

App²: Center Pivot Sprinkler Irrigation Evaluation container catch data (ml)

First container at 1.5 m for pivot container spacing at 5 m

Container				Container			
Span no	Position Number	x Catch = weighted catch		Span no	Position Number	x Catch = weighted catch	
1	1	Start numbering at pivot end of inner span. Do not wait for completion of irrigation at first few containers.		6	51	111	5661
	10				52	105	5460
2	11				53	122	6466
	20				54	122	7588
3	21	82	1722		55	107	5885
	22	67	1474		56	89	4984
	23	126	2898		57	87	4959
	24	51	1224		58	45	2610
	25	56	1400		59	66	3894
	26	49	1274		60	63	3780
	27	40	1080	7	61	94	5734
	28	46	1288		62	91	5642
	29	65	1885		63	71	4473
	30	82	2460		64	89	5696
4	31	51	1581		65	66	4290
	32	82	2624		66	83	5478
	33	45	1485		67	92	6164
	34	42	1428		68	92	6256
	35	83	2905		69	109	7521
	36	122	4392		70	81	5670
	37	122	4514	8	71	96	7047
	38	89	3382		72	86	5084
	39	61	2379		73	100	7719
	40	94	3870		74	30	6804
5	41	78	3198		75	34	9520
	42	101	4242		76	75	9632
	43	123	5289		77	72	9135
	44	70	3080		78	70	1848
	45	97	4365		79	88	6952
	46	103	4738	9	80	93	7440
	47	88	4136		81	87	7047
	48	82	3936		82	62	5084
	49	110	5390		83	93	7719
	50	134	6700		84	81	6804
					85	112	9520
					86	112	9632
					87	105	9135
					88	21	1848

* High pressure system.

App.3: Center Pivot Sprinkler Irrigation Evaluation container catch data (ml)

First container at 1.5 m for pivot container spacing at 5 m

Container				Container			
Span no	Position Number	x Catch = weighted catch		Span no	Position Number	x Catch = weighted catch	
1	1	Start numbering at pivot end of inner span. Do not wait for completion of irrigation at first few containers.		5	55	139	7645
	12				56	145	8120
2	13				57	141	8037
	24				58	114	6612
					59	107	6313
3	25	87	2175	6	60	118	7080
	26	115	2990		61	129	7869
	27	148	3996		62	143	8866
	28	104	2912		63	123	7749
	29	120	3480		64	103	6592
	30	119	3570		65	131	8515
	31	138	4278		66	113	7458
	32	126	4032		67	115	7705
	33	89	2937		68	115	7820
	34	152	5168		69	79	5451
4	35	117	4098		70	109	7560
	36	91	3276	7	71	128	9088
	37	143	5291		72	126	9072
	38	129	4902		73	115	8395
	39	158	6162		74	105	7770
	40	118	4720		75	105	7875
	41	91	3731		76	101	7676
	42	161	6762		77	114	8778
	43	140	6020		78	87	6786
	44	112	4928		79	121	9559
	45	117	5265		80	93	7440
5	46	136	6256		81	117	9477
	47	109	5123	8	82	67	5494
	48	102	4896		83	51	4233
	49	135	6615		84	100	8400
	50	133	6650		85	126	10710
	51	112	5712		86	115	9890
	52	137	7124		87	127	11049
	53	128	6784		88	138	12144
	54	141	7614		89	122	10858
					90	129	11610
					91	125	11375
					92	48	4416

* low pressure system.

