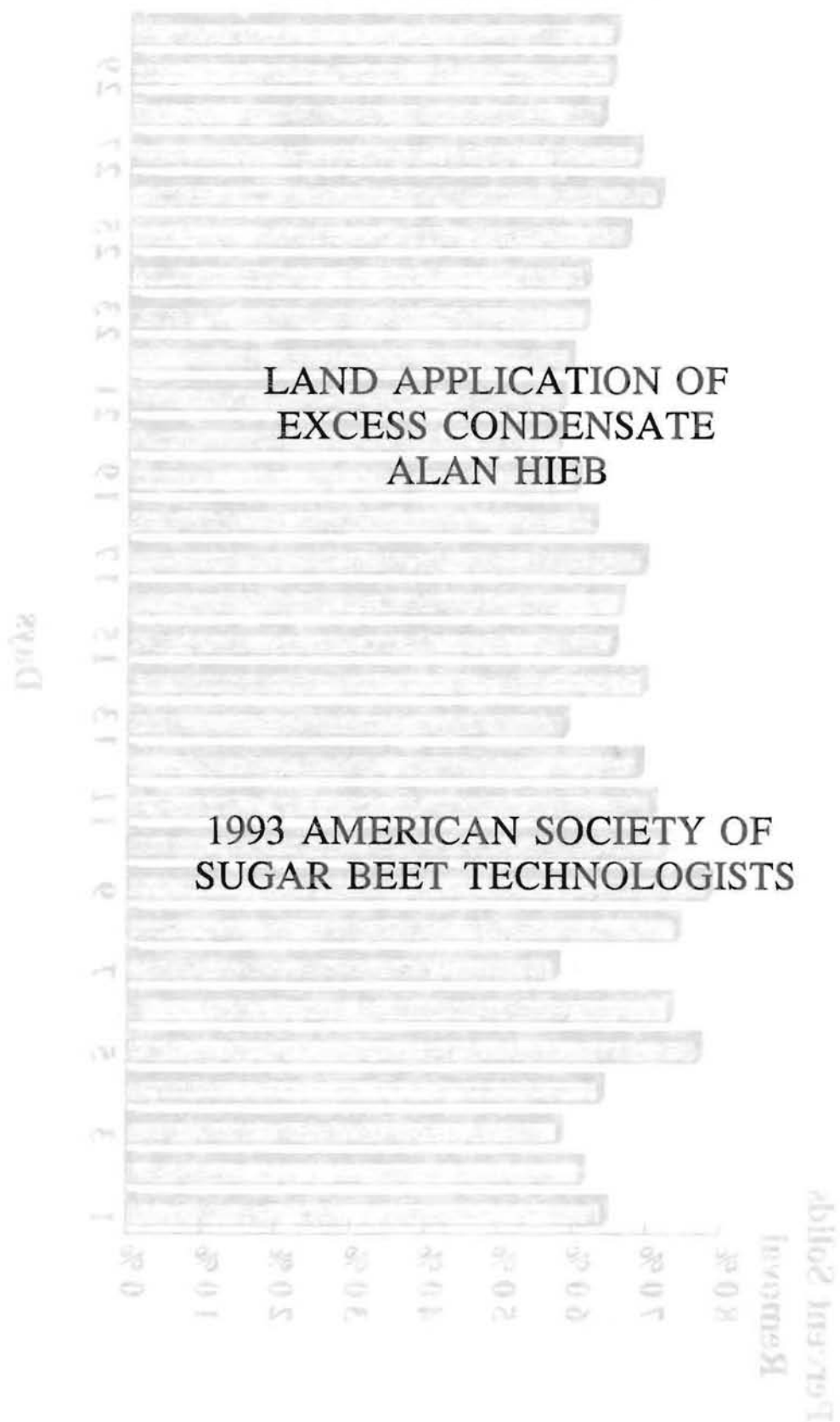


THE AMALGAMATED SUGAR CO.
MINI-CASSIA FACTORY

Figure 1. Percent Solids Through Clarifier

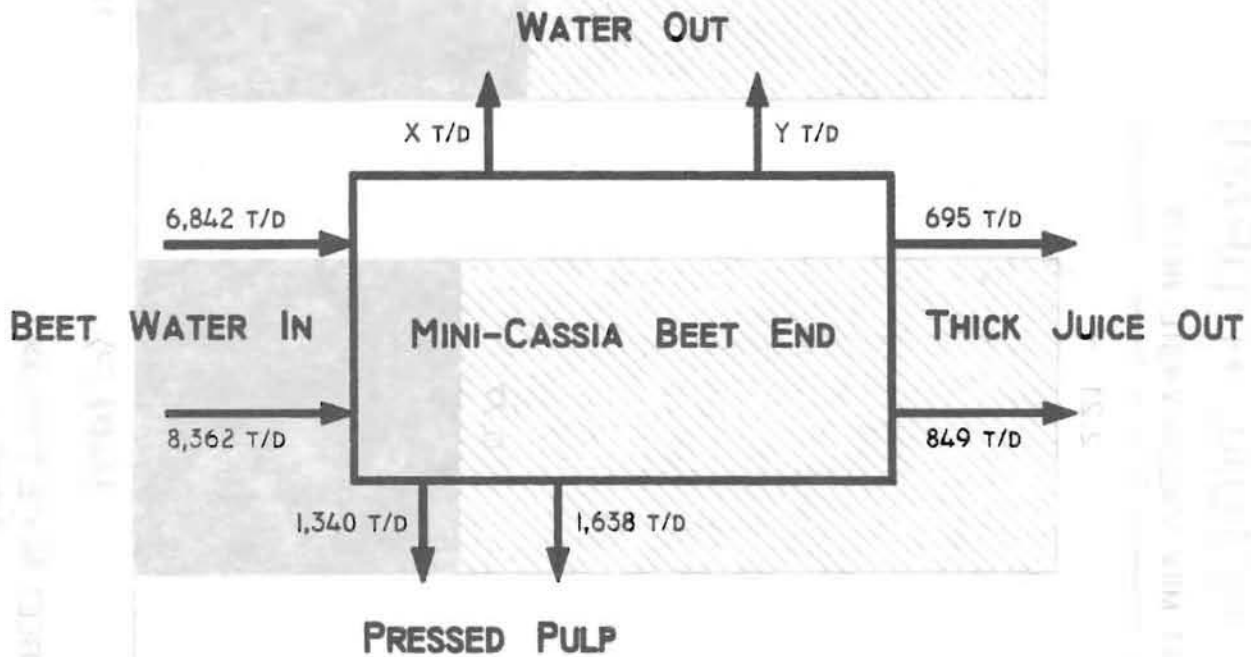


Percent Solids Through Clarifier
(Levovna) = % Removal

THE AMALGAMATED SUGAR COMPANY

MINI-CASSIA FACTORY WATER BALANCE

9,000 TONS/DAY SLICE VS. 11,000 TONS/DAY SLICE



ASSUMPTIONS:

EVAPORATOR CONDENSER WATER LOSS CONSTANT (LOWER DIFFUSER DRAFT)

