

APPENDIX A

Table A1--Actual and estimated values of corn yield using estimate No. 2, Fort Collins, Colorado 1972 irrigation experiment

Treatment	Variables values ^{1/}					Relative deviation ^{2/} Percent
	x ₁	x ₂	y _i	\hat{y}_i	(y _i - \hat{y}_i)	
1A	.27	6	7,128	7,059	68	1
3AI	.42	7	9,450	7,990	1,460	15
4A	.65	0	10,130	9,720	410	4
1B	.36	5	7,142	7,959	- 817	-11
3B	.47	2	9,037	8,967	70	1
4B	.84	0	9,972	9,872	100	1
1C	.38	9	6,817	7,511	- 694	-10
3C	1.00	5	8,906	9,049	- 143	- 2
4C	1.00	0	9,553	9,917	- 364	- 4
5	1.00	0	9,899	9,917	- 118	- 1

1/ See text for the definition of the variables.

2/ Computed as $\frac{(y_i - \hat{y}_i)}{y_i} \times 100$.

Hall, W.A. and J.A. Dracup. *Water Resources Systems Engineering*. McGraw-Hill, New York, 1970.

Minhas, B.S., et al. "Toward the Structure of a Production Function for Wheat Yields with Dated Inputs of Irrigation Water," *Water Resources Research*, June 1974, pp. 383-93.

Dudley, N. D. Howell, and W. Musgrave. "Optimal Intraseasonal Irrigation Allocation," *Water Resources Research*, Aug. 1971a, pp. 770-88.

Dudley, N., D. Howell, and W. Musgrave. "Irrigation Planning 2: Choosing Optimal Acresizes Within a Season," *Water Resources Research*, Oct. 1971b, pp. 1051-63.

Table A2--Marginal product of x_1^* for selected combinations of x_1^* and x_2 , based on Estimate 2

Variables' values ^{1/}			\hat{y}	MP _{x_1^*} ^{2/}	Relative marginal product ^{3/} Percent
x_1	x_2				
.30	0	:	8,211	10	10
.30	5	:	7,492	92	9.2
.30	10	:	6,836	84	8.4
.50	0	:	9,405	32	3.2
.50	5	:	8,581	29	2.9
.50	10	:	7,830	26	2.6
.75	0	:	9,820	7.4	0.74
.75	5	:	8,960	6.7	0.67
.75	10	:	8,175	6.1	0.61
1.00	0	:	9,917	1.72	0.172
1.00	5	:	9,048	1.57	0.157
1.00	10	:	8,257	1.43	0.143

1/ See text for the definition of the variables.

2/ Computed according to (3) in text.

3/ Computed as $(MP_{x_1^*} / \hat{A}) \times 100$.

Figure A2--Level of soil moisture in irrigation experiment, Fort Collins, Colorado, 1953

Figure VI--Level of soil moisture in irrigation experiment, Fort Collins, Colorado, 1953

Percent of Soil Moisture Depleted

Figure A1-Level of soil moisture in corn irrigation experiment, Fort Collins, Colorado, 1972. Treatment/A (one irrigation, July 25)

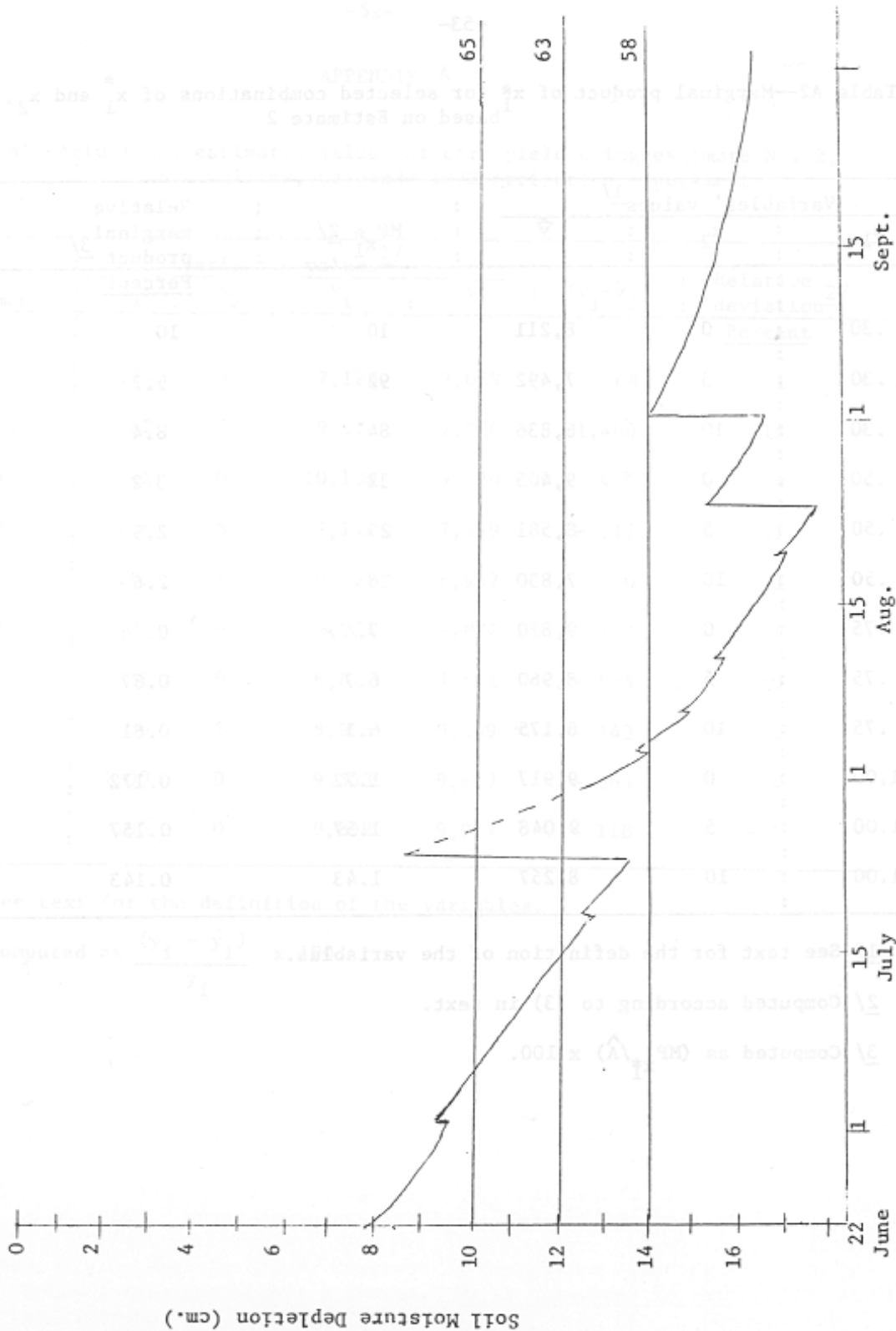
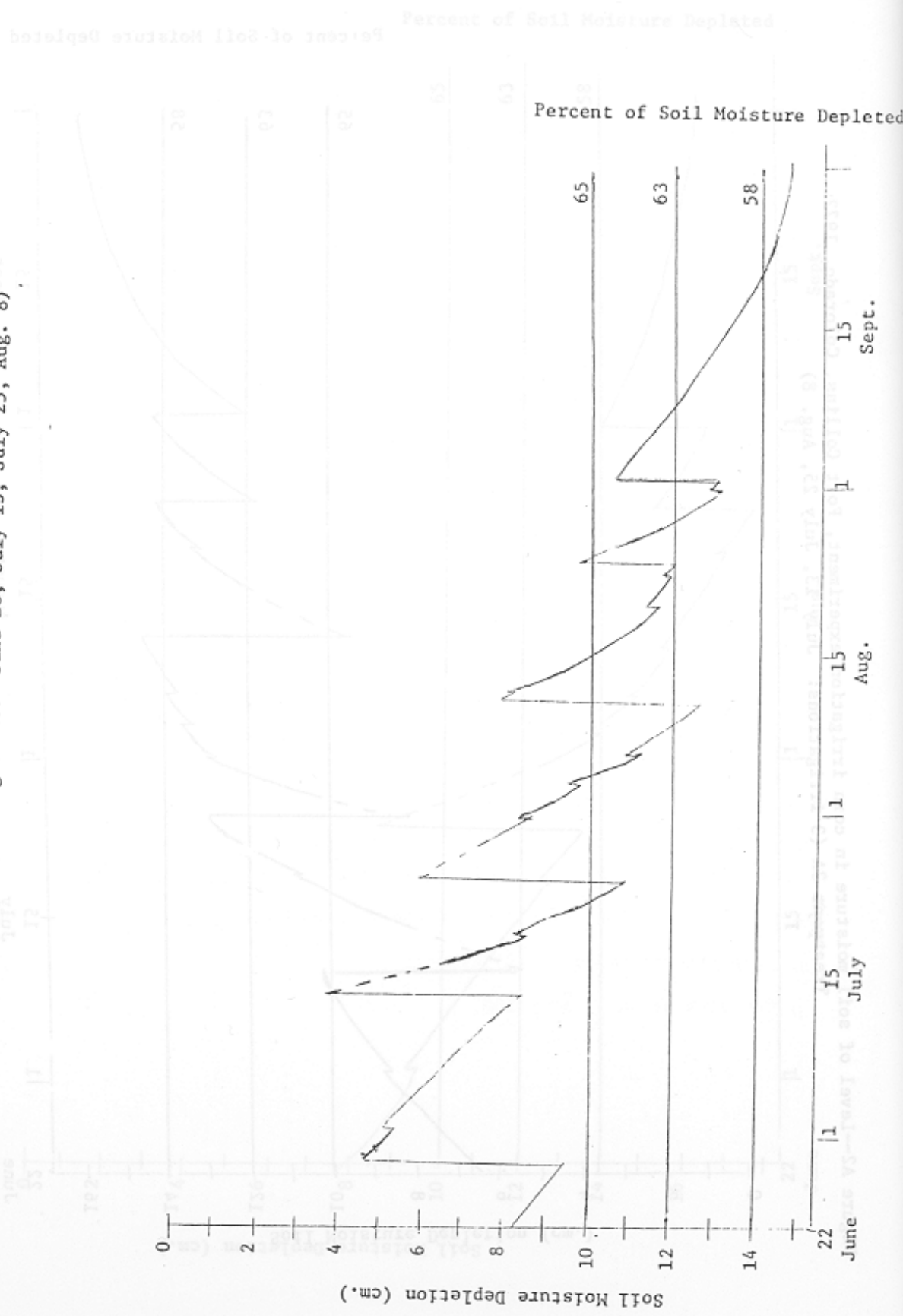


Figure A3---Level of soil moisture in corn irrigation experiment, Fort Collins, Colorado, 1972.
Treatment 4A (4 irrigations: June 28, July 13, July 25, Aug. 8)



