

Phase 6 Cover Crops Expert Panel

Chair: Ken Staver, UMD

Membership

Name	Affiliation	Role
Ken Staver	University of Maryland	Panel Chair
Charlie White	Penn State University	Panel Member
Jack Meisinger	USDA – Agriculture Research Service	Panel Member
Paul Salon	USDA-Natural Resources Conservation Service	Panel Member
Wade Thomason	Virginia Tech	Panel Member
<i>Jason Keppler</i>	<i>Maryland Department of Agriculture</i>	<i>Watershed Technical Workgroup representative</i>
<i>David Wood</i>	<i>Chesapeake Bay Program Office</i>	<i>Modeling Team representative</i>
<i>Mark Dubin</i>	<i>University of Maryland</i>	<i>AgWG Coordinator</i>
<i>Lindsey Gordon</i>	<i>Chesapeake Research Consortium</i>	<i>Staff</i>

Expert Panel Scope of Work

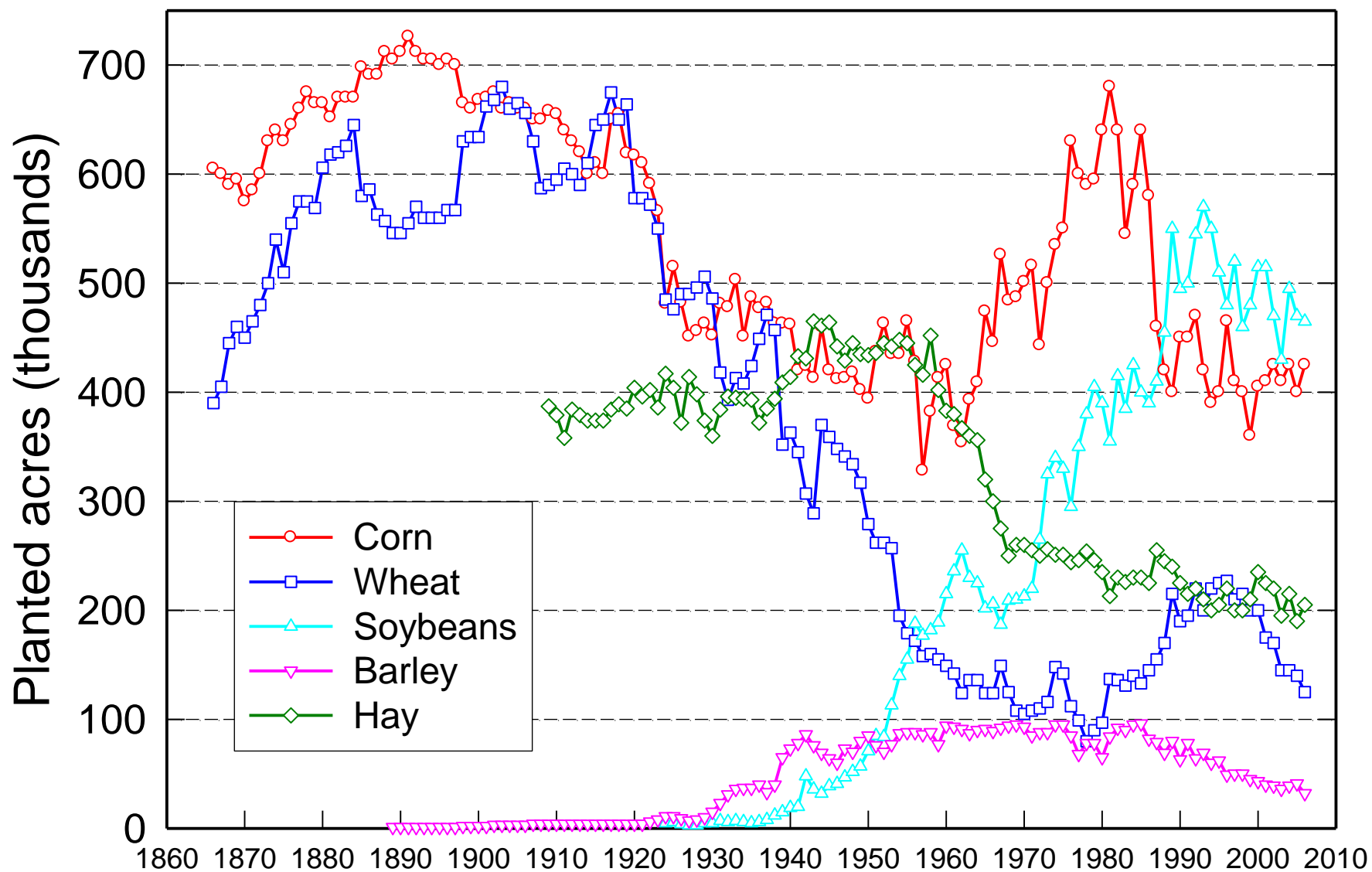
- Transition and translate all current cover crop reduction efficiencies from the P5.3.2 to the P6.0 model.
- Review and update the definitions and reduction efficiencies of cover crops that are eligible for commodity cover crop status.
- Panel will collaborate with the P6.0 conservation tillage Panel to address credits for winter cover crops that receive fall nutrients.
- The following two items are recommended for consideration if time allows, or if necessary within the context of addressing charges 1 and 2:
 - Create a late-summer planting system for cover crops that are planted in mid- to late-August after a silage removal or short-season crop (e.g., vegetable).
 - Consider a change from the current approach that uses average frost date for setting planting dates to one that uses heat units.