ADDITIONAL THICK JUICE WILL GO TO STORAGE (CONSTANT SUGAR END CAPACITY)

MISCELLANEOUS VENT LOSSES CONSTANT

————— WATER OUT 9,000 T/D SLICE -X- = 6,842 - 1,340 - 695 = 4,807 T/D

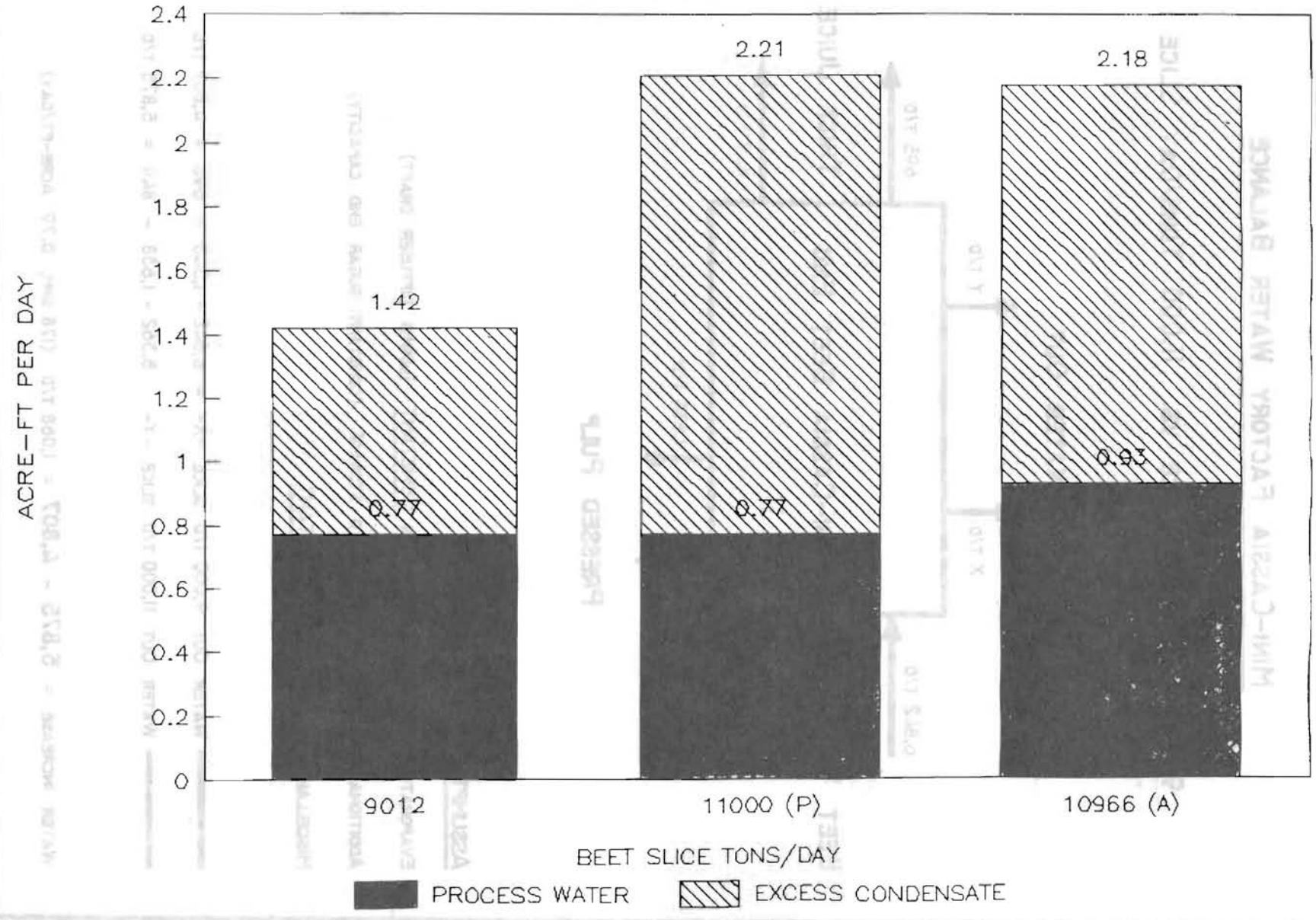
————— WATER OUT 11,000 T/D SLICE -Y- = 8,362 - 1,638 - 849 = 5,875 T/D

WATER INCREASE = 5,875 - 4,807 = 1,068 T/D (178 GPM, 0.79 ACRE-FT/DAY)

