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]
	x_1	x_2	y_i	$\hat{y}_i$	$(y_i - \hat{y}_i)$	
						Percent
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 $\frac{(y_i - \hat{y}_i)}{y_i} \times 100$.

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

Variables' values[1]				
x_1	x_2	$\hat{y}$	$MP_{x_1^*}$ [2]	Relative marginal product [3]
				Percent
.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 $(MP_{x_1^*}/\hat{A}) \times 100$.

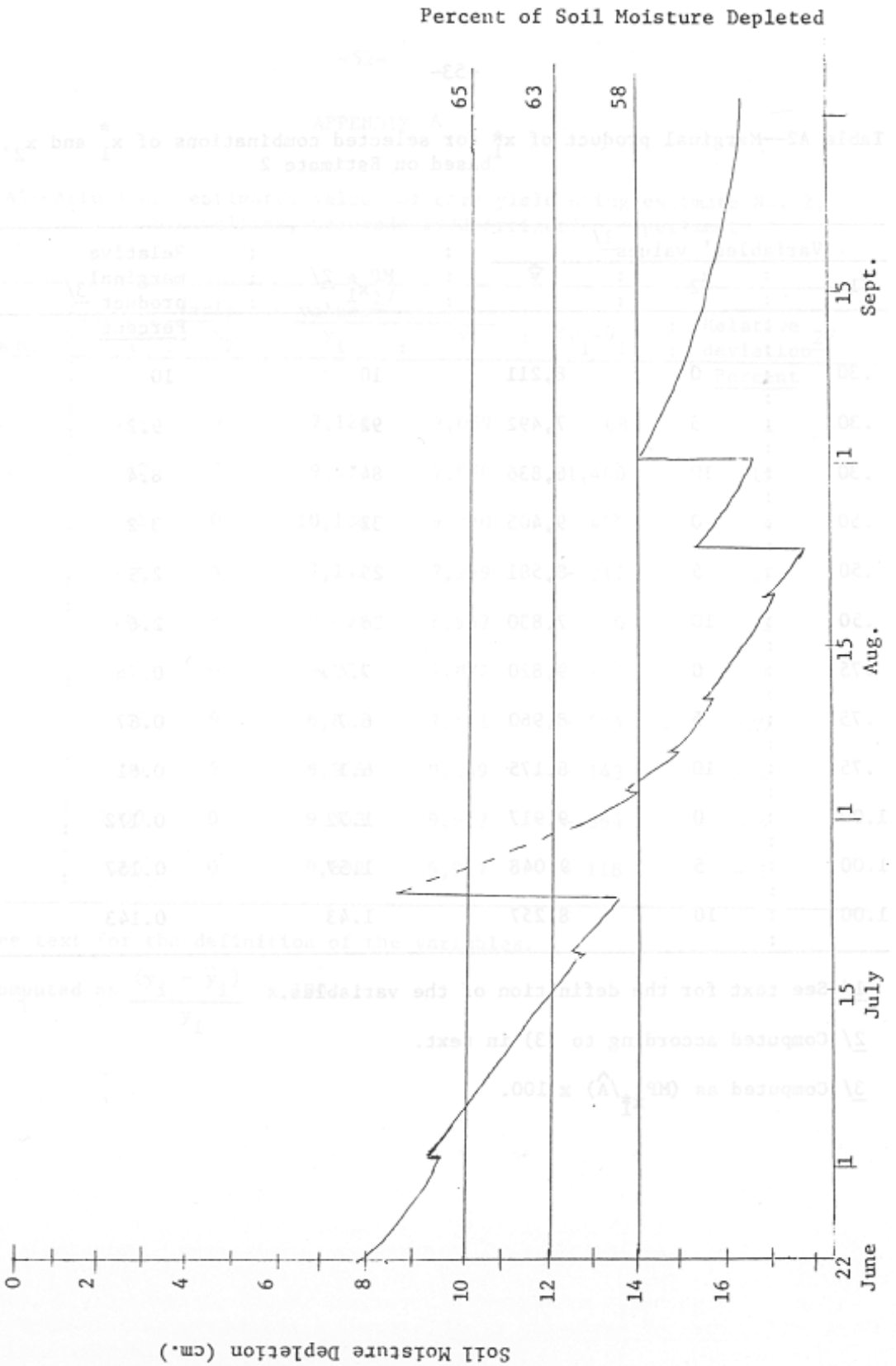


Figure A1-Level of soil moisture in corn irrigation experiment, Fort Collins, Colorado, 1972. Treatment/A (one irrigation, July 25)

Figure A2--Level of soil moisture in corn irrigation experiment, Fort Collins, Colorado, 1972.
Treatment 3A (3 irrigations: July 13, July 25, Aug. 8)

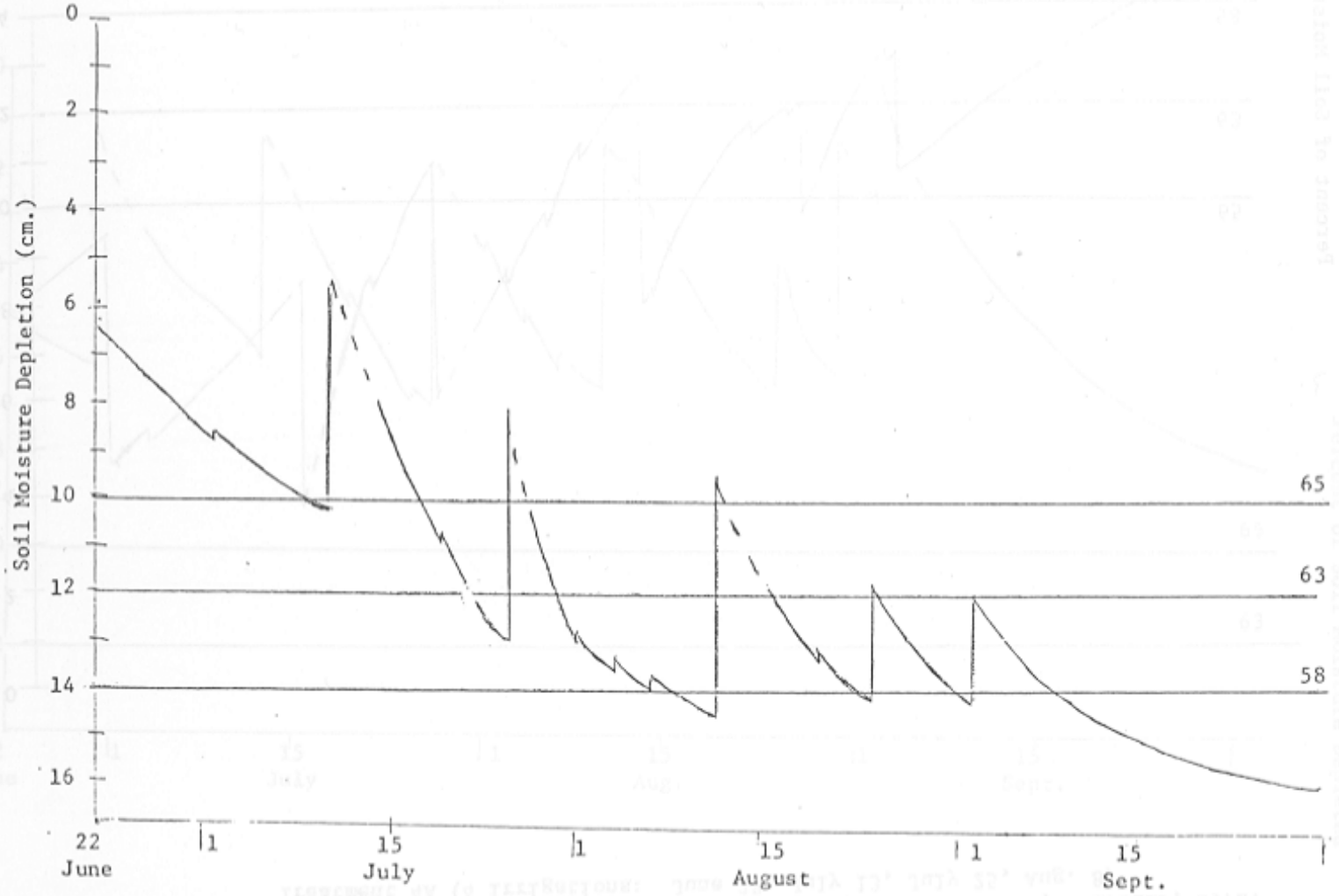
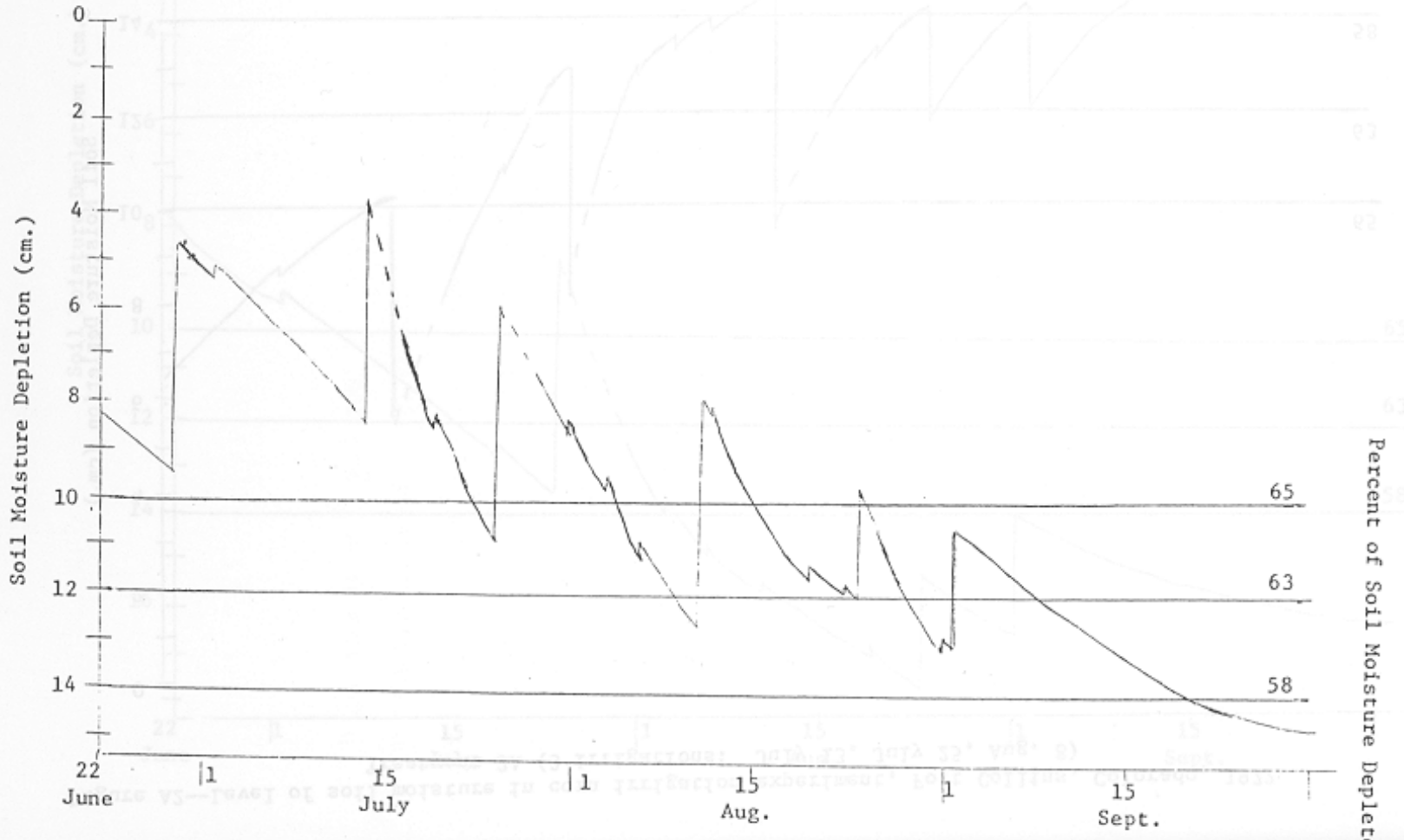


