

Assessing the effect of salinity and sodium adsorption ratio on infiltration rate. (From Hanson et al. 1999)

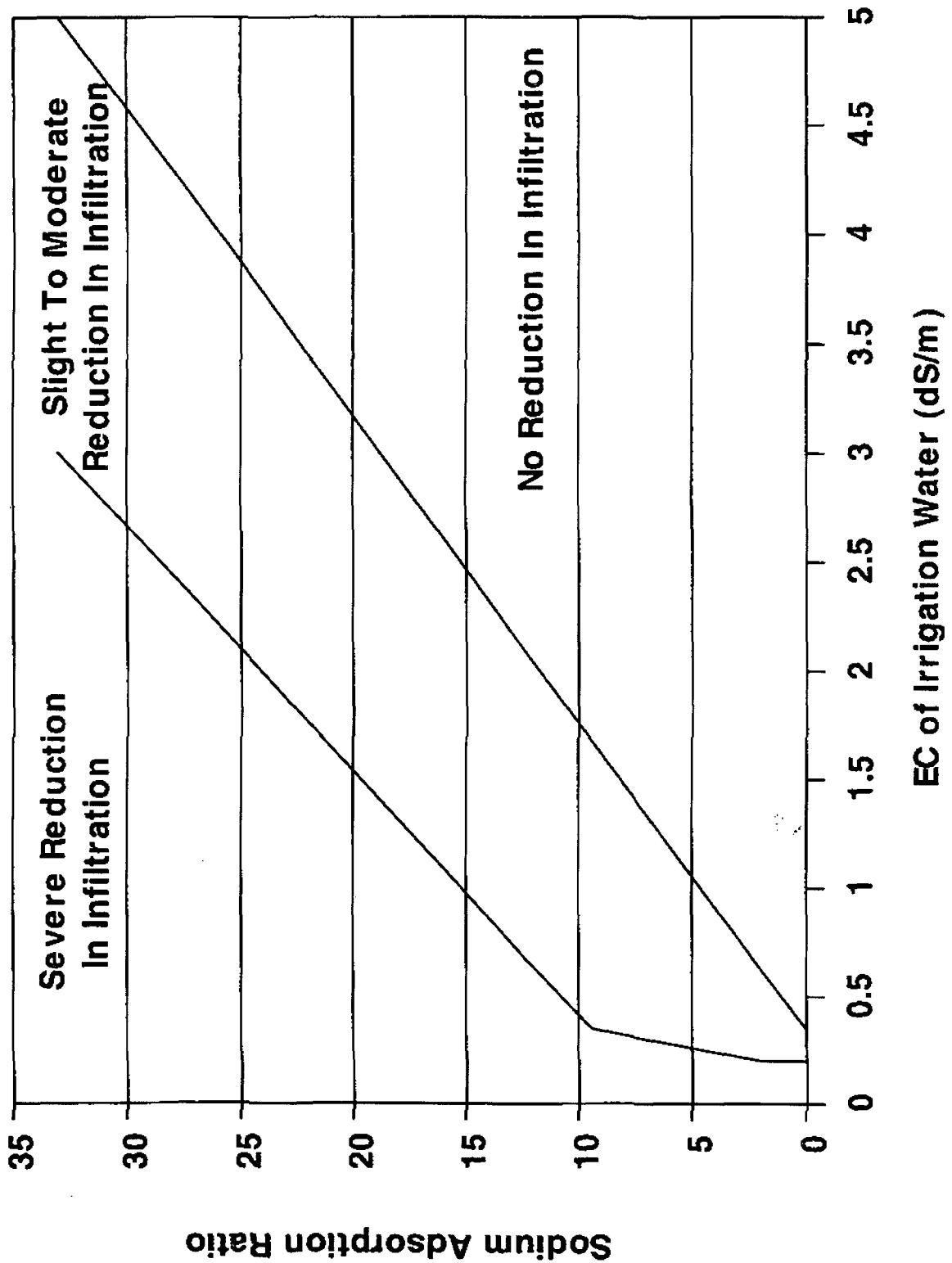


Figure 3. Assessing the effect of salinity and sodium adsorption ratio on infiltration rate.

