

Olsen's Agricultural Laboratory, Inc.

210 East 1st St. / PO Box 370 / McCook, Nebraska 69001

Office: 308-345-3670 / FAX: 308-345-7880

www.olsenlab.com



Salinity and Sodium Hazard of Irrigation Water

Electrical Conductivity (EC_w), mmhos/cm	Salinity Hazard	SAR or SARadj	Sodium Hazard
0.00 – 0.75	Low	0 – 6	Low
		6 – 9	Medium
		9 – 12	High
		12+	Very High
0.75 – 1.50	Medium	0 – 6	Low
		6 – 8	Medium
		8 – 10	High
		10+	Very High
1.50 – 3.00	High	0 – 4	Low
		4 – 6	Medium
		6 – 8	High
		8+	Very High
3.00+	Very High	0 – 2	Low
		2 – 4	Medium
		4 – 6	High
		6+	Very High

Salinity hazard categories of low, medium, high, and very high are general. Please refer to the adjacent table entitled Salinity Hazard of Irrigation Water for Various Crops to determine the salinity hazard of irrigation water for specific crops.

Sodium hazard categorized as low, medium, high, and very high is defined as follows:

1. Low – no permeability problems exist.
2. Medium – usually no permeability problems expected, except when soils are high in clay and the EC_w is high or very high.
3. High – possible permeability problems. Water can be used on sandy soils if the leaching requirement is met. Gypsum or elemental sulfur may be required if the soils are sandy or silt loam. Soil should be tested annually to monitor salinity and sodic conditions.
4. Very high – Serious permeability problems are expected. Soils will require application of gypsum or elemental sulfur and leached with good quality water to maintain productivity. Soils should be tested annually to monitor salinity and sodic conditions.