Figure A3--Level of soil moisture in corn irrigation experiment, Fort Collins, Colorado, 1972.
Treatment 4A (4 irrigations: June 28, July 13, July 25, Aug. 8)



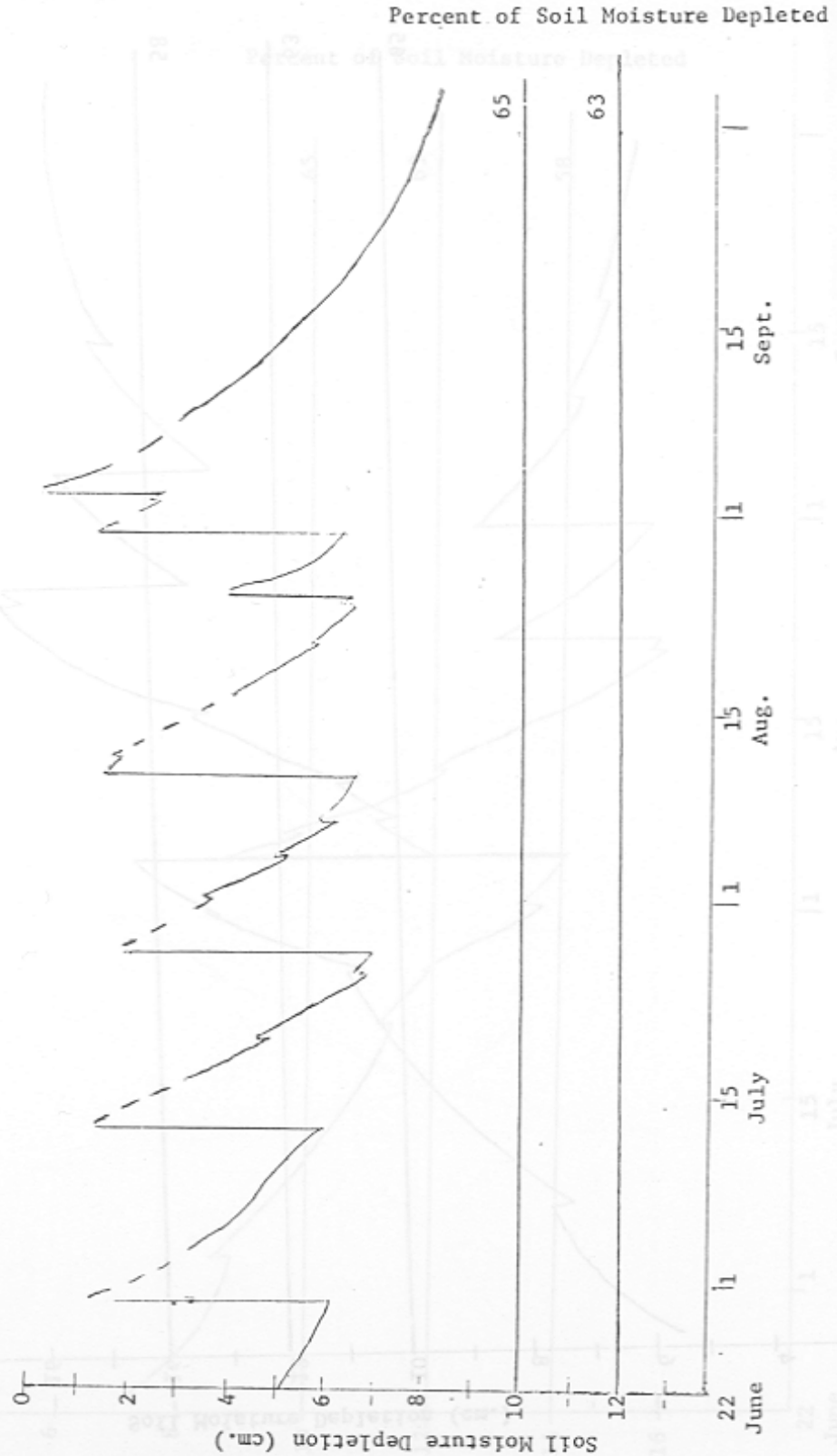


Figure A4--Level of soil moisture in corn irrigation experiment, Fort Collins, Colorado, 1972. Treatment 5 (5 irrigations: June 28, July 13, July 28, Aug. 8, Aug. 28)

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

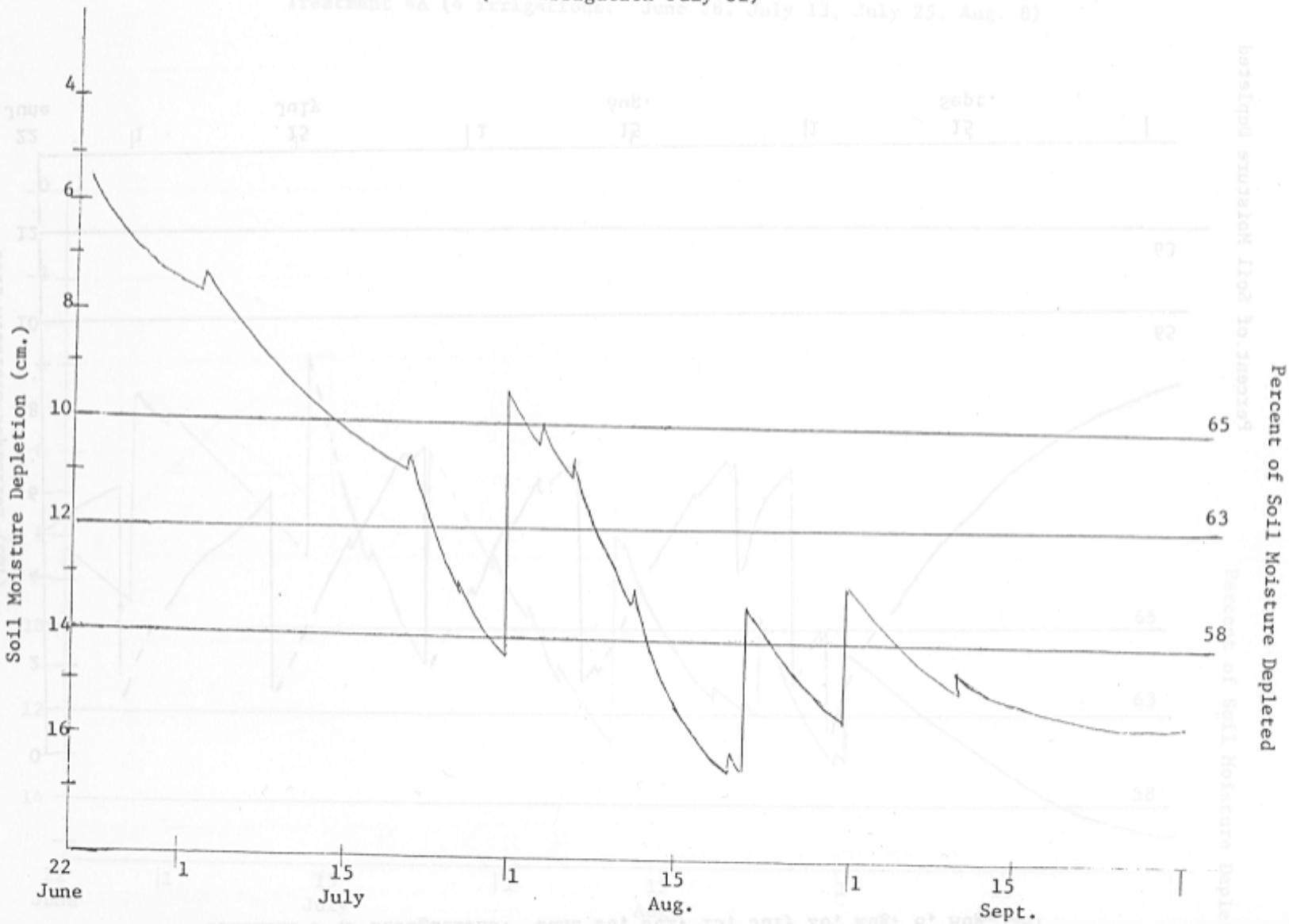


Figure A6 -Level of soil moisture in corn experiment, Fort Collins, Colorado, 1972. Treatment 1C (one irrigation, Aug. 4)

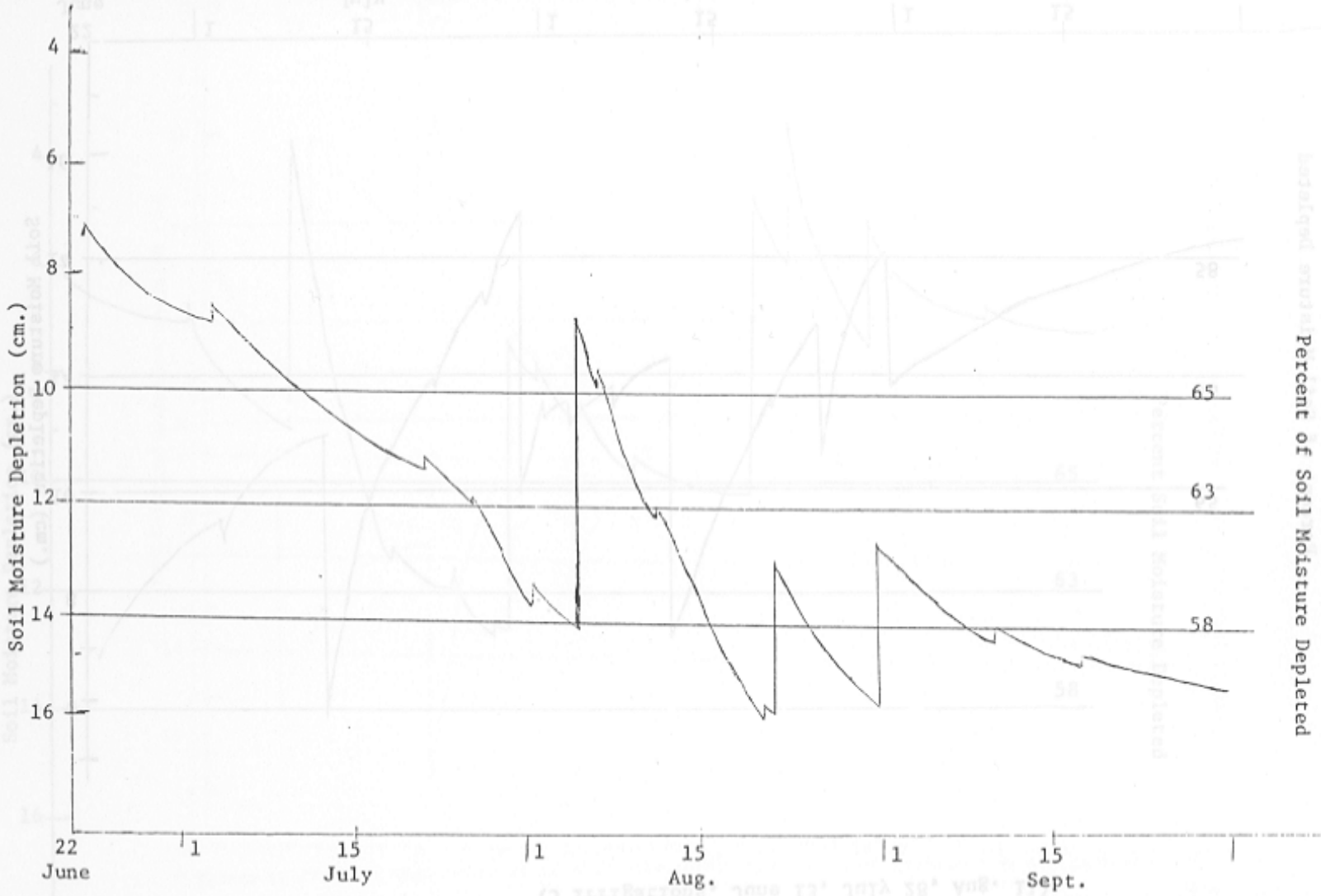


Figure A7-Level of soil moisture in corn experiment, Fort Collins, Colorado, 1972. Treatment 3B
(3 irrigations, June 13, July 28, Aug. 11)