Percent of Soil Moisture Depleted

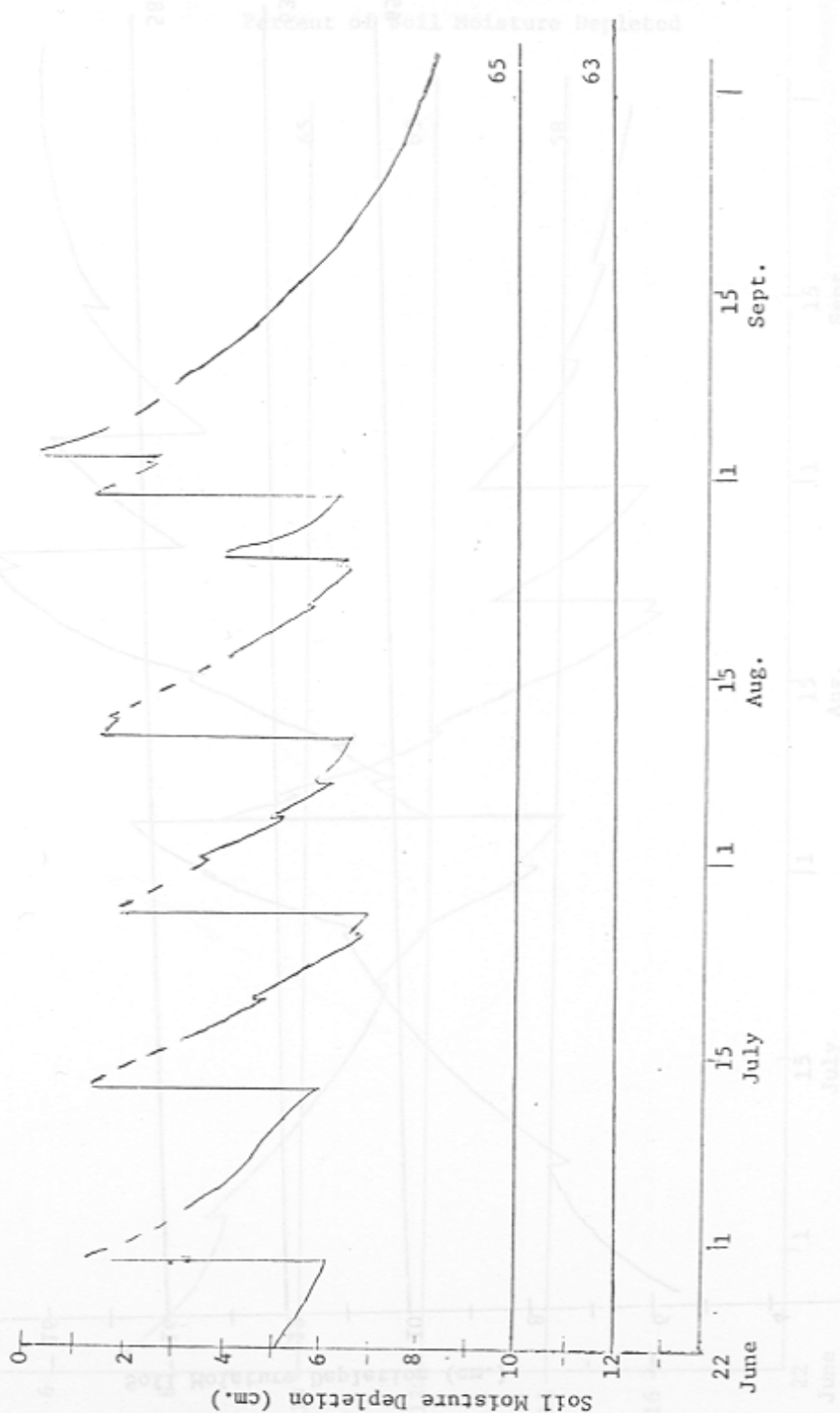


Figure A4--Level of soil moisture in corn irrigation experiment, Fort Collins, Colorado, 1972. Treatment 5 (5 irrigations: June 28, July 13, July 28, Aug. 8, Aug. 28)

Percent of soil moisture to crop evaporation, i.e. Collins' Colorado, 1972. Treatment 5

Figure A5-Level of soil moisture in corn experiment, Ft. Collins, Colorado, 1972. Treatment 1B (one irrigation July 31)

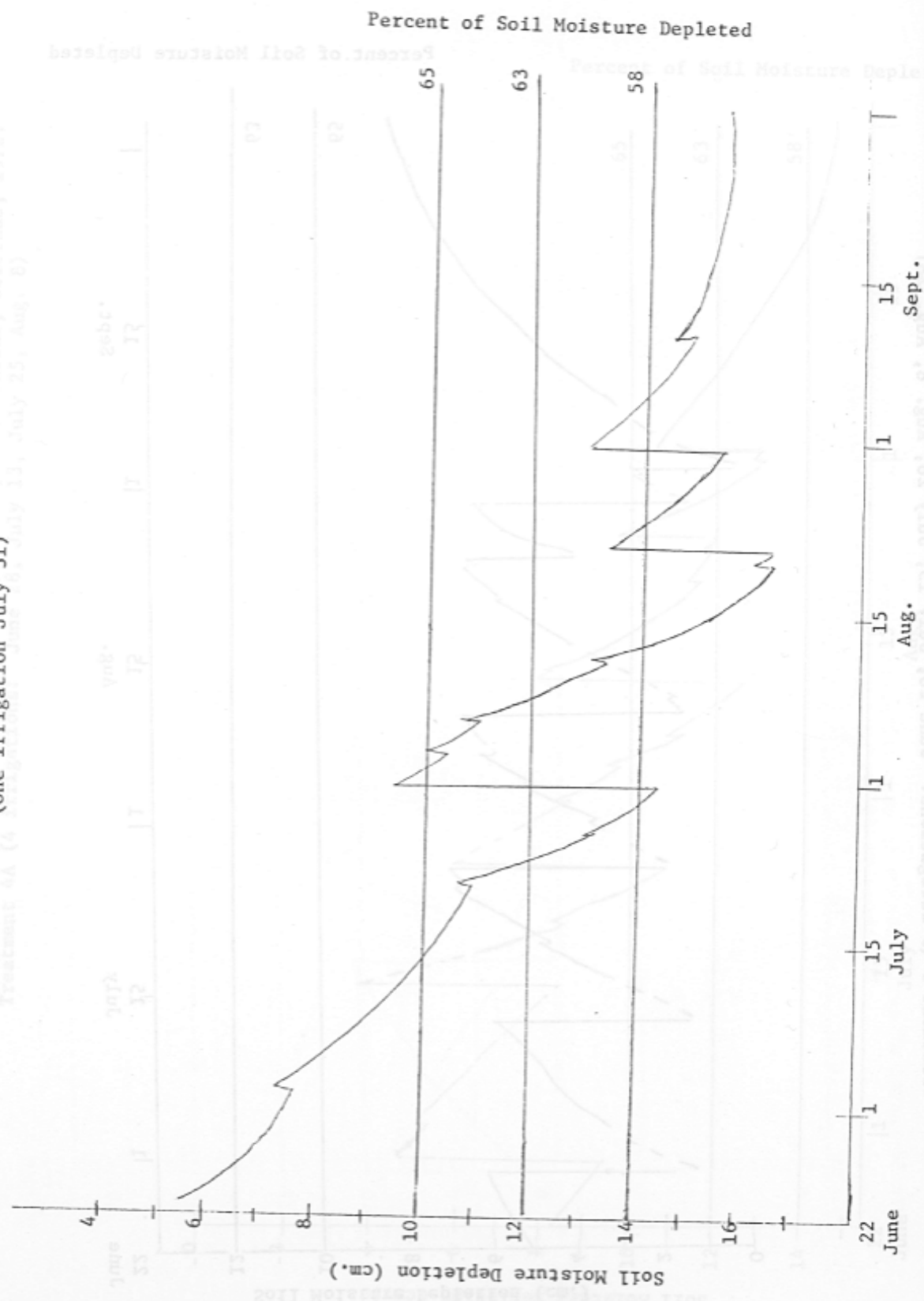


Figure A6 - Level of soil moisture in corn experiment, Fort Collins, Colorado, 1972. Treatment 1C (one irrigation, Aug. 4)

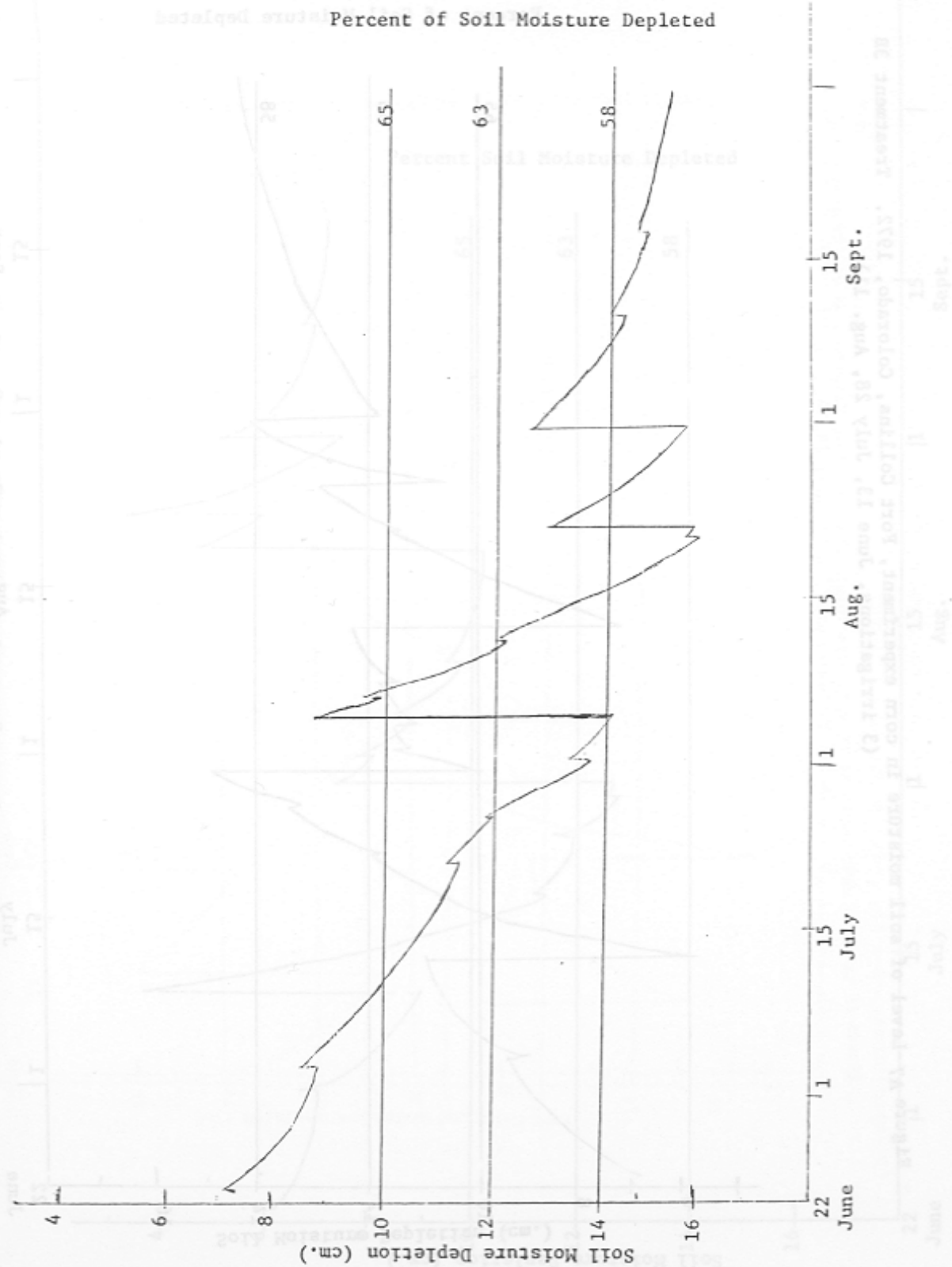


Figure A8—Level of soil moisture in corn experiment, Fort Collins, Colorado, 1972. Treatment 3C
 (3 irrigations, June 13, Aug. 2, Aug. 21)