PREDICTED VS. ACTUAL HYDRAULIC FLOW

1992-93 MINI-CASSIA WASTE WATER

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THE AMYGDALAM SUGAR COMPANY

TESTED FOR: THE AMALGAMATED SUGAR CO.---P.O. BOX 700---PAUL, ID 83347

DATE SAMPLED: 10-12-92
DATE REPORTED: 10-19-92

FIELD DESCRIPTION	DEPTH	BULK DENSITY g/cc	FIELD CAPACITY %	WATER HOLDING CAP, In/Ft	Pw, %	% OF F.C.	IN. H2O PER FOOT	DEPLETION FROM F.C. In/Ft
NORTH FARM								
SW 87 WET AREA	0-12	1.25	20.3	3.04	18.1	89.1	2.71	0.33
	12-24	1.27	19.0	2.90	17.6	92.6	2.68	0.22
	24-36	1.27	18.2	2.77	20.8	114.2	3.17	(-0.40)
	TOTAL			8.71			8.56	0.15
SW 87 DRY AREA	0-12	1.38	16.0	2.65	4.4	27.5	0.73	1.92
	12-24	1.35	18.5	3.00	10.1	54.6	1.64	1.36
	24-36	1.29	18.8	2.91	14.4	76.6	2.29	0.62
	TOTAL			8.56			4.66	3.90
160 ALFALFA	0-12	1.30	17.0	2.65	7.1	41.8	1.11	1.54
	12-24	1.24	15.9	2.37	8.8	55.3	1.34	1.03
	24-36	1.20	21.6	3.11	10.5	48.6	1.51	1.60
	TOTAL			8.13			3.96	4.17
160 SW BEETS	0-12	1.13	26.5	3.59	18.6	70.2	2.52	1.07
	12-24	1.12	24.3	3.26	23.2	95.5	3.12	0.14
	24-36	1.06	25.5	3.24	26.4	103.5	3.36	(-0.12)
	TOTAL			10.09			9.00	1.09
160 NW GRAIN	0-12	1.19	24.7	3.53	11.5	48.7	1.64	1.89
	12-24	1.21	23.6	3.43	8.2	34.7	1.19	2.24
	24-36	1.17	24.4	3.43	12.9	52.9	1.81	1.62
	TOTAL			10.39			4.64	5.75
160 EAST GRAIN	0-12	1.36	19.6	3.20	12.2	62.2	1.99	1.21
	12-24	1.20	22.5	3.24	12.5	55.6	1.80	1.44
	24-36	1.10	26.4	3.48	19.3	73.1	2.55	0.93
	TOTAL			9.92			6.34	3.58

GORTLAND
(87 ACRES)
SW 87

WILKINS
(25 ACRES)
ALFALFA

WILKINS
BEETS
(55 ACRES)

WILKINS
GRAIN
(80 ACRES)

FISK
BLACKER
(80 ACRES)
GRAIN

1992 OFF-SITE WASTE WATER IRRIGATION

DATE	87L-6 MEETER	TOTAL 24 HR.	COO	NUMBER OF	SPRINKLER	RISER	LINE	LINE	LINE	LINE	PRECIPITATION	FIELD	ESTIMATED	FIELD	IRRIGATION
DAY ENDING	READING	FLOW	mg/l	SPRINKLERS	SPACING	SPACING	NUMBER	NUMBER	NUMBER	NUMBER	DAY ENDING	AWC GROSS	ET	NET AWC	HOURS PER
DAY ENDING	ACRE-FT	FEET		FEET	FEET						INCHES	INCHES	INCHES/DAY	INCHES	24 HR. DAY
11/01/92	770730	0.36	199	33	40	50	1188				0.03	3.55	0.02	3.54	24
11/02/92	771919	0.37	214	33	40	50	117A				0.12	3.55	0.02	3.44	16
11/03/92	773124	0.60	190	66	40	50	117B	116A			0	3.55	0.02	3.46	24
11/04/92	775083	0.65	190	66	40	50	116B	115A			0	2.03	0.02	1.96	24
11/05/92	777216	0.77	167	66	40	50	115B	114A			0.04	2.03	0.02	1.94	24
11/06/92	779720	0.49	119	66	40	50	114B	113A			0	2.03	0.02	1.96	16
11/07/92	831308	0.69	176	99	40	50	113B	108B	107A		0	2.03	0.02	1.98	24
11/08/92	833567	0.73	176	99	40	50	112B	108A	107B		0	2.03	0.02	2	10
11/09/92	835955	0.76	143	99	40	50	111B	109A	106B		0.05	2.03	0.02	1.97	24
11/10/92	838434	0.52	167	66	40	50	110A	105B			0	2.03	0.02	1.99	24
11/11/92	990142	0.73	167	99	40	50	111A	110B	104B		0	2.03	0.02	2.01	10
11/12/92	92519	0.71	24	99	40	50	112A	109B	103B		0.08	2.03	0.02	1.95	24
11/13/92	924827	0.46	333	40	40	50	105A	103			0	2.03	0.02	1.97	24
11/14/92	926336	0.41	167	45	40	50	104A	103			0	2.03	0.02	1.99	24
11/15/92	927679	0.32	167	32	40	50	103A	103B			0	2.03	0.02	2.01	24
11/16/92	928725	0.00	119								0	2.03	0.02	2.03	24
11/17/92	928725	0.73	143	66	40	50	146	133			0	3.09	0.02	3.11	24
11/18/92	1011105	0.80	167	66	40	50	145	134			0	3.09	0.02	3.13	24
11/19/92	1013696	0.75	143	66	40	50	144	135			0	3.09	0.02	3.15	24
11/20/92	1046156	0.64	143	66	40	50	143	136			0.12	3.09	0.02	3.05	24
11/21/92	1038249	0.83	143	66	40	50	142	137			0	3.09	0.02	3.07	24
11/22/92	1110952	0.87	143	66	40	50	141	138			0.12	3.09	0.02	2.97	24
11/23/92	1113777	0.71	171	33	40	50	140	139			0	3.09	0.02	2.99	24
11/24/92	1116087	0.18	171	33	40	50	140				0	3.09	0.02	3.01	24
11/25/92	1116670	0.00									0	3.09	0.02	3.03	
11/26/92	1116670	0.00									0	3.09	0.02	3.05	
11/27/92	1116670	0.00									0	3.09	0.02	3.07	
11/28/92	1116670	0.00									0.06	3.09	0.02	3.03	
11/29/92	1116670	0.00									0.02	3.09	0.02	3.03	
11/30/92	1116670	0.00									0	3.09	0.02	3.05	
12/01/92	1116670	0.00									0	3.09	0.02	3.07	
	1116670														
TOTALS		14.1									0.64		0.62		
AVERAGES			164.3								0.02	2.69	0.02	2.65	