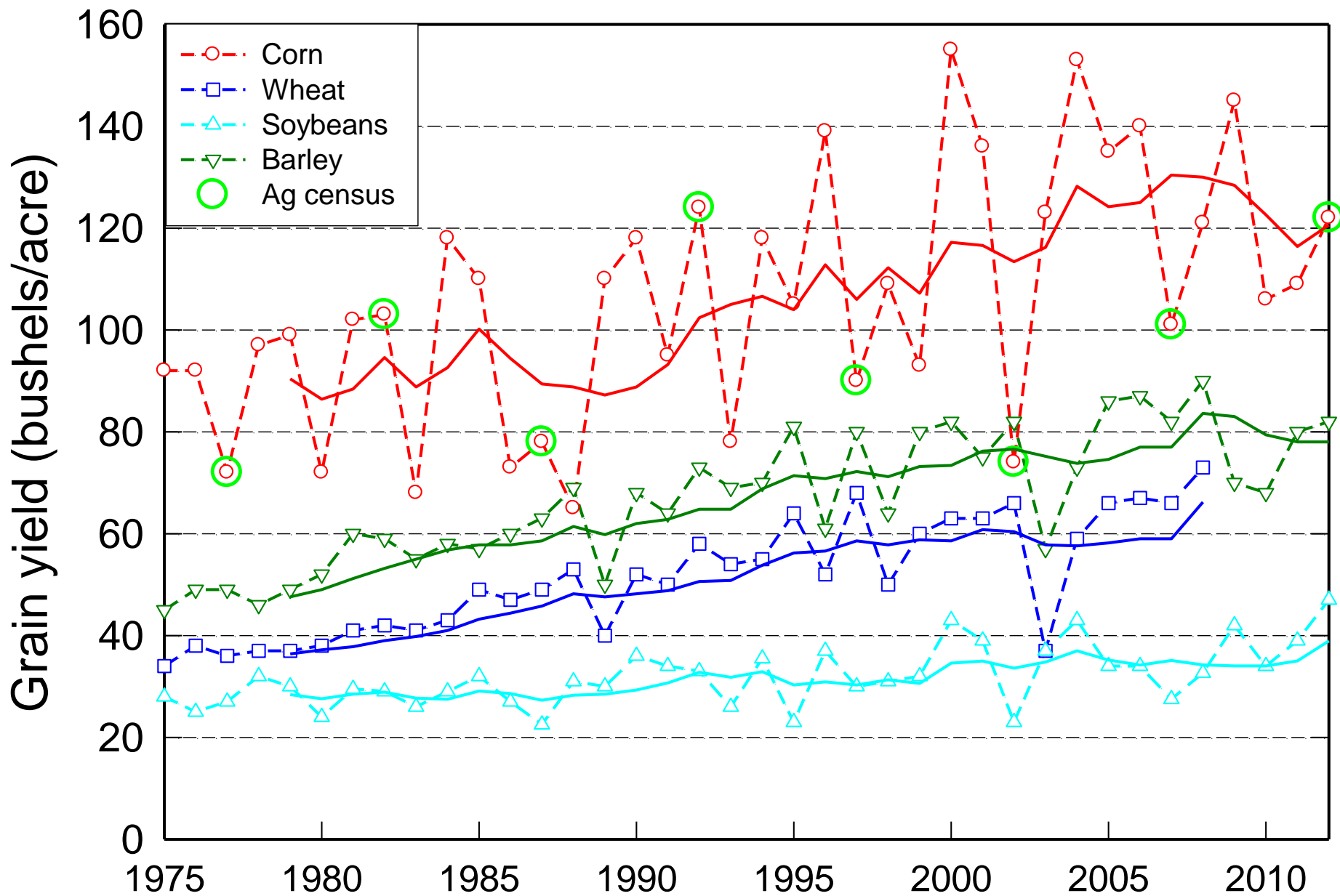
Timeline and Deliverables

- September/October 2015 – The Panel will present a provisional report to the AgWG, WTWG, and WQGIT for informational purposes, and for initial Partnership comments on the proposed direction of the Panel's evaluation. The paper will not represent a full recommendation report, and the Partnership will not be asked for formal approval at this time.
- February 2016 – Target date for Panel to release draft report to the Partnership.
- April 11, 2016 – Target date for full Partnership approval of the panel report.

The general direction

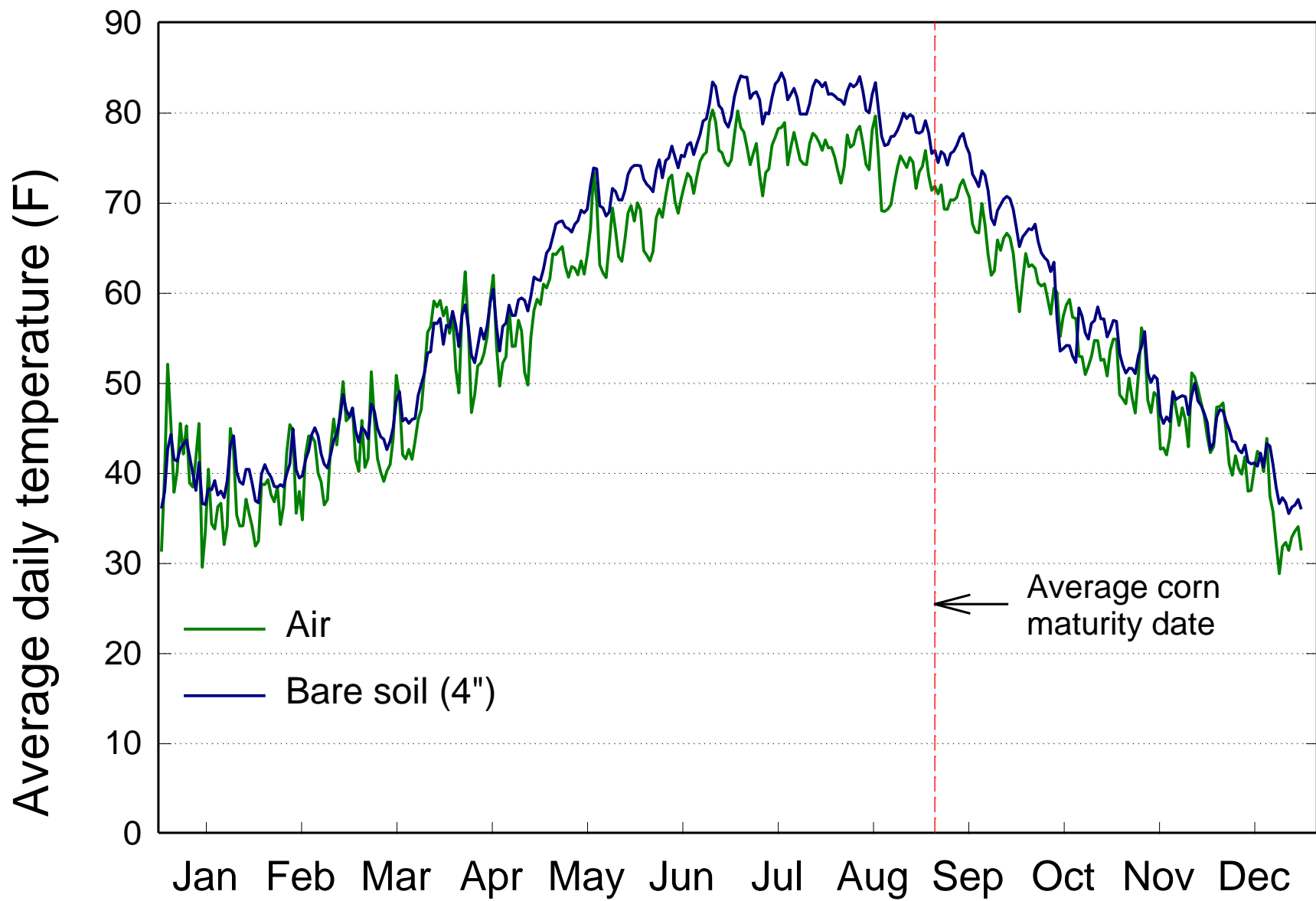
- Use past work with additions where there is support – mostly leaching
- Commodity cover crops ?????
- Manure happens and cover crops make a difference. Change since 85?
- Erosion issues? Modeling only option
- Quantifying 30 year change difficult
- Heat units appealing, looking forward





