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Lake Alfred AREC Research Report CS75-8
8/1/75 - GEC - 50

CHARACTERISTICS OF FLORIDA CITRUS PLANTINGS RELATED TO MECHANICAL HARVESTING

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CHARACTERISTICS OF FLORIDA CITRUS PLANTINGS RELATED TO MECHANICAL HARVESTING

FLORIDA DEPARTMENT OF CITRUS
AGRICULTURAL RESEARCH AND EDUCATION CENTER
UNIVERSITY OF FLORIDA
LAKE ALFRED, FLORIDA

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ACKNOWLEDGMENTS

The data presented in this report were furnished by the Florida Crop and Livestock Reporting Service. Tree spacing data were compiled from the computer tape of the Inventory of Commercial Citrus Acreage conducted in 1971 corrected to June 1972.

J. E. Mullin, J. W. Todd, T. L. Hill, and Dan Marquis, all of the Florida Crop and Livestock Reporting Service, gave valuable suggestions and assistance in the data compilation.

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PREFACE

A basic need in the development of mechanical citrus harvesting equipment is knowledge of the industry and conditions that the equipment is expected to operate under. Considerable data on grove characteristics have been collected already in conjunction with present industry reporting services. This publication assembles the data in a form suitable for the needs of those involved in harvesting equipment development. It should be of value to both researchers and machinery developers.

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FLORIDA CITRUS - COMMERCIAL ACREAGE BY variety AND PLANTING SYSTEM, AS OF JUNE 1972. ACRES

VARIETY	PLANTING SYSTEM RECTANGLE	DIAMOND	TRIANGLE	HEXAGONAL	CONTOUR	BEDDED	CLUSTER	OTHER	TOTAL
HAMLIN	115817	1144	438	957	663	19127	183	63	138392
PARSON BROWN	32581	524	241	292	179	1319	6	64	35205
NAVEL	9009	141	21	59	46	2003	49	6	11333
OTHER EARLY ORANGES	2011	53	13	5	9	38	0	5	2133
TOTAL EARLY ORANGES	159417	1862	713	1313	896	22486	238	138	187052
JAFFA	6468	95	18	33	2	16	0	51	6683
PINEAPPLE	95297	1422	550	857	137	27184	213	319	125978
SEEDLING	9050	302	69	216	5	69	11	55	9776
OTHER MIDSEASON ORANGES	4155	201	59	129	0	82	5	30	4660
TOTAL MIDSEASON ORANGES	114970	2020	696	1235	143	27351	229	455	147098
VALENCIA AND OTHER LATE ORANGES	250961	2824	757	2561	1364	53334	344	274	312419
UNIDENTIFIED ORANGES	12535	113	13	9	31	2823	0	19	15542
TOTAL ORANGES	537883	6818	2179	5118	2434	105993	812	885	662121
SEEDY GRAPEFRUIT	22800	449	55	210	0	1219	25	98	24856
WHITE SEEDLESS GRAPEFRUIT - MARSH	38776	563	91	256	27	23116	416	97	63340
PINK SEEDLESS GRAPEFRUIT - THOMPSON/RUBY	24152	276	109	59	185	6601	0	5	31388
UNIDENTIFIED GRAPEFRUIT	2735	4	11	1	2	3082	0	1	5836
TOTAL GRAPEFRUIT	88464	1292	266	526	215	34017	441	200	125421
TEMPLE	18460	213	39	115	85	4407	56	7	23383
TANGELOS	16519	218	36	145	60	5949	99	4	23028
TANGERINES	20168	321	102	152	42	1772	12	24	23594
MURCOTTS	7685	48	10	48	113	1986	42	0	9932
LIMES	4420	9	9	5	0	168	0	0	4611
TRUE LEMON	1861	36	3	9	0	4690	0	0	6599
MEYER LEMON	902	0	0	0	0	616	27	0	1546
OTHER CITRUS	9625	186	35	87	3	459	4	36	10434
ALL CITRUS	705987	9141	2679	6203	2952	160057	1492	1157	889669

HAMLIN ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	2	0	2									
15-16	205	9	1	194								
17-18	238	59	8	92	79							
19-20	2311	24	149	793	188	1158						
21-22	2229	15	171	323	122	334	1264					
23-24	3071	109	313	378	381	714	193	983				
25-26	63031	270	4492	8726	3216	8453	1177	927	35771			
27-28	20008	277	882	6444	2444	2612	1057	821	3031	2439		
29-30	44289	168	1044	8628	2076	13494	807	535	10807	953	5778	
31-40	3009	44	37	1369	371	304	129	147	248	88	117	155
TOTAL	138392											

PARSON BROWN ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	1	0	1									
15-16	70	0	4	66								
17-18	124	0	1	40	83							
19-20	750	1	35	93	47	574						
21-22	629	0	18	36	17	98	459					
23-24	1065	0	20	99	51	153	168	574				
25-26	17993	42	652	1135	140	1678	388	490	13469			
27-28	3694	8	93	435	114	342	306	75	1139	1183		
29-30	10079	35	126	1849	83	1578	145	102	3018	493	2651	
31-40	800	5	7	169	73	56	13	91	167	37	115	67
TOTAL	35205											

NAVEL ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	15	0	0	15								
17-18	38	0	11	4	23							
19-20	223	4	14	32	14	159						
21-22	289	2	20	134	5	13	116					
23-24	338	3	16	90	37	40	37	117				
25-26	4851	74	360	482	215	838	134	126	2622			
27-28	1528	0	100	227	251	233	155	60	316	186		
29-30	3669	8	333	760	343	1080	69	89	679	62	247	
31-40	381	0	71	75	119	26	26	0	13	2	35	14
TOTAL	11333											

OTHER EARLY ORANGES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	2	0	0	2								
17-18	3	0	0	0	3							
19-20	70	0	8	6	6	50						
21-22	84	0	7	0	7	32	38					
23-24	92	0	3	2	7	36	8	36				
25-26	934	1	41	23	9	152	14	50	644			
27-28	262	0	31	55	0	28	11	17	64	55		
29-30	623	2	3	66	12	170	13	0	177	12	169	
31-40	64	0	0	17	0	19	2	0	3	0	10	14
TOTAL	2133											

TOTAL EARLY ORANGES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	3	0	3									
15-16	291	9	5	277								
17-18	403	59	20	136	188							
19-20	3354	29	205	924	255	1941						
21-22	3231	16	216	492	151	478	1878					
23-24	4566	111	351	563	477	943	406	1709				
25-26	86809	387	5544	10366	3581	11121	1712	1593	52506			
27-28	25491	286	1106	7161	2809	3215	1529	974	4550	3863		
29-30	58661	213	1505	11302	2513	16322	1034	725	14681	1520	8845	
31-40	4254	49	116	1629	563	405	171	238	431	127	277	249
TOTAL	187062											

