

Michigan Supplemental Enhancement Activity

Water Quantity Enhancement Activity – WQT04 – Regional weather networks for irrigation scheduling

Irrigation scheduling is the process of maintaining optimum water balance in the soil profile for crop growth and production. Irrigation decisions are based on an accounting method on the water content in the soil. Components of irrigation scheduling include the plant growth stage and water use, soil water holding capacity, evaporative demand and rainfall or irrigation additions.

To estimate plant water use and evaporative demand factors such as temperature, solar radiation, humidity, wind and rainfall are monitored. The crop water use is known as crop evapotranspiration (ET). A potential reference evapotranspiration can be calculated based on weather conditions.

The Michigan Agricultural Weather Network (MAWN) calculates hourly PET at each station in Michigan and publishes the daily total value for irrigation scheduling use. The website for MAWN is <http://www.agweather.geo.msu.edu/mawn/irrigation>. Additional crop ET data can be found at <http://www.enviro-weather.msu.edu>. Both websites generate reports which may be submitted to NRCS as documentation of use of a regional subscription service.