Selection for yield in early generations by total weight harvest index and yield/day

The improvement for yield has been classified by [illegible] three categories:

a. Improvement by defects elimination

b. Improvement of yield by crossing and selection for yield *per se* using some sort of methodology for isolation of environmental and genetical effects.

c. By building a model or ideotype that the breeder envisages as more productive in a given environment.

Probably almost any breeder selecting for yield has one or several ideotypes in mind when selecting. One troublesome part of the selection process is to visualize the plants that are likely to produce high yielding plant communities once perpetuated. The [illegible] plant relationships in a heterogeneous (early [illegible]) [illegible] population obscure the behavior of an individual plant, [illegible] different plants differ in their competitiveness. Although [illegible] some empirical selection is likely to be necessary in the future [illegible] helpful to measure the components of economic yield [illegible] two types of processes closer to the yield, that is, accumulation of dry matter and the degree of partitioning of assimilates toward seeds [illegible].

Since there are several major genes that modulate both types of plant response and many genes with small effects, the most practical approach is to integrate the combined effects of several (or many) genes into one [illegible]

or a few selection criteria. Such criteria should be:

i) Easy to use in a breeding program.

ii) Compatible with the different breeding methods.

iii) Compatible with different ideotypes for different cropping systems.

iv) Flexible for being used in different agro-climatic zones.

In order to follow the above mentioned restrictions it was decided the methodology of selecting in early generations on the basis of the following criteria:

1. Accumulation of total dry matter (Total Weight)
2. Efficiency of partitioning (Harvest Index)
3. Efficiency of yield (Seed Yield/Day)

MATERIALS AND METHODS

Six segregating populations were planted at CIAT-Palmira. The populations are described in Table 1. In F_2 and F_3 generations, individual plant selection was practiced by visual inspection. The individual plant total weight, harvest index and number of days to maturity was recorded for each selected plant. The seed yield/day was calculated for each plant. In the F_4 generation yield was measured from single row plots 2.5 m long. One replication was planted in rows 60 cm apart and another replication was planted in rows 40 cm apart.

Also in the F_2 generation 60 individual plants were randomly harvested after the individual selections were made. This plants generated progenies that were harvested as balanced composites (one pod from each plant) during the F_3 generation.

Table 1. Description of six segregating populations where selection was done at CIAT-Palmira.

Cross	Parents	Seed Color
12362	A 429 x XAN 112	Cream x Black
12390	A 429 x G 17649	Cream x Black
12391	A 429 x G 37	Cream x Black
12420	DOR 41 x Aguas Calientes 52	Black x Black
12440	A 429 x G 2959	Cream x Black
12207	A 429 x DOR 44	Cream x Black

RESULTS AND DISCUSSION

The comparison of results can be made using the means of seed yield of F_4 progenies derived from F_2 or F_3 individual selections grouped by different selection criteria. Also a comparison will be made with the remaining visually selected but not outstanding selections.

The comparison with the original variability in each F_2 population is made with the group of randomly harvested plants (and progenies). All these comparisons are presented in Tables 2 to 10. Tables 2 to 7 present the yields of the F_4 progenies grouped by the selection criteria applied to the F_2 parent plants. Tables 8 to 10 present the same information for the F_4 progenies grouped by the selection criteria applied to F_3 individual selections.

The examination of the data of seed yield of the F_4 progenies grouped by F_2 selection criteria indicate:

1. The mean yield is higher in all six crosses in one or several of the F_4 groups of selection criteria, compared to the randomly selected progenies or to the visually selected progenies. In 3 out of 6 crosses, the mean yield of one or some of the selection groups is higher than the yield of both parents. Two exceptions [illegible] when good yielders are parents (ICR 44 and ICR 41).

2. Within each of the selection groups the [illegible] the range for the different selection groups is [illegible] than that of the average of the parents except [illegible] the parents.

3. The selection criteria seem to be especially effective for eliminating the poor yielders since the lower limit of the range of values as indicated by the minimum yield is substantially higher in the selection groups than in the randomly selected group or in

visual selection group. This fact has important implications in a breeding program when a recurrent selection scheme is used (as is the case in many breeding situations) to accumulate favorable genes.

4. The selection for yield/day seems to be a good choice. The F_2 selections by this criteria tend to be also selected by the other two criteria (harvest index and total weight) indicating that the combination of a high value of total weight and high [illegible] produces a high value of yield/day. For selection for yield/day only, needs to measure the seed yield and the time of maturity.

5. The selection in the F_3 generation does not seem more effective than the selection in F_2 generation (see Tables 8 to 10).

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2. Evans, L.T. 1971. Physiological aspects of [illegible]. In: Gene manipulation in plant improvement. [illegible] Genetics Symposium J.P. Gustafson Ed. Plenum Press. [illegible] 668p.

