

Depletion (in/ft) in available water versus soil matric potential and suggested range of irrigation trigger point for different soil textures.

Soil matric potential (kPa)	Soil type, depletion in inches per foot associated with a given soil matric potential value measured by the Watermark sensors, and available water holding capacity for different soil types							
	Silty clay loam topsoil, Silty clay subsoil (Sharpsburg)	Silt-loam topsoil (Keith)	Upland silt loam topsoil, Silty clay loam subsoil (Hastings, Crete, Holdrege)	Bottom land silt-loam (Wabash, Hall)	Fine sandy loam	Sandy loam	Loamy sand (O'Neill)	Fine sand (Valentine)
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.20	0.30	0.30	0.30
33	0.20	0.14	0.00	0.00	0.55	0.50	0.45	0.55
50	0.45	0.36	0.32	0.30	0.80	0.70	0.60	0.70
60	0.50	0.40	0.47	0.44	1.00	0.80	0.70	0.70
70	0.60	0.50	0.59	0.50	1.10	0.80	0.80	0.80
80	0.65	0.55	0.70	0.60	1.20	1.00	0.93	1.00
90	0.70	0.60	0.78	0.70	1.40	1.20	1.04	N/A
100	0.80	0.68	0.85	0.80	1.60	1.40	1.10	N/A
110	0.82	0.72	0.89	0.88	N/A	N/A	N/A	N/A
120	0.85	0.77	0.91	0.94	N/A	N/A	N/A	N/A
130	0.86	0.82	0.94	1.00	N/A	N/A	N/A	N/A
140	0.88	0.85	0.97	1.10	N/A	N/A	N/A	N/A
150	0.90	0.86	1.08	1.20	N/A	N/A	N/A	N/A
200	1.00	0.95	1.20	1.30	N/A	N/A	N/A	N/A
Water holding capacity (in/ft)	1.8-2.0	1.8-2.0	2.20	2.00	1.80	1.40	1.10	1.00
*Suggested range of irrig. trigger point (kPa)	75-80	80-90	90-100	75-80	45-55	30-33	25-30	20-25

(*) The trigger points were calculated with the assumption of no sensor malfunction.

The trigger points were calculated based on the 35% depletion of the total soil water holding capacity per foot of soil layer. The sensor readings and the trigger points should be verified/checked against the crop appearance in the actual field conditions during the season.

Trigger point should be the average of first 2 feet of sensors prior to crop reproductive stages and 3 feet once crop reaches the reproductive stage. However, for the sandy soils, the average of top 2 sensors should be used as a trigger point during the growing season. Dr. SUAT IRMAK; sirmak2@unl.edu; (402) 472-4865.