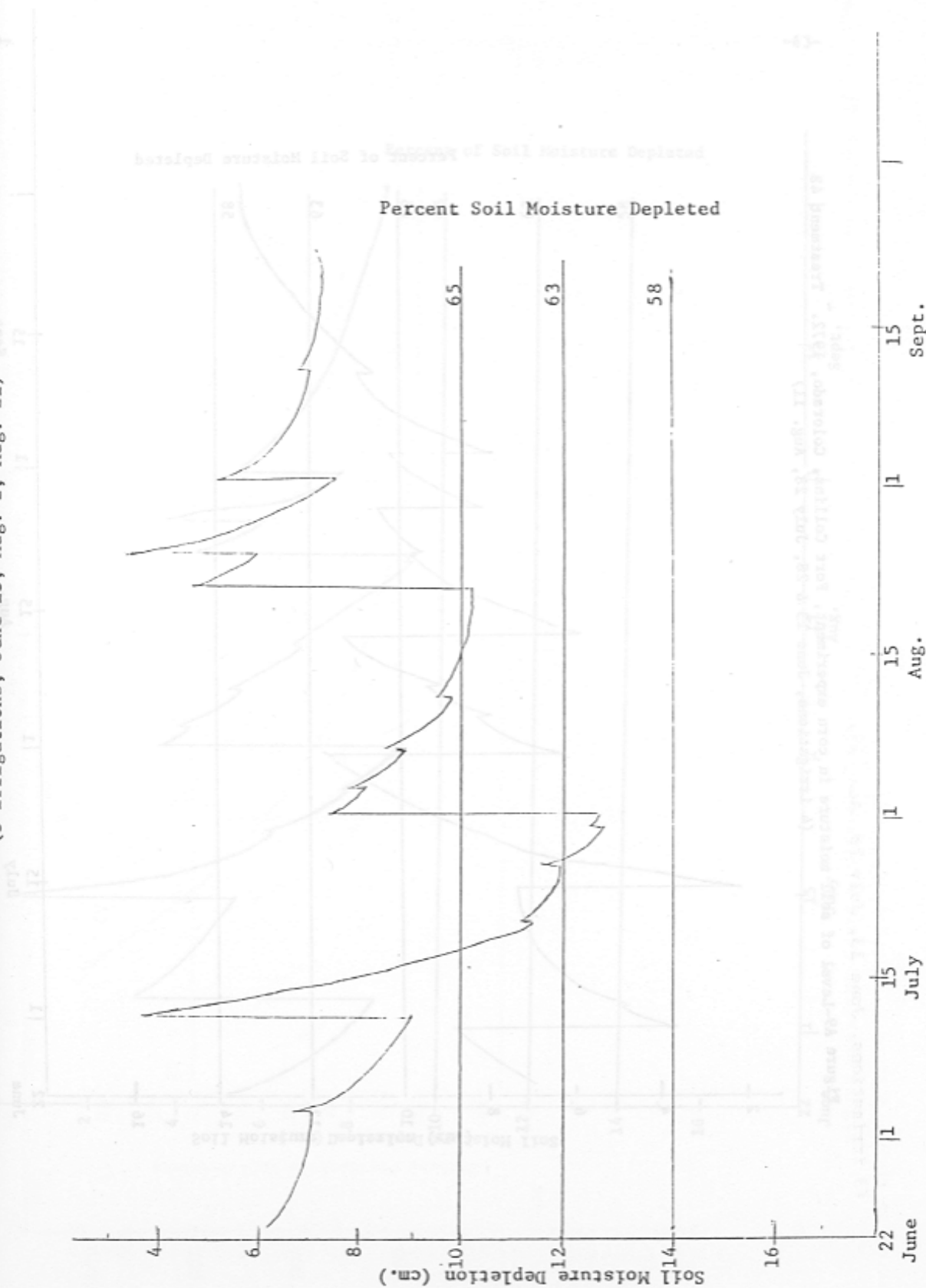


Figure A9—Level of soil moisture in corn experiment, Fort Collins, Colorado, 1972. Treatment 4B
 (4 irrigations, June 13 & 28, July 28, Aug. 11)

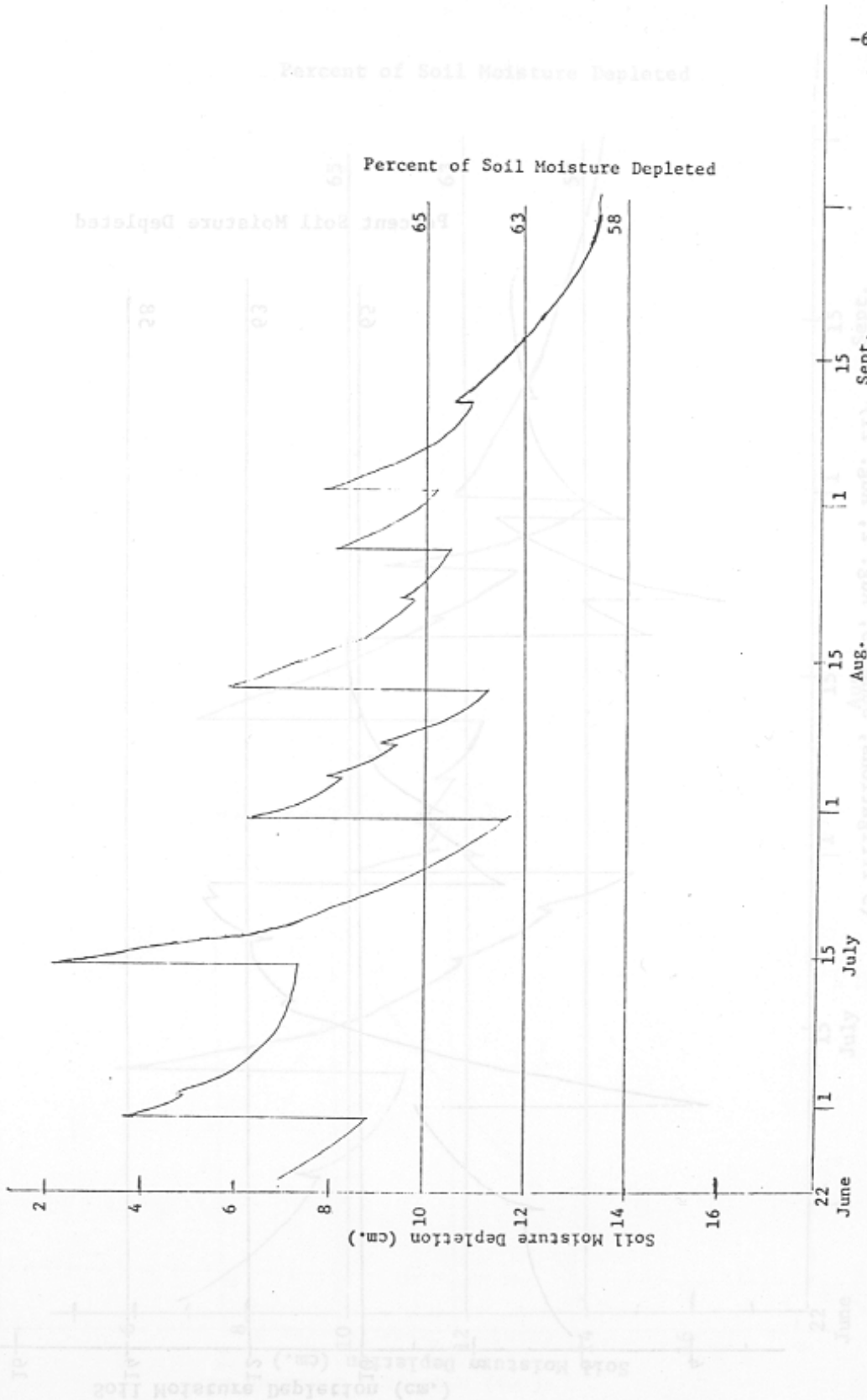


Figure A10.—Level of soil moisture in corn experiment, Fort Collins, Colorado, 1972. Treatment 4C
 (4 irrigations, June 13 & 28, July 31, Aug. 21)

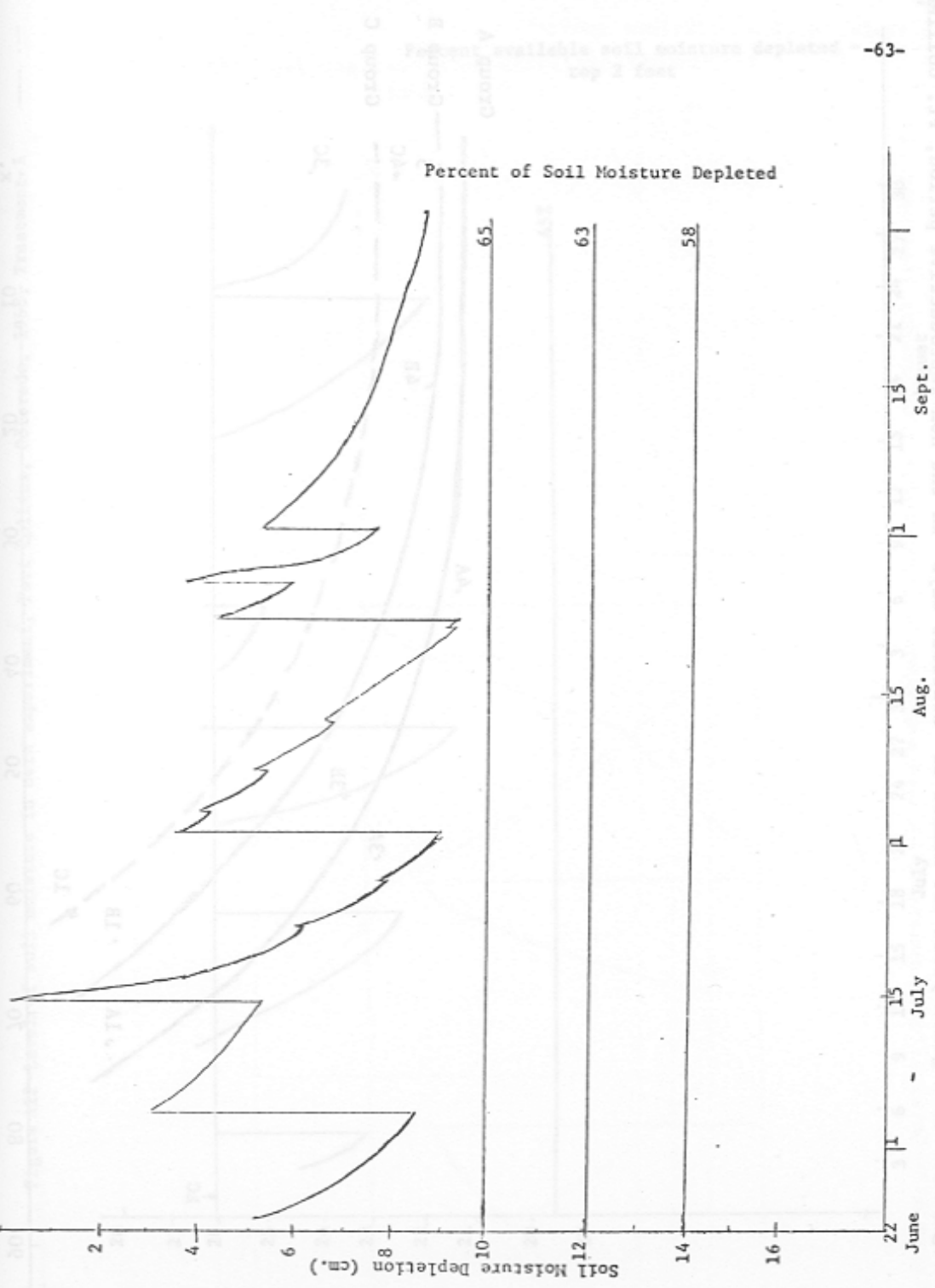


Figure All.-Corn grain yield vs. number of "critical days" in the non-reproductive period, Ft. Collins, 1972

