

WeedCast

An easy-to-use web-based model for predicting weed emergence on your farm

WeedCast is a computer model that simulates the timing of emergence of weeds, as well as the growth of weed seedlings after they emerge. The model can be used on any farm in Minnesota and surrounding states and provinces. It requires that the user supply local weather data and some simple information on soils. The weather data can come from the weather station nearest the farm or directly from the farm itself. Mandatory weather data are simple: only daily minimum and maximum air temperatures and daily rainfall. Optional data include average daily soil temperature measured at 2" depth. The model internally calculates soil temperature based on air temperature and soil information, but it works better if the user supplies the optional measured soil temperature data. The model also internally calculates soil water stress in the upper 2" of soil based upon rainfall and measured or simulated soil temperature.

Once soil temperature and soil water stress are calculated by WeedCast, they are combined into a single variable called "hydro-thermal time" or HTT. This is just like growing degree days, except that it also includes the effects of water stress. Fortunately, germination and emergence of each weed species respond to HTT uniquely, but consistently. Thus, if HTT is calculated correctly, it can predict the timing of emergence of any of several weed species equally well in any field in Minnesota, Iowa, Wisconsin, Manitoba and the Dakotas. Accurate predictions of the timing and extent of weed emergence on a daily basis in the spring and early summer allow growers to better time their herbicide applications as well as mechanical weed control tactics. These predictions can be made by WeedCast, which is easy to use, and can be downloaded at no cost from www.weedcast.net.

Frank Forcella, Research Agronomist at the USDA-ARS Soils Lab in Morris, MN, will talk about how area fruit and vegetable producers can use WeedCast to predict weed emergence during the Opening Session at the Upper Midwest Regional Fruit & Vegetable Growers Conference on January 22, 2009. Frank Forcella will also share information on some new projects they've been working on. The conference schedule can be found on pages 8 and 9.

Upper Midwest Regional Fruit & Vegetable Growers Conference & Trade Show

St. Cloud Civic Center, St. Cloud, MN
January 22 & 23, 2009

Beginning Grower Workshops: Your Future in Vegetable Production Starting An Apple Orchard

St. Cloud Civic Center, St. Cloud, MN
January 21, 2009

Making and Marketing Jams and Jellies

St. Cloud Civic Center, St. Cloud, MN
January 21, 2009

Accommodations are available at:

Best Western – Kelly Inn 320-253-0606

Single Rate - \$78 Double Rate - \$84

There is direct access to the Civic Center from the Best Western-Kelly Inn.

Mention "Minnesota Fruit & Vegetable Growers" to receive conference room rates.

The Radisson Suites Hotel 320-654-1661

The Radisson Suites Hotel is connected by a skywalk to the St. Cloud Civic Center.