3. Donald, C.M. 1968. The breeding of crop ideotypes. [illegible] 17:385-403.

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Cuadro 2.

Average seed yield (gms/plot) in F_4 progenies from F_2 individual selections made by different selection criteria

CROSS 12362 A 429 x XAN 112

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	20	266	396	133	70.6
2. Total weight	10	312	442	240	72.4
3. Yield/Day	3	283	315	263	28.2
4. Visual Selection	62	270	413	98	62.8
1 + 2	-	-	-	-	-
1 + 3	-	-	-	-	-
2 + 3	13	287	358	211	48.4
1 + 2 + 3	-	-	-	-	-
Random (F_2)	55	258	416	61	70.3
A 429		268			
XAN 112		256			

Cuadro 3.

Average seed yield (gms/plot) in F_4 progenies selected by different selection criteria in F_2 generation as individual plant selections

CROSS 12390 A 429 x CHICHICASTE

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	8	238	358	169	54.5
2. Total weight	1	371	371	371	-
3. Yield/Day	-	-	-	-	-
4. Visual Selection	20	248	312	156	45.6
1 + 2	1	292	292	292	-
1 + 3	-	-	-	-	-
2 + 3	4	319	399	255	68.8
1 + 2 + 3	4	291	365	258	49.7
Random (F_2)	58	234	416	16	73.6
A 429		268			
Chichicaste		253			

Cuadro 4.

Average seed yield (gms/plot) in F_4 progenies from F_2 individual selections made by different criteria

CROSS 12391 A 429 x PATA DE ZOPE

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	16	258	352	154	53.3
2. Total weight	9	286	346	184	52.1
3. Yield/Day	-	-	-	-	-
4. Visual Selection	23	269	365	146	47.2
1 + 2	-	-	-	-	-
1 + 3	2	258	275	241	-
2 + 3	4	317	352	263	42.2
1 + 2 + 3	-	-	-	-	-
Random (F_2)	54	264	563	81	74.1
A 429		268			
Pata de Zope		259			

Cuadro 5.

Average seed yield (gms/plot) in F_4 progenies from F_2 individual selections made by different selection criteria

CROSS 12420 DOR 41 x AGUAS CALIENTES 92

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	3	250	275	233	22.0
2. Total weight	-	-	-	-	-
3. Yield/Day	-	-	-	-	-
4. Visual Selection	10	247	331	158	52.7
1 + 2	-	-	-	-	-
1 + 3	1	247	247	247	-
2 + 3	1	221	221	221	-
1 + 2 + 3	2	292	308	276	-
Random (F_2)	56	245	399	146	49.8
DOR 41		399			
Aguas Calientes 92		201			

Cuadro 6.

Average seed yield (gms/plot) in F_4 progenies from F_2 individual selections made by different selection criteria

CROSS 12440 A 429 x PECHO AMARILLO

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	21	253	329	174	43.3
2. Total weight	9	253	339	170	56.5
3. Yield/Day	-	-	-	-	-
4. Visual Selection	128	263	376	136	44.6
1 + 2	-	-	-	-	-
1 + 3	-	-	-	-	-
2 + 3	9	282	383	179	63.5
1 + 2 + 3	-	-	-	-	-
Random (F_2)	55	257	386	124	51.8
A 429		268			
Pecho Amarillo		285			

Cuadro 7.

Average seed yield (gms/plot) in F_4 progenies from F_2 individual selections made by different selection criteria

CROSS 12209 A 429 x DOR 44

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	22	237	331	160	49.2
2. Total weight	-	-	-	-	-
3. Yield/Day	10	263	350	193	45.8
4. Visual Selection	63	262	366	150	41.9
1 + 2	-	-	-	-	-
1 + 3	-	-	-	-	-
2 + 3	5	273	295	238	-
1 + 2 + 3	1	326	326	326	-
Random (F_2)	56	254	391	160	50.0
A 429		268			
DOR 44		355			

Cuadro 8.

Average seed yield (gms/plot) in F_4 progenies from F_3 individual selections made by different selection criteria

CROSS 12362 A 429 x XAN 112

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	15	264	394	126	62.3
2. Total weight	2	287	290	283	-
3. Yield/Day	4	243	271	187	37.7
4. Visual Selection	73	276	442	98	63.5
1 + 2	-	-	-	-	-
1 + 3	2	350	391	310	-
2 + 3	9	314	413	255	50.4
1 + 2 + 3	3	203	276	126	74.8
Random (F_2)	55	258	416	61	70.3
A 429		268			
XAN 112		256			

Cuadro 9.