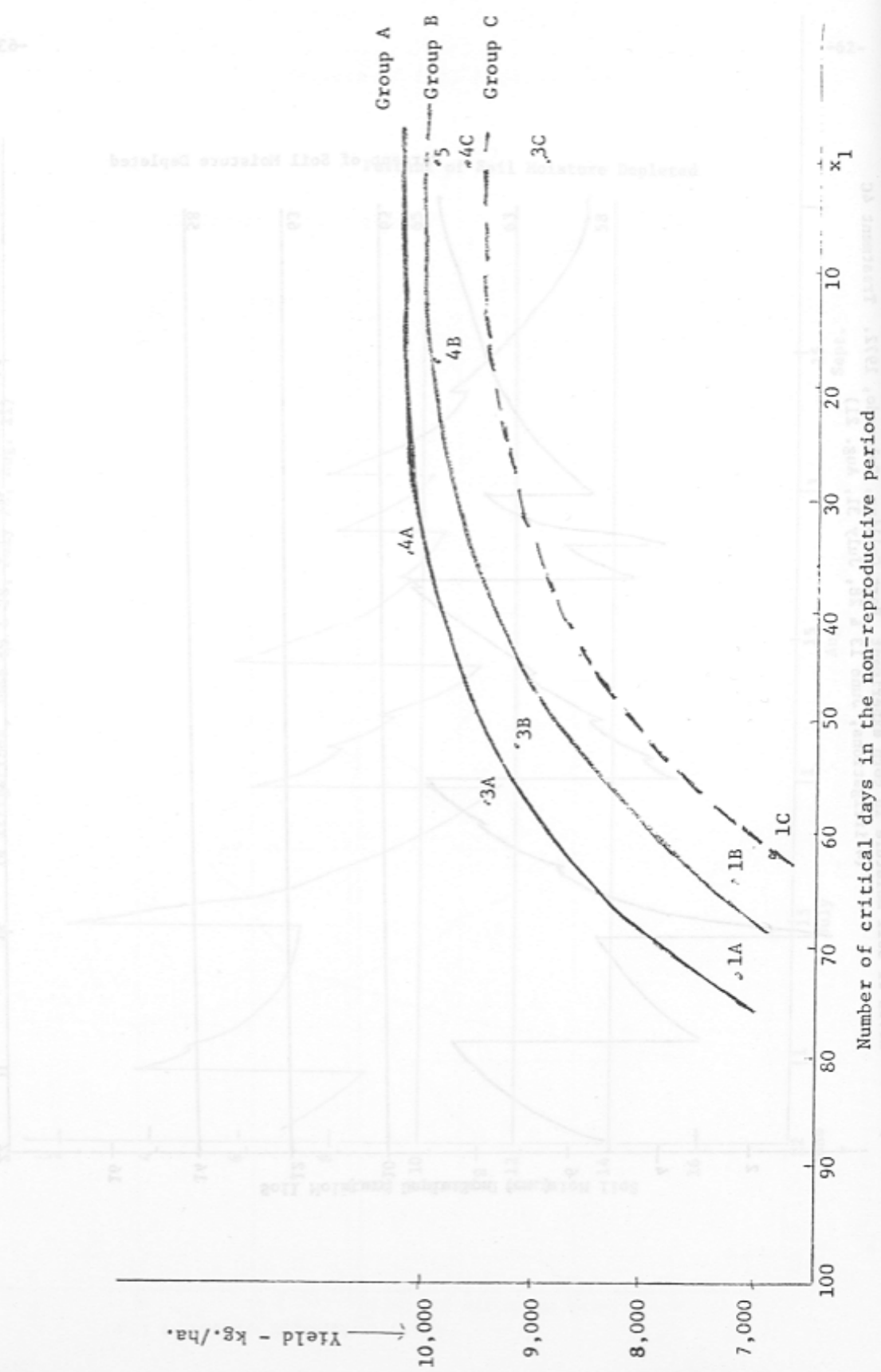


Figure A12 - Level of soil moisture in corn experiment, Fort Collins, Colorado, 1968, Treatment I

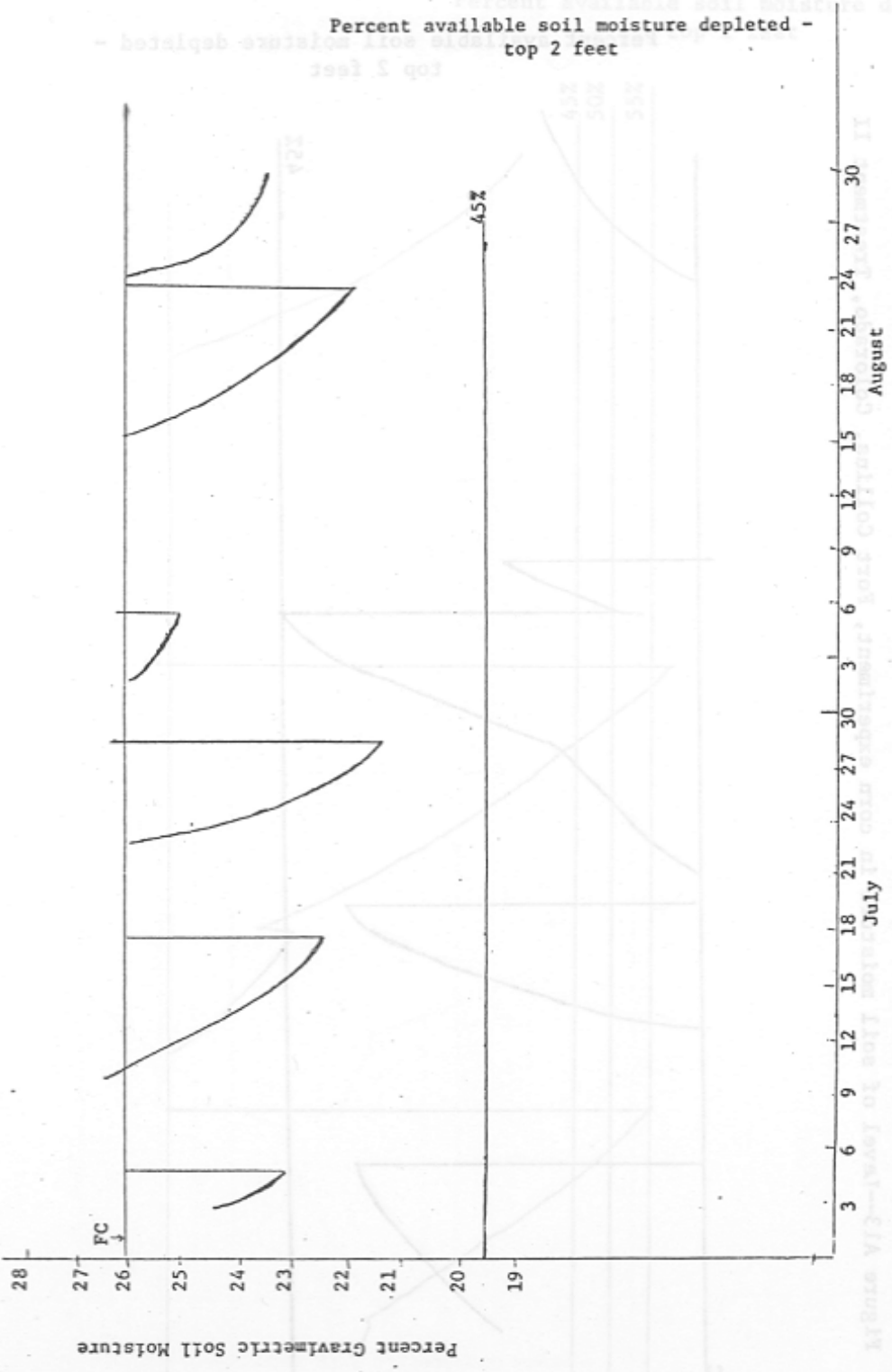


Figure A13--Level of soil moisture in corn experiment, Fort Collins, Colorado, Treatment II

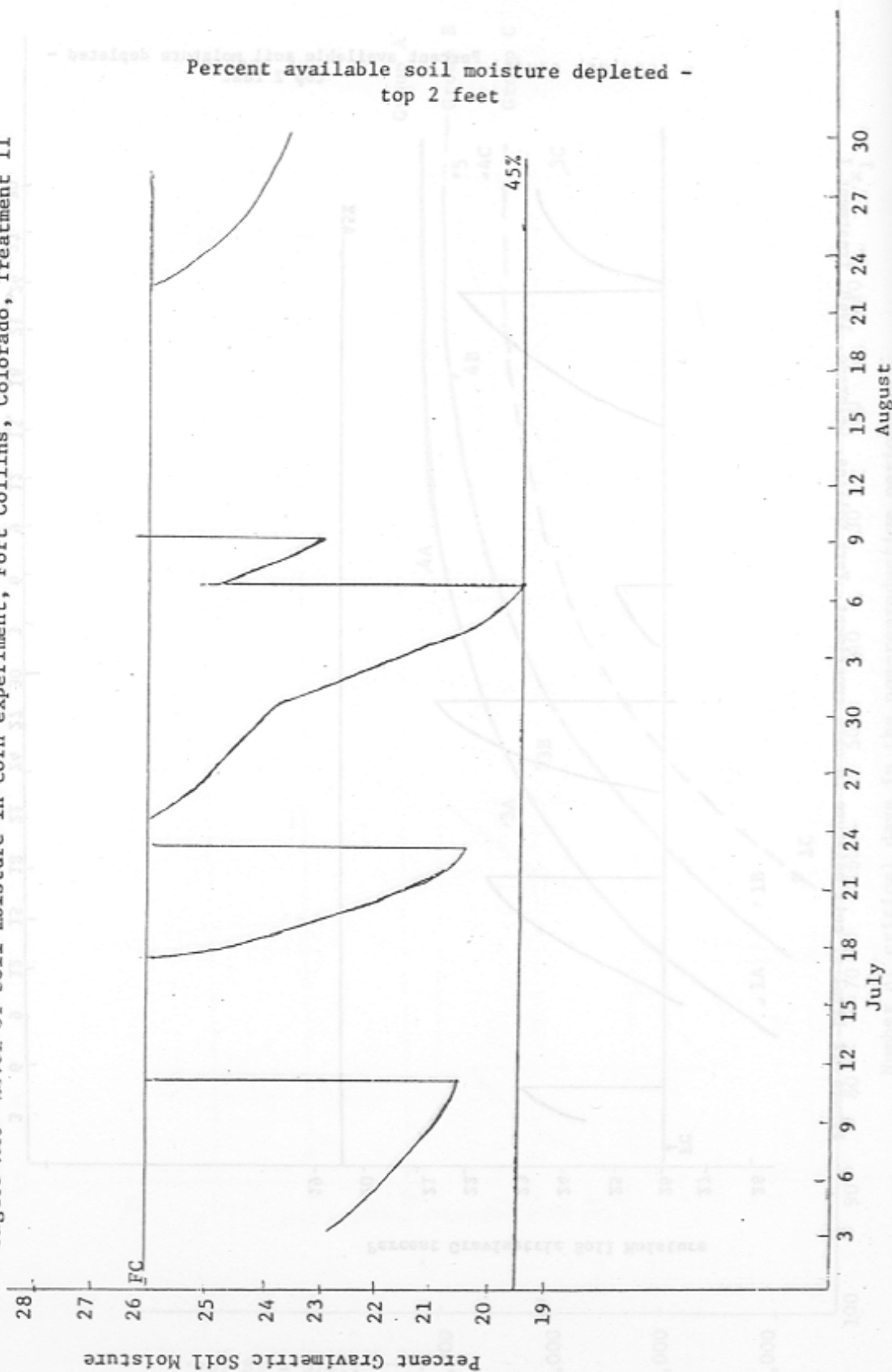


Figure A14--Level of soil moisture in corn experiment, Fort Collins, Colorado, 1968, Treatment III

