certain percentage of trees as resistant as Chinese

We cannot get more resistant than Chinese

We may have lost approximately $\frac{1}{3}$ of the resistance in the backcross program

We can potentially skip seed orchard step? But will have to do SSA of a lot of nuts.

He is assuming all 3 resistance sources

Quantities Mike discussed; large quantities at seedling level, using SSA. Multiple generations with large numbers, keeping best every time. Three generations?

Kendra: SSA we are now using "days to wilt" -- then hack off above inoculation, and plant good ones -- they will resprout.

Mike -- can also favor lines with other desirable characteristics

Kendra -- hard to work on other things before blight resistance; Jared laid out future of breeding program used in Meadowview and also other chapters; she suggests we talk to Jared and we can debate our possible approach ideas

Brad -- how does Jared's differ from Mikes

Kendra:

Stringent selection in seed orchards

Genotype after that

Jared is redoing evaluations of genotyping?

Deciding which families to keep -- Clappers -- we already have the trees, we

Some plots will have little resistance even in best

We then want to "spike the punch" -- plant 3-5 plots with these trees with more Chinese pollen;

Recurrent selection is an option but might take longer

(Mike is talking about recurrent breeding) -- the "spiking of punch" will take less time

Paul: Chinese controls are already in seed orchards but might want more American

Male sterile F1s? Those can be used as pollen parents

CT Ag station has possible pollen parents -- phenotype

Old USDA planting in NH -- some have had 50-70 years to compete

Don't want to re-use Clapper and Graves

So we can make crosses

Jamie: Graves, Nanking -- analyses have not been done? What does bringing them all together give us? Bringing in other B2s does not give us ...?

Kendra -- Jared is not very hopeful that stacking resistance among breeding lines (Clapper, Graves, Nanking) will help that much. We don't know yet what resistant "enough" means

John Emery has room for a couple of plots of Graves in his Clapper seed orchards

Yvonne -- what about adding PRR-resistant lines to our Clapper orchards? Kendra thinks we don't have enough info about which lines are best to combine

Will be able to get PRR resistance in and combine that with blight resistance better

Jamie -- genomic info and phenotyping info -- Kendra -- need two pieces

Can we do the phenotyping ourselves?

Kendra -- if she is not allowed to travel and she can do a virtual orchard visit, that might work -- not ideal, but we can do something

Jamie offered to test with that (tech approach to phenotyping)

Michael -- was not talking about existing seed orchards

Was not expecting stacking to improve resistance but to ensure that particular genes not lost from popn

Jared says % Chinese highly correlated with resistance (lots of genes involved) -- Mike wants to get more of total genes in our orchards

Rich Hoffman - male sterile F1s available

Kendra - F1s often look Chinese -like; we want to try to get more American type ones if possible. Pure Chinese or even F1s pull the average American genotype down a lot
Potential parents for B1s in orchards

YVONNE -- look at F1s in breeding orchard

Jim Foster in RI has some?

Moore State Park has a nice F1 as well, was selected by accident

Brian Clark mentioned another?

Upton Chinese

Wayland has F1s

1-inch long leaves? Ship to Meadowview for holding?

Kendra will send info re. Phenotyping -- canopy info, form, etc.

Doug Miner -- working on mortgage requiring an easement on a property with a seed orchard; bank unhappy about easement. He is working on that

We need orchard managers to take major responsibility for the work involved

Doug-- there is other farming activity going on. It is personally owned. Orchard would be about 100 years away from house, very similar to John Meiklejohn's. John has talked to Doug -- useful to develop group of local volunteers -- Doug is aware, has a good communal network
So he is working on a conservation easement. Most of other issues are in place.

First step: getting a fence up -- can be done anytime ground not frozen (Brian)

Lunch Break and informal chat (not recorded)

12:35

Orchard Report Brian

Brian has Spring 2020 Orchard Plans -- shared docs

Our May planting parties were largely canceled because of the COVID-19 issues

Westboro, Granville, Norfork are major plantings; Sanderfield as well?

Ashfield, Lincoln GCOs

Inoculations to do

Westboro: 4-5 plots were wiped out last year by raccoons; likely will replant with similar or with

Graves

3 plots remaining; potentially putting Graves in each.

Granville: replacements for 2 2019 plots; 2 new Graves plots planned; 1-2 Clappers

Norfolk: 8 plots in 2019; replacements; could do 1-2 new Clapper plots

Norfolk had very high wind damage, high percent of seedlings lost; many tubes blown away.

She has now put wood chips down. She doesn't have the kids available to help but lots of kids would love to volunteer once social distancing rules are relaxed. It is possible that some of these will recover and resprout, if the root system was not disturbed.

The kids went out a lot last fall, replanted. She has a student who would like to be involved.

YVONNE what is status of seedlings left at Bristol Aggie
(20 tubs?)

Clark Nursery: lost use of town greenhouse in early April due to Covid-19. Using his garage and apron, rolling platforms until warm enough to move onto deck

Has planted 1500, will do another 1000 next week

Brian showed photos of the seedlings! Gorgeous.

