

Subject: Re: One last query: Estimates of seed production per unit plant biomass?
From: Elizabeth Wolkovich <lizzie@oeb.harvard.edu>
Date: 4/12/16, 5:02 PM
To: <jhrl@u.washington.edu>

Hi Janneke,

Thank you! And no great rush. We've been pushing this project along, slowly, for years, a delay of a week or so is small potatoes (though I like to think we've entered a new rate category on this project this year .. we'll see).

If it's easy we'd be keen to have data from monocultures and mixtures -- for the first major part of the project we're just exploring parameter space so the more we know ranges the better. If it's much more work to get both types then just mixtures, assuming you have those data per species (and R* from monocultures).

Thank you again!
Lizzie

On 4/10/16 1:16 PM, Janneke Hille Ris Lambers wrote:

Hi Lizzie,

I can definitely get you all of these, but I'm totally swamped and I won't be able to get to it until the end of the week. Its been a while and I want to make sure I get you the information you need....

Do you need this from monocultures or mixtures? I can get you all the same information except for the belowground biomass, obviously. But the R* values (if you end up using those) are from monocultures.

Janneke

On 4/3/2016 8:04 AM, Elizabeth Wolkovich wrote:

Hi Janneke,

Sorry for the delay. I had to think through the model a little and then wanted my collaborator's (Megan Donahue) second opinion.

What I fundamentally need is conversion of end of season biomass into number of seeds the next season. So for the data you described I think that if you happen to have estimates of # inflorescences per plot then we could calculate what I need.

inflorescences per plot * seeds per inflorescence = # seeds per plot
aboveground + belowground biomass per plot = biomass per plot

And from that I could calculate #seeds produces per biomass of plant. Also, I could get by with aboveground biomass only and do some estimates from R:S if it's a pain to track down belowground biomass. That's all if you have the # inflorescences per plot; if not I can't think of a good way to get the needed estimate.

Thanks for any help!

And thanks for the NPR mention. It was fun work and I finally am learning to talk slower for radio with the rare bits of practice that I get!

All the best,
Lizzie

On 4/1/16 12:06 PM, Janneke Hille Ris Lambers wrote:

On 4/1/2016 8:51 AM, Elizabeth Wolkovich wrote:

Hi Janneke,

Thanks for your emails last month! I have actually pulled together a nice spreadsheet of values with your help and a few papers from Stan.

Great! BTW - I heard your voice on NPR about a week ago and meant to email you - cool story (wine grapes)! Congrats on the coverage.

I now have one query for you related to one parameter I have not been able to track down: biomass to seed conversion. From your 2010 Journal of Ecology paper it sounds like you measured seeds per inflorescence, and also biomass by species by plot. I am wondering if you think of any of these data could be converted in to biomass per plant and seeds per plant? Which would then of course let me estimate seeds per biomass. Or maybe you have a plot level estimate of both that would work?

Are you looking for allocation parameters (e.g. proportion biomass allocated to seed) or actual per individual plant fitness measures (seeds produced per plant)?

I definitely have seeds / inflorescence and individual seed biomass, but likely many of these species produce more than one inflorescence per plant. I can likely calculate some sort of allocation - and we may even somewhere have belowground biomass data from the monocultures (all on a per area basis) to get allocation for the whole plant... However, per individual measures would be impossible - they were all grown in dense monocultures and I never counted individuals per unit area. Also note that I never did viability tests - so estimates of fitness would be an overestimate.

Let me know. I have all the data and it shouldn't be too hard, although it might take me a week or two to find the time to reimmerse myself in the code / data and get you estimates.

Janneke

If you might have these data please let me know. I realize it is a pain to sift out old data so if it something you simply don't have time for I completely understand.

All the best and thanks again,
Lizzie

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