5A



SALT TOLERANT FORAGES

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THRESHOLD AND MAXIMUM SALT TOLERANCE LEVEL OF VARIOUS CROPS AND FORAGE SPECIES

Species	Electrical Conductivity (decisiemens/meter or mmhos/cm) Level at which productivity initially affected	Upper limits of plant survival
Barley	8	16
Sugar Beets	7	12
Safflower	6	10
Wheat	6	8
Oats	4	8
Corn	4	6
Beardless Wildrye	12	26
Tall Wheatgrass	12	26
Hybrid Wheatgrass-New Hay	10	24
Slender Wheatgrass	10	22
Tall Fescue	7	18
Western Wheatgrass	6	16
Strawberry Clover	6	16
Creeping Foxtail	5	12
Meadow Bromegrass	4	10
Cicer Milkvetch	4	10
Orchardgrass	3	8
Russian Wildrye	12	24
Tall Wheatgrass	12	24
Altai Wildrye	10	20
Slender Wheatgrass	10	20
Crested Wheatgrass	6	16
Pubescent Wheatgrass	6	12
Intermediate Wheatgrass	6	12
Smooth Bromegrass	5	10
Yellow Sweetclover	5	10
Birdsfoot Trefoil	5	10
Alfalfa	4	8
Nuttall's Alkaligrass	14	30
Alkali Sacton	14	26
Beardless Wildrye	12	26
Alkali Cordgrass	12	24
Alkali Bluegrass	12	24
Slender Wheatgrass	10	22
Plains Bluegrass	10	20
Western Wheatgrass	6	16
Thickspike Wheatgrass	6	14

Crops

Forages - Wet Sites

Forages - Dry Sites

Natives

Threshold levels are an average based on research at the Bridger Plant Materials Center, Bridger, MT (M. Majerus), US Salinity Lab, Riverside, CA, (Mans and Hofman) and the University of Wyoming (Boirelli and Brosz).