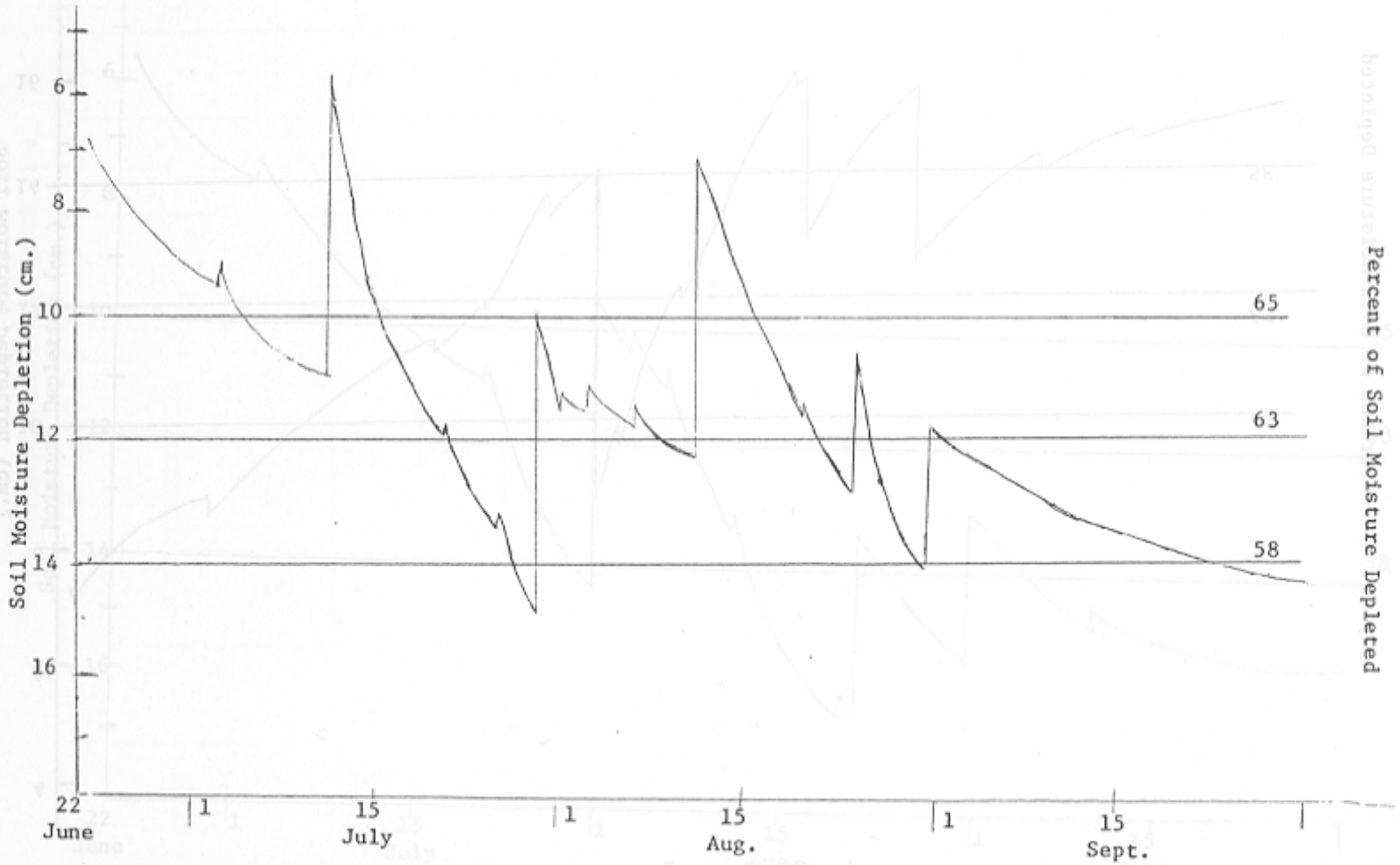


Figure A8-Level of soil moisture in corn experiment, Fort Collins, Colorado, 1972. Treatment 3C
(3 irrigations, June 13, Aug. 2, Aug. 21)

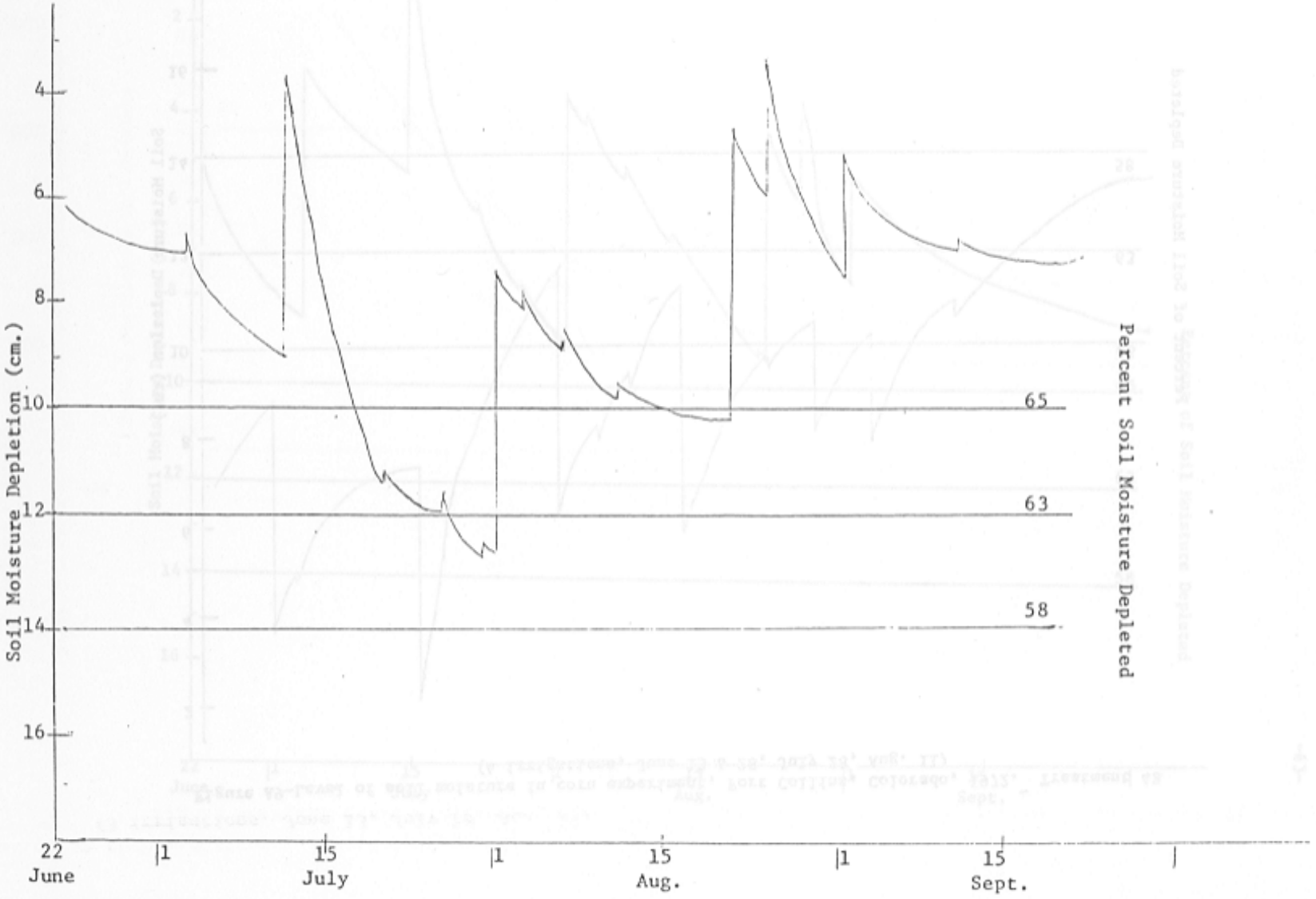


Figure A9-Level of soil moisture in corn experiment, Fort Collins, Colorado, 1972. Treatment 4B
(4 irrigations, June 13 & 28, July 28, Aug. 11)

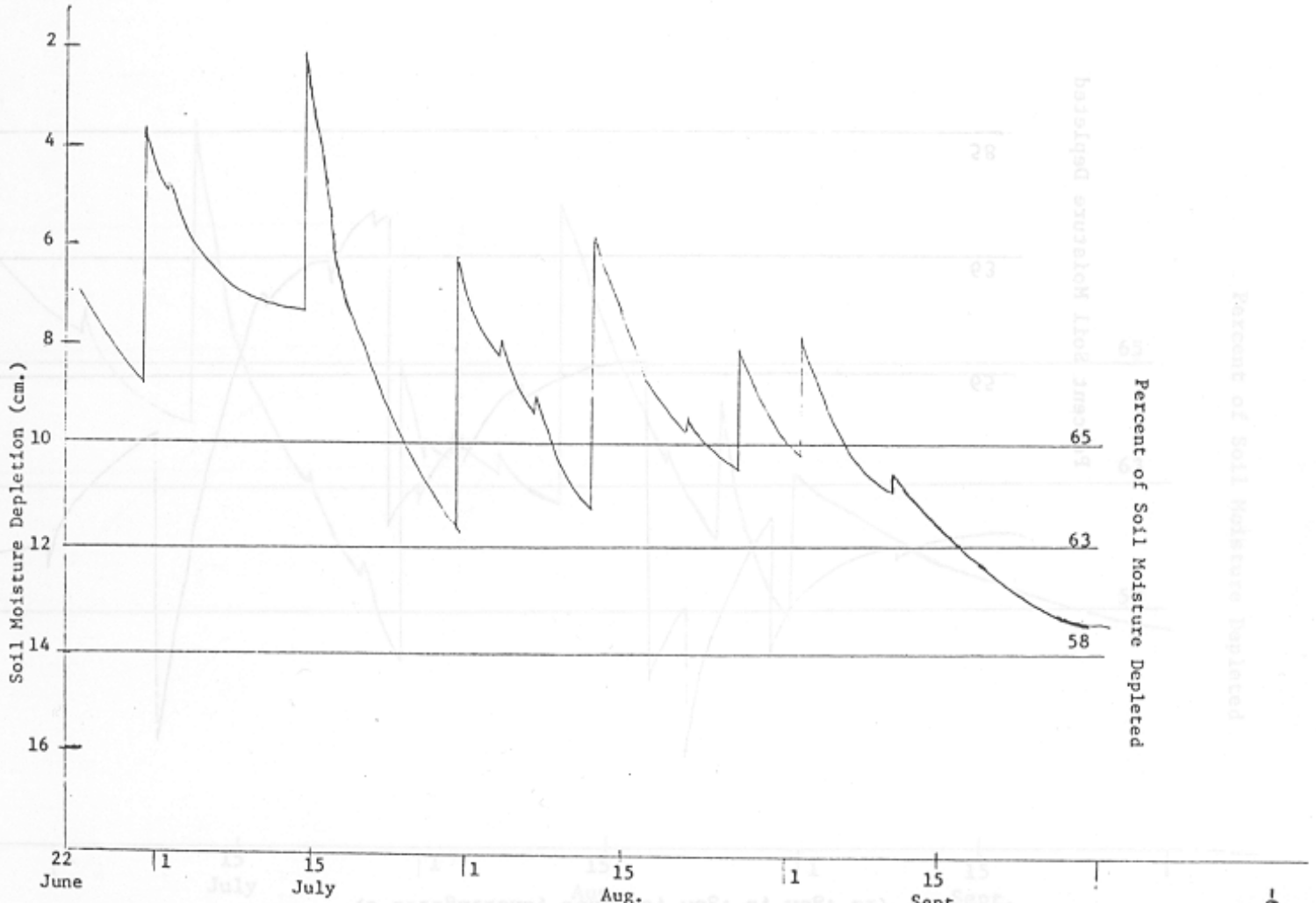


Figure A10.-Level of soil moisture in corn experiment, Fort Collins, Colorado, 1972. Treatment 4C
(4 irrigations, June 13 & 28, July 31, Aug. 21)

