

UC-3

TABLE 32

PREDICTION EQUATIONS OF YIELD DECLINATION FROM AYERS (1976) FAO SOIL BUL 31
 DATA AND ACTUAL FIELD YIELD T/HA OF SIX CROPS GROWN WITH 877 MG/L (1.35 MMHO/CM)
 AND 1,350 MG/L (2.0 MMHO/CM) IRRIGATION WATER

Crop	Data source	Year	Covariance equation* Y predicted = % Y crop = T/ha, X = mmho/cm	r ² %	Std err estimate	Fisher F level	Yield		Decli- nation %
							1.35 mmho % or T/ha	2.0 mmho T or T/ha	
Alfalfa	Predicted		Y = 155.6 - 12.4X	99.9	0.71	0.005	98.9%	90.8%	8.1
	UC 76	1974	Not significant				26.6 T	29.1 T	1.7
Beans	Predicted		Y = 27.4 - 2.77X	10.1	2.95	0.31	23.6 T	21.8 T	7.6
	Green Crop	1974	Y = 119.8 - 31.0X	98.1	3.71	0.005	77.9%	57.8%	25.8
Broccoli	Predicted		Y = 5.24 - 1.61X	38.9	0.72	0.038	3.07 T	2.02 T	34.1
	Pacificca	1975	Y = 127.4 - 14.09X	98.1	3.72	0.005	100%+	99.2%	0.8
Cabbage	Predicted		Y = 1.55 - 0.61X	20.6	0.42	0.138	2.36	2.76	0
	Copenhagen Mkt	1974	Y = 113.8 - 13.8X	99.6	1.65	0.005	95.2%	86.3%	9.4
Cantaloupe	Predicted		Y = 78.6 - 6.87X	19.0	5.05	0.157	69.3 T	64.9 T	6.4
	Top Mark	1974	Y = 118.8 - 12.5X	2 points only			100%+	93.8	6.2
Cauliflower	Predicted		Y = 20.73 - 2.52X	4.3	4.26	0.520	17.3	15.7	9.2
	Snowball	1975	None given						
Carrots	Predicted		Y = 13.40 - 2.00X	11.6	1.97	0.279	10.7	9.4	12.1
	Imperator 58	1974	Y = 116.0 - 24.5X	99.7	1.41	0.005	83.0%	67.1%	19.2
Lettuce	Predicted		Y = 45.70 - 2.72X	3.51	5.08	0.429	42.0 T	36.6 T	12.9
	Climax	1974	Y = 49.19 - 8.54X	40.12	3.71	0.027	37.7 T	32.1 T	14.7
Onion	Predicted		Y = 117.4 - 20.6X	99.8	1.31	0.001	89.6%	76.2%	15.0
	Granex 33	1974	Y = 30.68 + 5.72X	22.7	3.76	0.117	38.4	42.1	0
Sorghum	Predicted		Y = 23.55 + 0.22X	11.4	1.73	0.284	23.8	24.0	0
	Early Premium	1974	Y = 114.3 - 17.3X	98.4	2.3	0.005	90.8%	79.7%	12.3
Sugar beet	Predicted		Y = 88.8 - 16.4X	49.0	5.96	0.010	66.7 T	56.0 T	16.0
	USH 9A (sucrose)	1974	Y = 57.5 - 8.4X	35.9	3.99	0.050	46.2 T	40.7 T	11.8
Wheat	Predicted		Y = 51.6 - 5.7X	30.8	3.03	0.061	44.0 T	40.3 T	8.4
	Cajeme 71	1975	Y = 39.3 - 3.6X	13.9	3.18	0.230	34.4 T	32.1 T	6.8

* In the prediction equations alfalfa 1.3 <x< 5.3, beans 0.7 <x< 2.3, broccoli 1.8 <x< 5.3, cabbage 1.1 <x< 4.7, cantaloupe 1.5 <x< 2.3, carrots 0.7 <x< 2.7, lettuce 0.9 <x< 3.3, onion 0.9 <x< 2.7, sorghum 2.7 <x< 8.0, sugar beet sucrose 4.5 <x< 10.7 mmho/cm.

STATE WATER RESOURCES CONTROL BOARD
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