

**Subject:** Info on: Fruit matures after leaf senescence  
**From:** Elizabeth M Wolkovich <wolkovic@mail.ubc.ca>  
**Date:** 5/27/18, 10:24 AM  
**To:** Sally Gee <sallygee17@gmail.com>, "Ettinger, Ailene" <aettinger@fas.harvard.edu>

Hi Ailene and Sally,

I have been chatting with Rob guy about a few trees that you monitored where fruit developed after senescence.

By this I assume we mean: fruits growing after leaf senescence which means the mother plant must be sending resources to the fruit after photosynthesis has stopped (or that's how Rob put it) which he seemed to think was interesting.

He said you definitely see this in crops like wheat and barley, but there the nutrients have nowhere else to go (so to speak) so he wasn't sure how often it would happen in trees which could translocate resources into storage instead. See below for more of his thoughts ...

All the best,  
Lizzie

----- Forwarded Message -----  
Subject: RE: Fruit matures after leaf senescence  
Date: Fri, 25 May 2018 15:49:28 -0700  
From: Guy, Robert <[rob.guy@ubc.ca](mailto:rob.guy@ubc.ca)>  
To: Wolkovich, Elizabeth <[e.wolkovich@ubc.ca](mailto:e.wolkovich@ubc.ca)>

Ah yes... another point: Seeds of Platanus and Liquidambar are both wind dispersed, also Liriodendron (not Carya or Styphnolobium though). Good to get those wind-blocking leaves out of the way first!  
-Rob

-----Original Message-----  
From: Guy, Robert  
Sent: Friday, May 25, 2018 12:12 PM  
To: Wolkovich, Elizabeth <[e.wolkovich@ubc.ca](mailto:e.wolkovich@ubc.ca)>  
Subject: RE: Fruit matures after leaf senescence

Hi Lizzie,

So.... I would wonder whether these fruits are actually growing after leaf senescence, as opposed to developing or maturing. Liquidambar has a head of capsules that needs to dehisce to release seeds, so is mature when it is dead and dries out. Platanus has a head of achenes that must also dry out and fall apart to release the achenes (the fruits themselves, the hairy achenes, are indehiscent). My question would be, when do these fruiting structures stop acquiring resources (C, N, etc.) from the plant? That could be when they are still green. Was dry mass monitored?

Cheers,  
Rob

-----Original Message-----  
From: Wolkovich, Elizabeth  
Sent: Friday, May 25, 2018 11:58 AM  
To: Guy, Robert <[rob.guy@ubc.ca](mailto:rob.guy@ubc.ca)>  
Subject: Fruit matures after leaf senescence

Hi Rob,

Just gleaning from our supp figure (S1 attached -- last page, you can zoom way in), these species had fruit maturing after leaf senescence:

/Liquidambar styraciflua

/

//

/Platanus occidentalis/

/Styphnolobium japonicum /(only 1/4 individuals did this, others were more concurrent)

And for/L//iriodendron tulipifera, Carya glabra,/ /Carya ovata /1-2 out of 4 individuals which ripened fruit as senescening, so not the same thing.

Any more thoughts welcome!

Thanks again,

Lizzie

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