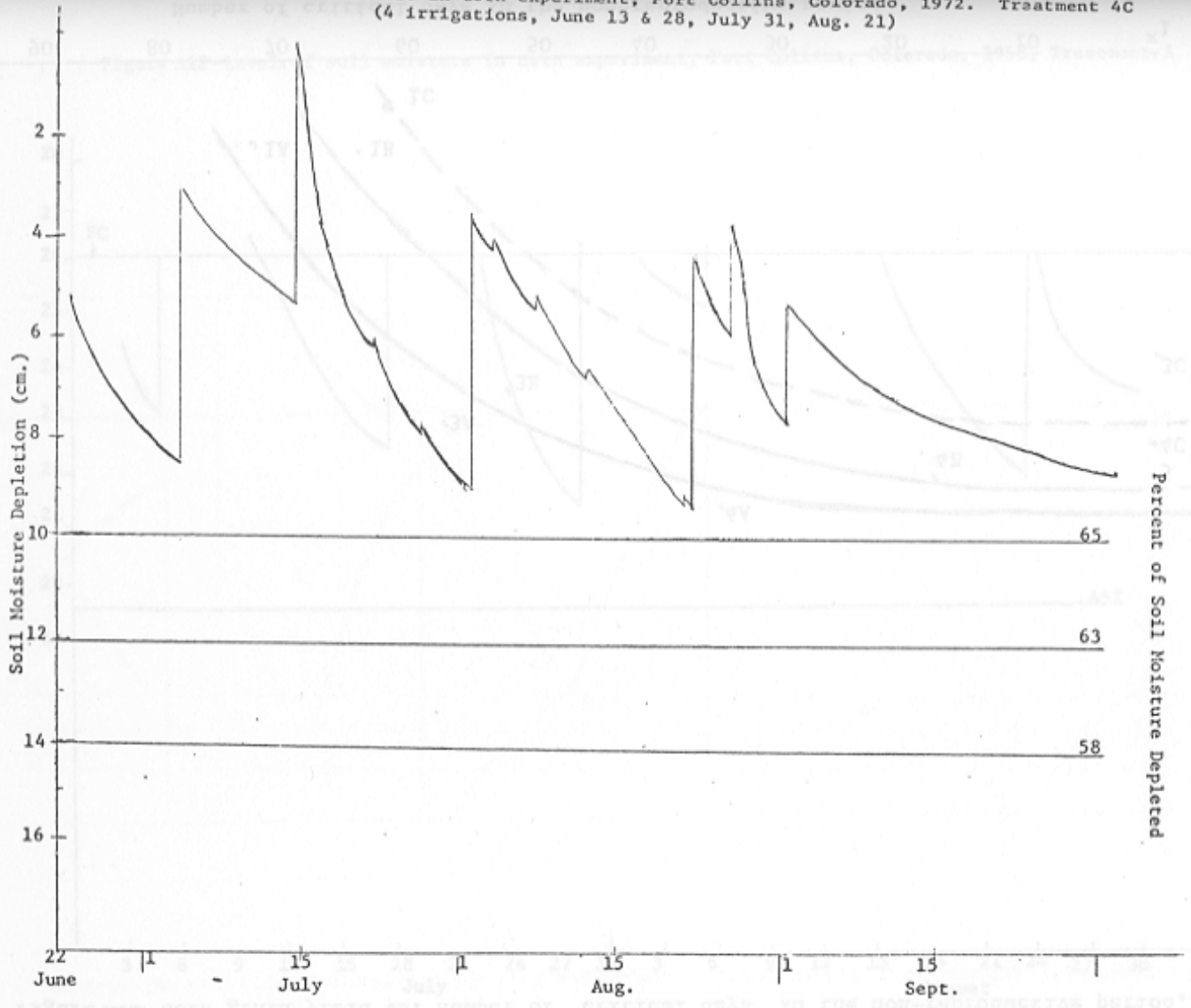


Figure A11--Corn grain yield vs. number of "critical days" in the non-reproductive period, Ft. Collins, 1972

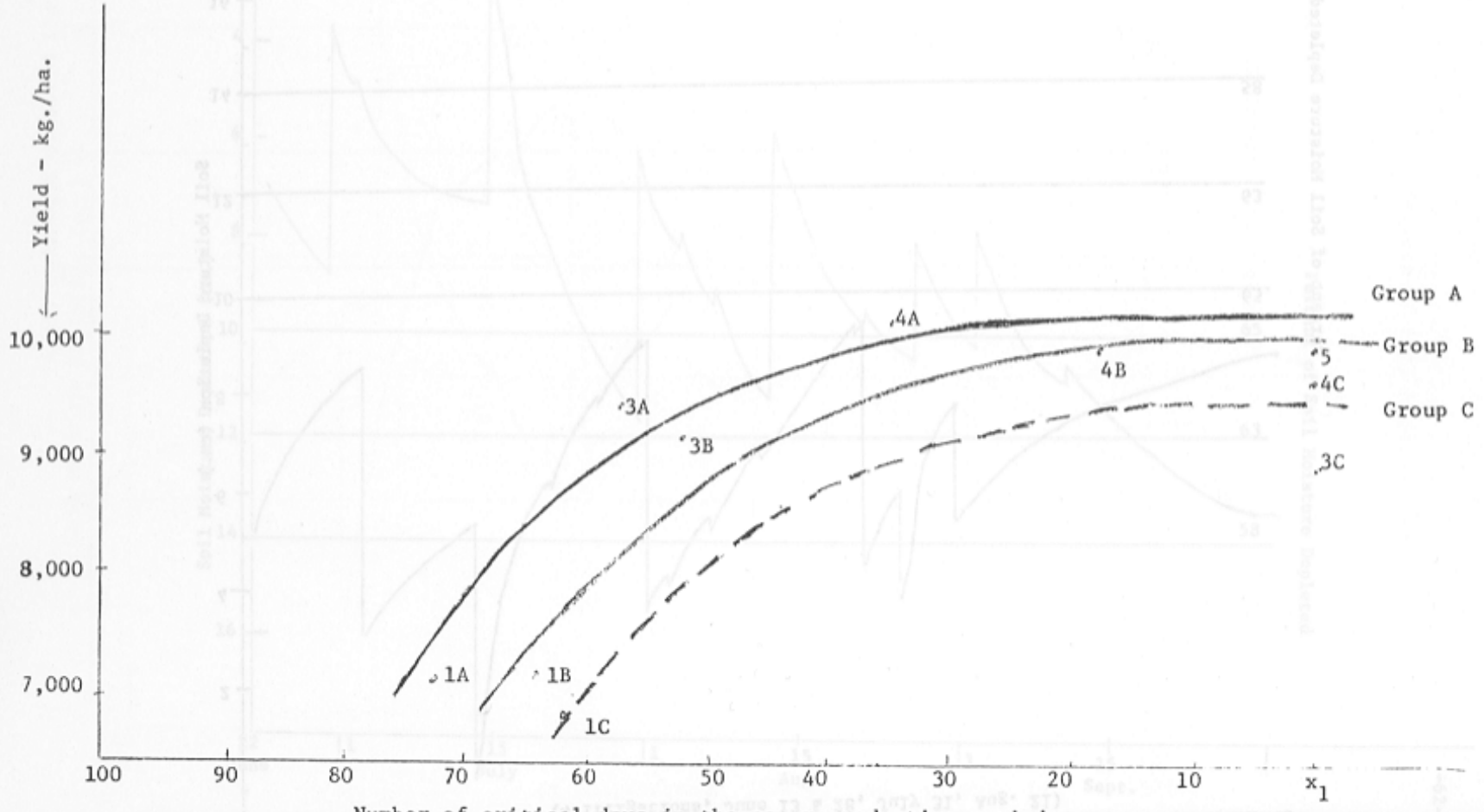


Figure A12-Level of soil moisture in corn experiment, Fort Collins, Colorado, 1968, Treatment I