JAFFA ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	1	0	1									
15-16	2	0	1	1								
17-18	2	0	0	0	2							
19-20	86	0	0	11	2	74						
21-22	65	0	0	4	3	12	47					
23-24	156	0	12	34	5	38	19	48				
25-26	2961	0	58	145	55	497	78	71	2058			
27-28	987	0	10	27	65	68	127	64	334	291		
29-30	2348	0	23	195	30	866	70	14	687	134	330	
31-40	77	0	5	0	6	9	1	0	6	17	11	22
TOTAL	6683											

PINEAPPLE ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

ETWEEN OWS FT	ACRES	0-10	SPACING - IN ROW DISTANCE - FT 11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	2	2										
11-14	3	0	3									
15-16	78	0	2	76								
17-18	227	1	3	43	181							
19-20	3950	542	113	981	219	2096						
21-22	3000	16	336	160	155	410	1924					
23-24	3007	144	167	228	452	598	290	1128				
25-26	48113	359	4189	7043	3157	4622	1503	907	26332			
27-28	18269	491	1578	5127	2675	1566	770	551	2941	2569		
29-30	40154	304	2069	7736	2133	9344	757	456	9396	1767	6191	
31-40	9177	170	53	5666	1669	393	295	42	270	174	253	193
TOTAL	125979											

SEEDLING ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	9	0	3	6								
17-18	14	0	7	2	5							
19-20	354	0	1	7	20	326						
21-22	303	0	3	0	17	49	234					
23-24	315	0	5	33	9	56	34	178				
25-26	3007	0	46	53	24	180	92	65	2548			
27-28	975	7	7	14	7	65	35	47	345	449		
29-30	4079	5	11	192	8	189	27	37	817	262	2531	
31-40	720	0	0	28	12	45	16	6	172	58	126	259
TOTAL	9776											

OTHER MIDSEASON ORANGES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	6	0	6									
15-16	41	0	0	41								
17-18	54	0	0	2	52							
19-20	157	0	7	14	0	136						
21-22	233	0	4	1	9	20	200					
23-24	130	0	12	10	8	31	31	38				
25-26	2517	8	101	105	31	326	65	55	1828			
27-28	481	2	52	65	6	53	24	42	73	164		
29-30	925	0	9	109	6	178	45	43	267	29	240	
31-40	116	0	0	13	1	3	2	0	2	9	33	54
TOTAL	4660											

TOTAL MIDSEASON ORANGES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	2	2										
11-14	10	0	10									
15-16	130	0	6	124								
17-18	296	1	10	46	240							
19-20	4547	542	121	1013	241	2631						
21-22	3600	16	342	164	183	491	2405					
23-24	3608	144	196	305	474	723	374	1392				
25-26	56599	367	4394	7345	3266	5624	1738	1098	32766			
27-28	20712	500	1647	5234	2754	1752	956	704	3692	3474		
29-30	47505	309	2112	8231	2177	10577	899	550	11166	2192	9292	
31-40	10090	170	58	5706	1688	449	313	48	449	258	423	528
TOTAL	147099											

VALENCIA AND OTHER LATE ORANGES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	16	1	14									
15-16	160	89	2	68								
17-18	394	39	50	80	225							
19-20	5368	492	621	1537	180	2537						
21-22	4790	301	377	687	183	525	2717					
23-24	6097	68	886	813	940	687	479	2225				
25-26	114504	415	8120	14715	7407	10460	2423	1454	69511			
27-28	44947	626	2115	9994	5544	4408	2857	2051	9384	7968		
29-30	118237	420	3804	22052	4586	31678	2289	1809	29408	4994	17196	
31-40	17908	120	117	10103	2166	1131	631	584	1401	573	568	513
TOTAL	312419											

UNIDENTIFIED ORANGES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	69	48	16	5								
17-18	59	31	14	1	13							
19-20	959	346	219	250	20	125						
21-22	286	55	47	38	24	43	79					
23-24	520	14	165	133	42	46	31	89				
25-26	6173	139	1048	1726	379	838	126	79	1839			
27-28	1902	55	166	696	103	215	73	99	256	238		
29-30	4575	210	224	1536	184	775	62	74	807	238	466	
31-40	999	14	13	488	79	36	39	33	203	39	36	20
TOTAL	15542											

TOTAL ORANGES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	2	2										
11-14	29	1	27									
15-16	649	146	28	475								
17-18	1153	130	93	264	665							
19-20	14228	1409	1165	3724	696	7233						
21-22	11907	388	983	1382	539	1537	7079					
23-24	14790	338	1598	1819	1933	2398	1289	5415				
25-26	264084	1308	19105	34152	14632	28043	5999	4223	156622			
27-28	93052	1467	5034	23085	11209	9590	5415	3828	17881	15543		
29-30	228978	1152	7645	43121	9461	59353	4284	3159	56062	8943	35799	
31-40	33251	354	304	17926	4495	2020	1154	902	2483	997	1305	1310
TOTAL	662122											

SEEDY GRAPEFRUIT ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	1	0	1									
15-16	26	0	1	25								
17-18	33	0	0	3	31							
19-20	404	0	3	46	7	347						
21-22	421	0	10	68	7	63	273					
23-24	400	1	2	12	21	84	32	248				
25-26	6964	6	36	340	117	555	251	211	5449			
27-28	2317	0	5	207	42	109	67	127	862	898		
29-30	13080	3	10	1026	27	1730	149	338	3938	1308	4549	
31-40	1211	0	0	46	36	180	25	29	364	64	210	257
TOTAL	24856											

WHITE SEEDLESS GRAPEFRUIT - MARSH ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	1	0	0	1								
17-18	57	0	2	29	26							
19-20	577	3	0	73	5	496						
21-22	978	20	63	81	140	300	374					
23-24	1807	0	157	177	211	895	129	239				
25-26	16370	37	302	2814	1893	3111	734	250	7230			
27-28	10106	17	503	1306	1433	1877	784	732	2514	940		
29-30	29307	36	245	2830	711	7925	1212	905	10089	1408	3947	
31-40	4137	0	12	950	464	630	221	89	503	628	358	284
TOTAL	63340											

PINK SEEDLESS GRAPEFRUIT - THOMPSON,RUBY ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	1	0	0	1								
17-18	16	0	0	3	13							
19-20	219	0	2	51	16	150						
21-22	532	1	70	32	150	82	196					
23-24	613	0	31	87	27	315	27	126				
25-26	6503	13	31	401	526	1274	308	191	3760			
27-28	4554	20	40	485	423	1106	371	393	1038	679		
29-30	16494	10	203	1501	404	3108	600	314	6759	564	3032	
31-40	2456	0	37	167	282	554	434	107	463	40	300	74
TOTAL	31388											