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SW87
GRAIN

SW87
BEANS

NW160
ALFALFA

DATE DAY ENDING	CALCULATED TOTAL FLOW GPM PER SET	CALCULATED FLOW PER NOZZLE PER SET, GPM	ACTUAL FLOW GPM AVERAGE PER DAY	ACTUAL FLOW PER NOZZLE GPM AVERAGE PER DAY	HYDRAULIC LOADING INCHES	DEVIATION FROM AWC	ORGANIC LOADING # COD/DAY	TOTAL ACRES IRRIGATED	IRRIGATION REST DAYS	30 DAY REST	
										ORGANIC LOADING # COD/ACRE-DAY	ORGANIC LOADING # COD/ACRE-DAY
11/01/92	101	3.06	83	1.25	2.89	-0.65	197	1.5	30	4.3	SWBT GRAIN
11/02/92	147	4.46	84	1.27	2.93	-0.51	215	1.5	30	4.7	
11/03/92	197	2.99	136	2.06	2.38	-1.08	310	3.0 1.5 1.5	30	3.4	
11/04/92	112	1.69	148	2.24	2.59	0.63	338	3.0	30	3.7	
11/05/92	111	1.68	174	2.63	3.04	1.10	349	3.0	30	3.8	
11/06/92	168	2.54	110	1.67	1.93	-0.03	158	3.0	30	1.7	
11/07/92	169	1.71	157	2.38	1.83	-0.15	332	4.5	30	2.4	SWBT BEANS
11/08/92	411	4.15	166	2.51	1.93	-0.07	351	4.5	30	2.6	
11/09/92	169	1.70	172	2.61	2.01	0.04	296	4.5	30	2.2	
11/10/92	114	1.72	119	1.80	2.08	0.09	238	3.0	30	2.6	
11/11/92	413	4.17	165	2.50	1.93	-0.08	331	4.5	30	2.4	
11/12/92	167	1.69	160	2.43	1.87	-0.08	46	4.5	30	0.3	
11/13/92	68	1.70	105	1.59	3.03	1.06	419	1.8	30	7.6	
11/14/92	77	1.72	93	1.41	2.39	0.40	187	2.1	30	3.0	
11/15/92	56	1.74	73	1.10	2.62	0.61	146	1.5	30	3.3	
11/16/92	0	0.00	0	0.00	0.00	0.00	0	0.0	30	0.0	
11/17/92	177	2.69	165	2.50	2.89	-0.22	284	3.0	30	3.1	160 ALFALFA
11/18/92	179	2.71	180	2.73	3.15	0.02	361	3.0	30	4.0	
11/19/92	180	2.72	171	2.59	2.99	-0.16	293	3.0	30	3.2	
11/20/92	174	2.64	145	2.20	2.54	-0.51	250	3.0	30	2.7	
11/21/92	175	2.65	188	2.84	3.29	0.22	322	3.0	30	3.5	
11/22/92	170	2.57	196	2.97	3.43	0.46	337	3.0	30	3.7	
11/23/92	85	2.59	160	2.43	5.61	2.62	330	1.5	30	7.2	
11/24/92	86	2.60	40	0.61	1.42	-1.59	83	1.5	30	1.8	
11/25/92											
11/26/92											
11/27/92											
11/28/92											
11/29/92											
11/30/92											
12/01/92											
TOTALS						2.13	6172.9	67.5		3.0	
AVERAGES			132.9			0.09	257.2		30.0		