Average seed yield (gms/plot) in F_4 progenies from F_3 individual selections made by different selection criteria

CROS 12390 A 429 x CHICHICASTE

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	10	287	371	234	42.0
2. Total weight	2	216	219	212	-
3. Yield/Day	-	-	-	-	-
4. Visual Selection	20	251	399	156	62.4
1 + 2	-	-	-	-	-
1 + 3	2	241	258	224	-
2 + 3	4	287	365	213	64.7
1 + 2 + 3	-	-	-	-	-
Random (F_2)	58	234	416	16	73.6
A 429		268			
Chichicaste		253			

Cuadro 10.

Average seed yield (gms/plot) in F_4 progenies from F_3 individual selections made by different selection criteria

CROSS 12391 A 429 x PATA DE ZOPE

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	9	279	307	245	19.3
2. Total weight	4	306	349	235	49.2
3. Yield/Day	-	-	-	-	-
4. Visual Selection	35	270	365	146	54.9
1 + 2	-	-	-	-	-
1 + 3	1	263	263	263	-
2 + 3	2	228	297	159	-
1 + 2 + 3	3	261	282	241	-
Random (F_2)	54	264	563	81	74.1
A 429		268			
Pata de Zope		259			

Cuadro 11.

Average seed yield (gms/plot) in F_4 progenies from F_3 individual selections made by different selection criteria

CROSS 12420 DOR 41 x AGUAS CALIENTES 92

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	3	262	300	235	33.7
2. Total weight	-	-	-	-	-
3. Yield/Day	-	-	-	-	-
4. Visual Selection	8	248	331	158	55.4
1 + 2	1	248	248	248	-
1 + 3	1	221	221	221	-
2 + 3	3	264	308	209	50.4
1 + 2 + 3	1	240	240	240	-
Random (F_2)	56	245	399	146	49.8
DOR 41		399			
Aguas Calientes 92		201			

Cuadro 12.

Average seed yield (gms/plot) in F_4 progenies from F_3 individual selections made by different selection criteria

CROSS 12440 A 429 x PECHO AMARILLO

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	26	256	367	170	48.3
2. Total weight	4	246	294	211	40.0
3. Yield/Day	1	254	254	254	-
4. Visual Selection	127	261	376	136	45.6
1 + 2	-	-	-	-	-
1 + 3	1	308	308	308	-
2 + 3	6	313	383	274	40.7
1 + 2 + 3	2	272	277	267	-
Random (F_2)	55	257	386	124	51.8
A 429		268			
Pecho Amarillo		285			

Cuadro 13.

Average seed yield (gms/plot) in F_4 progenies from F_3 individual selections made by different selection criteria

CROSS 12209 A 429 x DOR 44

Selection Criteria	No of Sels.	Mean Yield	Max. Yield	Min. Yield	Std. Dev.
1. Harvest Index	11	245	296	181	39.8
2. Total weight	1	198	198	198	-
3. Yield/Day	2	243	261	225	-
4. Visual Selection	79	258	336	150	42.5
1 + 2	-	-	-	-	-
1 + 3	-	-	-	-	-
2 + 3	-	-	-	-	-
1 + 2 + 3	1	202	202	202	-
Random (F_2)	56	254	391	160	50.0
A 429		268			
DOR 44		355			

Data file vir85
Title: Vivero de seleccion para rend85

Function: PRLIST
Data case no. 1 to 821
Without selection

0 5 Numero de cruza
1 -20 Progenitores
2 3 F2:1=IC;2=IC+W;3=IC+W+W/dia;4=sol;5=cb;6=1+2;7=1+3;8 [illegible]
3 -10 Identificacion de la seleccion
4 3 Peso total por planta F2 gms x 10
5 2 Indice de cosecha %
6 2 Dias a madurez fisiologica F2
7 3 Peso total por dia F2 gms/dia x 100
8 2 Rendimiento por dia F2 gms/dia x 100
9 3 Peso total F3 gms x 10
10 3 Peso semilla F3 gms x 10
11 2 Indice de cosecha F3 %
12 2 Dias a madurez fisiologica F3
13 3 Peso total por dia F3 gms/dia x 100
14 2 Rendimiento por dia F3 gms/dia x 100
15 1 F2:1=IC;2=IC+W;3=IC+W+W/dia;4=sol;5=cb;6=1+2;7=1+3;8 [illegible]
16 3 Numero de entrada
17 3 Numero de entrada ex-v1236240
18 4 Peso de semilla por parcela corregido gms x 10