Type of sprinkler system : Hand-move system

Type of sprinkler head : Rolland

No of sprinkler : 20

Spacing ($s_l \times s_m$) : 12 X 12 m

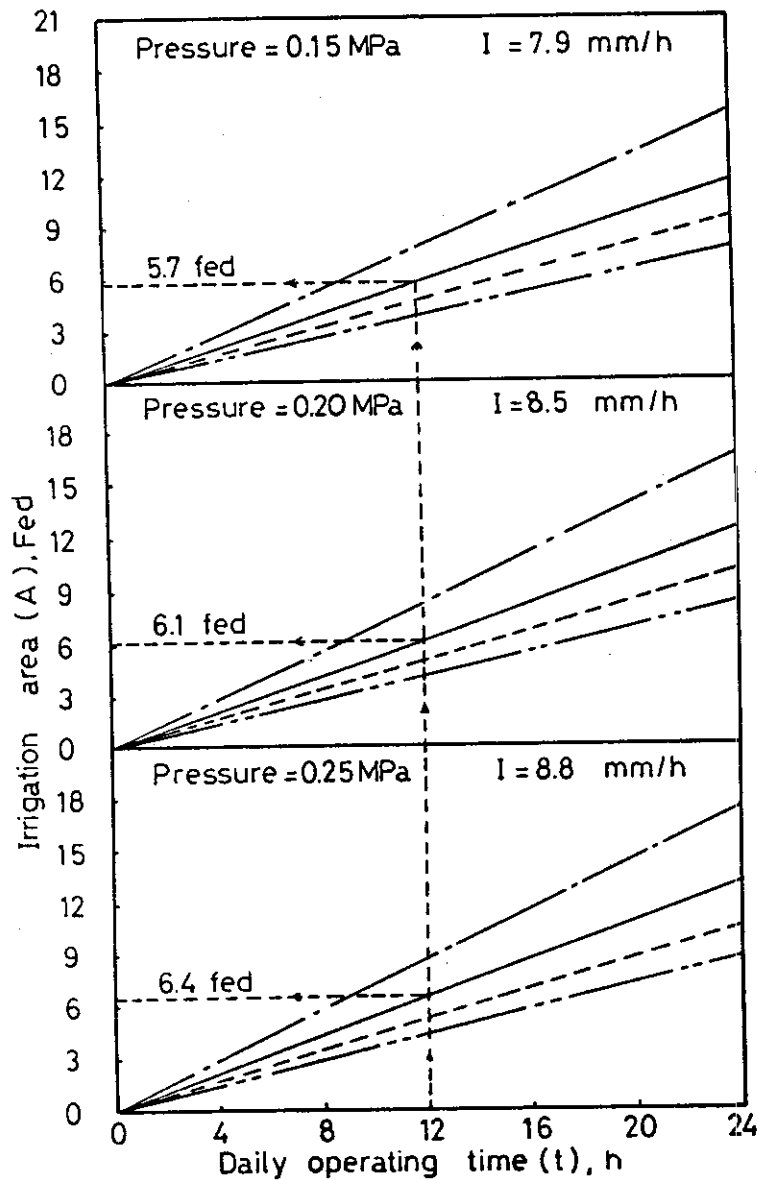
Field efficiency (η_f) : 90%

----- d = 30mm

———— d = 40mm

----- d = 50mm

----- d = 60mm



App.4 : The performance curves of the "Hand-move" sprinkler system (Irrigation cycle 4 days)