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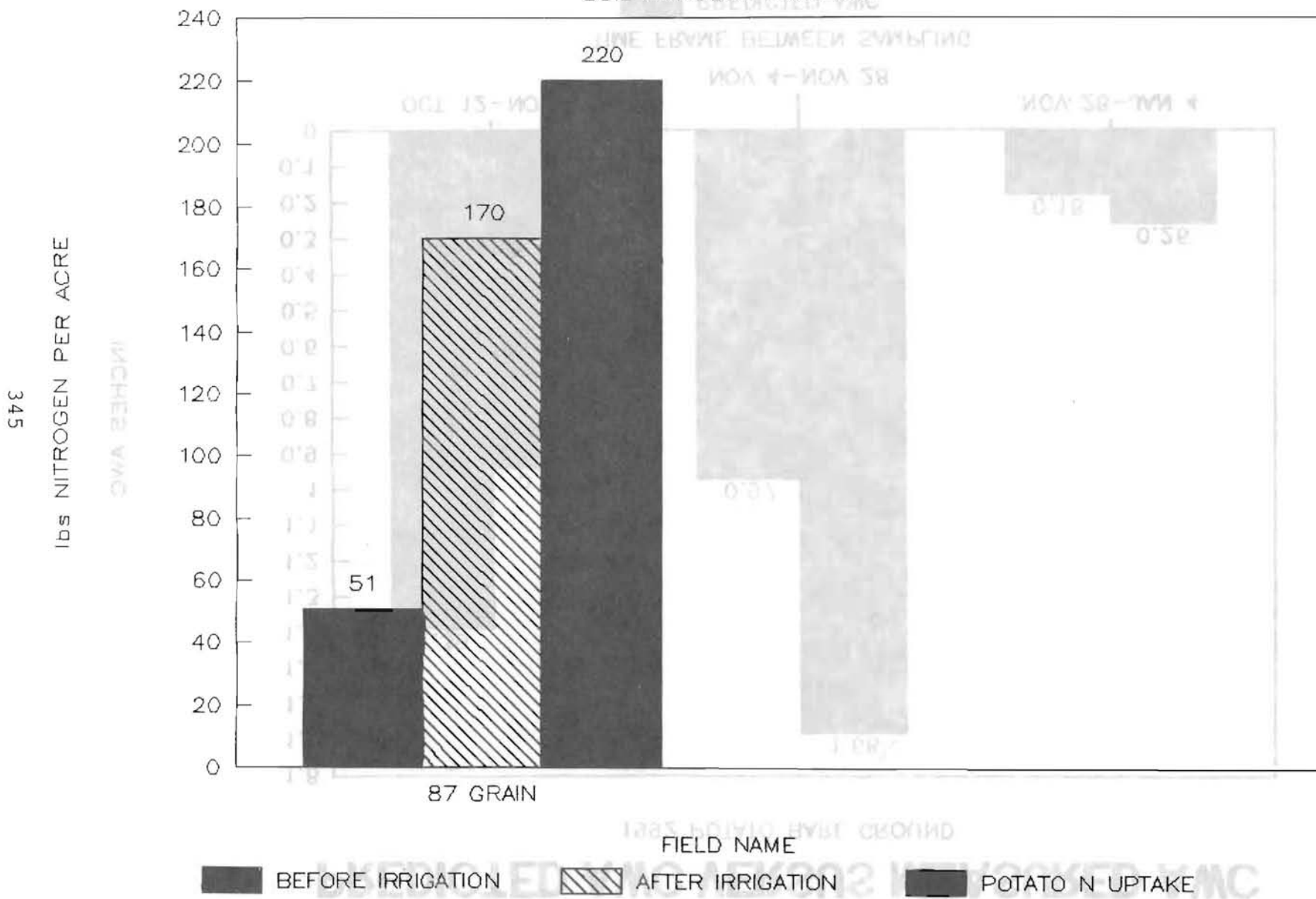
SWBT
GRAIN