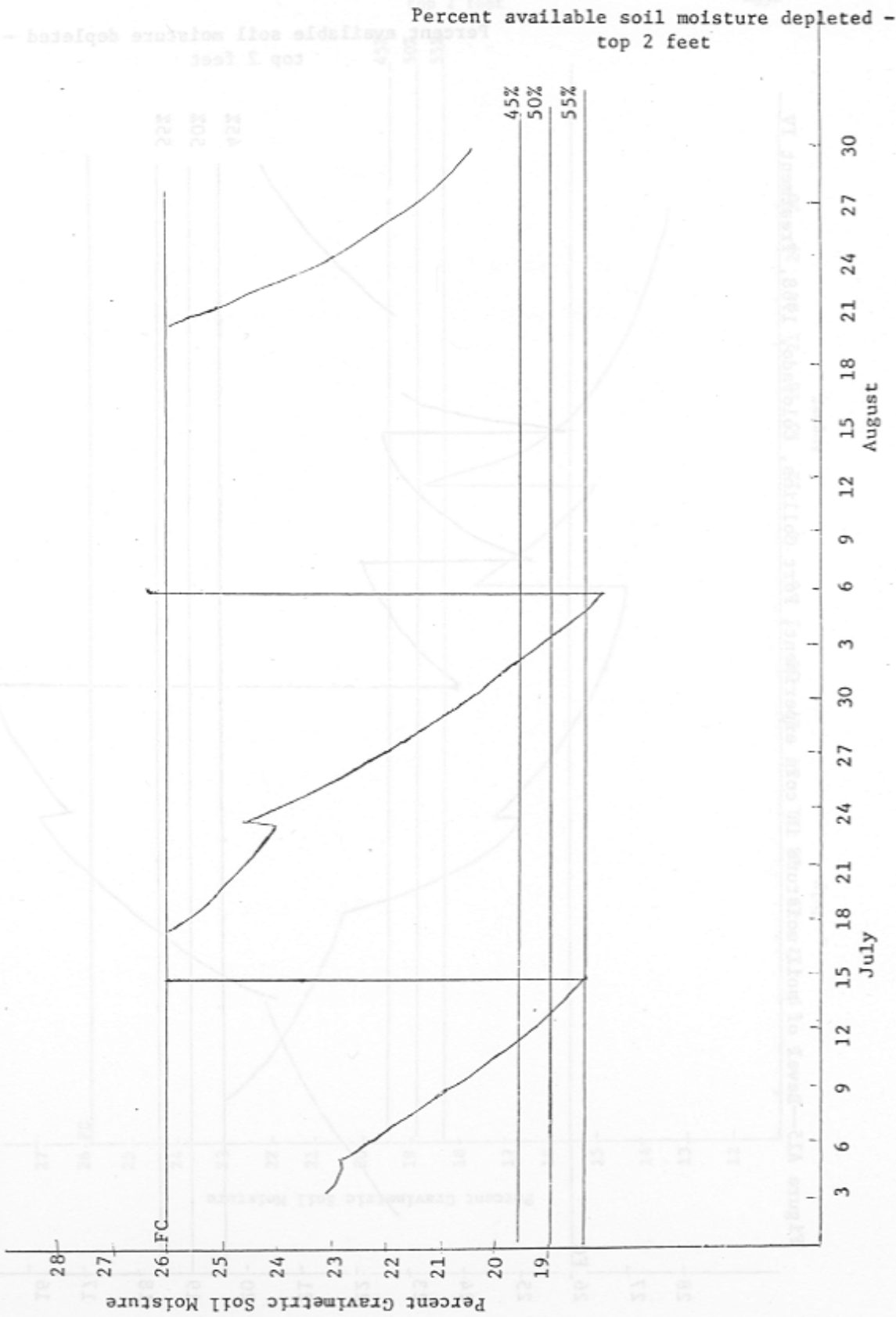
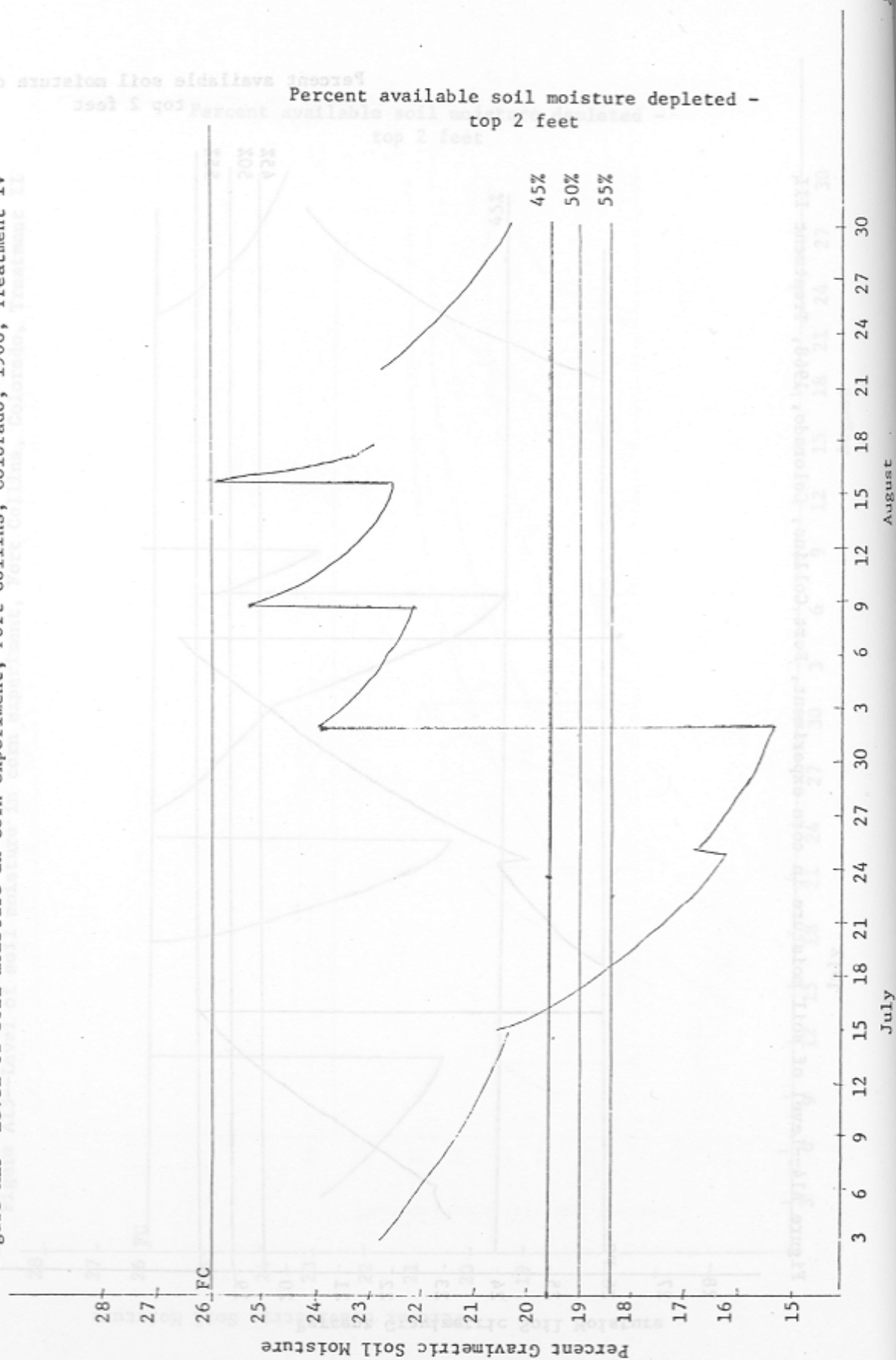
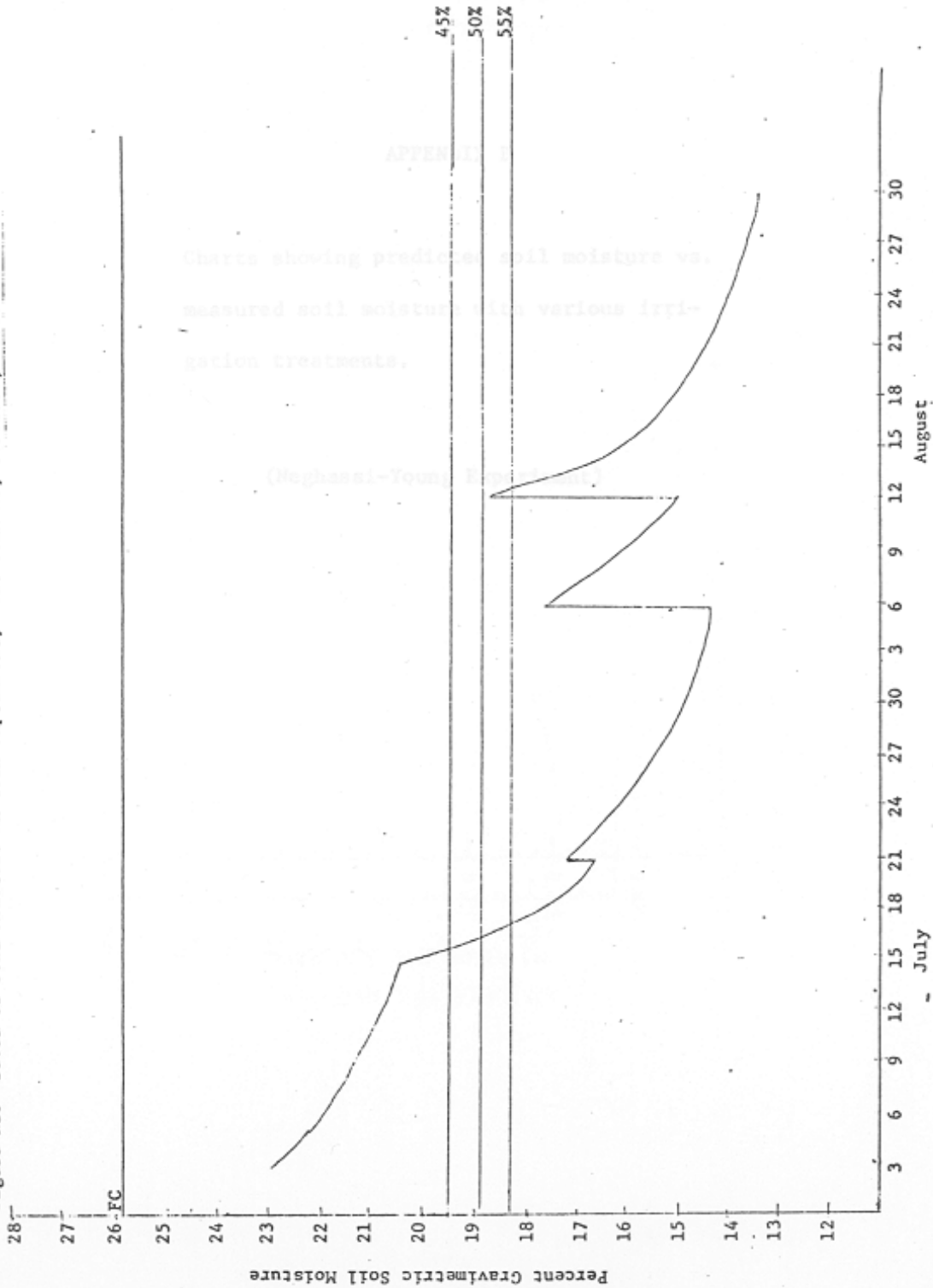


Figure A15--Level of soil moisture in corn experiment, Fort Collins, Colorado, 1968, Treatment IV



Percent available soil moisture depleted -
top 2 feet

Figure A16---Level of soil moisture in corn experiment, Fort Collins, Colorado, Treatment V