CAS NUM.	0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8
1	12362		4	1-1	508	61	70	73	44	237	156	57	76	31	18	4	1	1	2670
2	12362		4	1-2	508	61	70	73	44	149	99	66	76	20	13	1	2	2	2613
3	12362		4	2-1	248	61	68	36	22	186	107	57	77	24	14	4	3	3	1202
4	12362		4	2-2	248	61	68	36	22	115	69	60	77	15	9	4	4	4	2032
5	12362		4	3-1	394	60	76	52	31	134	83	61	76	18	11	4	5	5	1611
6	12362		4	4-1	257	58	75	34	20	296	193	65	70	41	25	3	6	6	1974
7	12362		4	4-2	257	58	75	34	20	254	165	65	76	33	22	1	7	7	2154
8	12362		1	5-1	332	66	74	45	30	191	121	63	76	25	16	4	8	8	2185
9	12362		4	6-1	328	59	84	39	23	292	195	66	71	41	27	1	9	9	2713
10	12362		4	6-2	328	59	84	39	23	151	127	70	75	21	17	1	10	10	2125
11	12362		4	6-3	328	59	84	39	23	285	201	71	74	38	27	[illegible]	11	11	[illegible]
12	12362		8	7-1	607	63	74	92	52	126	81	64	71	15	11	4	12	12	[illegible]
13	12362		8	7-2	607	63	74	92	52	161	104	64	75	21	14	4	13	13	[illegible]
14	12362		2	8-1	635	62	80	79	49	250	159	63	71	35	22	4	14	14	2605
15	12362		2	8-2	635	62	80	79	49	161	97	57	72	22	13	4	15	15	[illegible]
16	12362		2	8-3	635	62	80	79	49	149	101	67	75	20	13	1	16	16	[illegible]
17	12362		4	9-1	366	59	80	46	27	158	99	62	78	20	13	4	17	17	
18	12362		1	10-1	327	66	75	44	29	145	59	47	71	20	10	4	18	18	[illegible]
19	12362		1	10-2	327	66	75	44	29	407	259	63	76	54	34	8	19	19	[illegible]
20	12362		1	10-3	327	66	75	44	29	200	125	62	77	26	16	4	20	20	[illegible]
21	12362		4	11-1	371	56	80	46	26	198	122	61	72	28	17	4	21	21	[illegible]
22	12362		4	11-2	371	56	80	46	26	155	97	62	75	21	13	4	22	22	3524
23	12362		4	11-3	371	56	80	46	26	142	88	61	75	19	12	4	23	23	[illegible]
24	12362		4	12-1	546	67	94	65	44	245	154	62	77	32	20	4	24	24	1730
25	12362		4	13-1	363	56	77	47	26	321	201	62	75	40	27	2	25	25	[illegible]
26	12362		1	15-1	345	67	70	49	33	296	200	67	72	41	28	7	26	26	3100
27	12362		1	15-2	345	67	70	49	33	155	101	65	73	21	14	1	27	27	2911
28	12362		1	15-3	345	67	70	49	33	165	118	71	74	22	16	1	28	28	3241
29	12362		1	16-1	337	66	74	46	30	225	140	62	71	32	20	4	29	29	1531
30	12362		1	16-2	337	66	74	46	30	210	127	60	74	28	17	4	30	30	3447