Other: Irrigation at Norfolk, Granville, Westboro,

Inoculations at Hawley, Smith, Pittsfield, Weston, Westboro, SKLT

Meadowview & F4 inventory

15 Meadowview 1-2 yr old F3 seedlings

55 Meadowview F3's potted up (Clark & Chapter)

55 F4s from Clark F3 orchard potted up

Pollinations

Male sterile F1s from timber form Chinese

Lilly Kingsolver is Barbara's daughter and is working at greenhouse; unclear if inoculum will come from there or from Kendra

First-round SG inoculations higher priority for Kendra

Paul is getting us inoculation supplies for Chapter

We may have smaller teams working over time

Anything that is on tight spacing is high priority

Weston is very crowded - rows only 5 feet apart

Jamie: let's get you some teams

Kendra: for planning, we need to know which plots are really ready

Different seasons of inoculation makes it hard to compare seed orchard trees

Get tubes off, number trees for Kendra. SOmetimes you want to inoculate below
Getting tree numbers on trees is also very helpful

Yvonne - tubes can provide a sheltered place for fungus to grow; good to get this off well before trees are big AND any inoculation in orchard done

Identifying which plots are highest priority helpful.

We can start numbering things now

Having a tape measurer with you is critical if trees are missing; you can see which number you are really on.

Genomic analysis

Freezing material for genomic analysis: silica was ok, cold but not freezing might be better...
Kendra is hoping to get back into the office. Silica is available at Michael's

Brian was hoping to look at second batch of phenotype data. Jared used a slightly different method

Stacked resistance: Jared saw accidental crossing of Clapper and Graves; it may not be beneficial but waiting to see.

Brian and John Emery did about 500 trees CxG.

Selecting lines to pot up: Brian still working on

Under \$200 for supplies can be done without executive approval

As voted on last year, we can have the Executive Committee approve somewhat larger amounts.

Next Meeting:

July 25th, 10-2pm

QR code round labels, all-weather per last meeting's samples:

Yvonne will order:

Jamie - get him 12-15, 2-3 inch ones

Paul Wetzel - get him 4 that are 2 inches diameter

John Meiklejohn: 2 that are around 1 1/2 to 2" square.

Figuring out ways to do inoculations while keeping people safe:

Kendra: Team of 3: one person doing holes, one person doing inoculum, one person doing data

TACF has asked people not to do in-person work other than with people in one household

Paul: social distancing could be maintained if people space out during the inoculation

"No licking the trees" was suggested to promote health of volunteers

Working alone or in (family) groups are the current options.

Gray Curtis' presentation: he shared his screen. He met with the site manager for the museum.

They needed evidence of past historical involvement; the nearby Boy Scout Camp Sayr, has chestnut sprouts. This is in Milton, MA. The Boy Scout Troop leader is interested. Eagle Scouts can help with the project.

"Chestnut Run" is nearby. Brad and Gray did a presentation to the Museum people, Brad says a demo planting could be good there. Gray used to live near that estate. More than 1/4 acre.

Jamie suggests that Gray consider being a manager, continue developing relationship with museum.

Kendra: good to continue developing relationship, please send her specifics on the location.

She can do a soil survey printout for that. Brad -- we can do a real soil sample. We need to avoid the wet sections. He saw oak seedlings coming up.

The upcoming Chestnut magazine will have an article on GCO layout.

Signage: we had approved 2 sets of 3-panel signs. One was going to Westboro, one to Norfolk. We were not billed for the Norfolk one; the school did that one.

Bill and Rufin are working on a possible chestnut wood sign for the Westboro orchard.

Mark discussed the managers of the three GCOs in Massachusetts.

One near Lunenburg; had many pure American sprouts on property.

One near Harvard, MA. Is on the Conservation Commission in town. Works in biotech. Article in local paper. Brian McClain. Orchard work going on.

One in Lincoln, MA. 2 acres on site of a former winery. Land has a well, town is willing to help. Town doesn't want the land vacant; simplified the procedure -- license for \$80/year for 2 acres. The town cleared out the vines. The town has chestnut on its town seal; site near a walking trail.

Mark will get the info re. The trees to Jamie. 1-page agreement. 3-year tenancy, renewable.

Jamie -- what are the terms of license; can they let us go? Mark -- yes.

We could lose the trees.

John -- it is agricultural land, and is a hilly part of the field that is not suitable for soccer. During the tenancy of 3 years needs "good behavior" for the relationship to continue. The Lincoln town land of this orchard is subject to the Town's Con Comm.

Kendra -- Regular communication with landowners is potentially our best protection there.

John Emery -- are they willing to have a fence there?

Tall shelters not recommended; trees grow tall and spindly. For deer -- individual cages?

Jamie -- we have had no conversation about spending money to rent land, and in town politics things can change.

Mike N. -- Chapter needs to keep track of all such expenses. Towns cannot bind themselves into the future, that was decided by the Supreme Court.

Jamie -- time frame for these trees is not just 3 years.

Mark -- the town has rolled out red carpet; has a historical interest. Extremely unlikely that town would find another use for land.

Yvonne -- towns can change their minds. We have lost trees to groups changing policy.

Rich - - pure Americans can look unsightly, shrubby.

Kendra -- would want replication of the sources at this site.

Gary -- Medway is conservation commission land.

Jamie -- we need to understand that this is a risky site

Yvonne -- Mark et al., might want to be sure other replications of these lines are in more "secure" sites.

Kendra -- re. Hill Craddock -- virtual training on grafting is in planning stages. If anyone is interested please grab some scion material, she is trying to get it set up.

Rich Hoffman is very interested. Other people as well.

Kathy: Winter minutes are edited and ready for approval at next meeting.

Meeting adjourned at 2:57 pm