Crops Put In a 4-Day Work Week

Richard O. Pope

Iowa State University, ropope@iastate.edu

Follow this and additional works at: http://lib.dr.iastate.edu/cropnews

Part of the Agricultural Science Commons, Agriculture Commons, Agronomy and Crop Sciences Commons, Meteorology Commons, and the Plant Pathology Commons

Recommended Citation


http://lib.dr.iastate.edu/cropnews/595

The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit https://crops.extension.iastate.edu/.
Crops Put In a 4-Day Work Week

Abstract
For organisms, heat drives development. If you can regulate your own heat like we humans do every day is a balmy 98.6 or so, so development every day is the same and can be measured by the calendar. But for our field crops and most of the pests they face, development is based on the heat they get from the environment. And, less heat means slower growth. For the week of July 12--19 alone, Iowa normally accumulates 200 base-50 degree days as a statewide average. Last week that accumulation was 133, or about four and a half "normal" days for the week. So, for the season since May 1, we are now 143 to 205 degree days behind normal.

Keywords
Plant Pathology

Disciplines
Agricultural Science | Agriculture | Agronomy and Crop Sciences | Meteorology | Plant Pathology
Crops Put In a 4-Day Work Week

By Rich Pope, Department of Plant Pathology

For organisms, heat drives development. If you can regulate your own heat like we humans do every day is a balmy 98.6 or so, so development every day is the same and can be measured by the calendar. But for our field crops and most of the pests they face, development is based on the heat they get from the environment. And, less heat means slower growth. For the week of July 12–19 alone, Iowa normally accumulates 200 base-50 degree days as a statewide average. Last week that accumulation was 133, or about four and a half "normal" days for the week. So, for the season since May 1, we are now 143 to 205 degree days behind normal.

Base 50°F degree days
May 1 through July 19, 2009

So what does that mean? Here are just a few fine points for discussion at field edges and coffee shops:

- **Will soybeans be damaged by the cold during flowering?**

  Pod set is determined in part by biomass accumulation, which is slowed by the cold. But soybean has a great ability to flower over long periods, and warmth in the next 2–3 weeks should allow for ample pod set. We will start to have more concern if it gets to August and we are still unusually cool, but even 80-degree highs and 60-degree lows will help.

- **What diseases might become issues?**

  Some diseases are more prevalent in the heat, some in cooler weather. Conditions may favor downy mildew on soybean in lowlying
areas, and eyespot on corn is a concern in some areas, while southwest and south central Iowa have cornfields with significant gray leaf spot infections.

- **What about all the weeds?**

  Soybeans are growing slowly, and late to canopy. That allows light penetration and encourages weed growth. Add that to fields where weed control programs were delayed and weed pressures have built up, means that 2009 may be remembered as a year of the weeds.

- **It is an odd year, so does that mean soybean aphids are a huge concern?**

  So far, soybean aphids have been reported in some fields in the northern half of Iowa, but not generally at threshold levels. Soybean aphids bear watching because populations can grow rapidly with favorable conditions, which includes cool temperatures.

Rich Pope is a program specialist with responsibilities with Integrated Pest Management. Pope can be contacted by email at ropope@iastate.edu or by calling (515) 294-5899.

---

This article was published originally on 7/21/2009. The information contained within the article may or may not be up to date depending on when you are accessing the information.

Links to this material are strongly encouraged. This article may be republished without further permission if it is published as written and includes credit to the author, Integrated Crop Management News and Iowa State University Extension. Prior permission from the author is required if this article is republished in any other manner.