30	12362	1	16-2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	12362	1	16-3	337	66	74	46	30	271	163	60	76	36	21	4	31	31	3677
32	12362	4	17-1	363	60	72	50	30	115	72	62	71	16	10	4	32	32	1954
33	12362	4	18-1	491	63	70	70	44	243	152	62	69	35	22	4	33	33	3254
34	12362	4	18-2	491	63	70	70	44	196	127	64	71	28	18	4	34	34	2359
35	12362	4	18-3	491	63	70	70	44	328	218	66	76	43	29	9	35	35	2760
36	12362	8	19-1	640	64	82	78	50	293	187	63	78	38	24	4	36	36	3026
37	12362	8	19-1	640	64	82	78	50	227	133	58	77	29	17	4	37	37	[illegible]
38	12362	8	20-2	871	64	82	106	68	177	105	59	77	27	14	4	38	38	[illegible]
39	12362	4	21-1	502	62	72	70	43	325	204	62	71	46	29	8	39	39	[illegible]
40	12362	4	21-2	502	62	72	70	43	110	65	57	75	15	9	4	40	40	2346
41	12362	1	23-1	557	66	76	73	48	121	77	58	68	19	11	4	41	41	[illegible]
42	12362	1	23-2	557	66	76	73	48	174	106	63	77	23	15	4	42	42	[illegible]
43	12362	1	23-3	557	66	76	73	48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	43	43	[illegible]
44	12362	3	24-1	559	65	72	79	51	297	188	62	69	[illegible]	[illegible]	3	44	44	[illegible]
45	12362	3	24-2	559	65	72	79	51	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	24	[illegible]	45	45	[illegible]
46	12362	3	24-3	559	65	72	79	51	[illegible]	[illegible]	59	76	[illegible]	[illegible]	[illegible]	46	46	[illegible]
47	12362	4	29-1	[illegible]	61	75	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	48	48	[illegible]
48	12362	1	30-1	[illegible]	[illegible]	72	[illegible]	[illegible]	[illegible]	[illegible]	54	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
49	12362	1	30-2	[illegible]	66	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50	12362	4	[illegible]	[illegible]	64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
51	12362	4	[illegible]	[illegible]	64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
52	12362	4	34-1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
53	12362	4	34-2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
54	12362	4	35-1	[illegible]	56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
55	12362	4	35-2	[illegible]	58	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
56	12362	1	36-1	[illegible]	61	79	[illegible]	76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
57	12362	1	36-2	[illegible]	66	79	[illegible]	76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
58	12362	4	37-1	[illegible]	63	74	48	30	53	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
59	12362	2	38-1	[illegible]	60	84	79	47	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
60	12362	2	38-2	[illegible]	60	84	79	47	[illegible]	123	62	75	[illegible]	16	4	[illegible]	[illegible]	[illegible]
61	12362	2	38-3	[illegible]	60	84	79	47	[illegible]	170	56	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]
62	12362	8	39-1	[illegible]	65	71	85	55	239	[illegible]	54	76	[illegible]	20	4	[illegible]	[illegible]	2727
63	12362	4	40-1	466	[illegible]	79	59	37	[illegible]	191	61	[illegible]	40	25	[illegible]	[illegible]	[illegible]	2971