UNIDENTIFIED GRAPEFRUIT ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

ETWEEN OWS FT	ACRES	0-10	SPACING - IN ROW DISTANCE - FT 11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	0	0	0	0								
17-18	0	0	0	0	0							
19-20	134	18	7	61	26	22						
21-22	70	6	20	13	4	23	4					
23-24	312	0	66	38	143	34	21	10				
25-26	2111	7	112	364	739	438	30	73	348			
27-28	976	14	65	165	364	84	78	32	133	42		
29-30	1801	10	163	213	212	520	76	26	288	80	213	
31-40	432	0	22	94	74	126	25	6	52	21	5	5
TOTAL	5836											

TOTAL GRAPEFRUIT ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	1	0	1									
15-16	29	0	1	28								
17-18	107	0	3	35	69							
19-20	1333	22	12	231	54	1016						
21-22	2001	26	163	195	302	468	848					
23-24	3132	1	256	314	402	1328	209	623				
25-26	31947	63	480	3918	3274	5377	1323	725	16787			
27-28	17953	51	613	2163	2261	3175	1300	1284	4546	2559		
29-30	60682	59	621	5570	1354	13284	2038	1582	21073	3360	11740	
31-40	8237	0	72	1257	856	1490	705	231	1382	752	873	620
TOTAL	125421											

TEMPLE ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	2	0	2									
15-16	24	15	0	9								
17-18	60	0	1	30	29							
19-20	498	9	60	130	62	236						
21-22	513	23	30	106	69	47	238					
23-24	639	0	88	127	95	129	66	135				
25-26	10447	147	778	1822	563	1487	420	111	5120			
27-28	2954	95	161	540	597	535	415	123	315	172		
29-30	7361	41	528	1524	588	2441	164	81	1306	59	629	
31-40	886	36	19	458	147	65	64	0	48	10	25	14
TOTAL	23383											

TANGELOS ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	4	2	2									
15-16	121	95	0	26								
17-18	171	53	44	37	38							
19-20	777	57	220	281	70	150						
21-22	620	30	88	214	46	68	173					
23-24	753	8	184	254	94	104	31	78				
25-26	9849	318	1166	2528	639	1449	235	150	3365			
27-28	4289	67	664	1373	658	679	164	253	282	151		
29-30	5480	59	483	1460	327	1372	79	72	1186	138	304	
31-40	963	38	0	484	161	93	59	0	74	13	28	13
TOTAL	23028											

TANGERINES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	1	1										
11-14	35	17	18									
15-16	103	70	0	34								
17-18	179	14	73	15	77							
19-20	1096	89	167	271	59	509						
21-22	722	17	73	154	47	62	370					
23-24	564	15	42	176	31	78	46	177				
25-26	10568	210	655	1491	271	1172	391	209	6170			
27-28	2448	37	250	233	343	415	75	135	463	498		
29-30	6251	79	107	1256	156	1471	71	128	1740	210	1034	
31-40	628	4	19	80	126	39	31	10	80	61	95	83
TOTAL	22594											

MURCOTTS ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	1	1	0									
15-16	37	6	10	21								
17-18	102	13	49	34	8							
19-20	668	22	155	307	27	157						
21-22	418	44	37	89	142	32	74					
23-24	369	0	84	196	20	37	18	15				
25-26	4399	157	580	1575	457	841	57	20	713			
27-28	1767	49	164	817	352	284	14	3	66	19		
29-30	1960	92	247	755	185	520	2	0	110	32	17	
31-40	211	2	0	121	80	2	0	0	6	0	0	0
TOTAL	9932											

LIMES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	1	1										
11-14	34	13	21									
15-16	380	77	186	118								
17-18	1162	54	874	81	154							
19-20	1501	284	632	237	163	185						
21-22	539	64	325	49	62	37	1					
23-24	306	58	28	80	41	49	25	25				
25-26	484	84	101	83	24	138	29	1	25			
27-28	146	14	32	89	0	1	0	2	0	8		
29-30	47	3	1	9	6	16	0	1	11	0	0	
31-40	12	0	5	0	5	0	1	0	1	0	0	0
TOTAL	4611											

TRUE LEMON ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

ETWEEN OWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	1	0	0	1								
17-18	47	0	46	1	0							
19-20	156	126	2	19	0	10						
21-22	69	0	24	0	3	0	42					
23-24	223	214	5	3	1	0	0	0				
25-26	1056	35	199	774	0	9	0	0	39			
27-28	4325	268	121	3789	21	123	0	0	3	0		
29-30	640	0	153	172	9	292	0	1	11	0	1	
31-40	82	0	0	80	0	0	0	0	3	0	0	0
TOTAL	6599											

MEYER LEMON ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	0	0	0	0								
17-18	34	0	34	0	0							
19-20	271	165	101	3	0	2						
21-22	542	515	27	0	0	0	0					
23-24	19	15	0	1	4	0	0	0				
25-26	272	24	90	127	0	30	0	0	1			
27-28	171	0	101	33	0	0	37	0	0	0		
29-30	234	25	24	94	0	69	0	19	3	0	0	
31-40	2	0	2	0	0	0	0	0	0	0	0	0
TOTAL	1546											

OTHER CITRUS ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	6	6										
11-14	11	1	10									
15-16	315	3	15	297								
17-18	442	8	16	43	374							
19-20	1485	47	22	363	187	866						
21-22	748	39	29	163	136	177	205					
23-24	1434	9	11	34	191	612	136	440				
25-26	3620	49	180	351	107	622	196	213	1901			
27-28	524	7	20	34	10	151	84	109	62	47		
29-30	1575	245	3	67	79	355	97	35	390	55	248	
31-40	278	7	0	66	67	28	0	18	18	4	48	24
TOTAL	10437											

ALL CITRUS ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	10	10										
11-14	116	35	80									
15-16	1661	412	240	1009								
17-18	3455	271	1231	538	1414							
19-20	22013	2229	2536	5565	1319	10365						
21-22	18080	1147	1777	2352	1347	2428	9029					
23-24	22229	658	2295	3002	2811	4734	1820	6908				
25-26	336726	2395	23334	46819	19968	39168	8649	5652	190741			
27-28	127629	2053	7160	32155	15450	14952	7503	5738	23619	18997		
29-30	313205	1754	9813	54029	12166	79172	6734	5078	81892	12796	49770	
31-40	44549	440	420	20471	5938	3737	2013	1161	4095	1837	2374	2064
TOTAL	889672											