SWBT
BEANS

160 ALFALFA

1992 OFF-SITE IRRIGATION

SOIL NITROGEN INCREASE



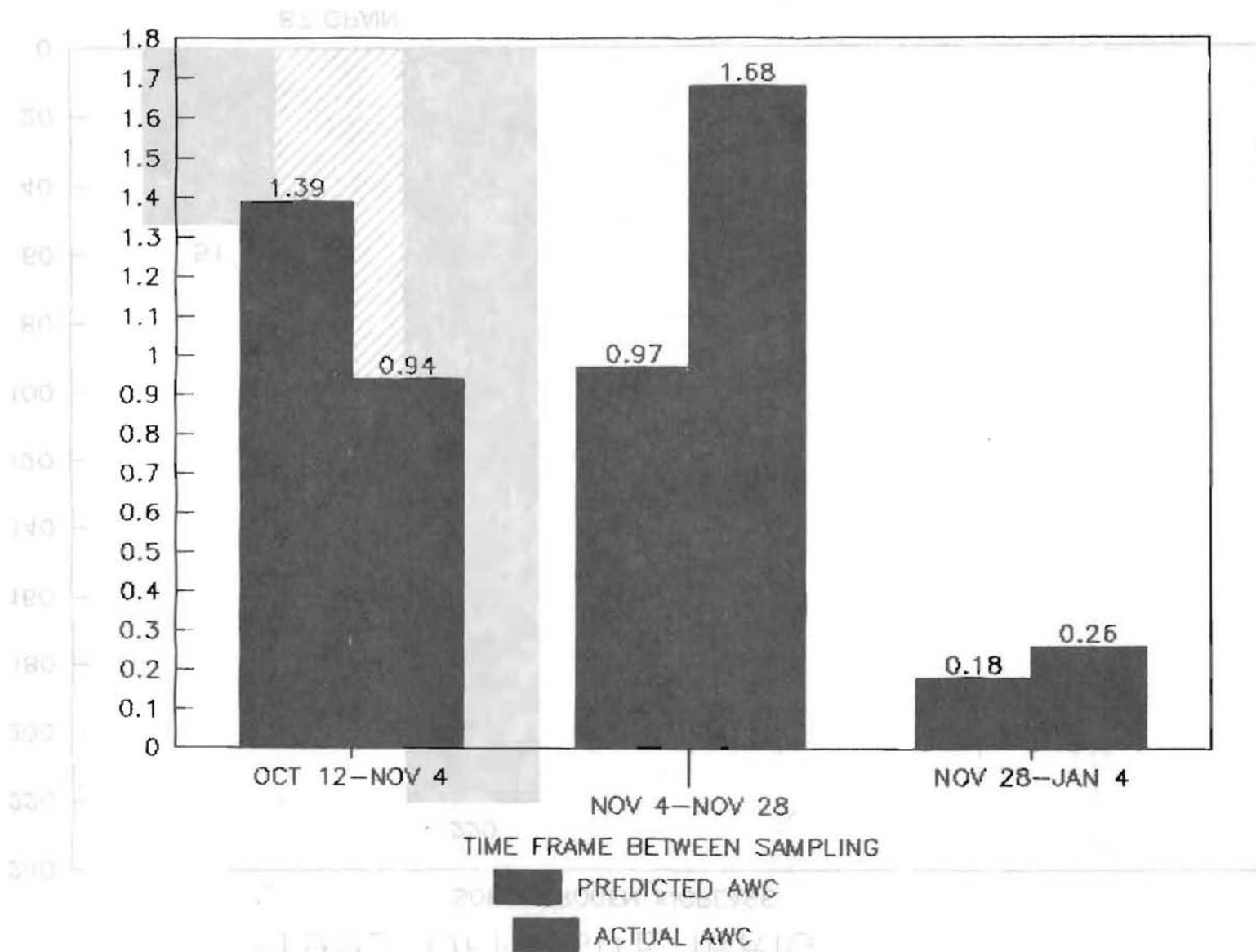
345

PREDICTED AWC VERSUS MEASURED AWC

1992 POTATO BARE GROUND

346

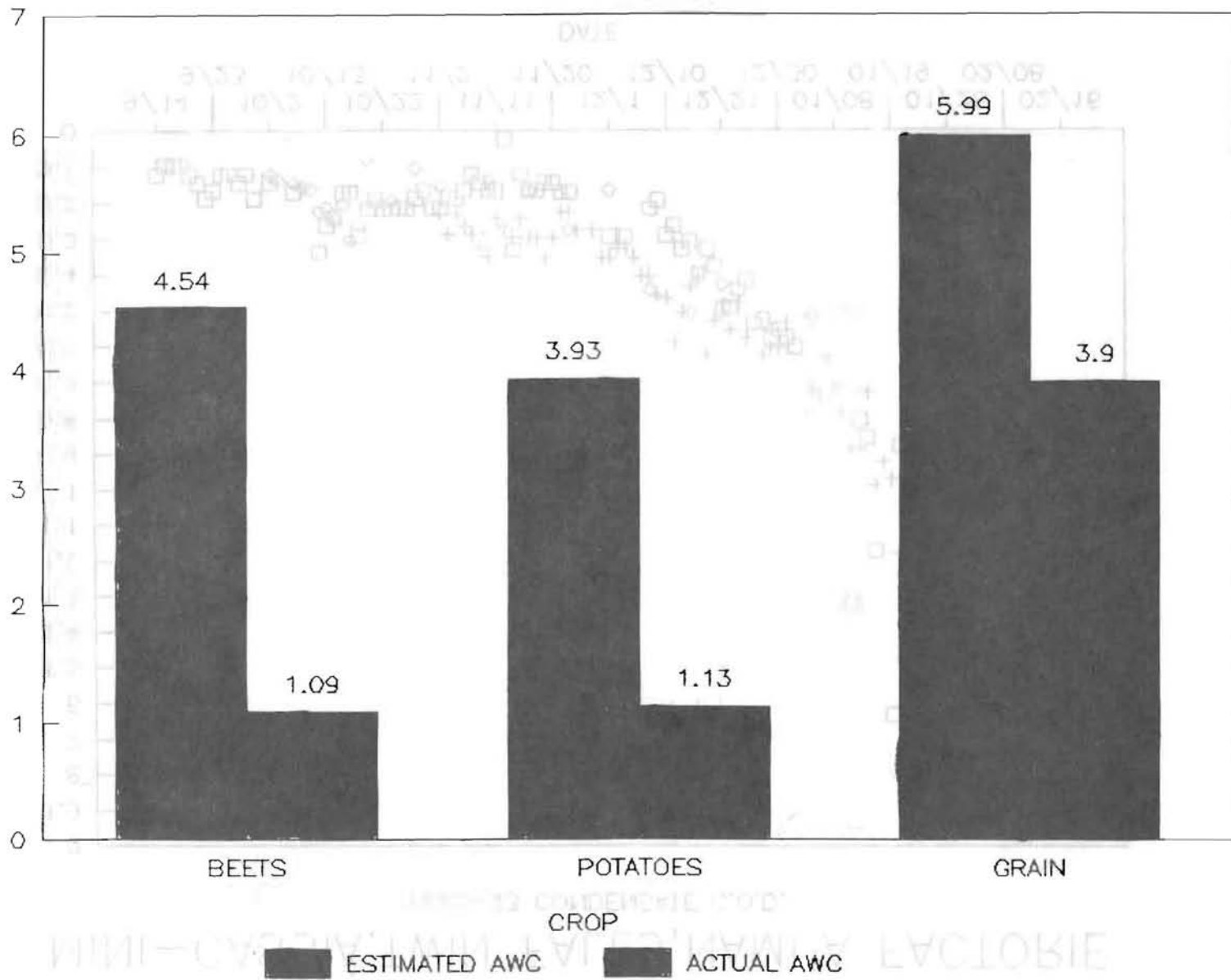
INCHES AWC



