

# Olsen's Agricultural Laboratory, Inc.

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## Salinity Hazard of Irrigation Water for Various Crops

Yield Decrement Expected from EC<sub>w</sub>\*  
Value of Irrigation Water Shown in Table

Crop	0%	10%	25%	50%	Maximum EC <sub>w</sub> **
Alfalfa	1.3	2.2	3.6	5.9	10.0
Barley***	5.3	6.7	8.7	12.0	19.0
Bermuda grass	4.6	5.7	7.2	9.8	15.0
Clover	1.0	1.6	2.4	3.8	6.6
Corn	1.1	1.7	2.5	3.9	6.7
Cotton	5.1	6.4	8.4	12.0	18.0
Field bean	0.7	1.0	1.5	2.4	4.2
Flax	1.1	1.7	2.5	3.9	6.7
Grape	1.0	1.7	2.7	4.5	7.9
Meadow foxtail	1.0	1.7	2.7	4.5	7.9
Onion	0.8	1.2	1.8	2.9	5.0
Orchard grass	1.0	2.1	3.7	6.4	12.0
Pepper	1.0	1.5	2.2	3.4	5.8
Perennial ryegrass	3.7	4.6	5.9	8.1	13.0
Potato	1.1	1.7	2.5	3.9	6.7
Rice	2.0	2.6	3.4	4.8	7.6
Safflower	3.5	4.1	5.0	6.6	9.7
Sorghum (milo)	2.7	3.4	4.8	7.2	8.7
Soybean	3.3	3.7	4.2	5.0	6.7
Sudan grass	1.9	3.4	5.7	9.6	17.0
Sugarbeet***	4.7	5.8	7.5	10.0	10.0
Tall fescue	2.6	3.9	5.7	8.9	7.8
Tall wheatgrass	5.0	6.6	9.0	13.0	21.0
Tomato	1.7	2.3	3.4	5.0	8.4
Trefoil, birdsfoot	3.3	4.0	5.0	6.7	10.0
Vetch	2.0	2.6	3.5	5.0	8.1
Wheat***	4.0	4.9	6.4	8.7	13.0
Wheatgrass	2.3	4.0	6.5	11.0	19.0

\*EC<sub>w</sub> = Electrical conductivity of irrigation water in mmhos/cm at 25°C. A 15 – 25% leaching fraction is assumed.

\*\*Maximum EC<sub>w</sub> = Electrical conductivity of the irrigation water at which crop growth ceases.

\*\*\*Barley, wheat, and sugar beets are less tolerant during germination and seeding stage.