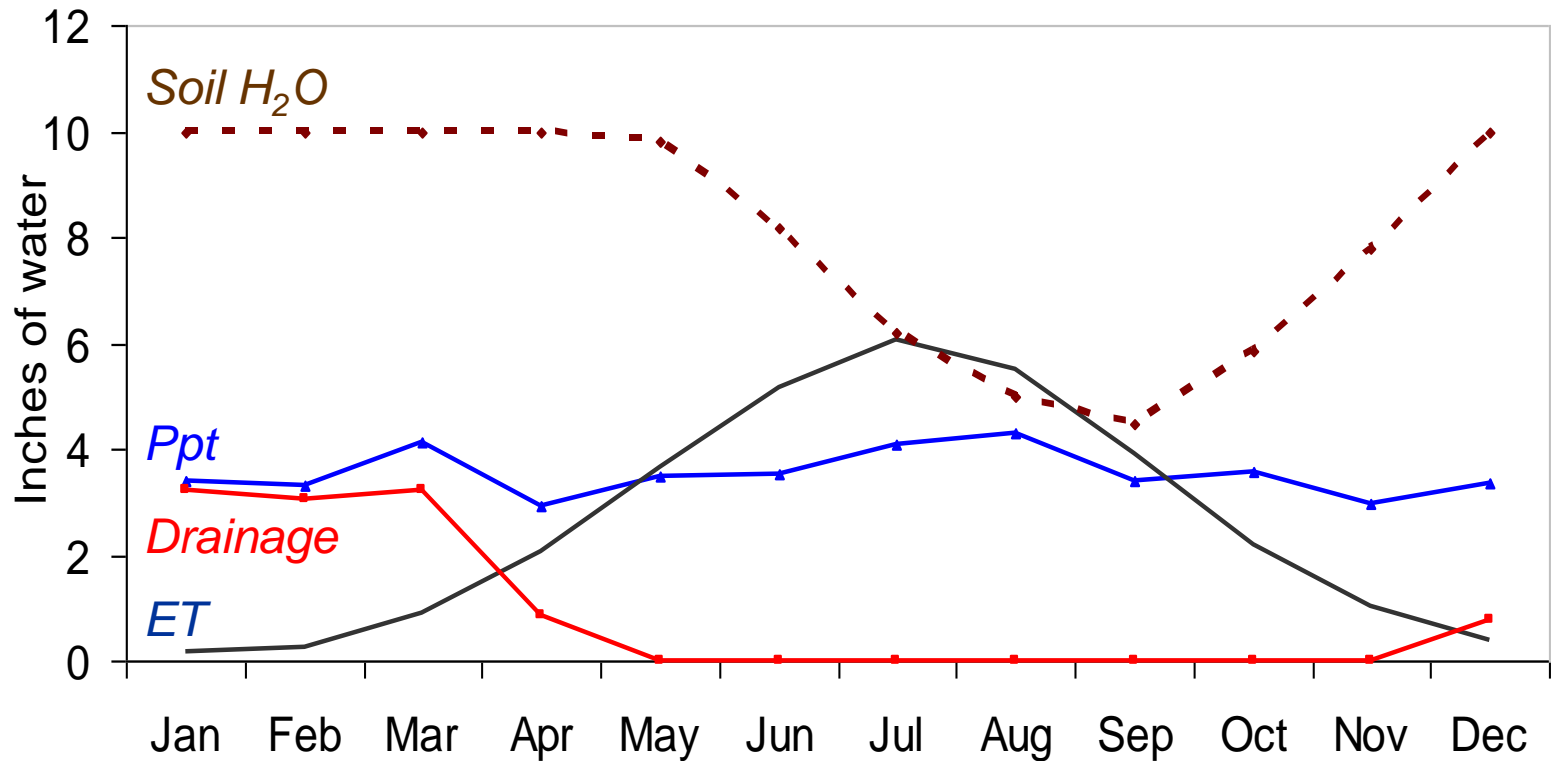
**Chesapeake Bay
watershed is a big place!
How well will cover crops
work in other regions of
the watershed?**





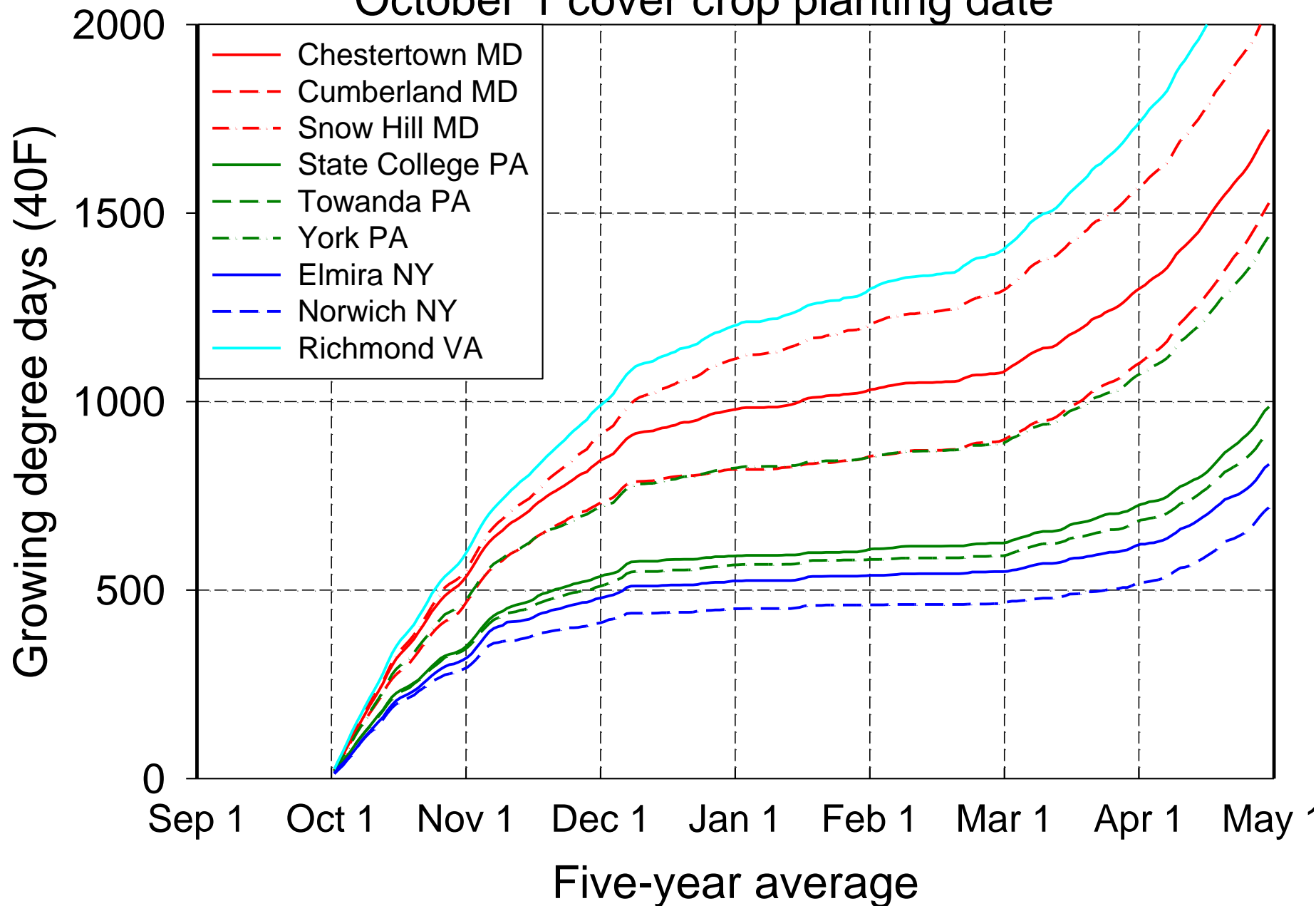
How does the General Hydrologic Cycle affect N Losses over a Calendar Year?