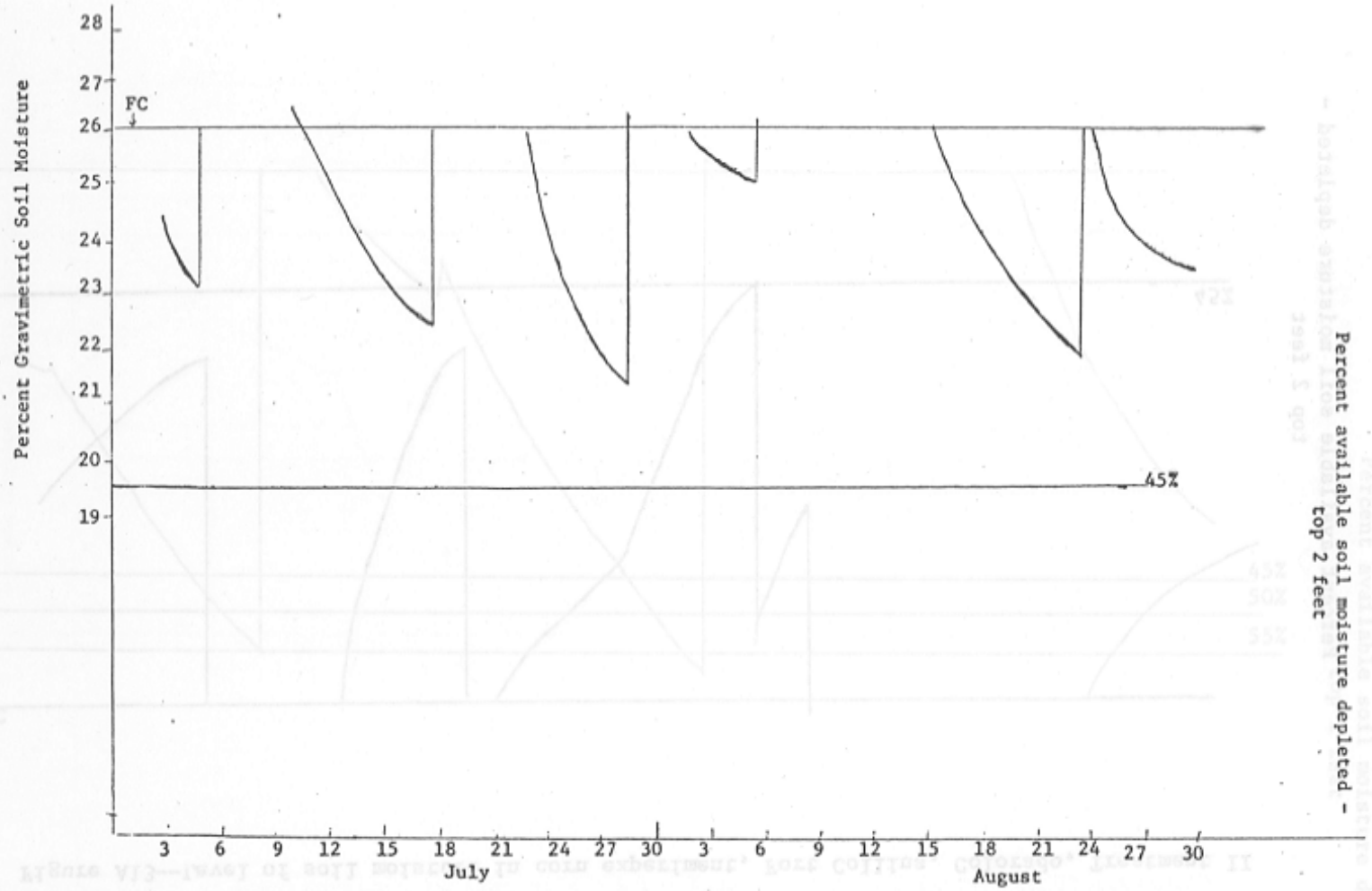
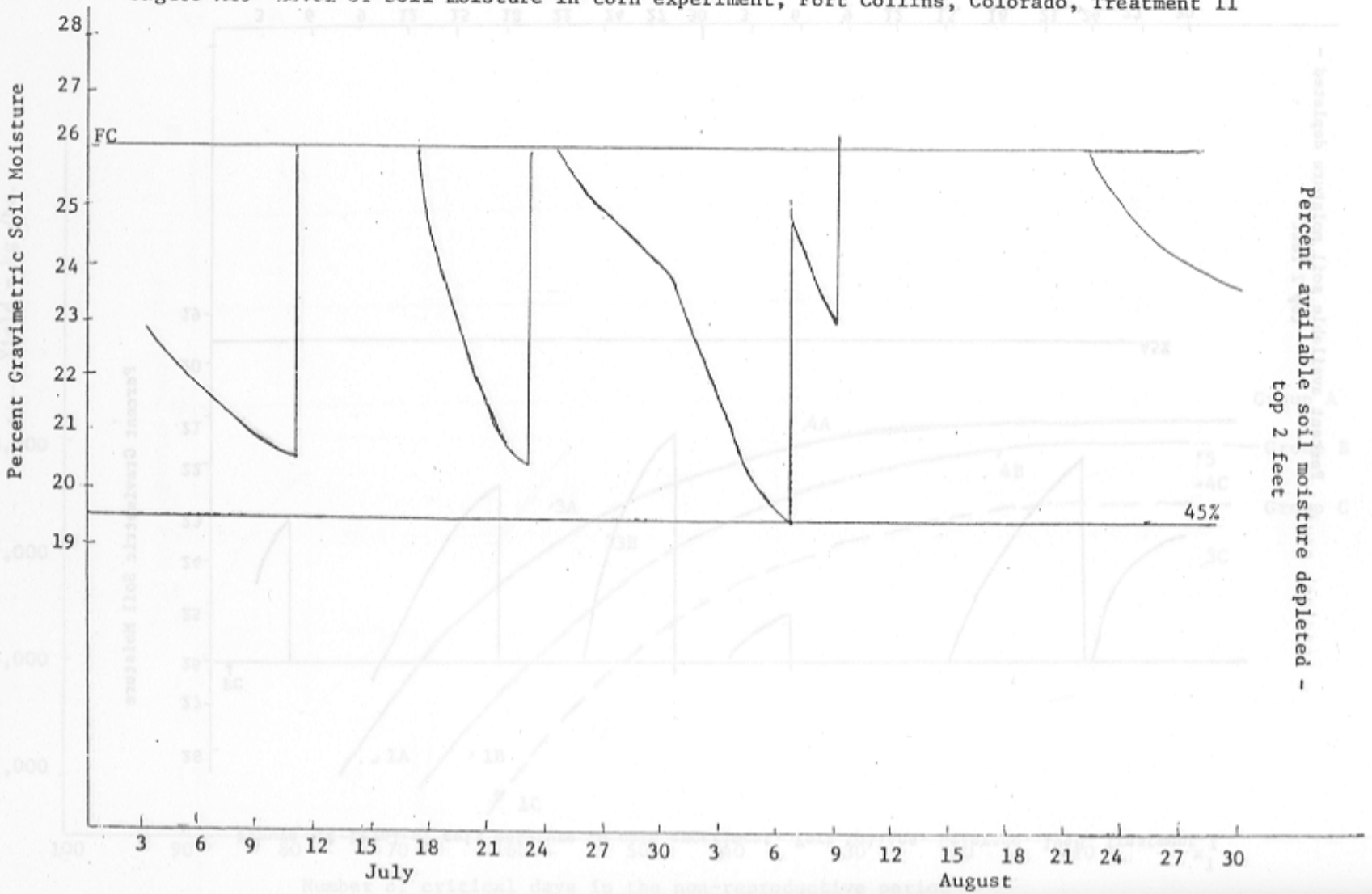


Figure A13--Level of soil moisture in corn experiment, Fort Collins, Colorado, Treatment II



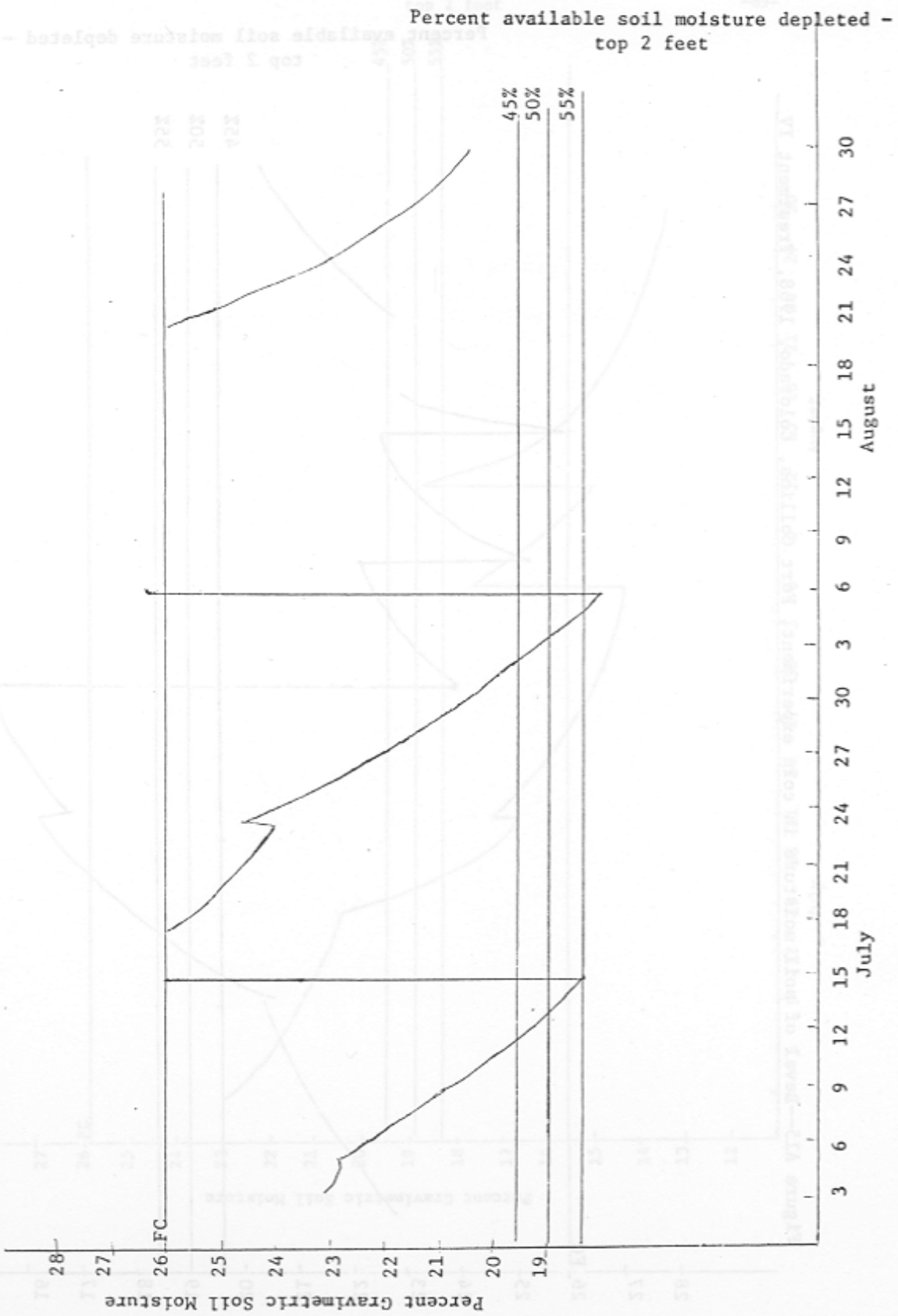


Figure A14--Level of soil moisture in corn experiment, Fort Collins, Colorado, 1968, Treatment III