FLORIDA CITRUS - COMMERCIAL ACREAGE BY YEAR SET AND PLANTING SYSTEM, AS OF JUNE 1972. ACRES

YEAR SET	PLANTING SYSTEM								
	RECTANGLE	DIAMOND	TRIANGLE	HEXAGONAL	CONTOUR	BEDDED	CLUSTER	OTHER	TOTAL
PRE-1920 PLANTINGS, ALL VARIETIES	39700	1059	291	579	8	110	12	225	41983
1920-29 PLANTINGS, ALL VARIETIES	86639	1520	400	782	0	193	2	337	89872
1930-39 PLANTINGS, ALL VARIETIES	73454	1072	403	1326	13	610	13	234	77124
1940-49 PLANTINGS, ALL VARIETIES	92054	1031	437	1080	1169	684	16	140	96611
1950-54 PLANTINGS, ALL VARIETIES	72728	758	438	373	532	1112	4	38	75983
1955-59 PLANTINGS, ALL VARIETIES	75099	753	119	456	222	2566	202	22	79432
1960-64 PLANTINGS, ALL VARIETIES	155261	1913	298	913	748	60158	797	73	220162
1965-69 PLANTINGS, ALL VARIETIES	94630	971	281	641	230	86643	448	69	183914
1970-71 PLANTINGS, ALL VARIETIES	16423	63	12	53	30	7981	0	19	24581

PRE-1920 PLANTINGS, ALL VARIETIES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	12	0	12									
15-16	92	0	1	90								
17-18	130	0	7	11	112							
19-20	1235	1	7	70	54	1103						
21-22	1454	0	6	11	44	171	1222					
23-24	1128	0	7	27	70	164	178	682				
25-26	15273	0	53	198	118	976	605	474	12850			
27-28	3601	0	25	50	24	229	140	259	1314	1561		
29-30	16832	2	99	786	88	1710	259	270	6047	1014	6556	
31-40	2229	0	9	144	76	231	39	59	309	215	462	684
TOTAL	41983											

1920-29 PLANTINGS, ALL VARIETIES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	3	0	3									
15-16	29	0	3	26								
17-18	152	1	6	10	136							
19-20	1725	2	29	67	71	1557						
21-22	2186	1	5	66	73	273	1768					
23-24	1898	1	1	72	163	278	280	1103				
25-26	33362	0	197	713	192	2846	1191	957	27267			
27-28	8356	0	30	134	138	420	422	583	3734	2897		
29-30	38790	0	53	3379	305	6203	409	992	10945	5249	11254	
31-40	3372	0	8	168	294	113	46	62	993	759	492	438
TOTAL	89873											

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

VEEN OR LESS	ACRES	0-10	SPACING - IN ROW DISTANCE - FT 11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	0	0	0									
15-16	144	1	1	143								
17-18	320	0	7	49	264							
19-20	1947	9	41	86	98	1719						
21-22	2091	0	7	66	180	387	1452					
23-24	2283	0	97	236	112	482	305	1052				
25-26	34732	2	361	1212	663	5097	1294	831	25273			
27-28	6882	2	85	314	461	960	493	512	2080	1975		
29-30	26358	14	70	2511	536	7518	723	260	7227	1405	6094	
31-40	2368	0	4	133	470	205	200	44	557	222	329	206
TOTAL	77124											

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

ON			SPACING - IN ROW DISTANCE - FT									
YR	ACRES	9-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
12	0	0										
14	2	0	2									
16	168	0	6	161								
18	216	0	12	37	168							
20	1628	90	167	313	190	747						
22	1321	117	51	65	123	233	733					
24	1969	28	48	113	217	594	194	781				
26	29073	65	798	1924	774	2557	773	560	21620			
28	9107	18	330	351	190	1149	696	695	2784	2895		
30	30-05	101	148	4687	1253	5501	620	417	11330	1147	5201	
40	2194	4	13	229	330	383	356	84	391	87	174	149

[illegible] - NUMBER [illegible] SCHOOL BY [illegible] AS OF JUNE 1972

	S T A N D A R D					R U N	D I S T A N C E						
[illegible]	[illegible]	[illegible]	10-15	16-20	[illegible]	26-30	21-25	26-30	31-35	36-40	41-45	46-50	51-60
	1												
	1	1											
78	2	10	63										
[illegible]	1	25	23	180									
1015	63	331	415	11	805								
1354	67	75	73	51	130	768							
1252	2	144	135	65	985	78	580						
19433	16	1350	2689	521	3845	640	512	20406					
10406	228	415	965	864	1838	1068	492	2749	1835				
13582	67	295	5963	955	10439	595	588	10161	797	3691			
1610	14	4	229	420	302	57	105	205	70	122	66		
19438													

1960-64 PLANTINGS, ALL VARIETIES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

ETWEEN OWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	4	4										
11-14	32	1	31									
15-16	465	38	161	266								
17-18	620	14	120	240	247							
19-20	5747	449	812	2303	352	1832						
21-22	3088	328	447	390	279	480	1164					
23-24	3755	41	348	602	463	1054	191	1056				
25-26	83961	501	3840	16435	9625	11295	1608	1048	39609			
27-28	36570	352	1150	11853	8012	4788	2125	1488	4260	2542		
29-30	68843	339	2563	12567	5271	23054	1938	1141	14523	1205	6242	
31-40	17080	30	19	12251	1989	559	457	579	553	199	198	248
TOTAL	220165											

1965-69 PLANTINGS, ALL VARIETIES ACRES

FLA CITRUS - COMMERCIAL ACREAGE BY SPACING, AS OF JUNE 1972.

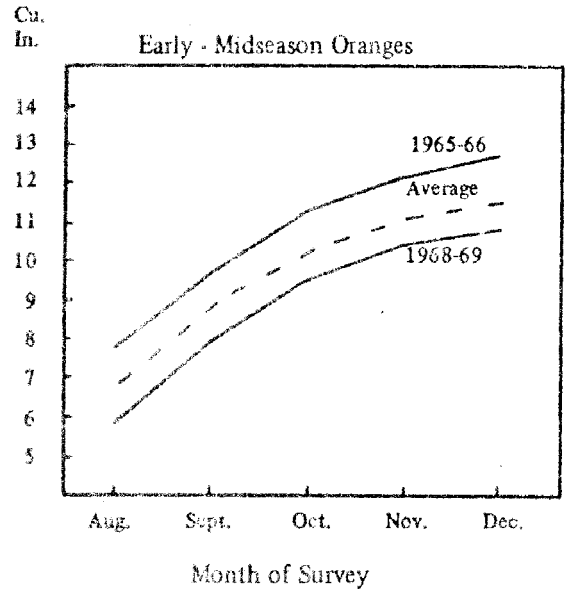
BETWEEN ROWS FT	ACRES	SPACING - IN ROW DISTANCE - FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	6	6										
11-14	50	31	19									
15-16	438	246	44	148								
17-18	1404	226	939	98	141							
19-20	5594	1345	1088	1856	221	1085						
21-22	4498	549	1123	1475	385	384	582					
23-24	6921	565	1443	1451	1356	1254	277	577				
25-26	61976	1655	10269	20319	6265	7592	579	492	14805			
27-28	35457	1409	4531	16645	4738	3800	887	788	1653	1005		
29-30	57074	1126	6094	19829	2757	13752	852	678	8897	618	2471	
31-40	10496	374	304	6482	1193	1375	87	117	253	102	123	85
TOTAL	183914											