Percent Gravimetric Soil Moisture

July

August

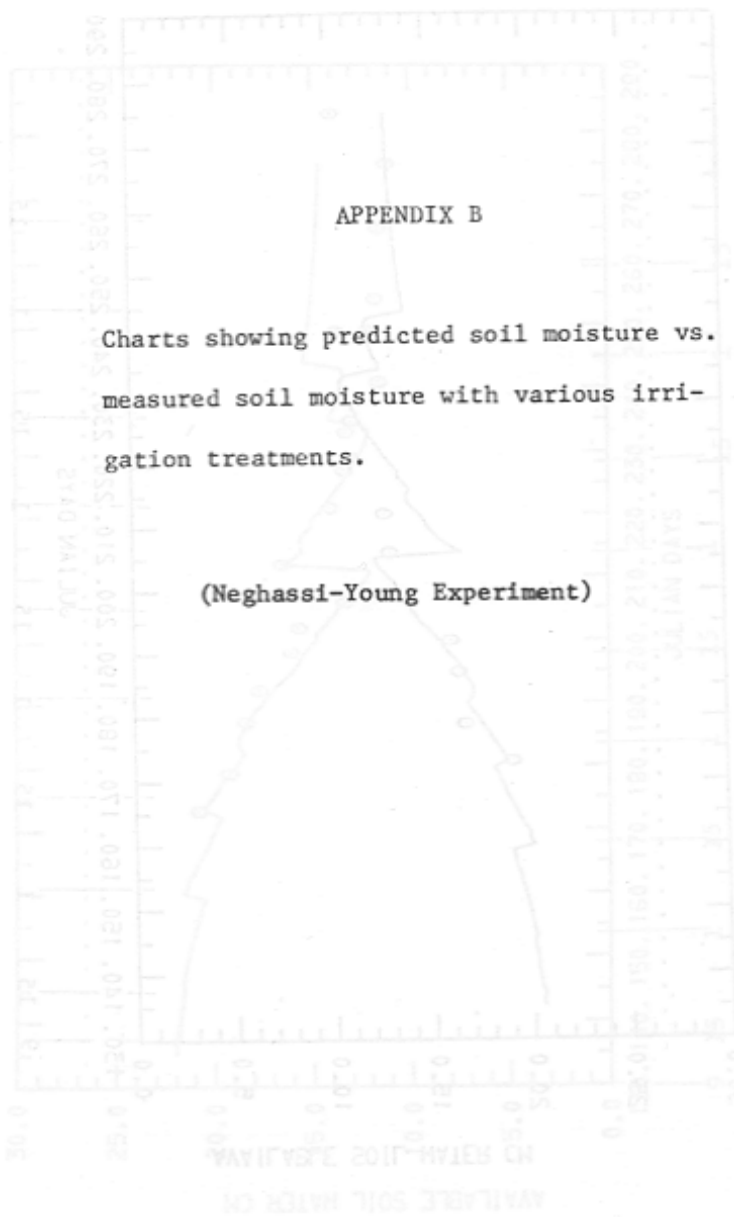


FIG. 18--TREATMENT 1B-- ONE 5 CM IRRIGATION

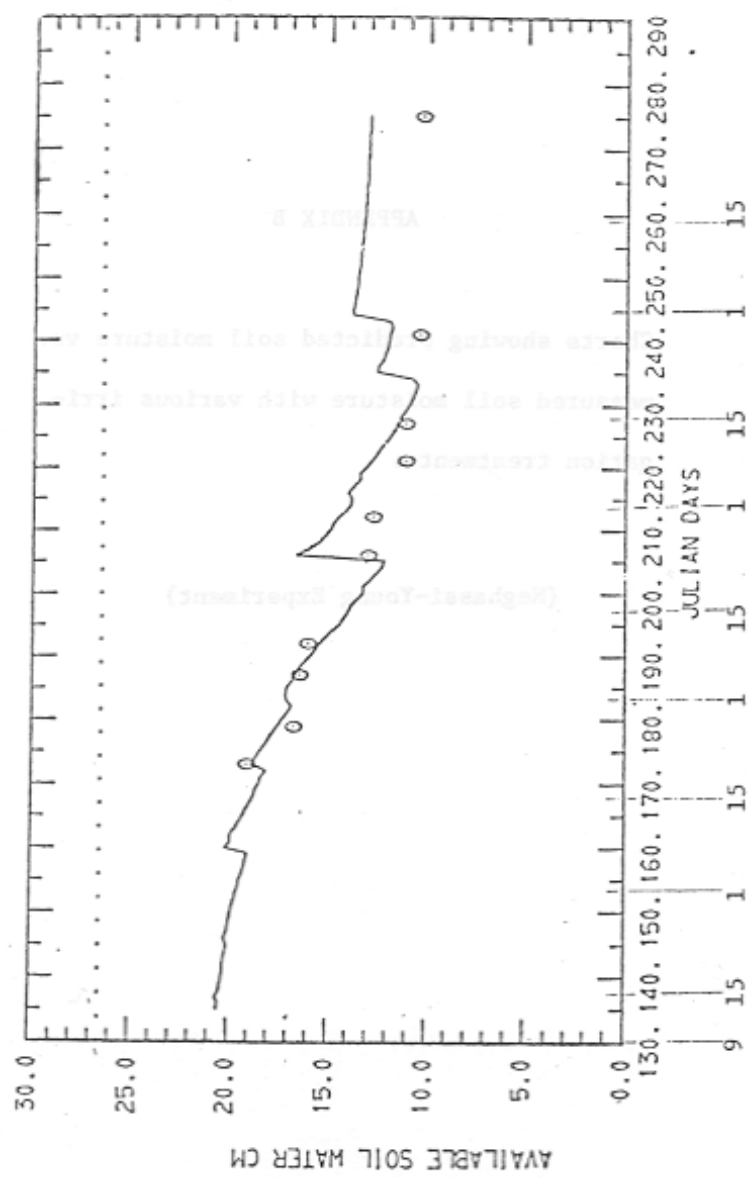


FIG. 1A -- TREATMENT 1A -- ONE 5 CM IRRIGATION

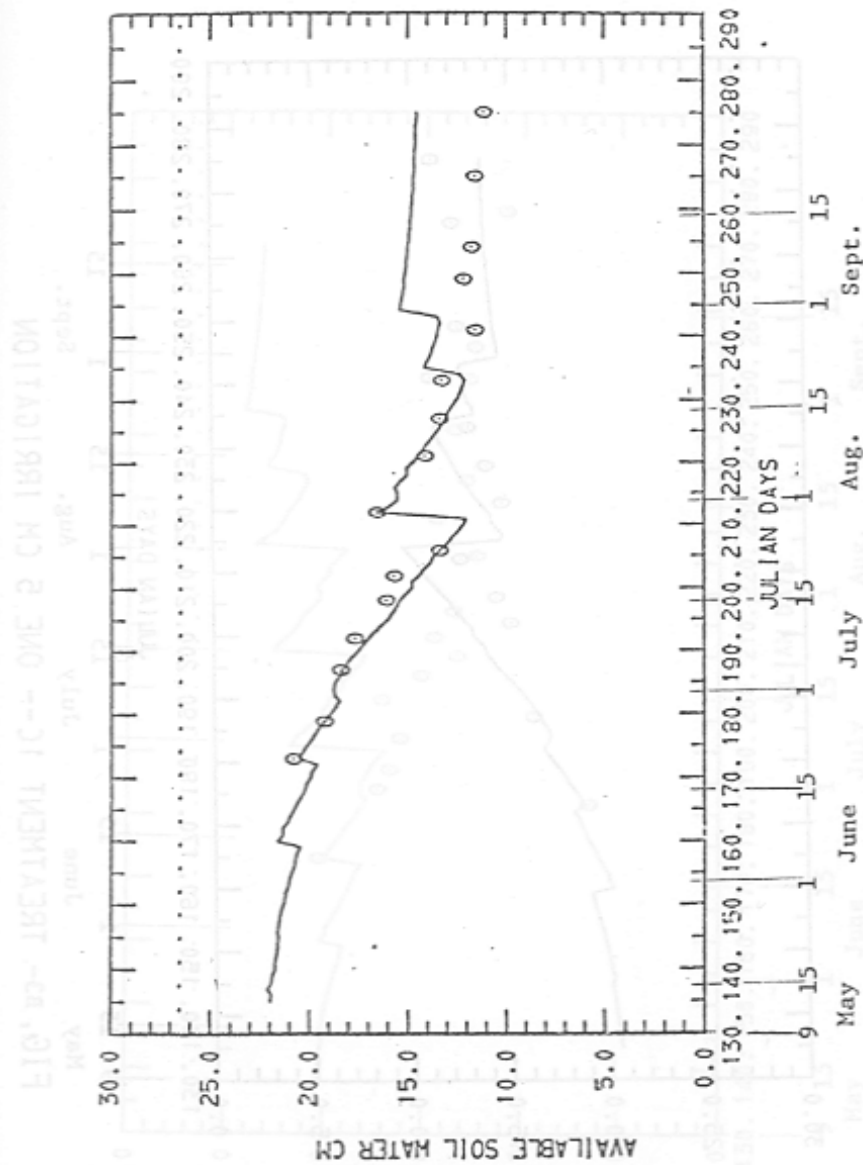


FIG. B2-- TREATMENT 1B-- ONE 5 CM IRRIGATION

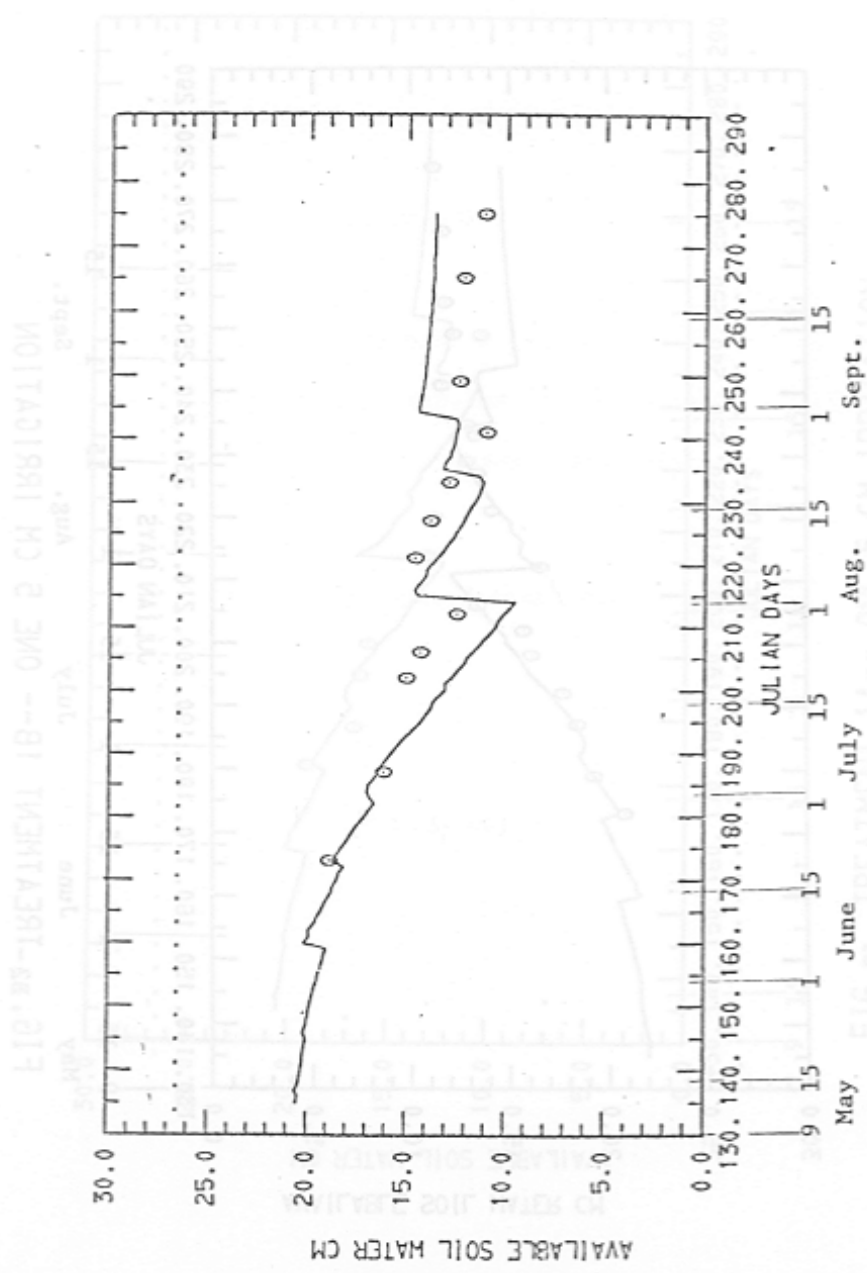


FIG. B3- TREATMENT 1C-- ONE 5 CM IRRIGATION

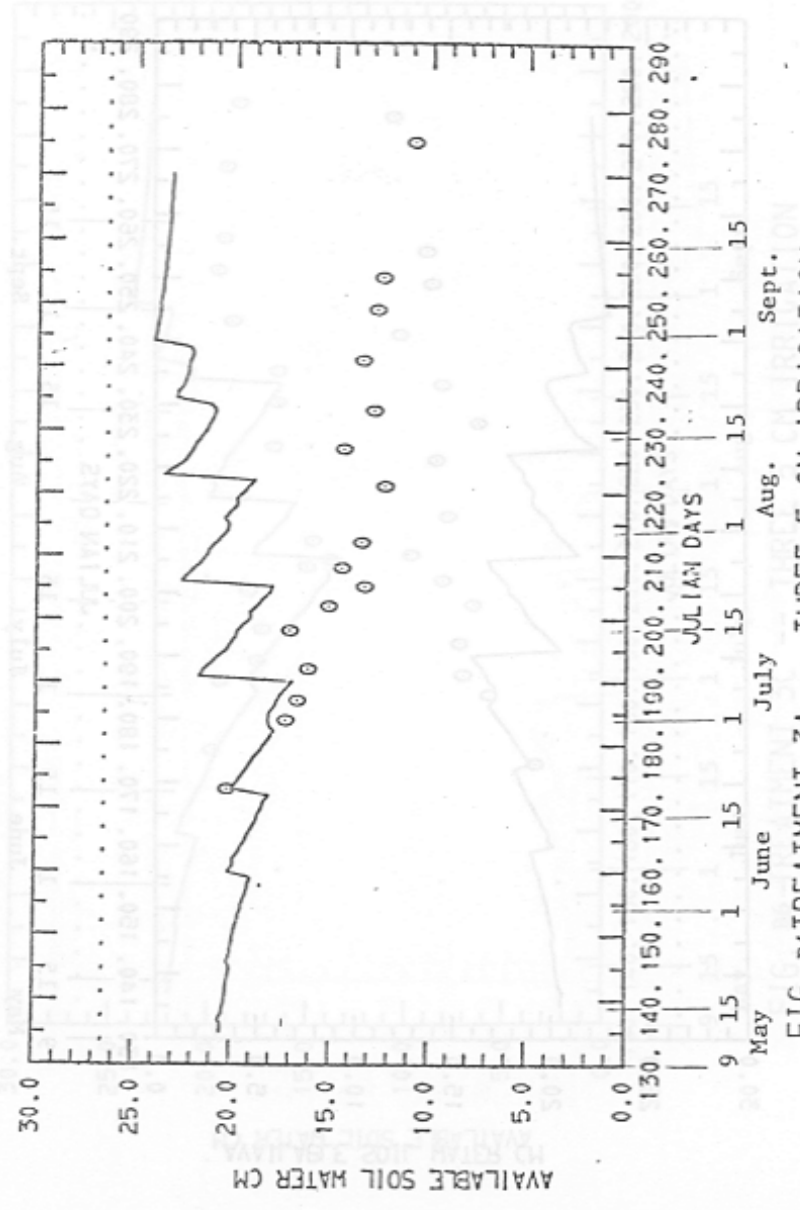


FIG. B4 TREATMENT 3A -- THREE 5 CM IRRIGATION

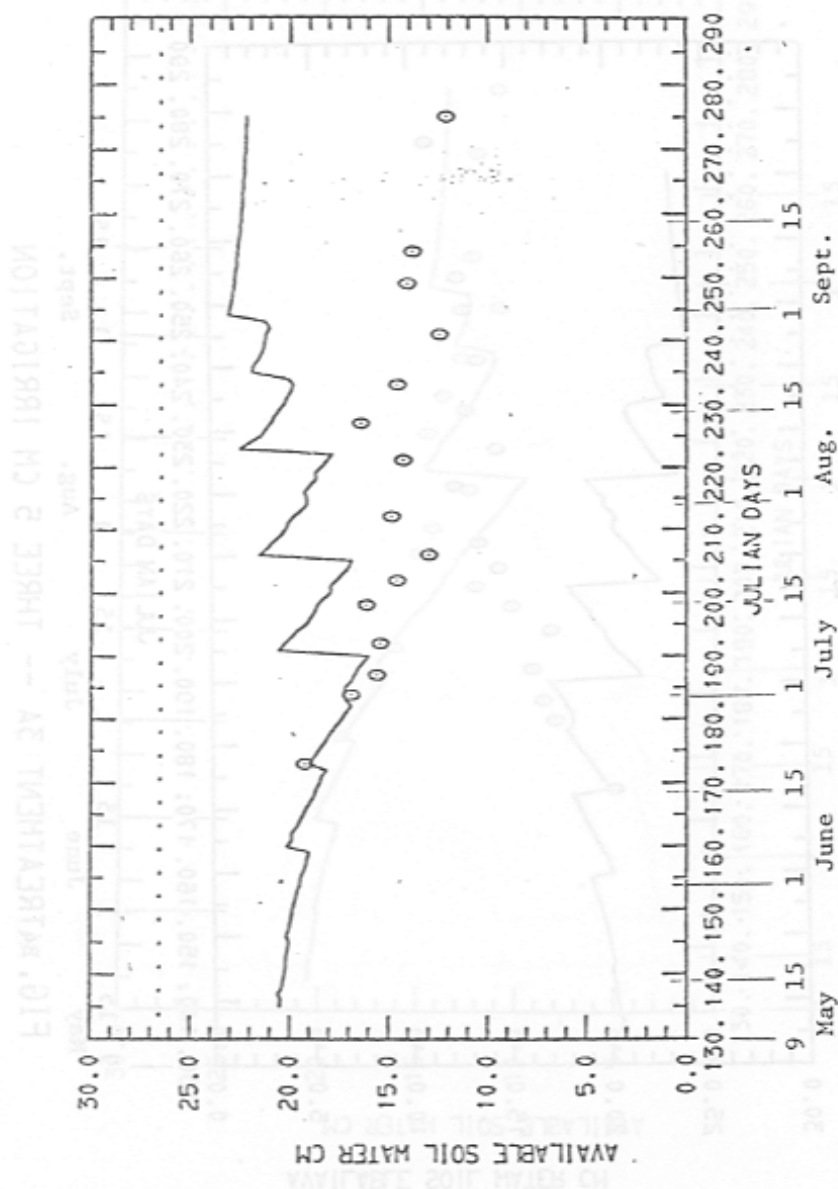


FIG. B5--TREATMENT 3B -- THREE 5 CM IRRIGATION

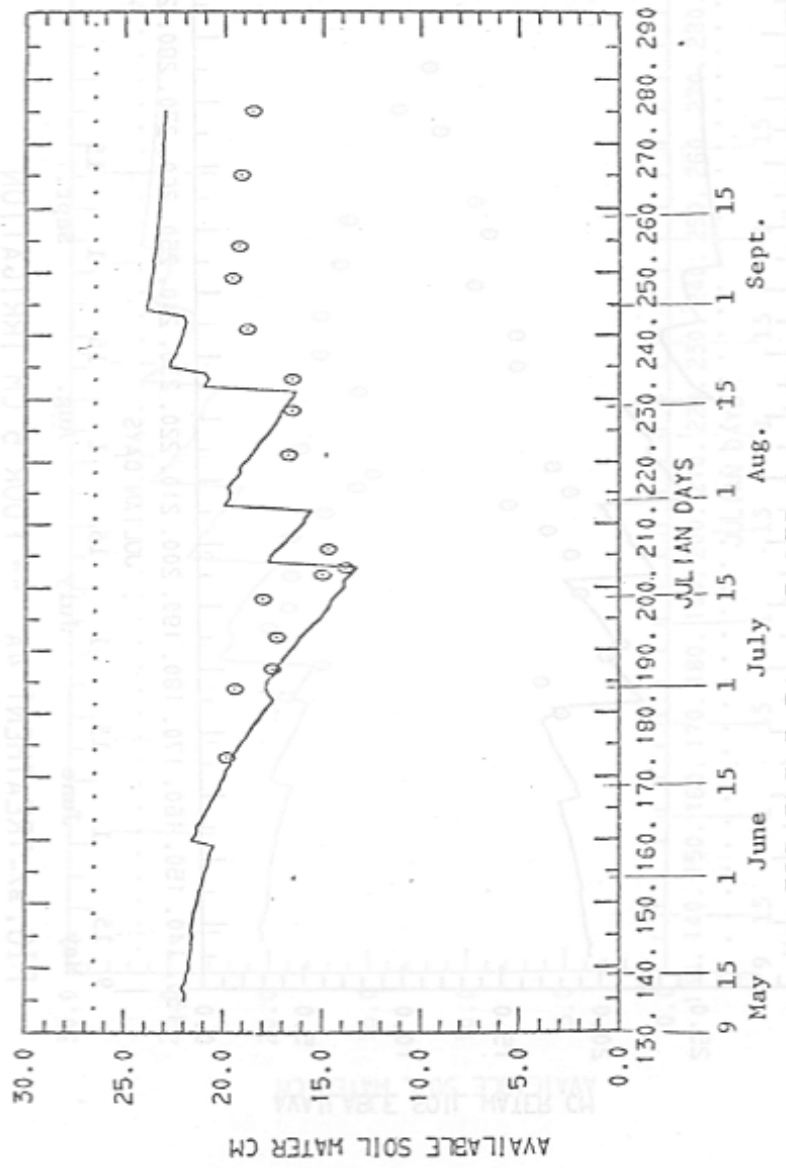


