# **Evapotranspiration Crop Coefficients for Growing Degree Day Functions. (A03-wright115441-Poster)**

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## Abstract:

Temperature accounts for many of the differences in crop development between years and regions. Relating the evapotranspiration (ET) crop coefficient (Kc) to a temperature-based Growing Degree Day (GDD) index, rather than to elapsed time alone, may improve the match of Kc curves to crop development and thus also to crop ET estimates. GDD indexes were previously fitted to ET crop coefficient curves for irrigated crops of potato, bean, sugar beet, corn, spring and winter grain, and pea at Kimberly, Idaho. Some of these GDD-based Kc curves were evaluated for irrigated areas of Fairfield, Montana; Hermiston, Oregon; and Rocky Ford, Colorado. Results showed that the GDD index offered improvement over elapsed time, as the time base, for some of the crops in adjusting Kc curves to account for yearly and regional differences in crop development. Research is needed to identify the most appropriate GDD base temperature for each crop and the point at which crop development reaches effective full or maximum cover for such practical applications as irrigation scheduling.

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