$$A = 2.46 (t \cdot I / d)$$

Type of sprinkler system : Hand-move system

Type of sprinkler head : Rain Bird 30

No of sprinkler : 20

Spacing ($s_l \times s_m$) : 12 X 18 m

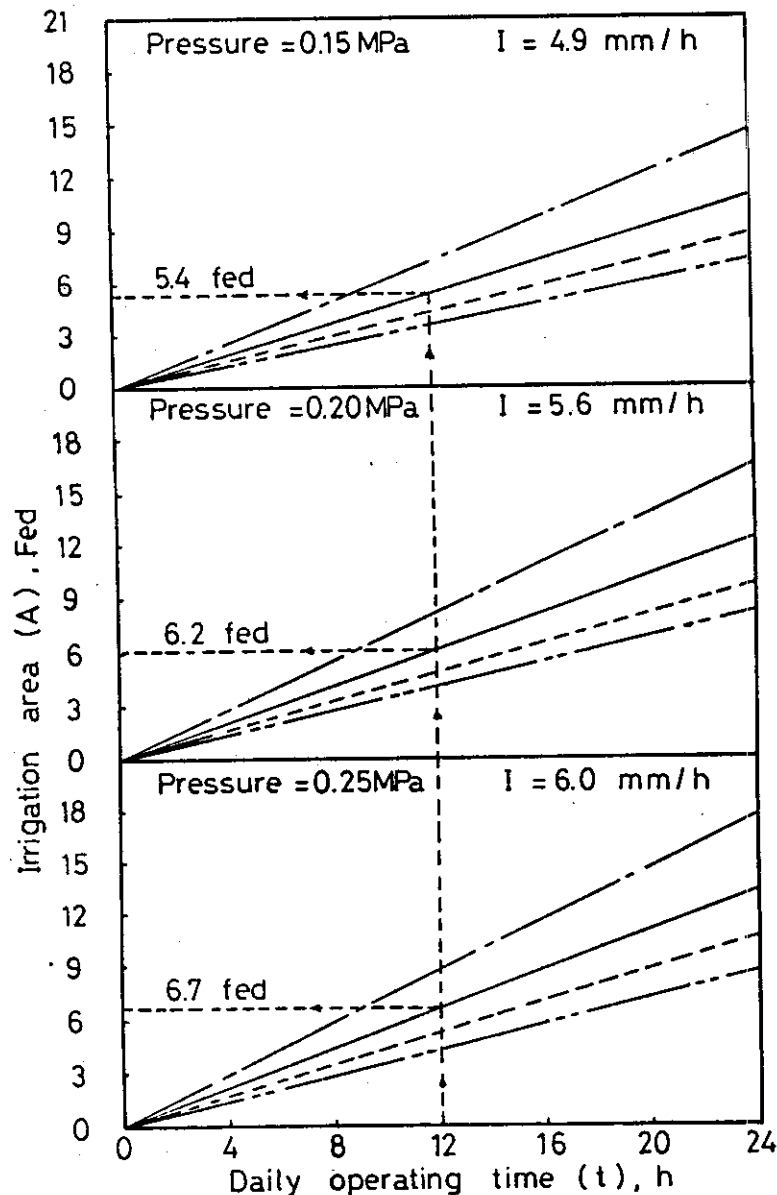
Field efficiency (η_f) : 90 %

----- d = 30mm

----- d = 40mm

----- d = 50 mm

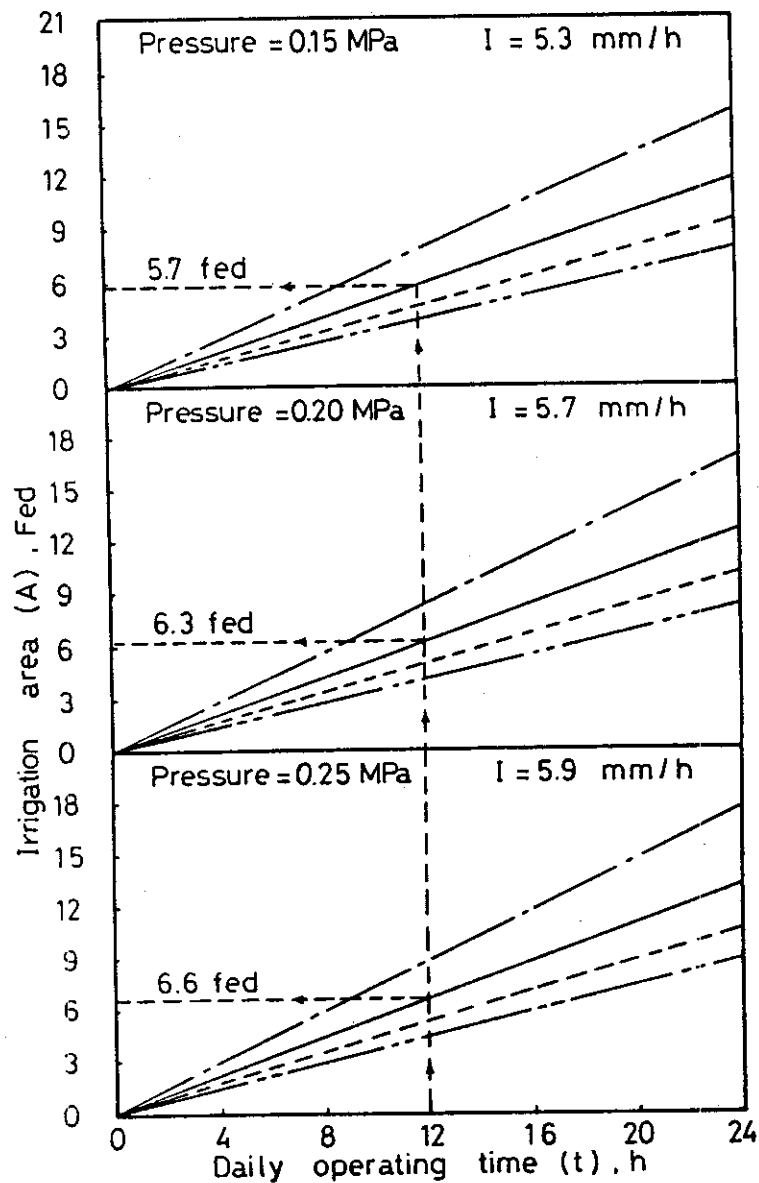
----- d = 60mm



App.5 : The performance curves of the "Hand-move" sprinkler system (Irrigation cycle 4 days)

$$A = 3.70 (t \cdot I / d)$$

Type of sprinkler system : Hand-move system
 Type of sprinkler head : Rolland
 No. of sprinkler : 20
 Spacing ($s_l \times s_m$) : 12 X 18 m
 Field efficiency (η_f) : 90 %



App.6 : The performance curves of the "Hand-move" sprinkler system (Irrigation cycle 4 days)