(Meisinger & Delgado, 2002)

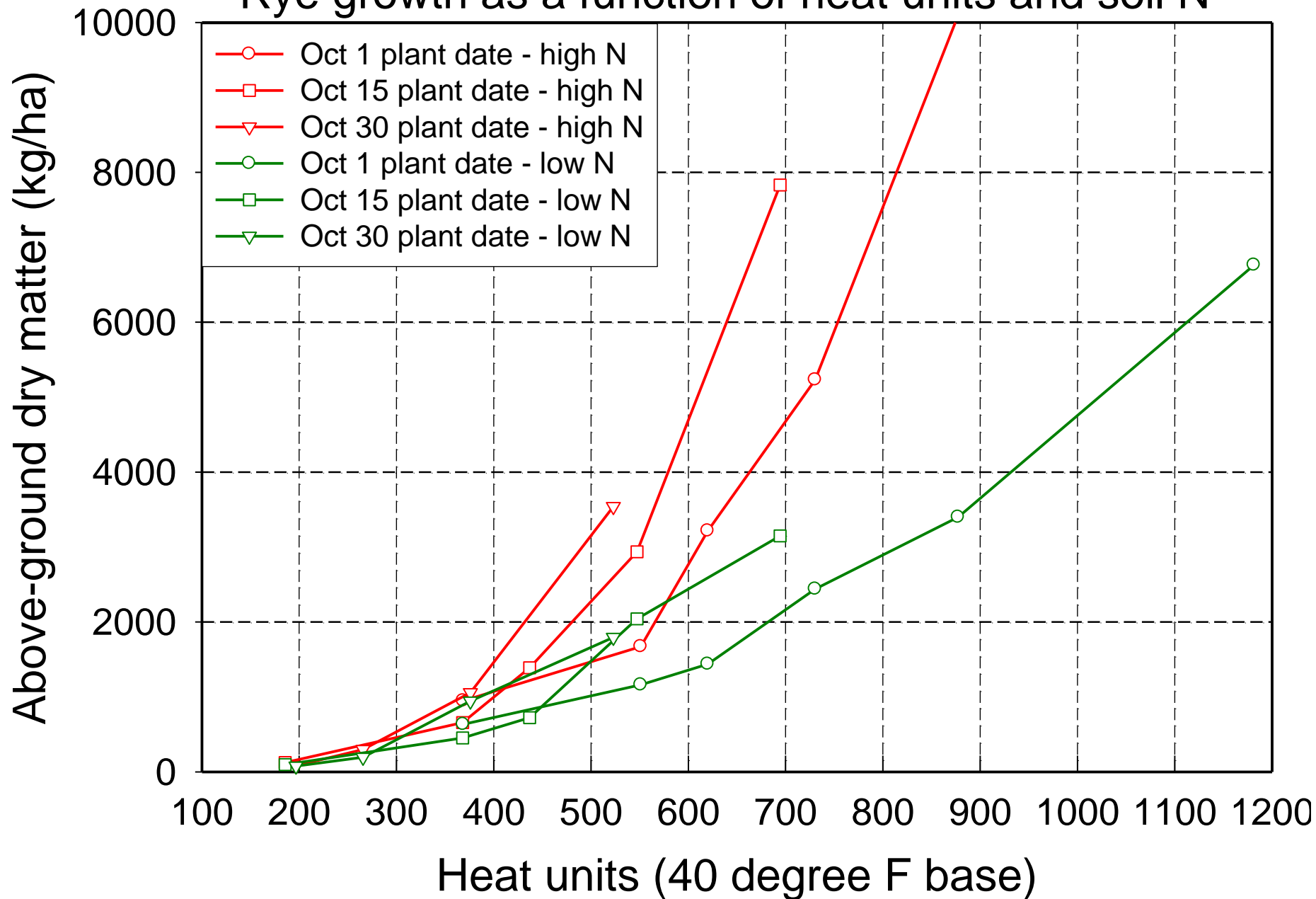


Soil water budget – Lower eastern shore

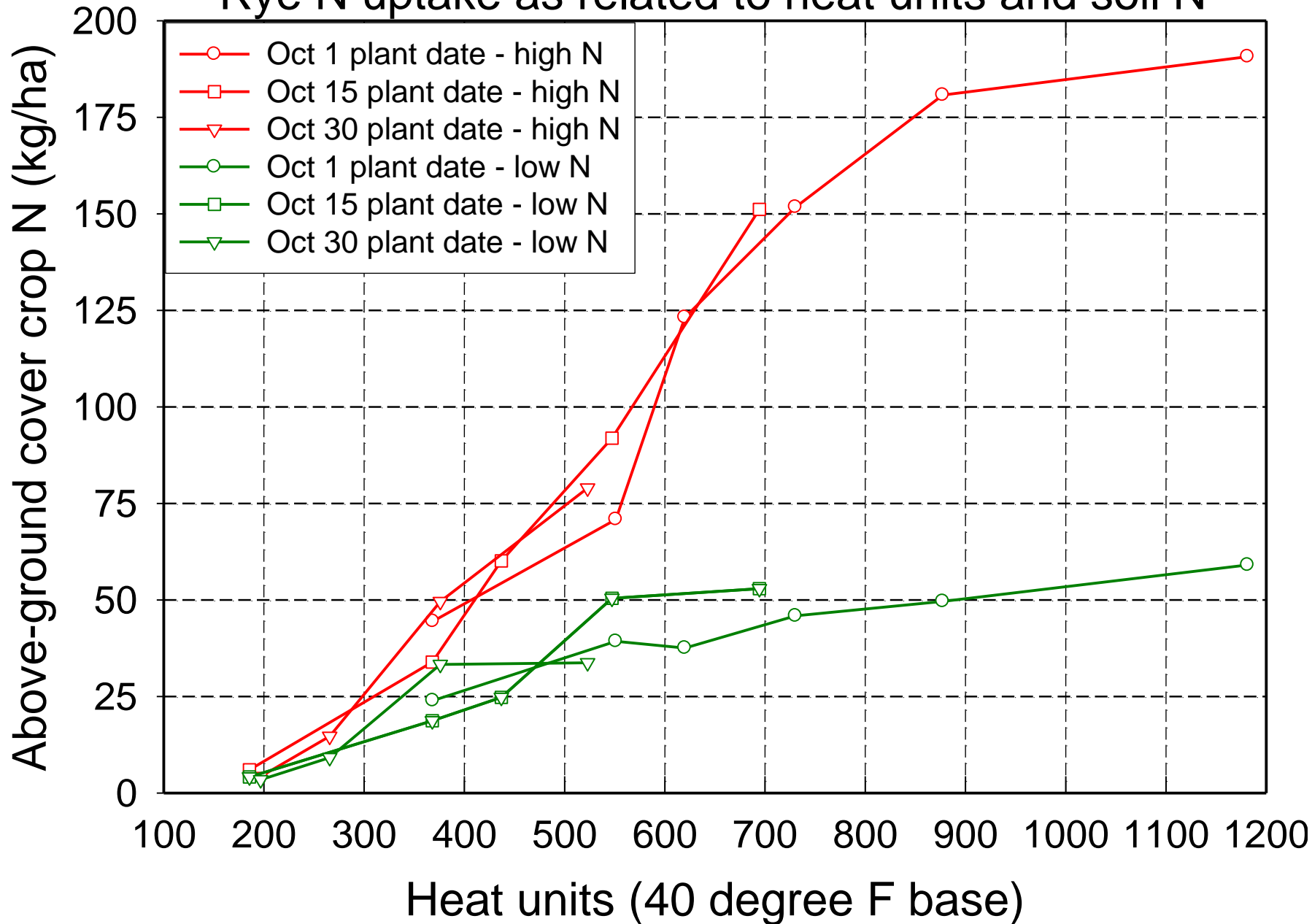