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

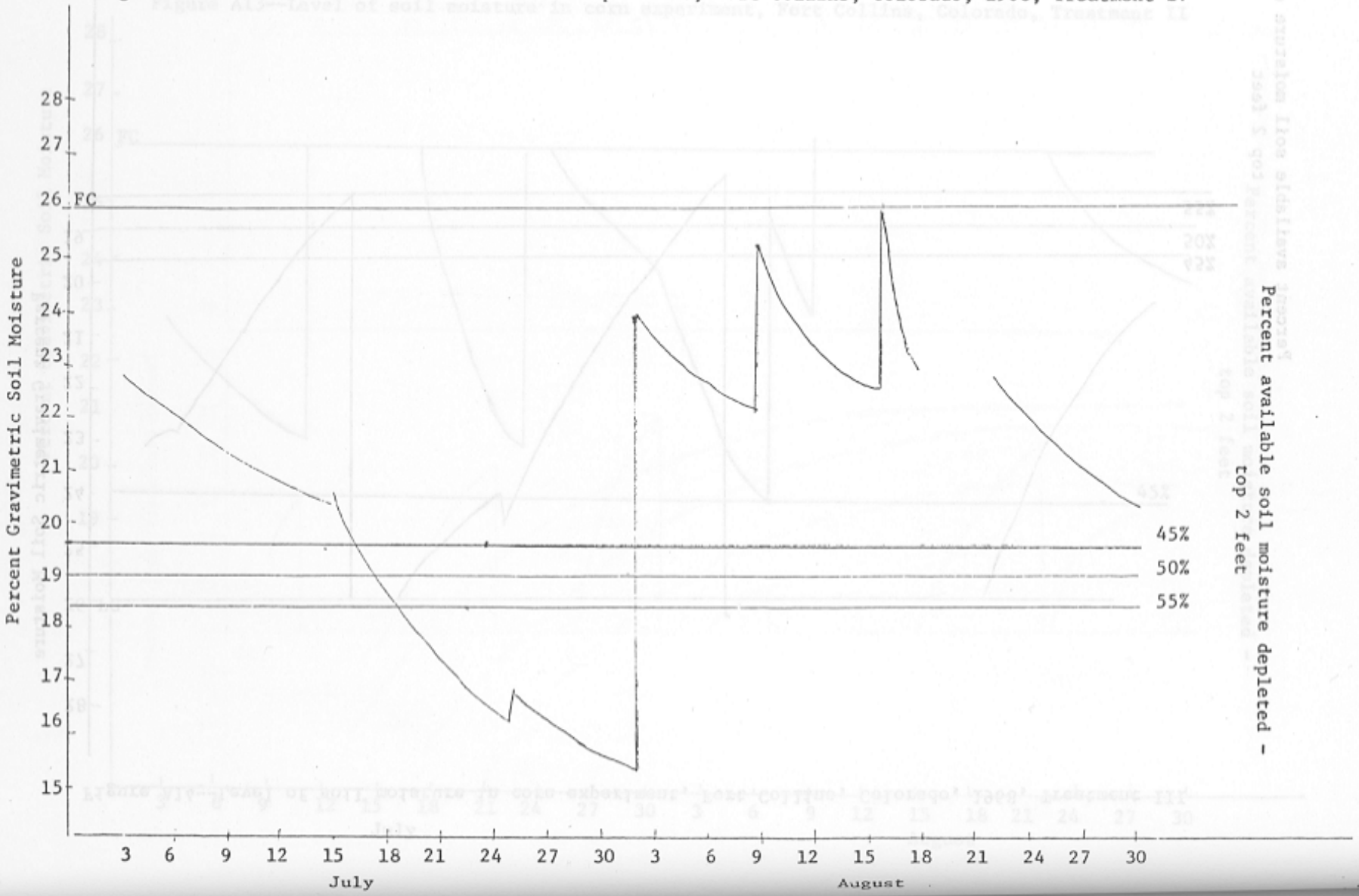
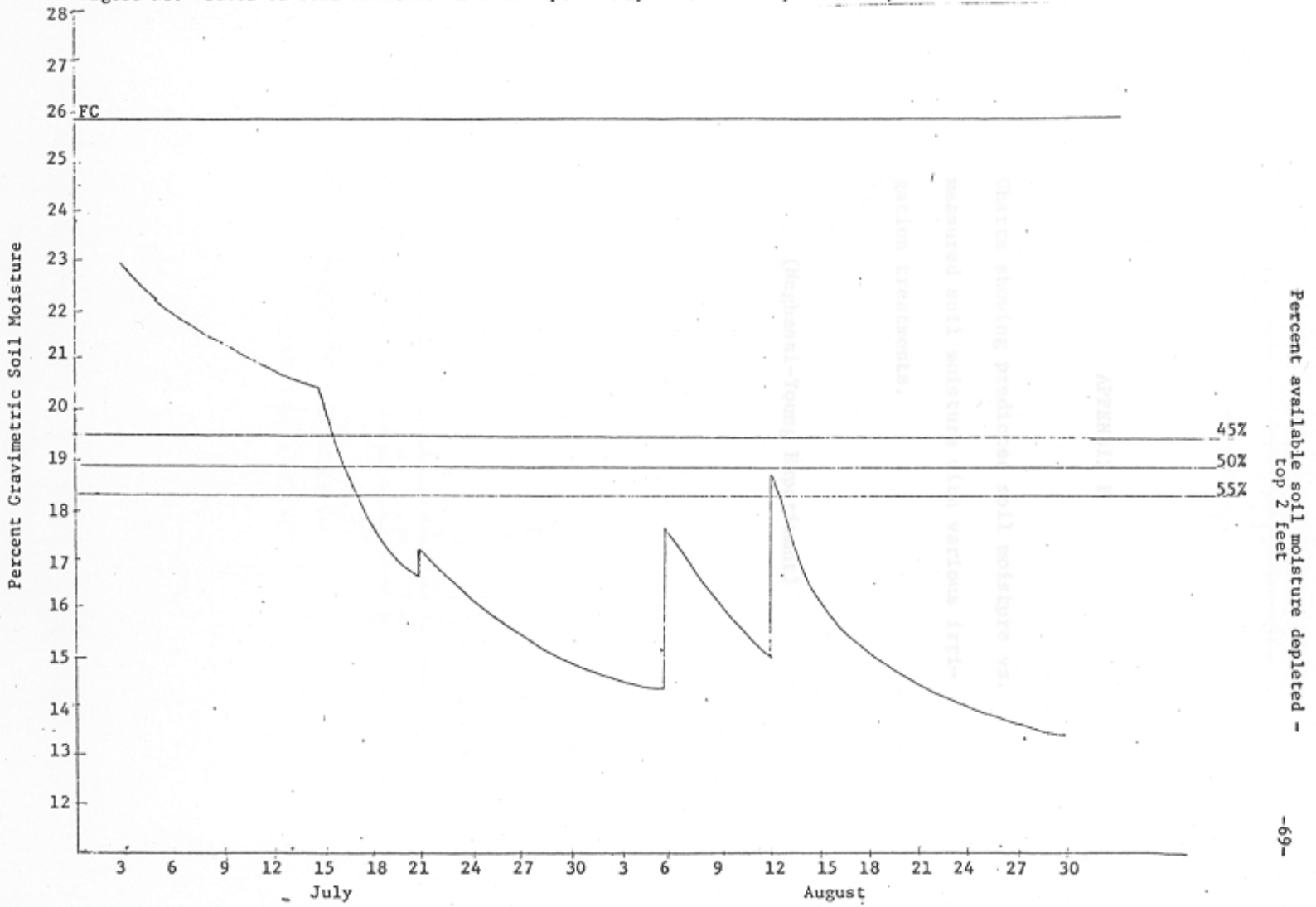


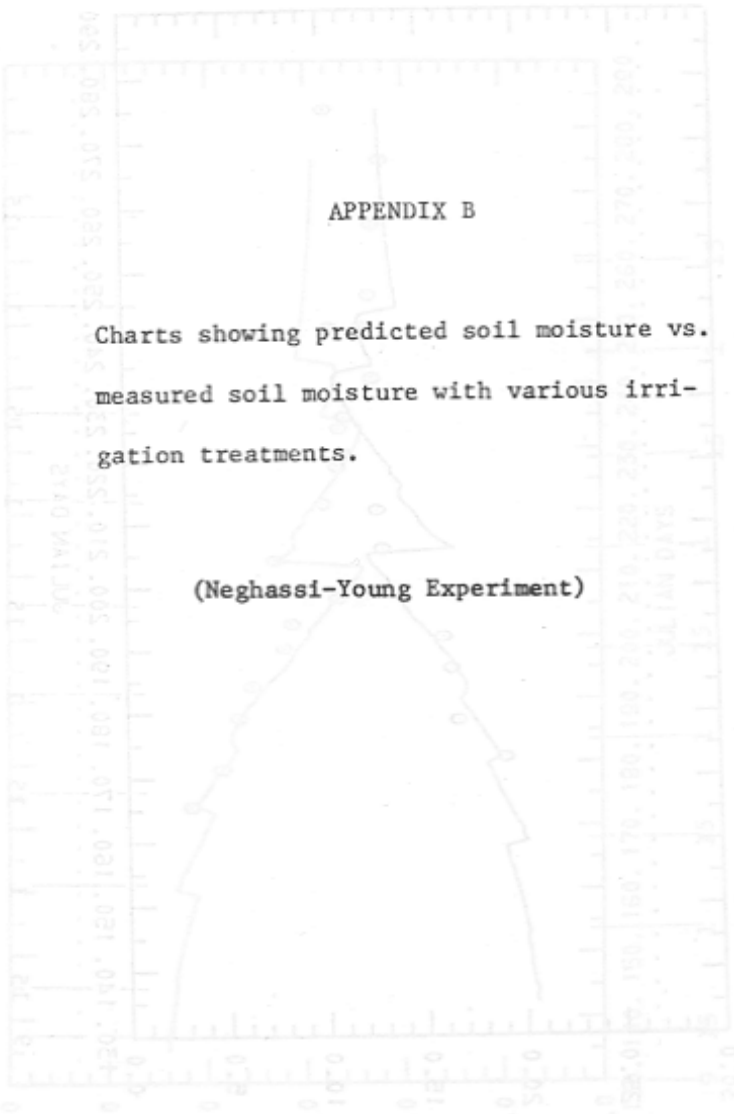
Figure A16--Level of soil moisture in corn experiment, Fort Collins, Colorado, Treatment V



APPENDIX B

Charts showing predicted soil moisture vs. measured soil moisture with various irrigation treatments.

(Neghassi-Young Experiment)