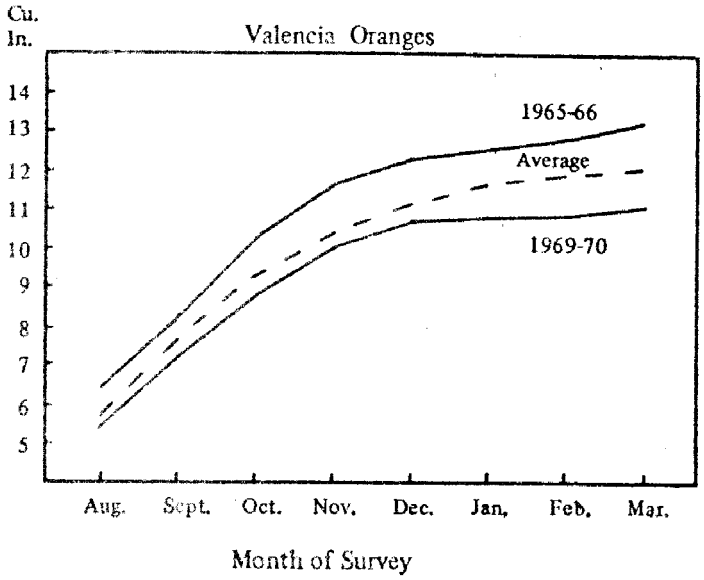
BETWEEN ROWS FT	ACRES	SPACING IN ROW DISTANCE FT 0-10	11-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30	31-40
0-10	0	0										
11-14	6	1	4									
15-16	131	121	6	5								
17-18	112	31	47	21	13							
19-20	737	233	107	187	45	164						
21-22	384	62	34	85	96	65	41					
23-24	991	28	183	201	257	169	68	86				
25-26	12269	137	5939	2118	1144	1182	273	107	1370			
27-28	3274	44	294	1479	572	276	114	84	265	146		
29-30	4624	44	321	1123	346	1212	247	48	628	209	448	
31-40	2054	14	52	635	615	158	137	32	300	50	36	26
TOTAL	24581											

FLORIDA CITRUS - COMMERCIAL ACREAGE BY YEAR SET AND AVERAGE SPACING AS OF JUNE 1972.

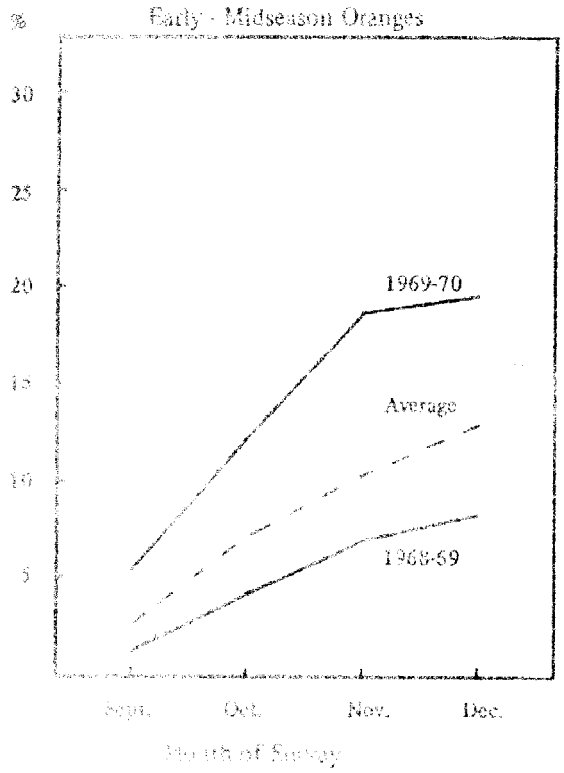
YEAR	EACH YEAR ACRES	BETWEEN ROWS	IN ROW	CUMULATIVE ACRES	BETWEEN ROWS	IN ROW
1901	3516.4	27.1	25.6	3516.4	27.1	25.6
1902	287.6	27.0	25.2	3804.0	27.1	25.5
1903	229.4	26.2	23.9	4033.4	27.0	25.5
1904	783.4	26.7	24.6	4816.8	27.0	25.3
1905	1716.7	25.7	24.1	6533.5	26.6	25.0
1906	1144.0	26.9	24.9	7677.5	26.7	25.0
1907	1282.0	26.8	25.6	8959.5	26.7	25.1
1908	500.1	27.9	25.2	9459.6	26.8	25.1
1909	1060.5	27.8	24.8	10520.1	26.9	25.1
1910	2103.4	27.5	25.0	12623.5	27.0	25.0
1911	1404.4	26.7	24.4	14027.9	26.9	25.0
1912	1869.2	27.2	24.9	15897.1	27.0	25.0
1913	1354.1	27.6	25.4	17251.2	27.0	25.0
1914	2679.5	27.7	24.6	19930.7	27.1	25.0
1915	3532.6	27.9	24.9	23463.3	27.2	25.0
1916	3032.0	26.9	24.7	26495.3	27.2	24.9
1917	4381.6	27.2	24.5	30876.9	27.2	24.9
1918	3578.0	28.0	24.9	34454.9	27.3	24.9
1919	7528.5	27.6	24.8	41983.4	27.3	24.8
1920	9894.7	27.7	24.9	51878.1	27.4	24.9
1921	7227.4	27.0	24.4	59105.5	27.4	24.8
1922	9075.0	27.2	24.0	68180.4	27.3	24.7
1923	4691.9	27.3	24.7	72872.3	27.3	24.7
1924	11771.0	28.0	24.8	84643.3	27.4	24.7
1925	9467.3	27.6	24.6	94110.6	27.4	24.7
1926	10432.8	27.7	24.3	104543.4	27.5	24.7
1927	10339.1	27.6	24.6	114882.5	27.5	24.7
1928	5995.4	27.0	23.8	120877.9	27.5	24.6
1929	10977.6	27.3	24.2	131855.5	27.4	24.6
1930	11827.8	27.0	23.7	143683.3	27.4	24.5
1931	9672.8	26.7	23.4	153356.1	27.4	24.4
1932	6524.0	26.9	23.6	159880.1	27.3	24.4
1933	4647.1	27.0	23.5	164527.2	27.3	24.4
1934	6039.6	27.1	23.7	170566.8	27.3	24.4
1935	8368.6	26.6	23.2	178935.4	27.3	24.3
1936	7942.3	27.0	23.0	186877.7	27.3	24.2
1937	7647.5	26.7	22.7	194525.2	27.3	24.2
1938	7603.4	27.1	23.1	202128.6	27.2	24.1
1939	6851.1	27.3	22.9	208979.7	27.2	24.1
1940	10718.5	26.9	23.0	219698.2	27.2	24.0
1941	7997.3	26.9	23.3	227695.5	27.2	24.0
1942	6146.4	27.1	23.2	233841.9	27.2	24.0
1943	6670.6	26.9	23.2	240512.5	27.2	24.0
1944	7325.9	27.3	23.0	247838.4	27.2	23.9
1945	11217.1	27.1	23.4	259055.5	27.2	23.9
1946	11003.8	27.3	23.8	270059.3	27.2	23.9
1947	10715.9	27.9	23.8	280775.2	27.2	23.9
1948	13282.5	27.6	23.7	294057.7	27.3	23.9
1949	11533.0	27.8	23.5	305590.7	27.3	23.9
1950	17747.1	27.5	23.3	323337.8	27.3	23.9
1951	11616.3	27.6	23.3	334954.1	27.3	23.8
1952	11077.2	27.4	23.1	346031.3	27.3	23.8
1953	13781.0	27.0	22.6	359812.3	27.3	23.8
1954	21761.3	27.3	22.5	381573.6	27.3	23.7
1955	14303.6	27.1	22.3	395877.1	27.3	23.6
1956	11412.3	27.2	21.6	407289.4	27.3	23.6
1957	9866.9	27.6	22.5	417156.3	27.3	23.6
1958	26230.7	27.5	21.8	443387.0	27.3	23.5
1959	17624.2	27.6	21.9	461011.2	27.3	23.4
1960	44400.6	27.1	21.3	505411.8	27.3	23.2
1961	34883.0	27.6	20.2	540294.8	27.3	23.0
1962	45483.2	27.8	20.0	585777.9	27.4	22.8
1963	44461.2	27.5	19.7	630239.1	27.4	22.6
1964	50937.7	27.1	18.8	681176.8	27.3	22.3
1965	68665.1	27.2	18.4	749841.9	27.3	21.9
1966	44683.5	27.4	17.3	794525.4	27.3	21.7
1967	35753.4	27.3	16.5	830278.8	27.3	21.4
1968	17067.7	26.7	17.1	847346.4	27.3	21.4
1969	17744.5	26.4	16.7	865090.9	27.3	21.3
1970	11801.2	26.0	15.8	876892.1	27.3	21.2
1971	8307.0	27.1	17.7	885199.1	27.3	21.2
1972	4472.9	27.1	19.5	889672.1	27.3	21.2