64	12362	4	40-2	466	63	79	59	37	[illegible]	161	61	77	34	21	[illegible]	65	65	[illegible]
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67	12362	4	43-1	312	60	82	39	25	151	96	52	69	26	14	4	[illegible]	[illegible]	[illegible]
68	12362	4	43-2	[illegible]	60	82	39	25	[illegible]	[illegible]	62	[illegible]	[illegible]	17	[illegible]	[illegible]	[illegible]	[illegible]
69	12362	4	43-3	[illegible]	60	83	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	19	[illegible]	[illegible]	[illegible]	[illegible]
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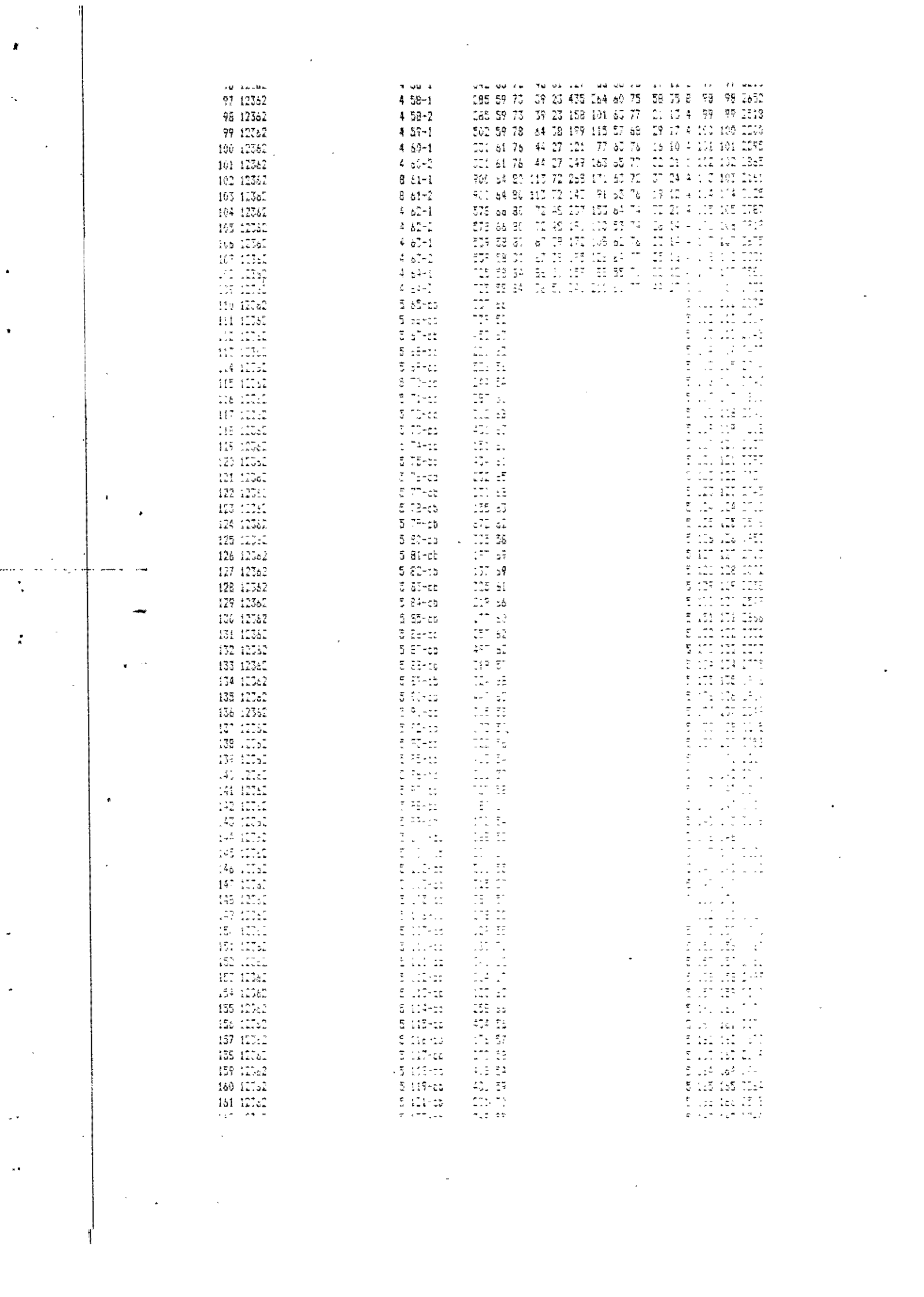
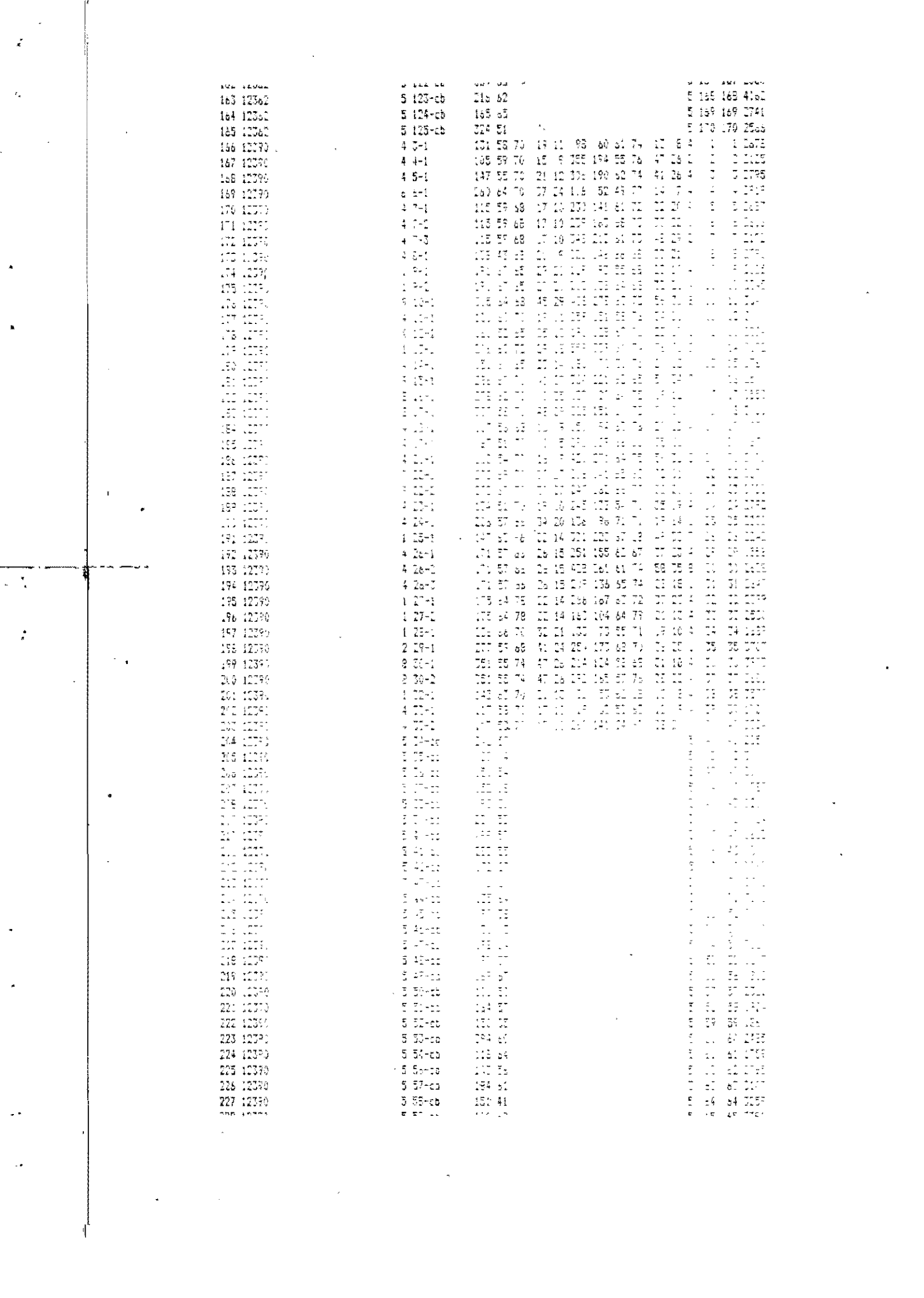
72	12362	4	45-1	[illegible]	64	84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
73	12362	4	46-1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
74	12362	4	46-2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
75	12362	4	46-3	[illegible]	59	75	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
76	12362	4	47-1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
77	12362	4	47-2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
78	12362	4	47-3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
79	12362	[illegible]	48-1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
80	12362	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
81	12362	[illegible]	49-1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
82	12362	1	49-2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
83	12362	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
84	12362	2	50-1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
85	12362	2	50-2	[illegible]	[illegible]	84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
86	12362	4	51-1	[illegible]	63	78	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	9	[illegible]	[illegible]	[illegible]
87	12362	4	51-2	[illegible]	[illegible]	73	[illegible]	[illegible]	119	74	64	[illegible]	15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
88	12362	8	52-1	[illegible]	64	79	87	57	241	[illegible]	59	[illegible]	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]
89	12362	8	52-2	[illegible]	64	79	89	57	[illegible]	123	59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
90	12362	4	53-1	[illegible]	65	74	[illegible]	[illegible]	[illegible]	126	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
91	12362	4	53-2	[illegible]	65	74	[illegible]	[illegible]	[illegible]	221	[illegible]	75	[illegible]	26	5	[illegible]	[illegible]	[illegible]
92	12362	4	53-3	[illegible]	65	74	[illegible]	[illegible]	[illegible]	[illegible]	62	75	34	21	4	[illegible]	[illegible]	[illegible]
93	12362	8	55-1	597	[illegible]	84	[illegible]	[illegible]	[illegible]	73	56	77	19	10	4	94	94	[illegible]
94	12362	8	55-2	597	64	84	107	68	120	71	59	77	16	9	4	95	95	2111
95	12362	8	55-3	597	64	84	107	68	[illegible]	215	60	77	46	28	8	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]