October 1 cover crop planting date

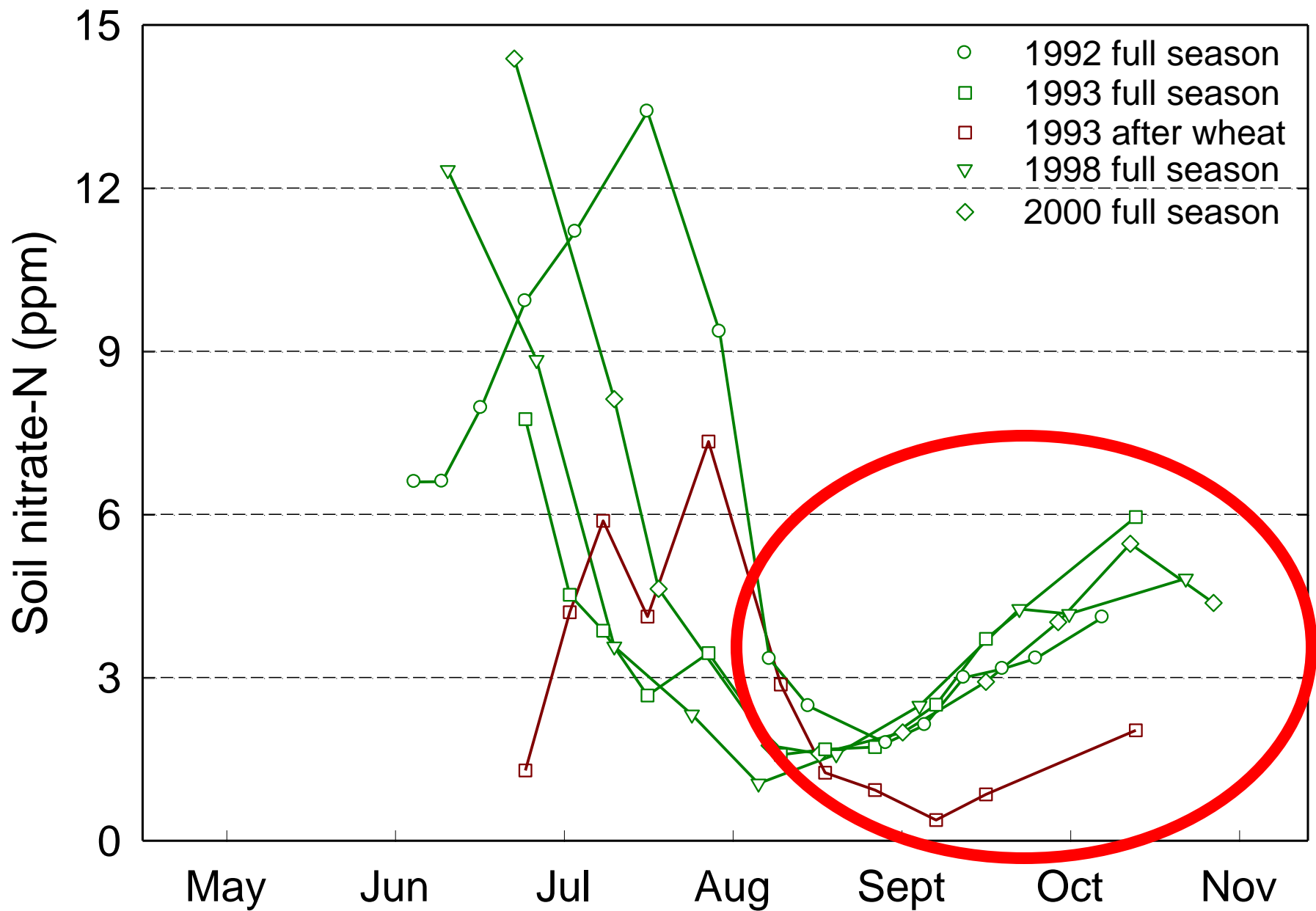


Rye growth as a function of heat units and soil N