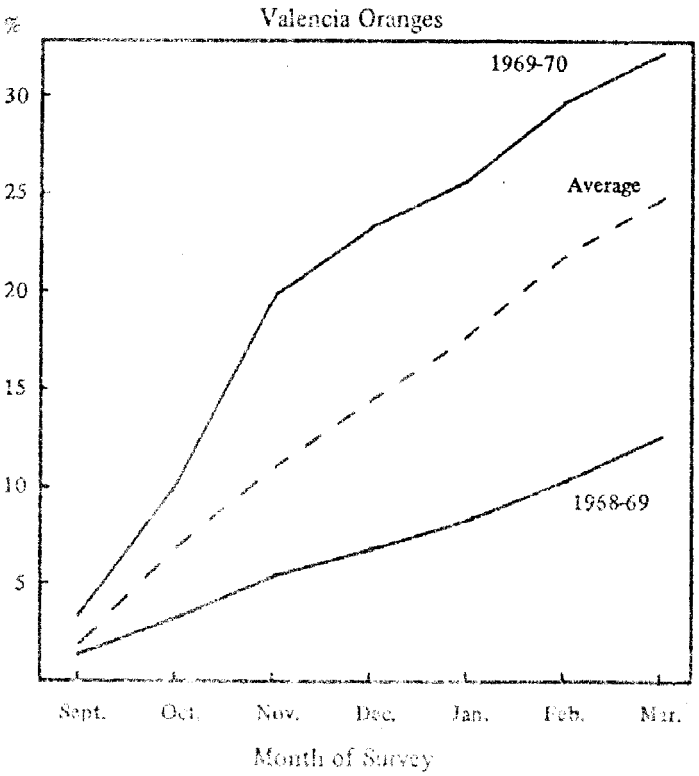
MEASURED FRUIT VOLUME BY MONTHS
EXTREME YEARS AND 8-YR. AVERAGE





ACCUMULATED FRUIT DROPPAGE BY MONTHS
EXTREME YEARS AND 8-YR. AVERAGE