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Yellow Sweetclover	5	10
Birdsfoot Trefoil	5	10
Alfalfa	4	8
Natives		
Utah's Alkali Grass	14	30
Alkali Sacton	14	26
Beardless Wildrye	12	26
Alkali Cordgrass	12	24
Alkali Bluegrass	12	24
Slender Wheatgrass	10	22
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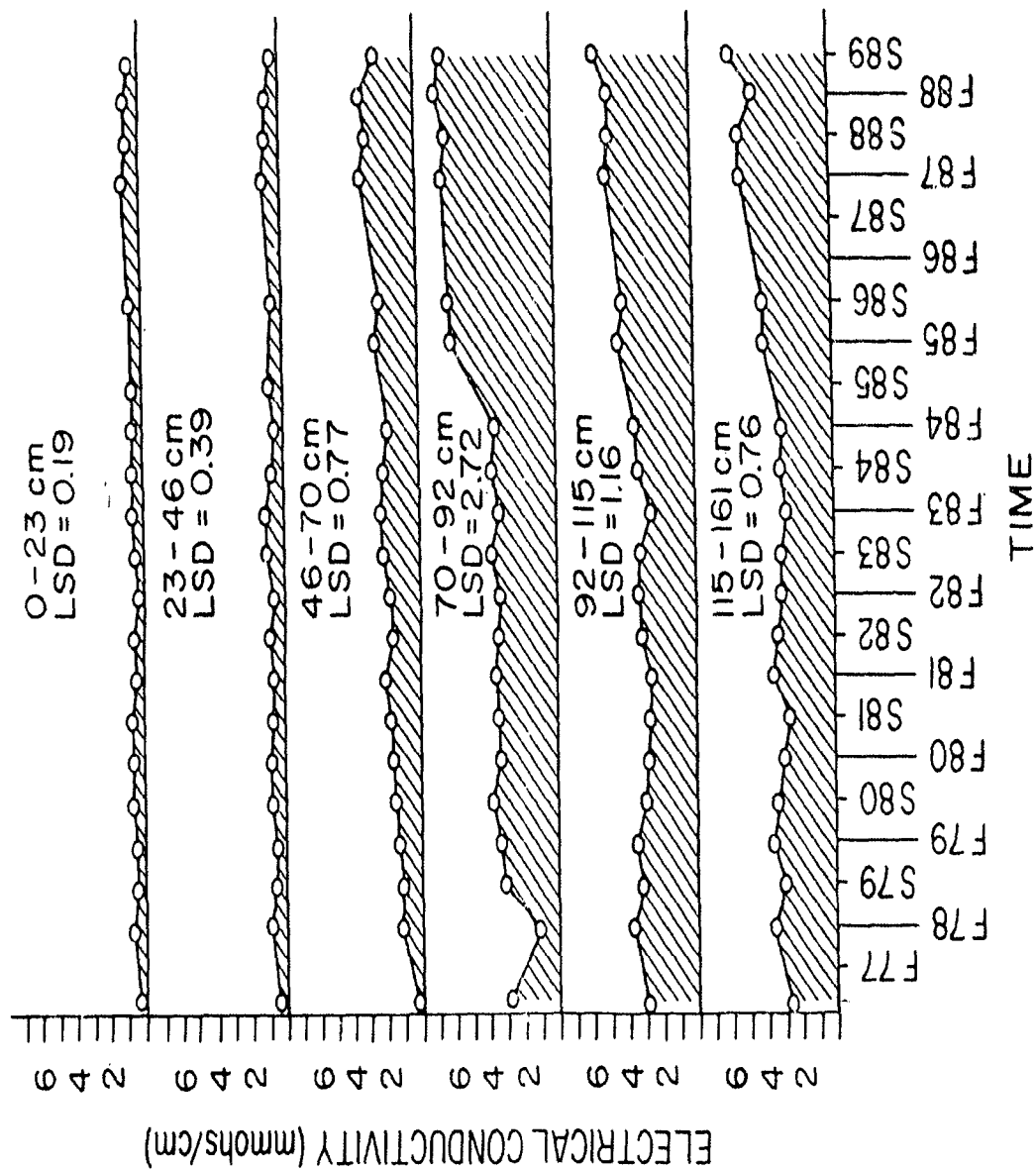
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Salt Tolerant Shrubs

Species	EC ¹	EC ²	EC ³	EC ⁴
Mat slatbush	> 16			
Mound Saltbush	8-16		18-24	
Castle Saltbush	8-16			
Sickle Saltbush	4-8			
Shadscale	4-8	8-10		
Fourwing Saltbush	2-4	8-16	18-24	
Rabbitbrush			18-24	
Sagebrush				28
Winterfat				27

1 Hodgkinson 1987, 2 Stutz 1987, 3 Buchanan 2007, 4 Uresk et al. 1986

EC (mmhos/cm) above Drilling Pit Contents after 1, 8, 20 and 44 Months, Mertz Study Site												
Depth	Time											
	1 month	8 month	20 month	44 month	1 month	8 month	20 month	44 month	1 month	8 month	20 month	44 month
90-150 cm	150 cm of cover											
75-90 cm	90 cm of cover											
60-75 cm												
30-60 cm												
	30 cm of cover											
15-30 cm	.51	.53	.54	.90	.43	.40	.45	6.8	1.33	1.43	1.44	14.8
0-15 cm	2.07	9.54	4.39	24.2	1.84	3.14	8.13	14.5	1.63	3.45	9.17	21.0
Drilling Pit Contents	169				169				169			



Changes in minesoil profile EC from 1977 to 1989 across all treatments. Coversoil is 0 to 70 cm. (from Dollhopf et al., 1992)