$$A = 3.70 (t \cdot I / d)$$

Type of sprinkler system : Side-roll system

Type of sprinkler head : Rain Bird 30

No of sprinkler : 20

Spacing ($s_l \times s_m$) : 12 X 18 m

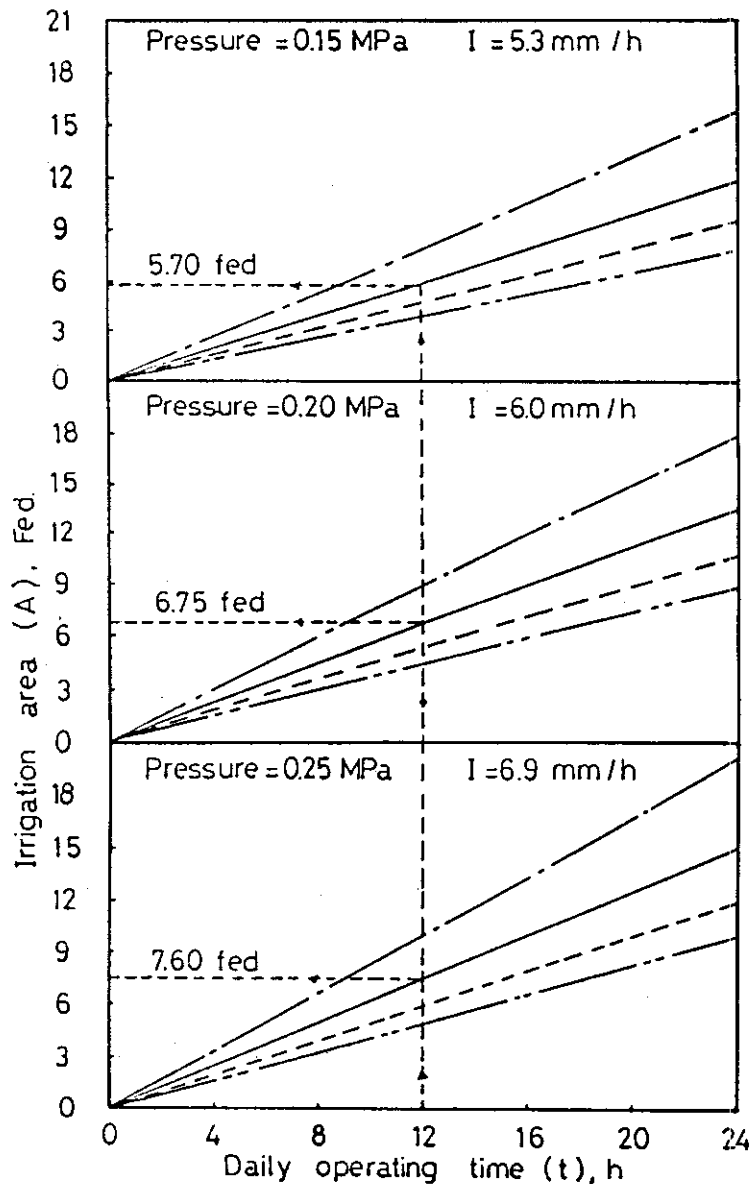
Field efficiency (η_f) : 90 %

----- d=30mm

———— d=40mm

----- d=50mm

— · — · — d=60mm



App.7 : The performance curves of the "Side-roll" sprinkler system (Irrigation cycle 4 days)