Rye N uptake as related to heat units and soil N









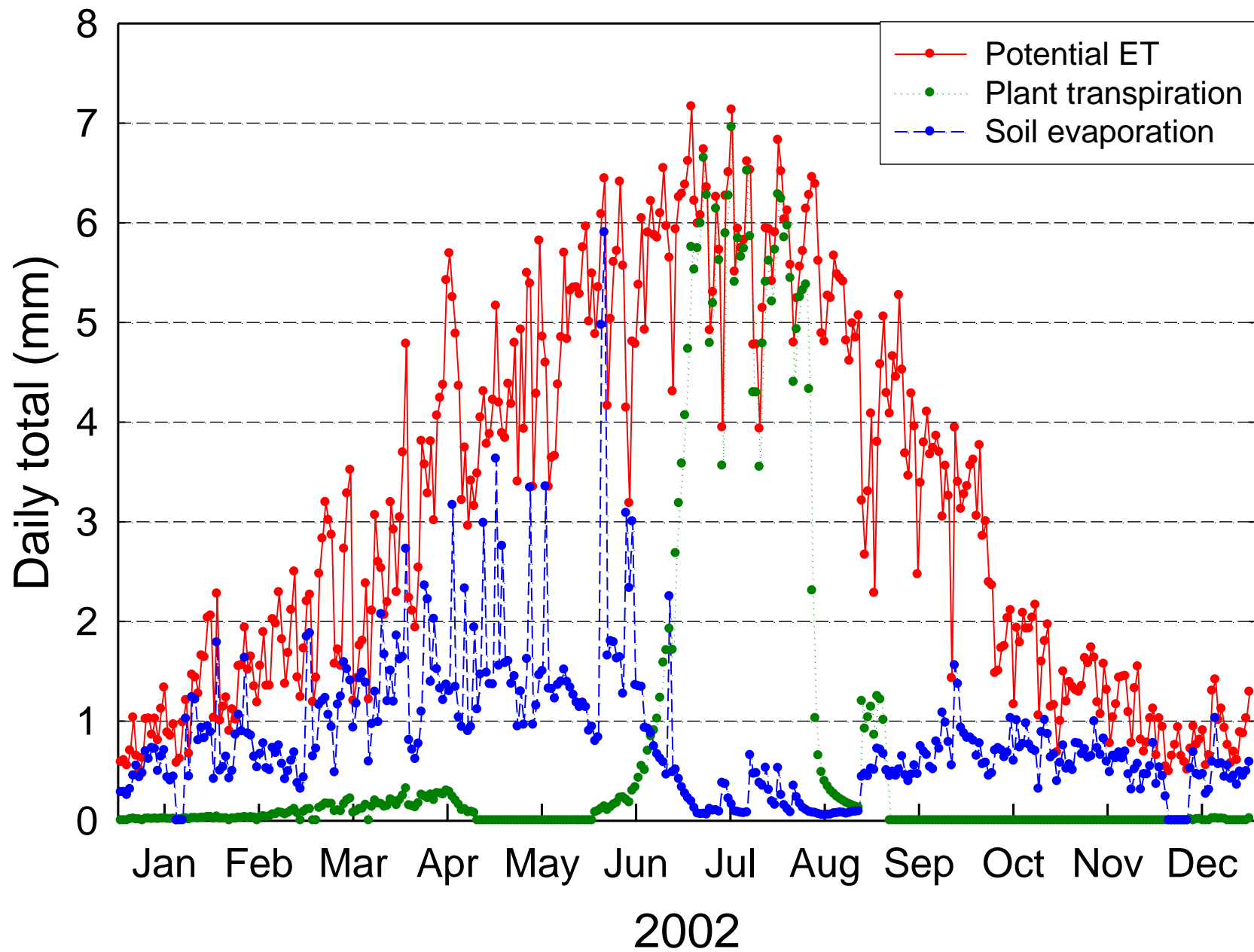


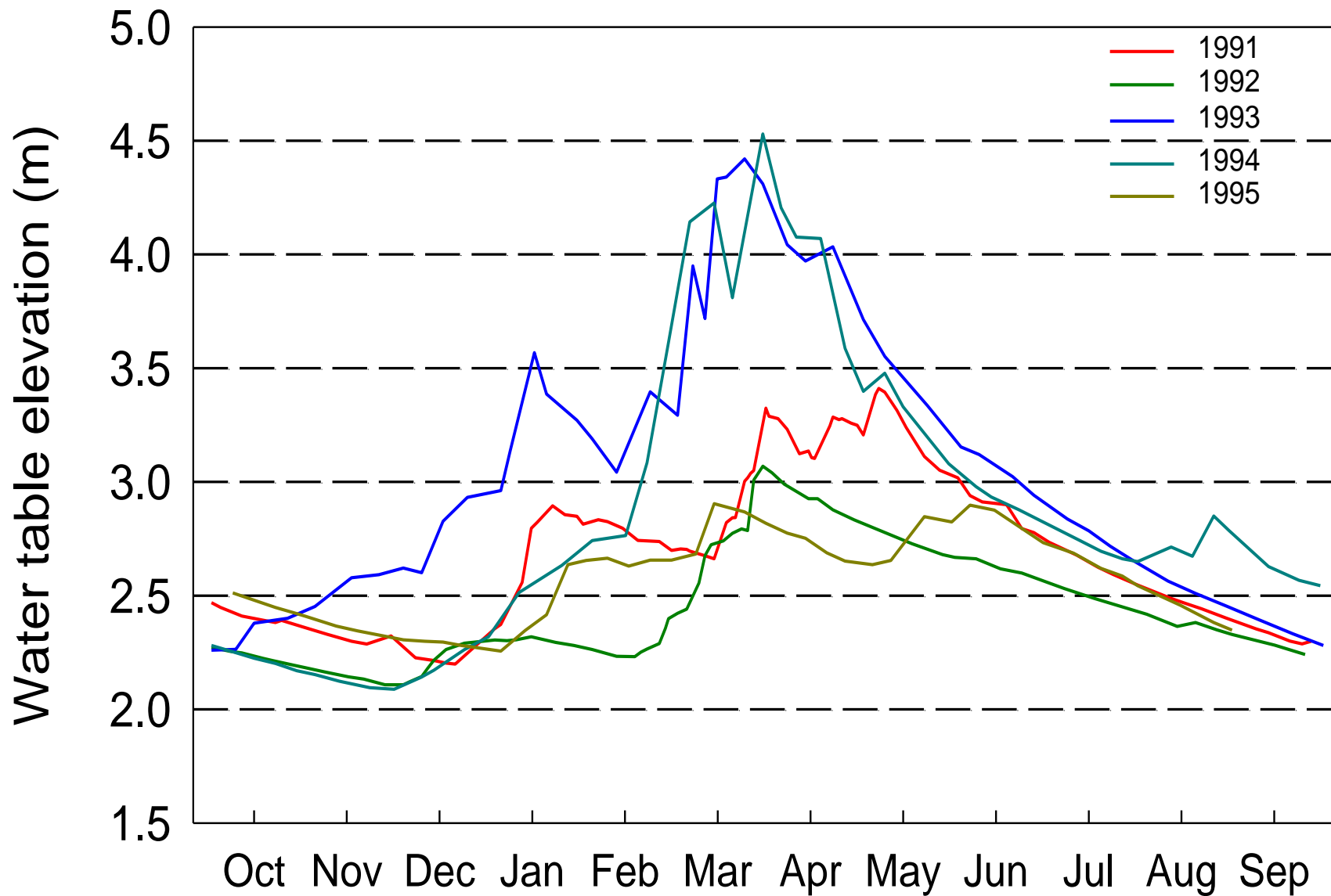