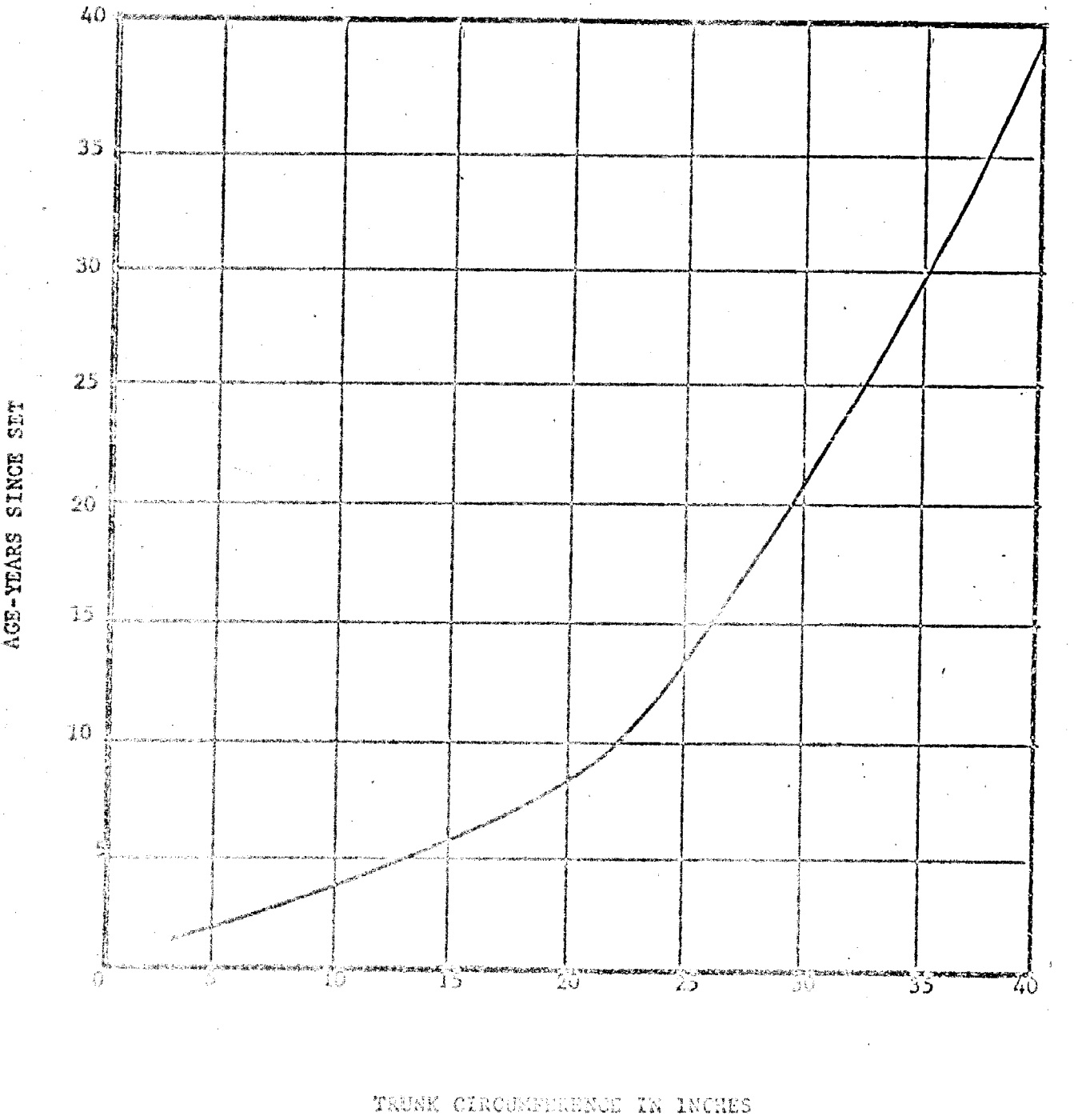




ORANGE TREES

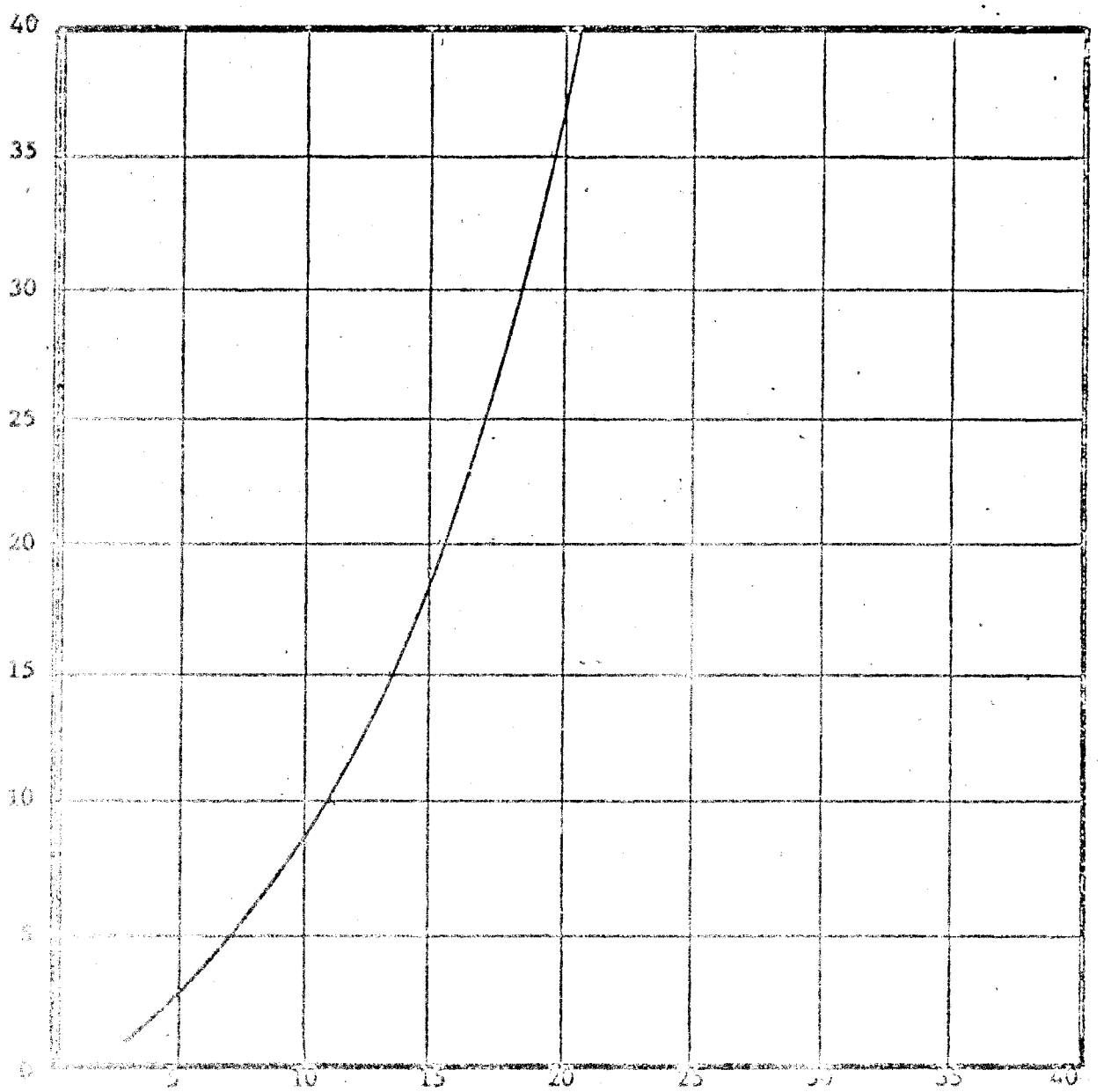
AGE VERSUS

TRUNK CIRCUMFERENCE



ALL ORANGE TREES

AGE VERSUS HEIGHT

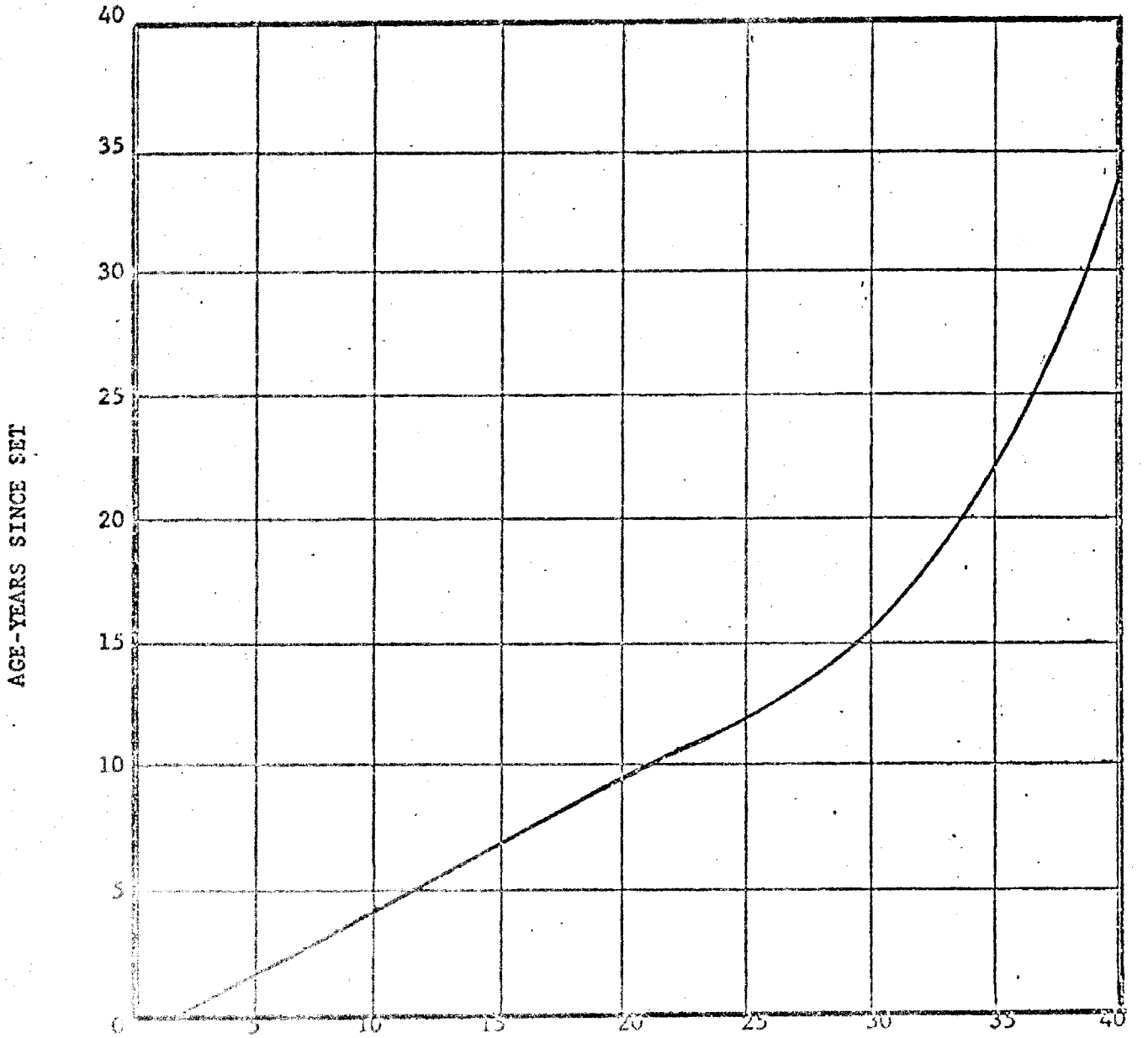