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230	12390	5 61-cb	185 59			5 67 67 2758
231	12390	5 62-cb	213 60			5 68 68 2402
232	12390	5 63-cb	126 59			5 69 69 732
233	12390	5 64-cb	91 75			5 70 70 1702
234	12390	5 65-cb	370 65			5 71 71 3282
235	12390	5 66-cb	115 45			5 72 72 [illegible]
236	12390	5 67-cb	75 54			5 73 73 1556
237	12390	5 68-cb	404 [illegible]			5 [illegible] 74 [illegible]
238	12390	5 69-cb	113 [illegible]			5 75 75 [illegible]
239	[illegible]	5 70-cb	[illegible] 57			[illegible]
240	[illegible]	5 71-cb	[illegible]			[illegible]
241	[illegible]	[illegible]	[illegible]			[illegible]
242	[illegible]	[illegible]	[illegible]			[illegible]
243	[illegible]	[illegible]	[illegible]			[illegible]
244	[illegible]	[illegible]	[illegible]			[illegible]
245	[illegible]	[illegible]	[illegible]			[illegible]
246	[illegible]	[illegible]	[illegible]			[illegible]
247	[illegible]	5 78-cb	124 58			[illegible]
248	[illegible]	[illegible]	[illegible]			[illegible]
249	[illegible]	5 80-cb	[illegible]			[illegible]
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266	12391	5 3-2	522 58 70	75 44 [illegible]	[illegible]	[illegible]
267	12391	3 3-3	[illegible] 56 79	75 44 [illegible]	[illegible]	[illegible]
268	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
269	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
270	[illegible]	4 4-3	[illegible]	[illegible]	[illegible]	[illegible]
271	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
272	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
273	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
274	[illegible]	4 5-3	[illegible]	[illegible]	[illegible]	[illegible]
275	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
276	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
277	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
278	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
279	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
280	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
281	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
282	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
283	[illegible]	1 8-2	[illegible]	[illegible]	[illegible]	[illegible]
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285	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
286	[illegible]	4 10-2	[illegible]	[illegible]	[illegible]	[illegible]
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296	12391	1	15-2	285	61	70	41	25	149	96	64	67	22	14	4	35	35	1838
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322	12391	5	32-cb	156	50										0	63	63	2607
323	12391	5	33-cb	184	55										0	64	64	2004
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325	12391	5	35-cb	216	16										0	66	66	7405
326	12391	5	36-cb	120	07										0	67	67	3951
327	12391	5	38-cb	212	58										0	69	69	2872
328	12391	5	41-cb	277	53										0	72	72	3591
329	12391	5	42-cb	205	67										0	73	73	2219
330	12391	5	43-cb	169	55										0	74	74	4217
331	12391	5	44-cb	195	30										0	75	75	2851
332	12391	5	45-cb	199	54										0	76	76	1889
333	12391	5	47-cb	75	12										0	78	78	3312
334	12391	5	49-cb	87	24										0	80	80	2756
335	12391	5	51-cb	226	46										0	82	82	2498
336	12391	5	52-cb	270	49										0	83	83	2749
337	12391	5	53-cb	110	47										0	84	84	2341
338	12391	5	54-cb	224	47										0	85	85	2417
339	12391	5	55-cb	195	64										0	86	86	2459
340	12391	5	56-cb	231	55										0	87	87	2722
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342	12391	5	58-cb	177	52										0	89	89	2264
343	12391	5	59-cb	199	48										0	91	91	2751
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345	12391	5	61-cb	71	32										0	93	93	2214
346	12391	5	62-cb	191	55										0	94	94	2911
347	12391	5	63-cb	114	56										0	95	95	2077
348	12391	5	64-cb	225	79										0	96	96	2852
349	12391	5	65-cb	152	65										0	97	97	2317
350	12391	5	67-cb	215	56										0	99	99	3448
351	12391	5	70-cb	319	54										0	102	102	2171
352	12391	5	71-cb	293	67										0	103	103	1961
353	12391	5	72-cb	85	27										0	104	104	3639
354	12391	5	73-cb	244	57										0	105	105	2058
355	12391	5	74-cb	118	46										0	106	106	2607
356	12391	5	75-cb	190	49										0	107	107	2525
357	12391	5	76-cb	275	56										0	108	108	2557
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359	12391	5	79-cb	94	43										0	111	111	2701