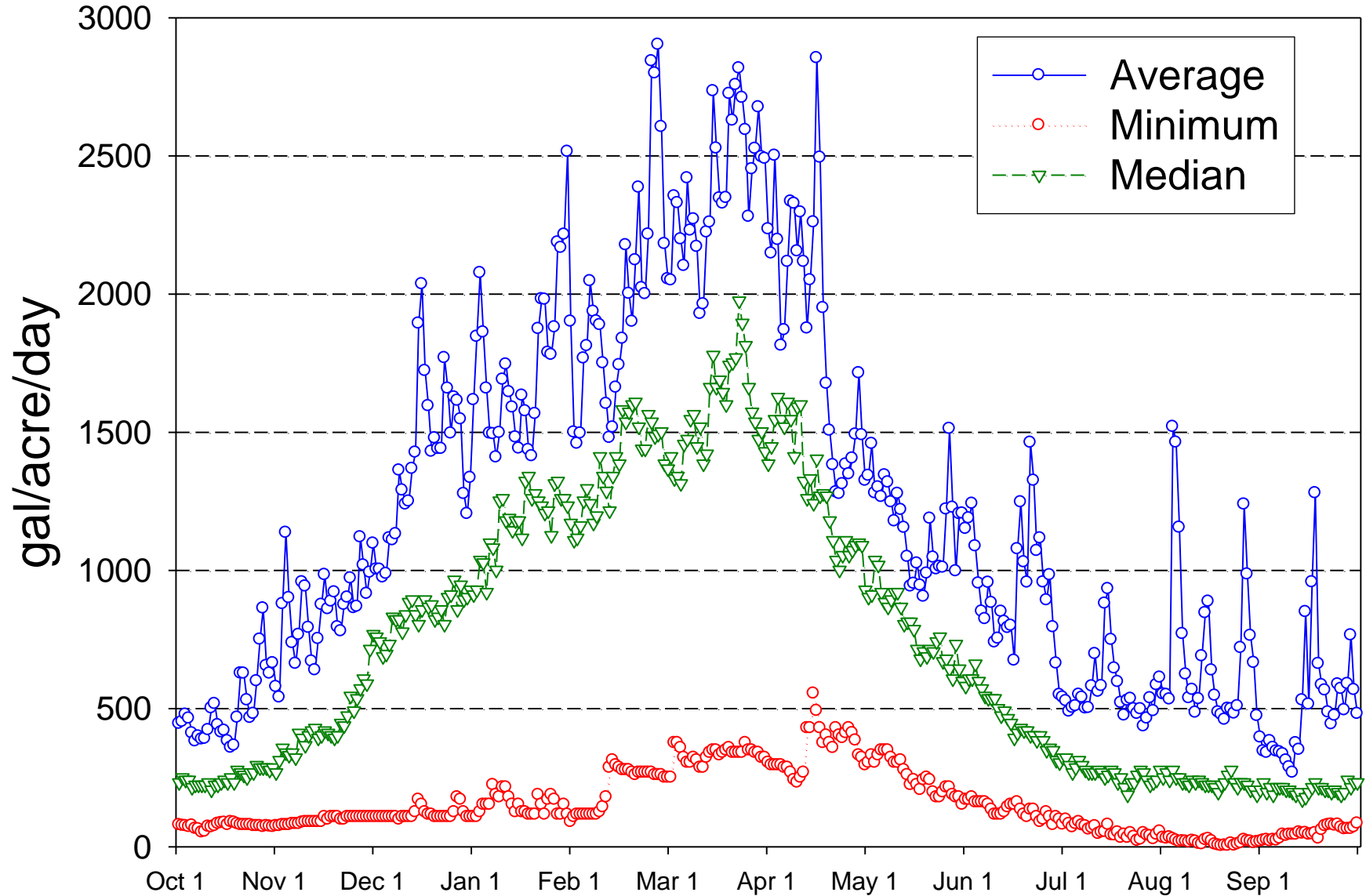
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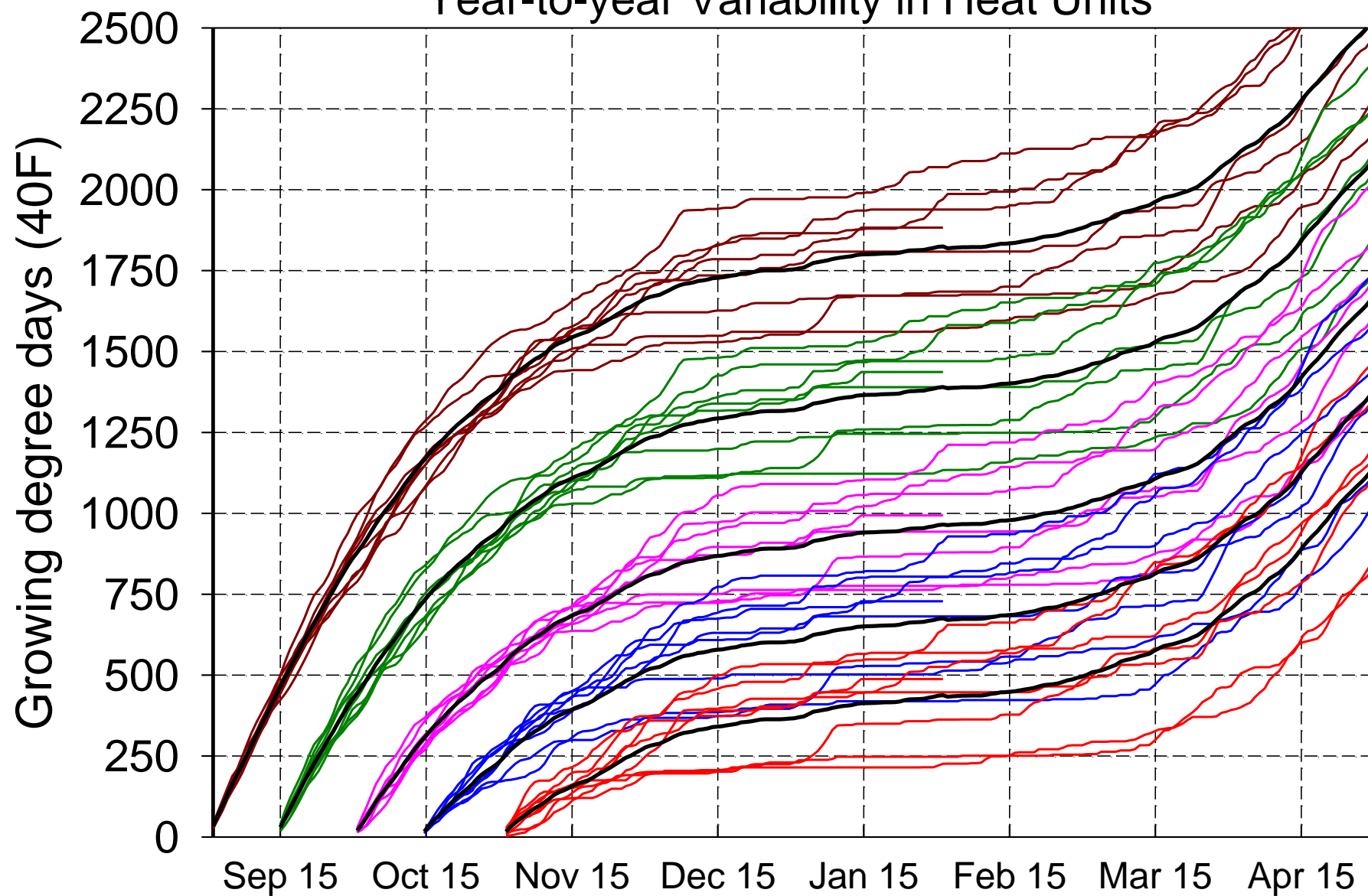