AFTER HARVEST SOIL AWC ESTIMATION

SOIL SAMPLES 10/12/92

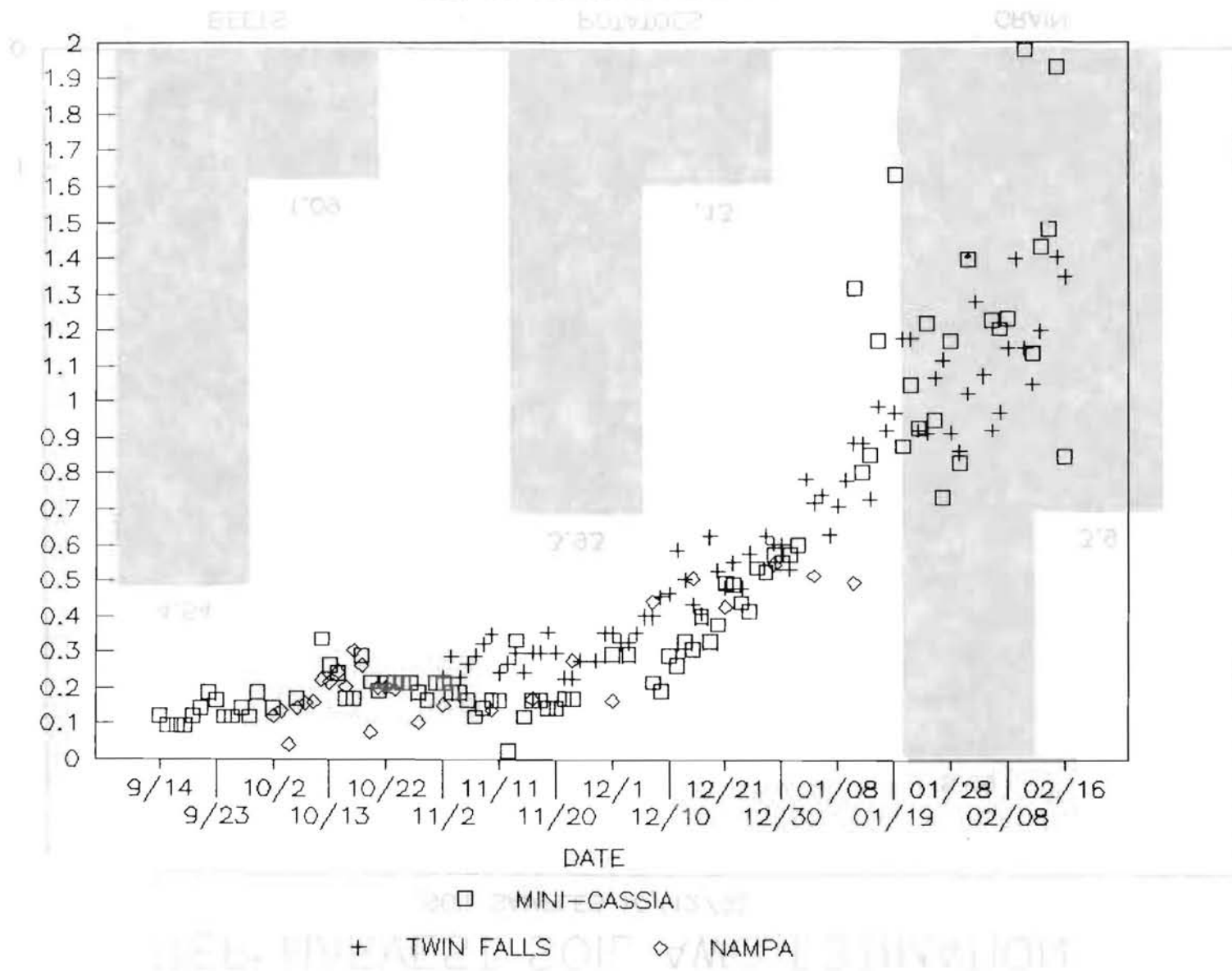
347
CWA SEHONI
DEWANI



MINI-CASSIA, TWIN FALLS, NAMPA FACTORIES

1992--93 CONDENSATE C.O.D.

348
mg/l CHEMICAL OXYGEN DEMAND
(Thousands)