HEIGHT OF TREE IN FEET

GRAPEFRUIT TREES

AGE VERSUS

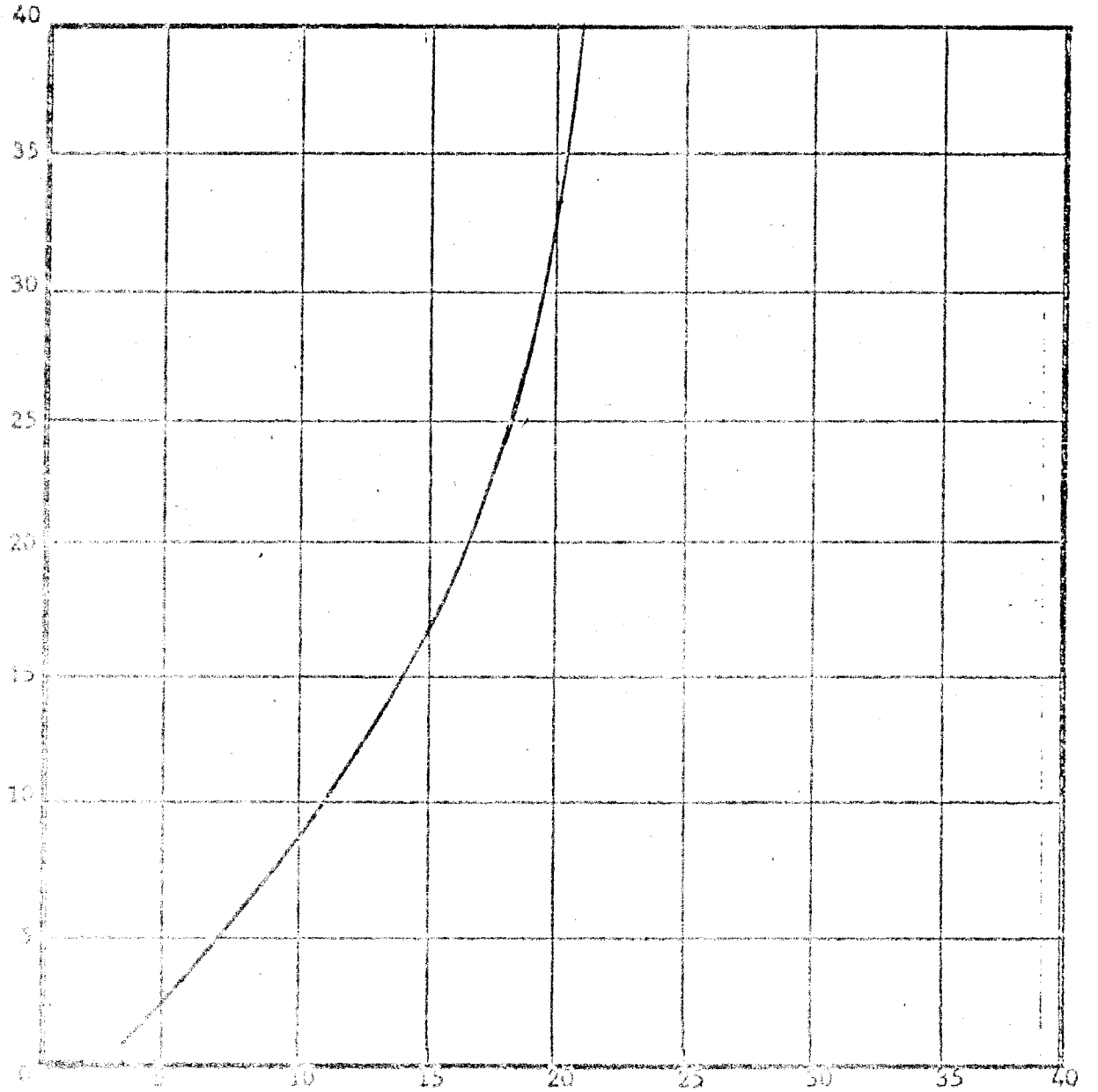
TRUNK CIRCUMFERENCE



GRAPEFRUIT TREES

AGE VERSUS

HEIGHT



HEIGHT OF TREES IN FEET