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Presentations**



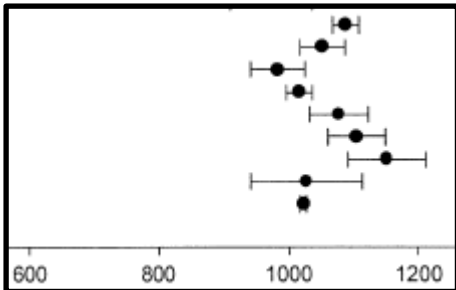
Projected Changes to Downy Brome Herbicide Application Timings

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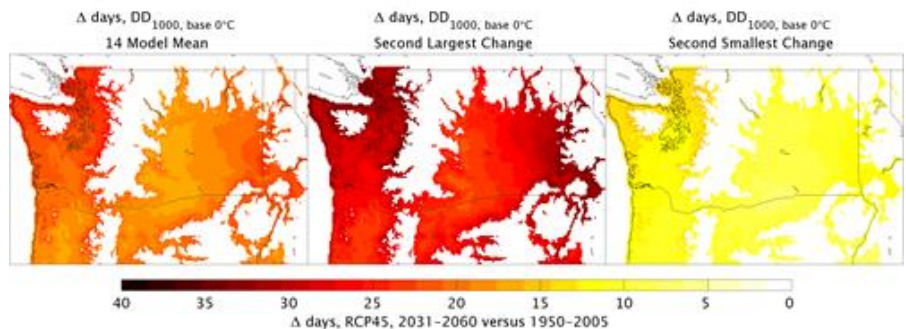


Downy brome (*Bromus tectorum*) is a widely distributed and problematic weed species in the winter wheat production regions of the PNW. Pairing a previously published downy brome development model based on GDD (Growing Degree Days) with downscaled climate models, the physiological development of downy brome is projected to accelerate in the PNW. This projected development will require earlier applications of spring applied herbicides to achieve effective control of downy brome. In recent years heavy spring rains have prevented timely applications of spring applied herbicides. This may become more pronounced as increased moisture during the winter and spring is projected. Downy brome control currently can be achieved with fall or spring applied herbicide applications. If timing of spring applications becomes more difficult in coming years the importance of fall applied herbicide applications may become more critical.

$$GDD = (Daily\ Max.\ Temp. + Daily\ Min.\ Temp.) / 2$$



Pictures and figures, from top to bottom are: downy brome prior to mature seed set, the formula for calculating GDD, GDD required to reach mature seed set in downy brome collected from the PNW (Ball et al. 2004), projected change in the calendar date when 1000 GDD is reached in the PNW in 2031-2060



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