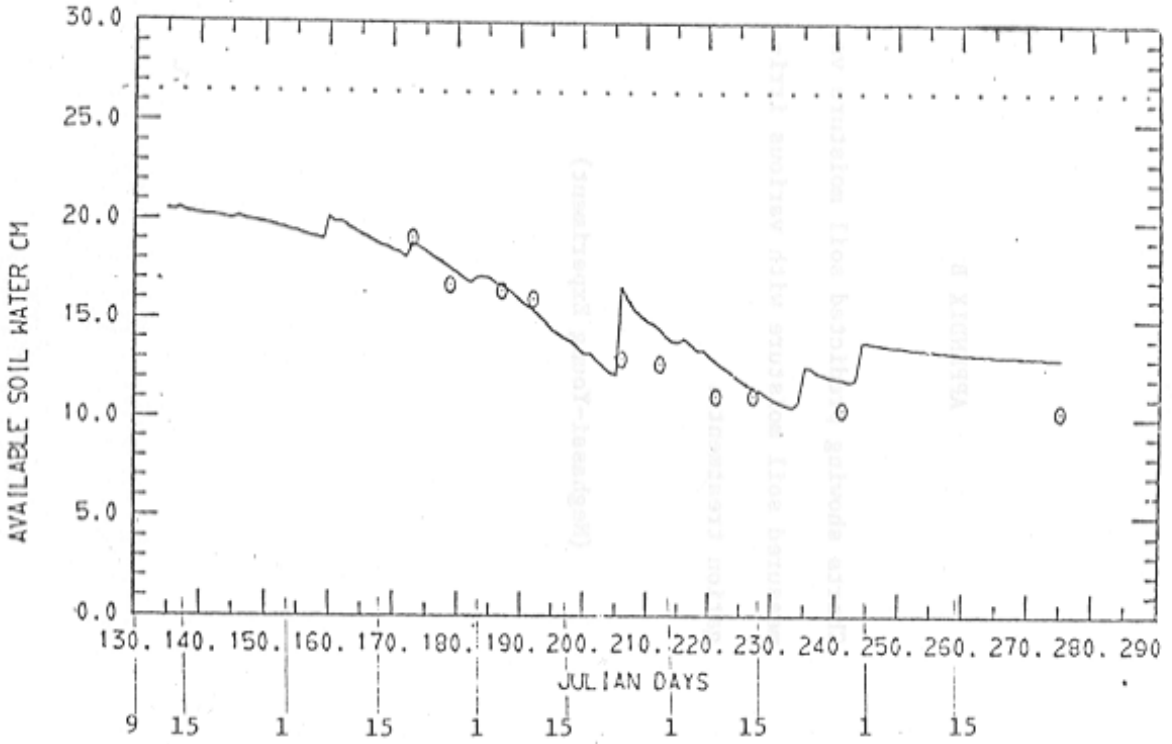


FIG. B1 - TREATMENT 1A-- ONE 5 CM IRRIGATION

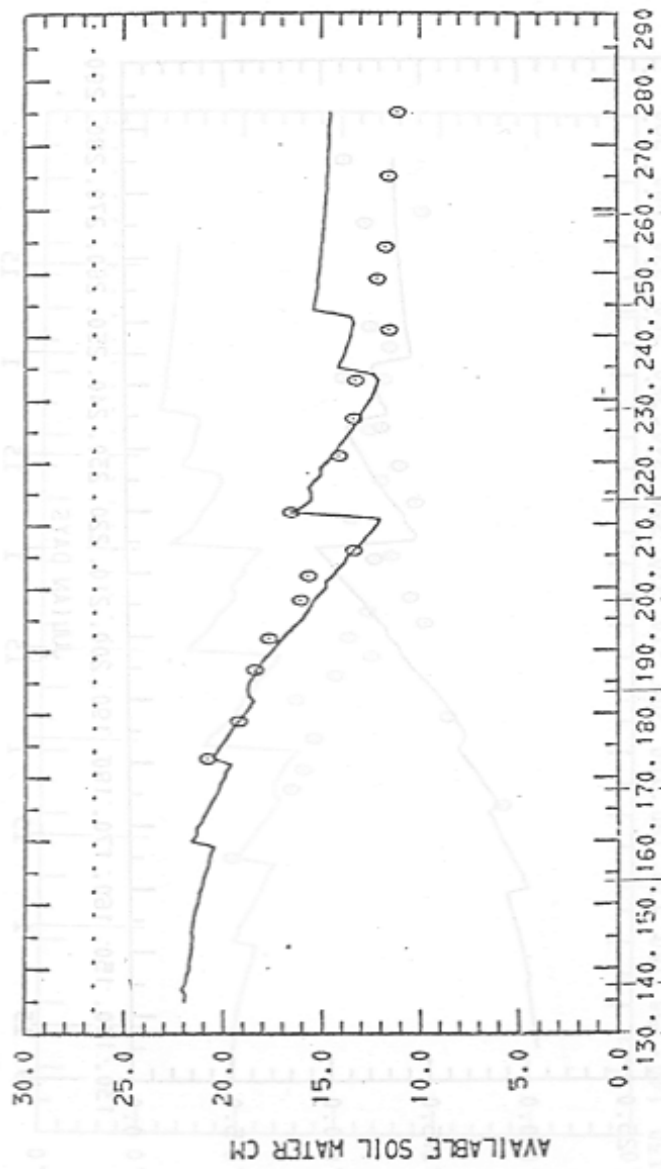


FIG. B2-TREATMENT 1B-- ONE 5 CM IRRIGATION

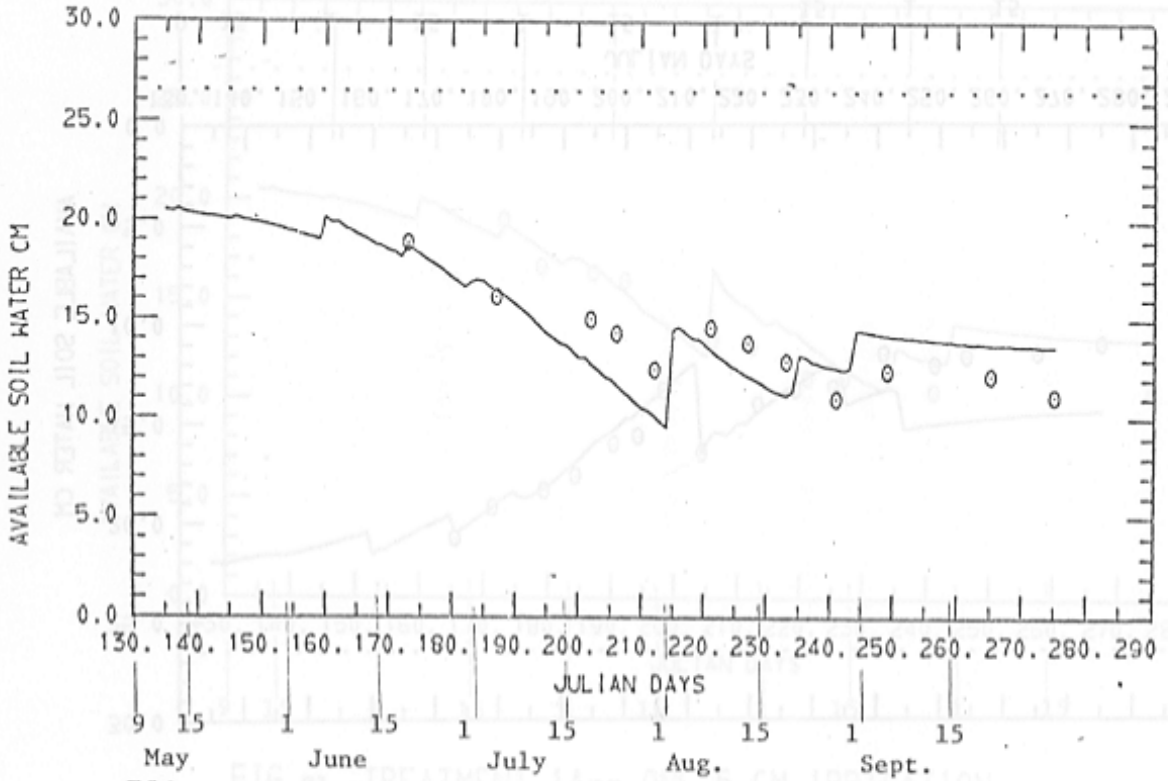


FIG. B3- TREATMENT 1C-- ONE 5 CM IRRIGATION

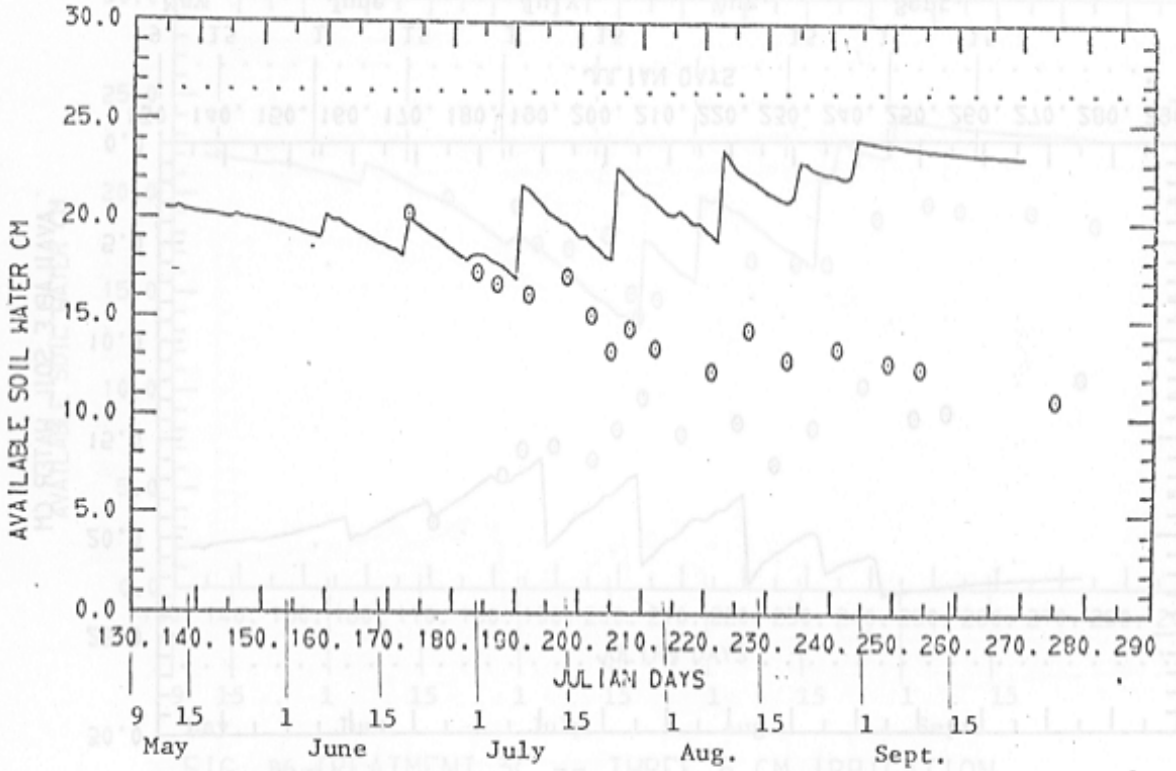


FIG. B4TREATMENT 3A -- THREE 5 CM IRRIGATION

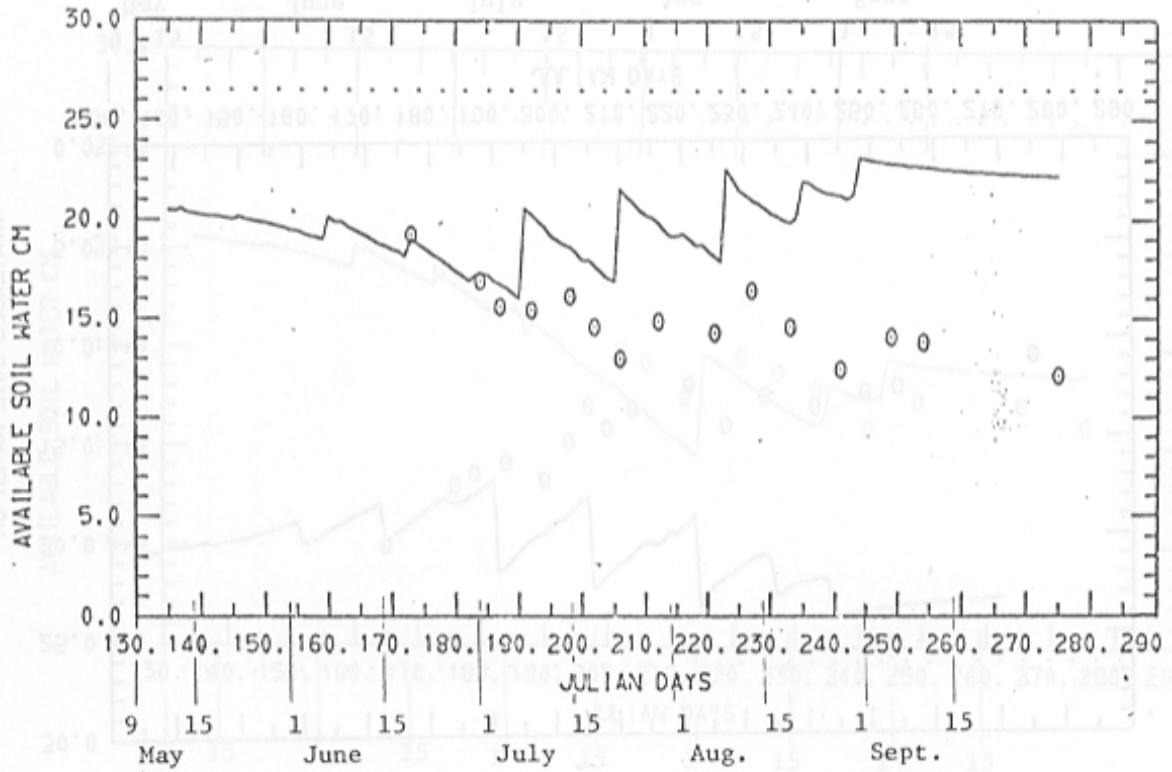


FIG. B5-TREATMENT 3B -- THREE 5 CM IRRIGATION