$$A = 3.70 (t \cdot I / d)$$

Type of sprinkler system : Solid set system

Type of sprinkler head : Rain Bird 14VH

No of sprinkler : 24

Spacing ($S_L \times S_m$) : 10 X 10 m

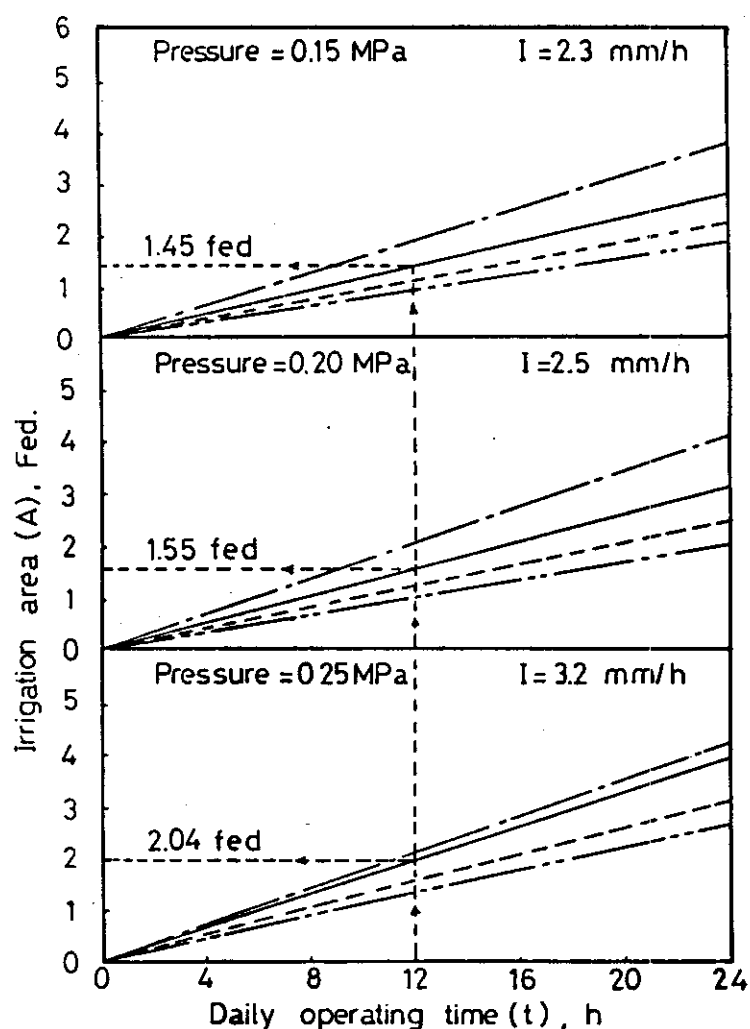
Field efficiency (η_f) : 90 %

----- d = 30 mm

———— d = 40 mm

----- d = 50 mm

----- d = 60 mm

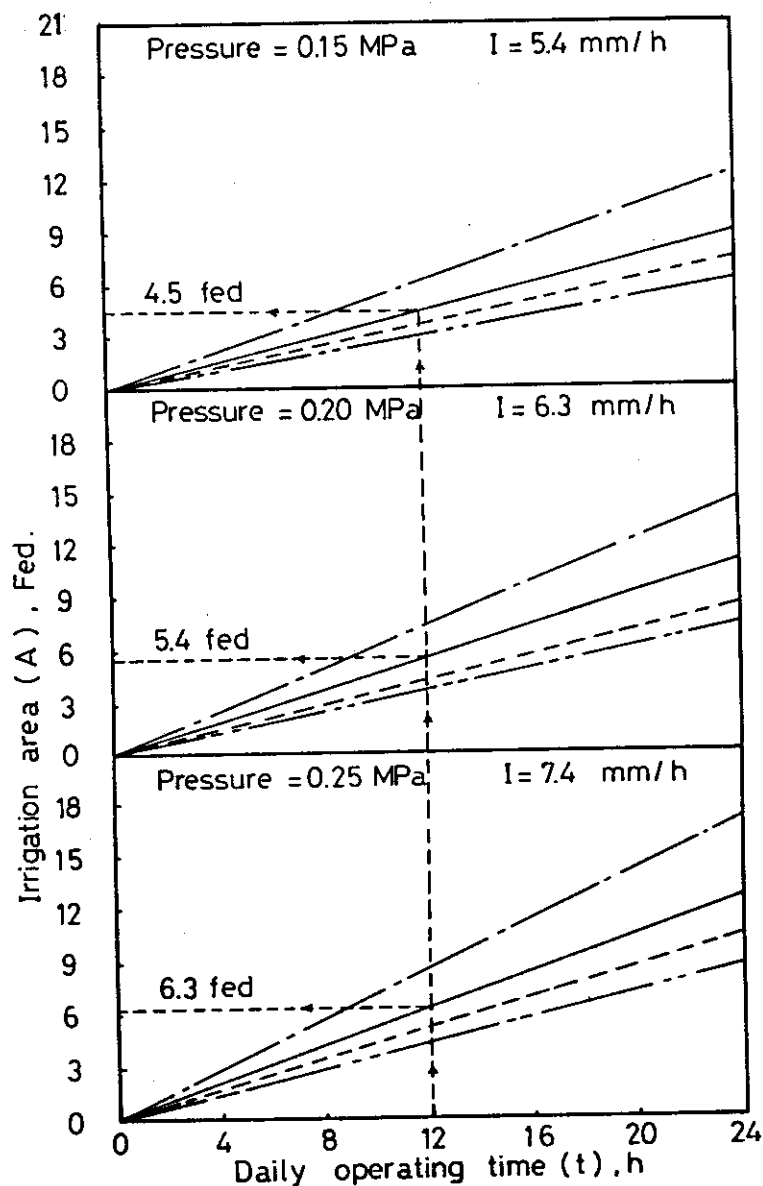


App.8 : The performace curves of the "solid-set" sprinkler system (Irrigation cycle 4 days)

$$A = 2.05 (t \cdot I / d)$$

Type of sprinkler system : Solid set system
 Type of sprinkler head : Rolland
 No of sprinkler : 15
 Spacing ($s_r \times s_m$) : 15 X 15 m
 Field efficiency (η_f) : 90 %

----- d = 30 mm
 ————— d = 40 mm
 - - - - - d = 50 mm
 — · — · — d = 60 mm



App.9 : The performance curves of the "Solid-set" sprinkler system (Irrigation cycle 4 days)

$$A = 2.89 (t \cdot I / d)$$