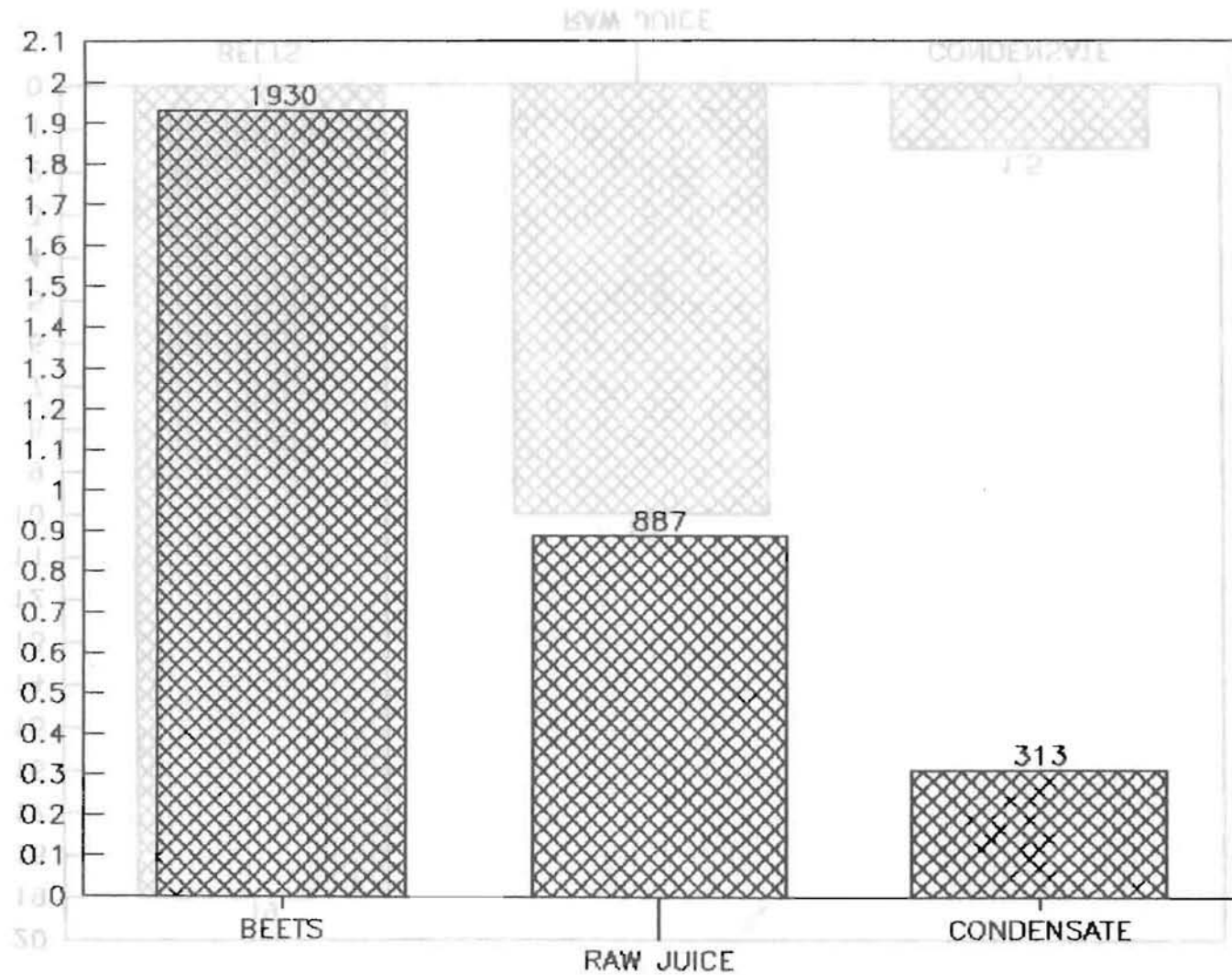


MINI-CASSIA ETHANOL CONCENTRATIONS

TASCO RESEARCH DEPARTMENT

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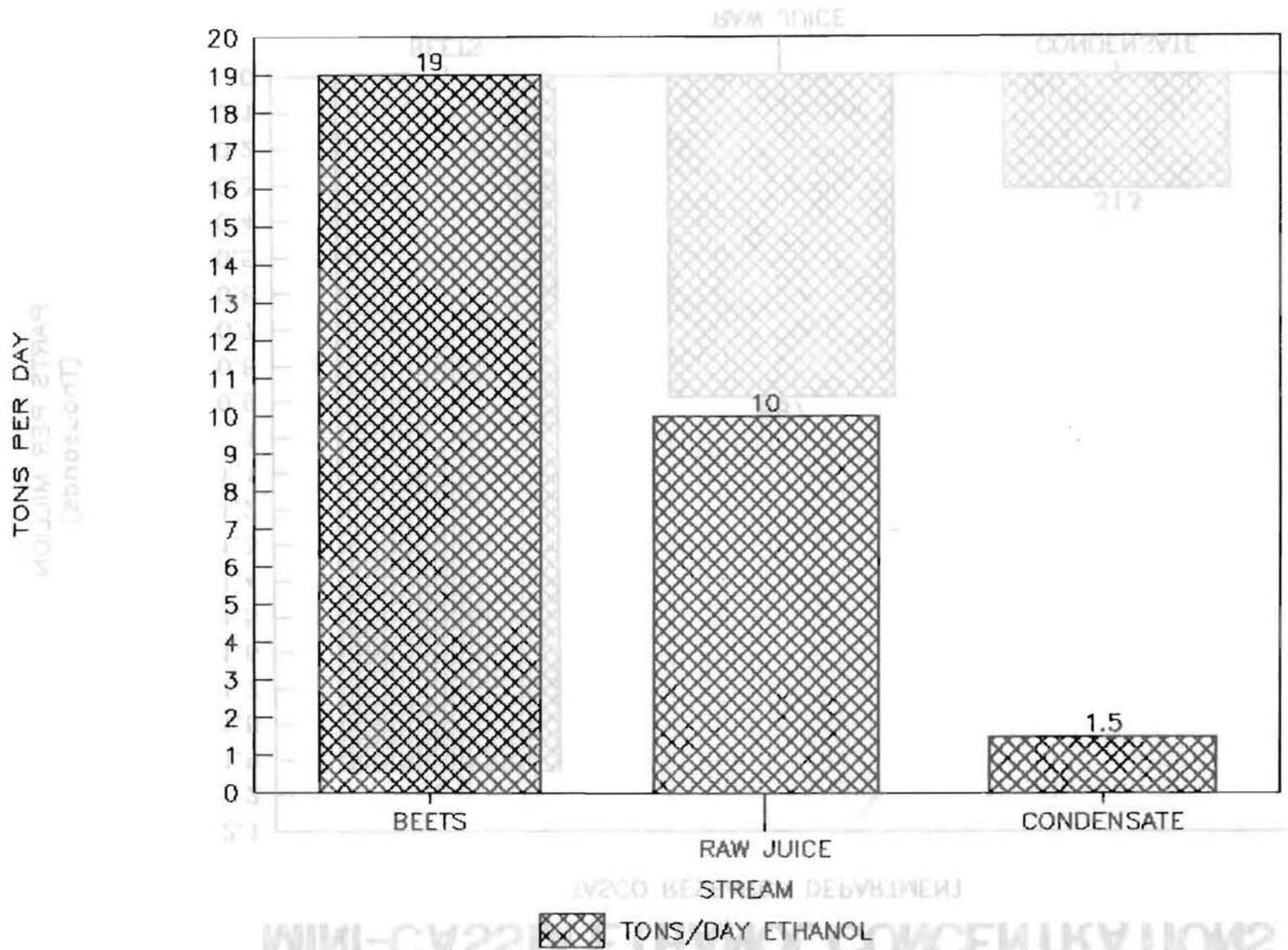
PARTS PER MILLION
(Thousands)



ppm ETHANOL

MINI-CASSIA ETHANOL ESTIMATED FLOWRATES

TASCO RESEARCH DEPARTMENT



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