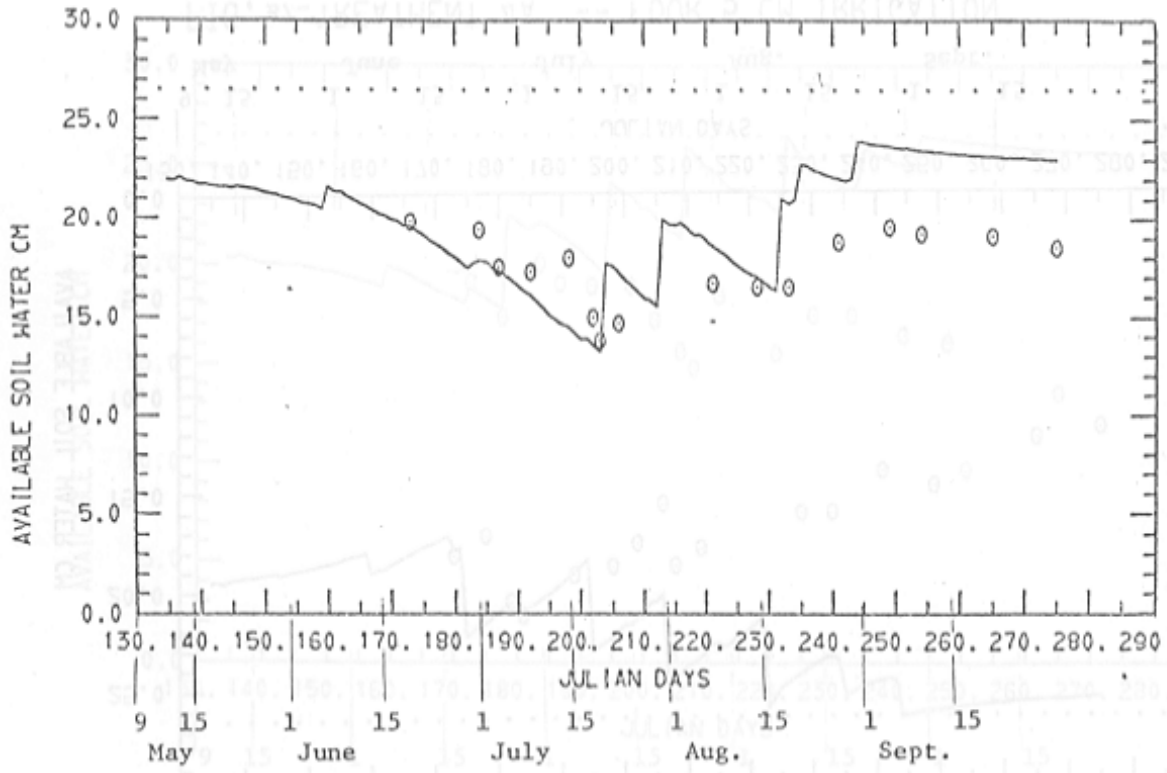


FIG. B6-TREATMENT 3C -- THREE 5 CM IRRIGATION

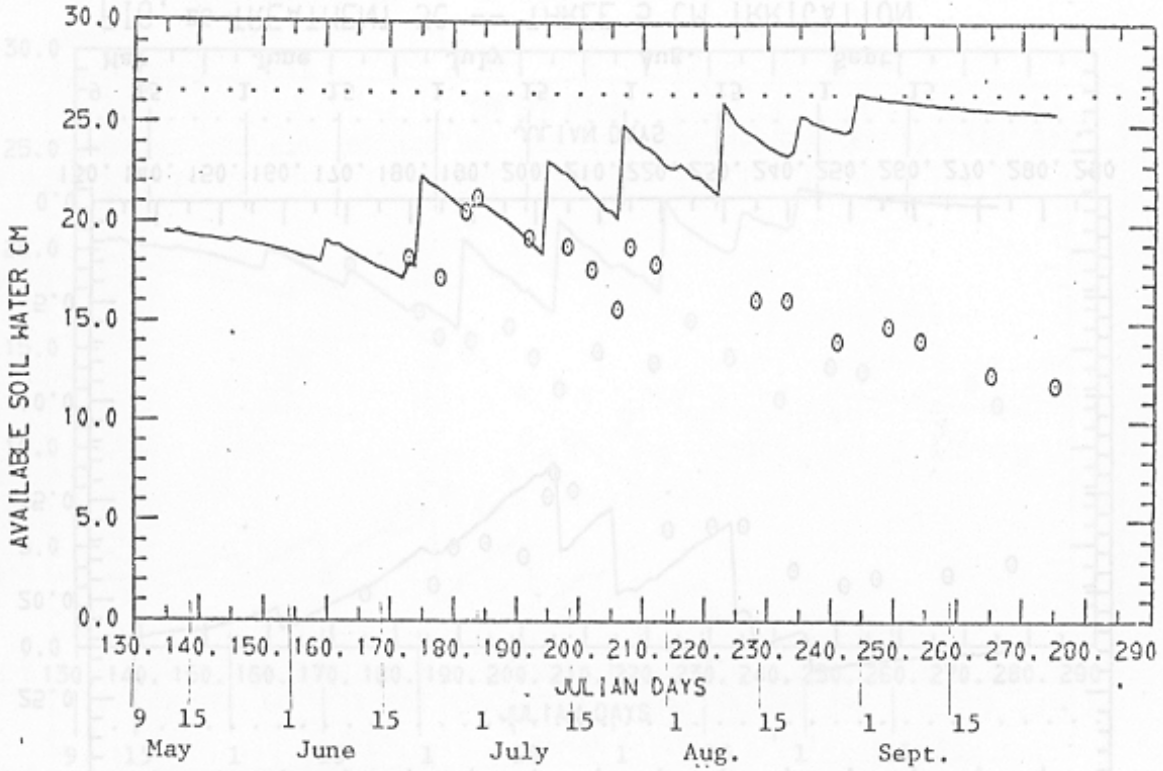


FIG. B7-TREATMENT 4A -- FOUR 5 CM IRRIGATION

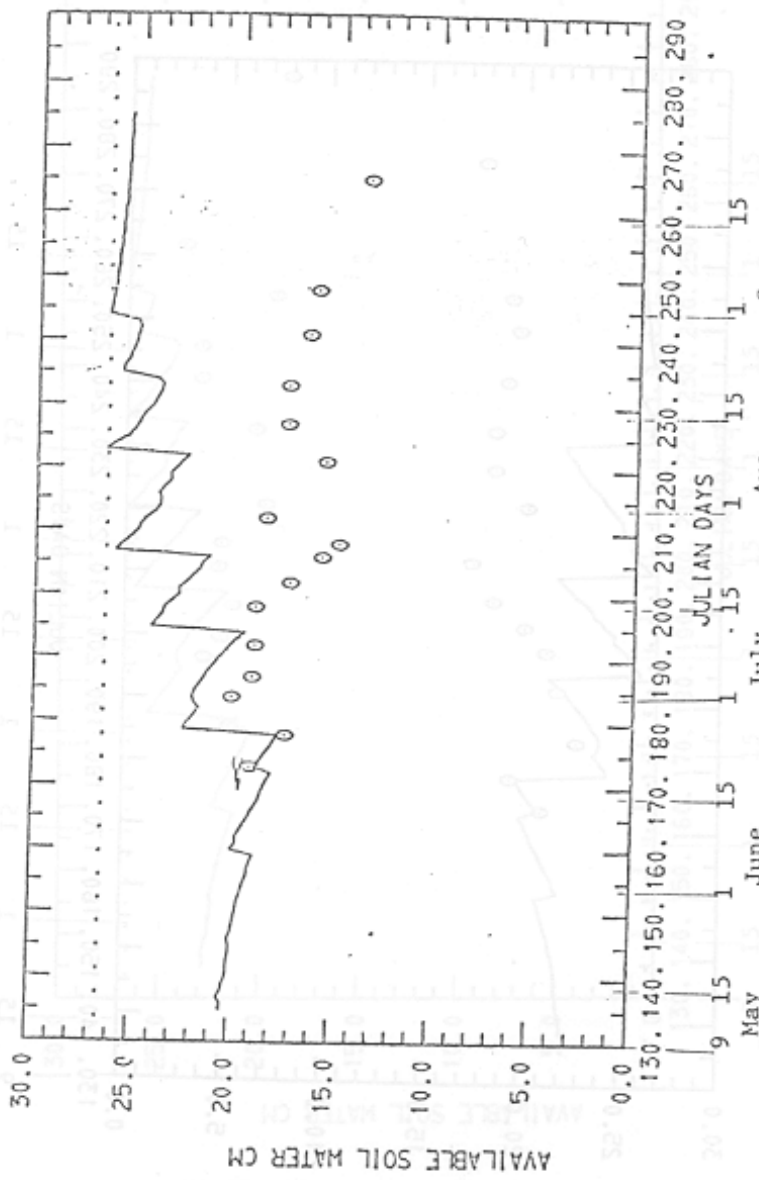


FIG. B8 -TREATMENT 4B -- FOUR 5 CM IRRIGATION

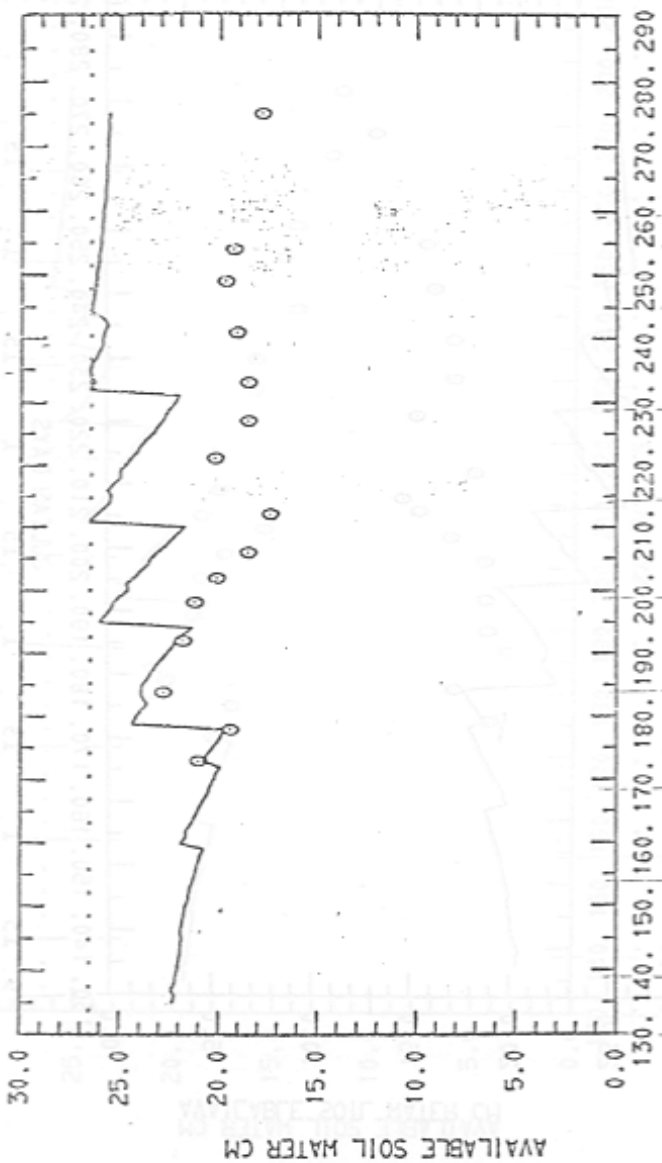


FIG. B9 -- TREATMENT 4C -- FOUR 5 CM IRRIGATION

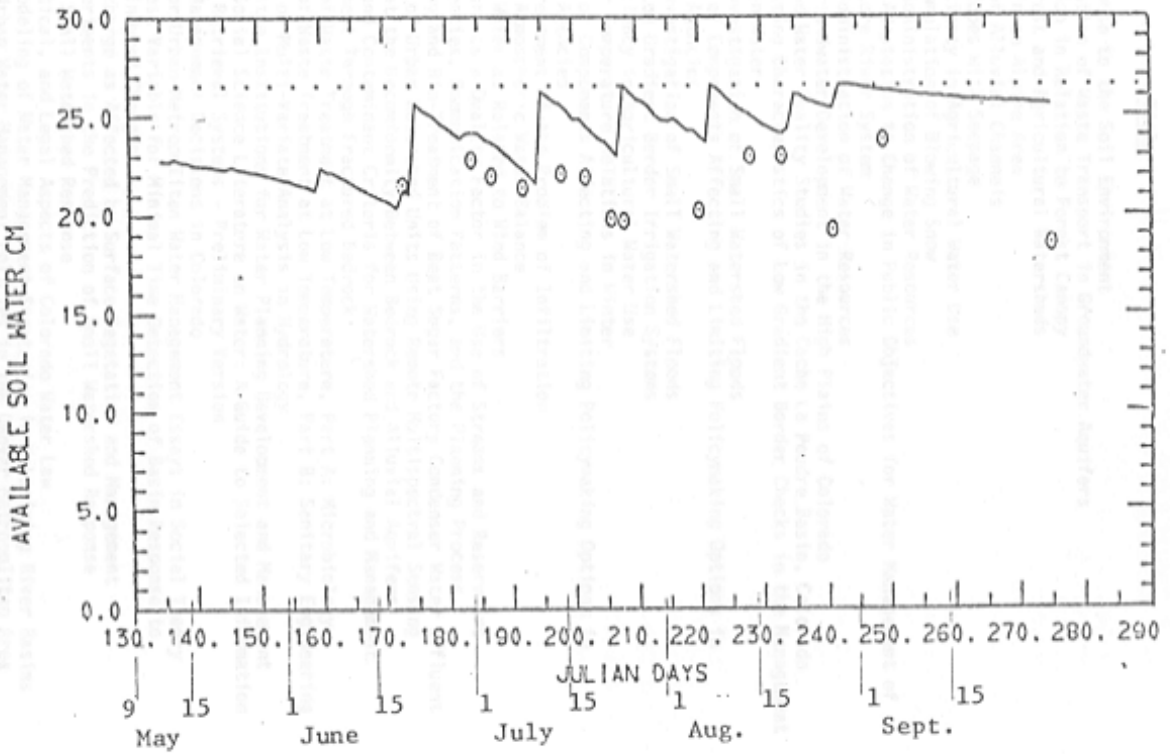


FIG. B10 TREATMENT 5 -- FIVE 5 CM IRRIGATION