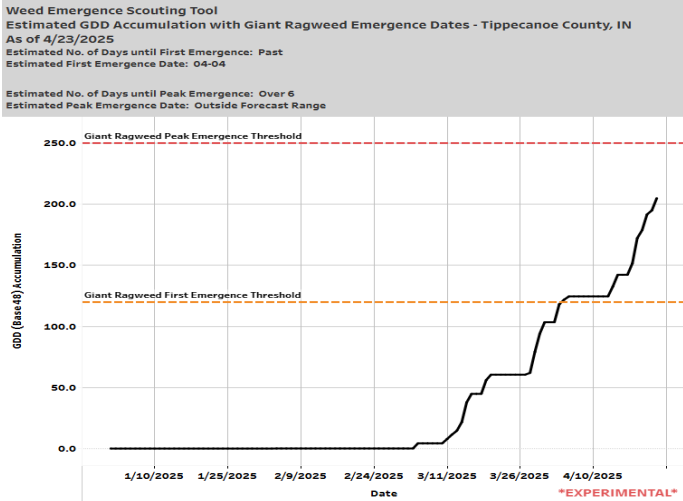
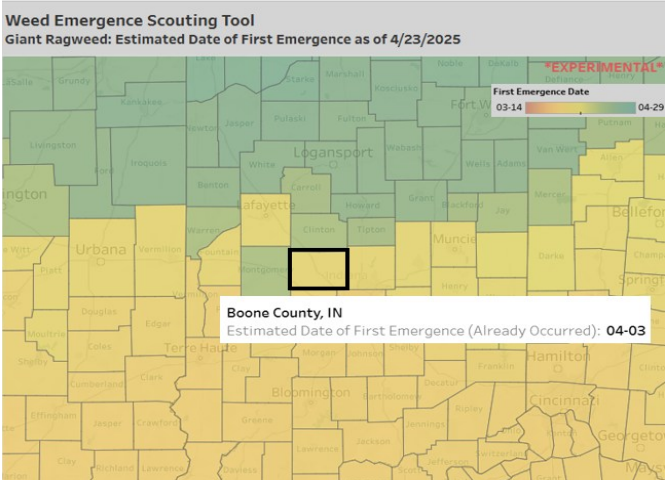




### About Weed Emergence Scouting

The Weed Emergence Scouting Tool (W.E.S.T.) is an innovative resource developed by the Midwestern Regional Climate Center (MRCC) in partnership with the North Central Integrated Pest Management (IPM) Center, Purdue University weed scientists, and Extension educators. This tool provides county-level estimates for the first and peak emergence dates of giant ragweed and waterhemp across the Midwest. By leveraging empirical relationships between weed development and Growing Degree Day (GDD) accumulations, W.E.S.T. helps users anticipate and manage weed emergence more effectively.



### How it works:

W.E.S.T. uses high-resolution PRISM temperature data to calculate GDDs with a base of 48°F and adds them to the previous day's total. Forecast maximum, minimum, and average temperatures from NOAA are adjusted to the county level, which are then used to calculate daily GDD accumulations over the subsequent six-day period. Research from Iowa State University indicates that giant ragweed typically emerges with fewer than 150 GDD, while waterhemp requires more than 350 GDD. Purdue Extension Educators collected field data across Indiana in 2023 to refine these estimates. Findings include:

- Giant ragweed first emerges at about 120 GDD (base 48°F) and reaches peak emergence between 200 and 300 GDD.
- Waterhemp first emerges at about 425 GDD (base 48°F) and peaks between 500 and 600 GDD.

### This tool allows users to:

- Track GDD (base 48°F) accumulations over the current year (January 1 to the current date) for any Midwest county.
- Determine whether giant ragweed or waterhemp is expected to reach its peak emergence based on forecast data within six days, and if so, in how many days.
- Review the current season's emergence dates for giant ragweed or waterhemp in specific Midwest counties.

**W.E.S.T. Validation Needed**

This tool is currently experimental and would benefit from your giant ragweed and waterhemp observations to better refine this product. Email [mrcc@purdue.edu](mailto:mrcc@purdue.edu) if you are interested in providing weed emergence observations to assist in tool validation.