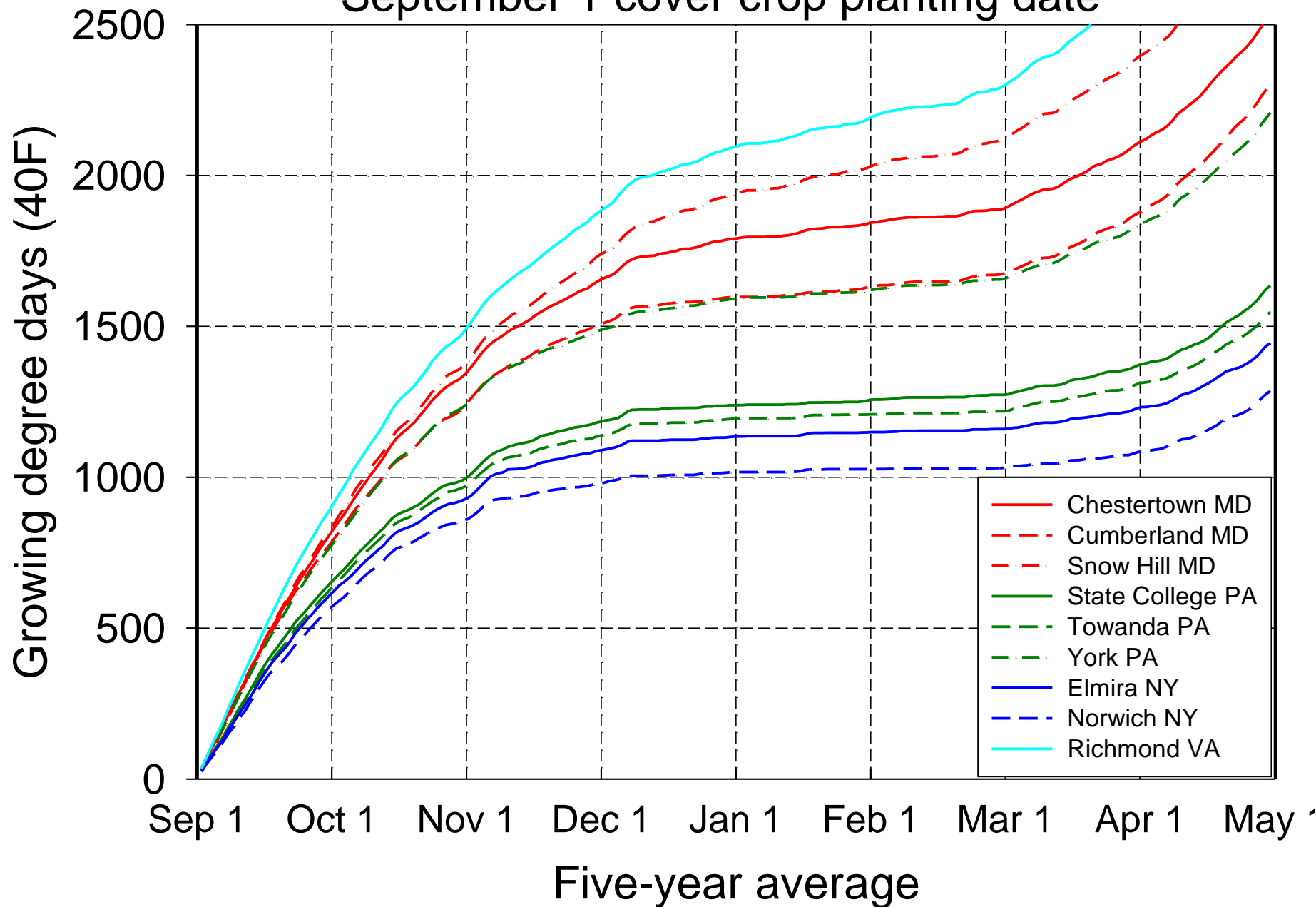
Greensboro 1949-2007 average



Year-to-year Variability in Heat Units



September 1 cover crop planting date



November 1 cover crop planting date

