MICHIGAN STATE UNIVERSITY | Extension

| Estimated weekly crop water use for field crops in Michigan (in/week)<br>Week of July 22 - 28 | | | | |
|---|---|---|---|---|
| **Crop** | **Growth stage** | **Constantine** | **Entrican** | **Hart** |
| Corn | V12 | 1.22 | 1.24 | 1.25 |
| | VT | 1.34 | 1.36 | 1.38 |
| | Silk, Blister, Dough, Begin Dent | 1.34 | 1.36 | 1.38 |
| | Full dent | 1.22 | 1.24 | 1.25 |
| Soybeans | R1 Beginning bloom | 1.22 | 1.24 | 1.25 |
| | R2 Full bloom | 1.34 | 1.36 | 1.38 |
| | R3 and R4 Beginning Pod/Full Pod | 1.34 | 1.36 | 1.38 |
| | R5 Begin seed/Full seed | 1.34 | 1.36 | 1.38 |

Corn remains at its peak water use during the early reproductive stages as the ears are developing. Also, water stress should be avoided during silking, to prevent significant yield reduction. For soybeans, water stress should be avoided during the R3-R4 stage of pod development and elongation, as it can result in low yields. This week, both soybeans and corn are at their maximum crop water use, with about 0.2" per day of potential crop evapotranspiration. It is recommended not to deplete more than 50% of soil water. Soil moisture content can be determined by using Irrigation Scheduling Tools. However, when scheduling your irrigation, always check the rainfall forecast and leave room for rainfall to prevent runoff and deep percolation.

The table above presents estimated crop water use for various field crops across three locations in Michigan. This data helps irrigation management decisions by showcasing potential crop evapotranspiration, calculated based on reference evapotranspiration and crop coefficients for each crop growth stage. It is crucial to note that crop water use values vary across regions due to differences in weather conditions, growth stages, agronomic practices and soil properties. When using these values for irrigation scheduling, be mindful that they assume all applied irrigation water will be utilized by the plants without any loss. Additionally, these values do not account for any precipitation that may occur during the week of calculation. For more tools and information on irrigation scheduling tools, please refer to: Irrigation Scheduling Tools. Reference evapotranspiration data was obtained from Enviroweather, which also offers a model for determining potential crop evapotranspiration. To access this tool, visit Enviroweather, click on "Crops," select your crop and use the potential evapotranspiration tool by choosing your nearest weather station, the latest date of interest and other crop information.