FIG. B6-TREATMENT 3C --- THREE 5 CM IRRIGATION

FIG. B8-TREATMENT 4B --- FOUR 5 CM IRRIGATION

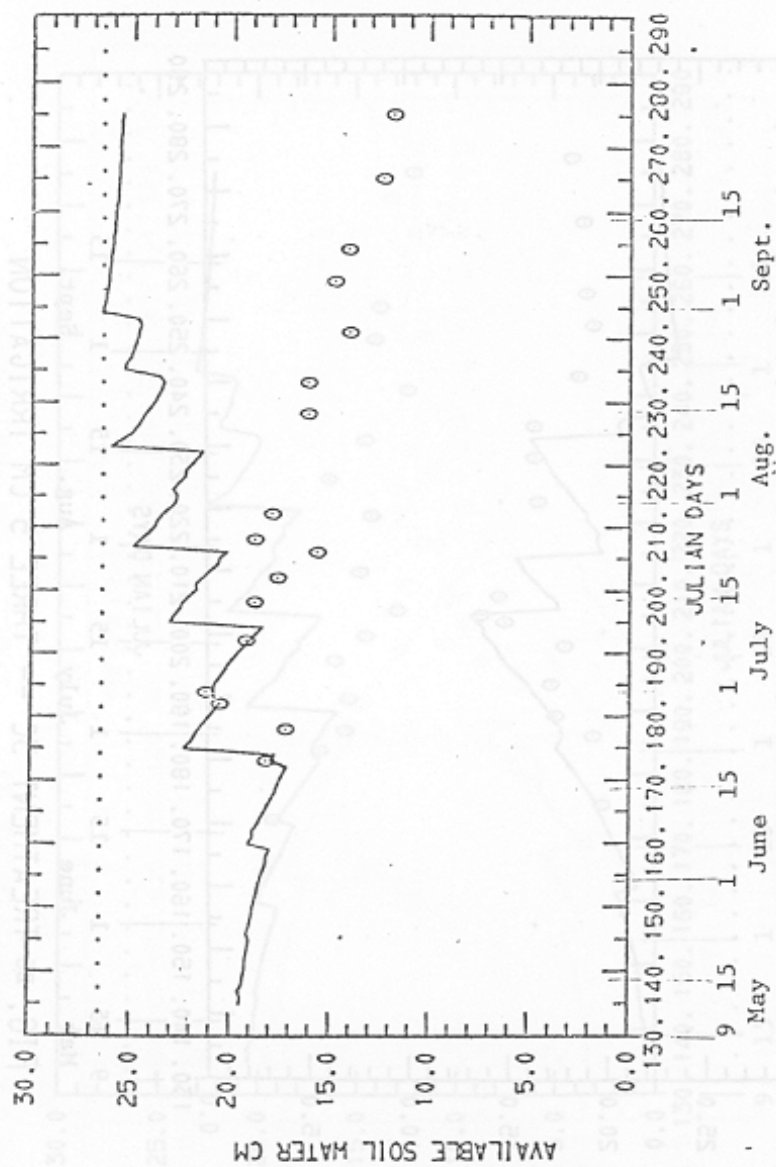


FIG. B7- TREATMENT 4A -- FOUR 5 CM IRRIGATION

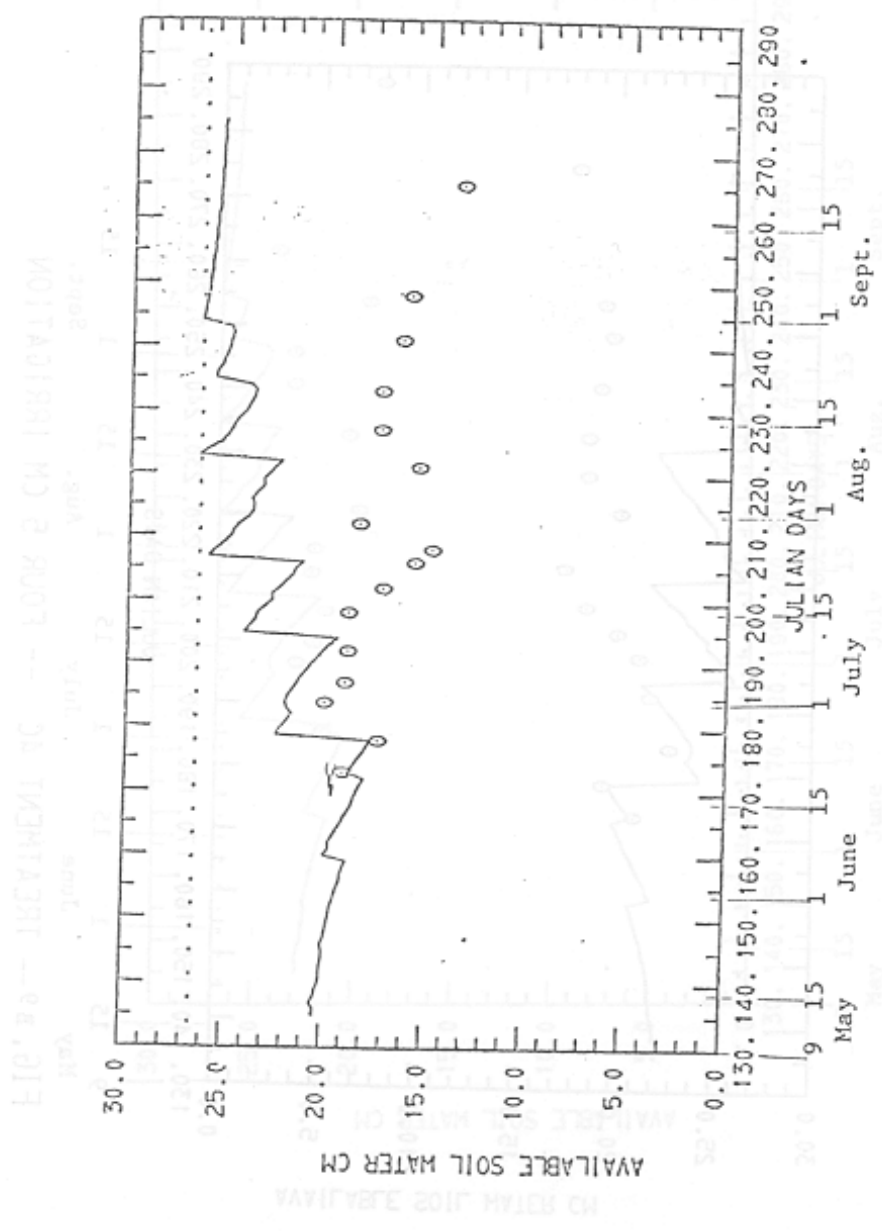


FIG. 4B - TREATMENT 4B --- FOUR 5 CM IRRIGATION

FIG. B9 -- JULIAN DAYS -- LONG 2 CM IRRIGATION

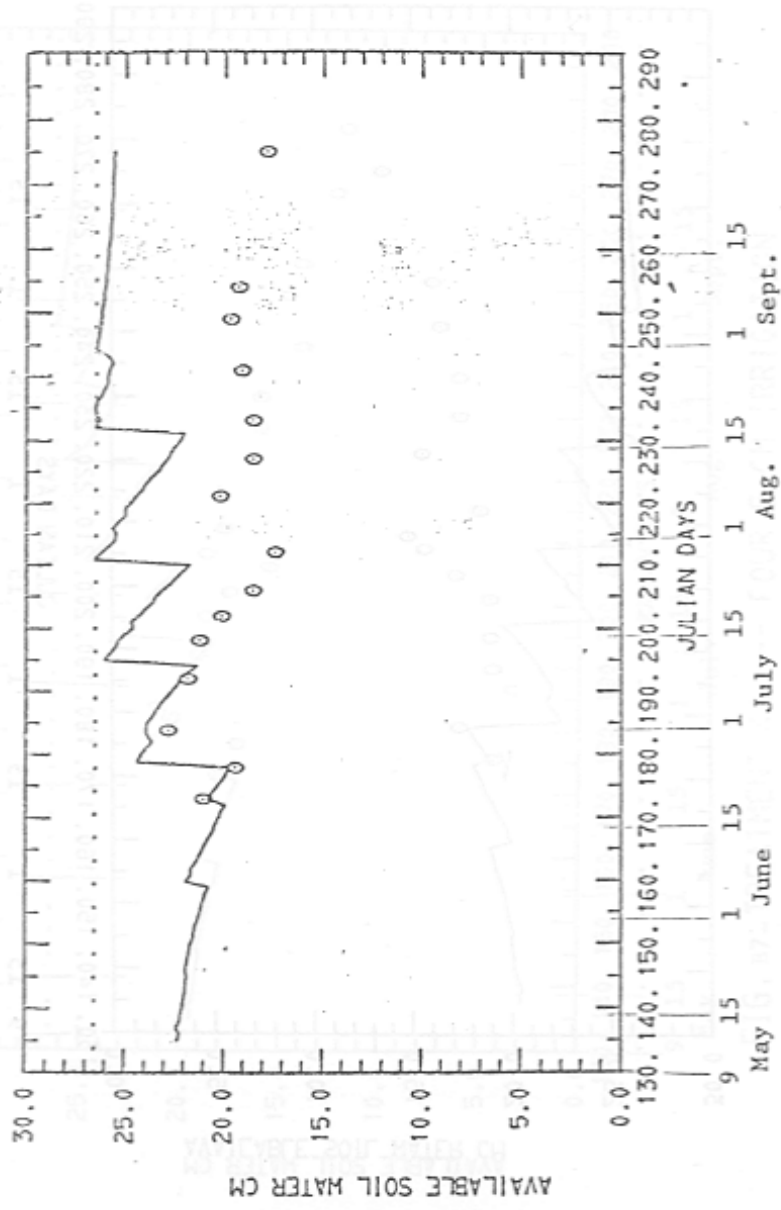


FIG. B9 --- TREATMENT 4C --- FOUR 5 CM IRRIGATION

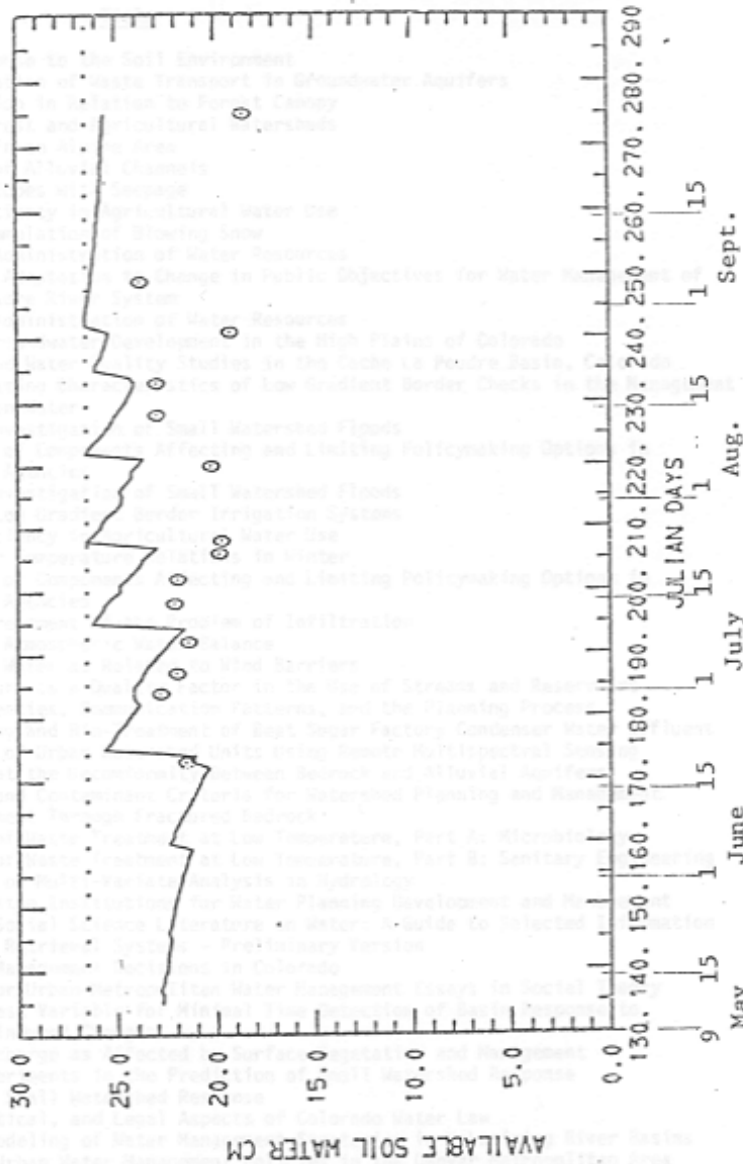


FIG. B10 TREATMENT 5 -- FIVE 5 CM IRRIGATION

2. Sectorial Response to the Soil Environment
 3. Computer Simulation of Waste Transport to Groundwater Aquifers
 4. Some Aspects of the Interaction of Forest Canopy
 5. Runoff from Forest and Agricultural Watersheds
 6. Soil Movement in the
 7. Stratification of
 8. Stability of
 9. Impedance of
 10. Control of
 11. Economics and
 12. Organizational
 13. Lake La Poudre
 14. Economics and
 15. Hydrology of
 16. Lake Mead
 17. An Experimental
 18. Experimental
 19. Impedance of
 20. Water Quality
 21. An Experimental
 22. A Systematic
 23. Studies of the
 24. Laboratory of
 25. Local Water
 26. Control of
 27. Water Quality
 28. Laboratory of
 29. Laboratory of
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