360	12391	5	80-cb	308	61										5	110	110	2010
361	12391	5	81-cb	207	62										5	111	111	2343
362	12391	5	82-cb	377	40										5	112	112	2476
363	12391	5	83-cb	210	48										5	113	113	2738
364	12391	5	84-cb	230	60										5	114	114	2202
365	12391	5	85-cb	113	48										5	115	115	1793
366	12391	5	86-cb	135	58										5	116	116	1821
367	12391	5	87-cb	117	62										5	117	117	2629
368	12391	5	88-cb	108	34										5	118	118	1863
369	12391	5	89-cb	172	62										5	119	119	1895
370	12420	4	1-1	192	64	70	27	18	155	107	69	71	22	15	1	1	1	2524
371	12420	7	3-1	356	60	75	47	28	97	66	68	69	14	10	2	2	2	2375
372	12420	4	5-1	107	62	65	16	10	194	102	53	69	28	15	4	4	4	1570
373	12420	1	6-1	119	66	65	18	12	320	183	57	69	46	27	4	5	5	[illegible]
374	12420	4	7-1	240	64	65	37	24	71	47	66	74	10	6	1	6	6	2353
375	12420	8	8-1	272	62	65	42	26	296	156	66	68	44	29	7	7	7	[illegible]
376	12420	4	9-1	239	61	70	34	21	516	277	54	69	75	40	5	8	8	2388
377	12420	1	10-1	154	65	65	24	15	344	152	62	71	34	21	1	9	9	[illegible]
378	12420	4	11-1	221	63	65	34	21	326	135	60	71	32	15	4	10	10	[illegible]
379	12420	4	11-2	221	63	65	34	21	307	233	65	72	71	46	5	11	11	[illegible]
380	12420	4	12-1	252	60	70	37	22	329	192	64	77	42	27	4	12	12	[illegible]
381	12420	9	13-1	262	66	71	50	32	332	210	64	71	47	29	3	13	13	[illegible]
382	12420	9	14-1	270	65	69	40	26	442	263	61	73	[illegible]	37	6	14	14	[illegible]
383	12420	4	15-1	223	65	71	31	20	155	107	69	75	21	14	[illegible]	15	15	[illegible]
384	12420	4	16-1	220	65	65	25	23	119	70	59	73	16	10	4	16	16	[illegible]
385	12420	4	17-1	223	59	68	30	19	195	126	65	78	25	16	4	17	17	[illegible]
386	12420	1	20-1	141	66	65	22	14	216	127	59	68	32	19	4	18	18	[illegible]
387	12420	5	23-cb	316	66										5	19	19	2073
388	12420	5	25-cb	217	54										5	21	21	3458
389	12420	5	26-cb	118	62										5	22	22	2451
390	12420	5	27-cb	116	40										5	23	23	[illegible]
391	12420	5	28-cb	210	61										5	24	24	3097
392	12420	5	29-cb	141	57										5	25	25	2401
393	12420	5	31-cb	117	12										5	27	27	2985
394	12420	5	32-cb	359	46										5	28	28	2371
395	12420	5	33-cb	223	60										5	29	29	2179
396	12420	5	34-cb	105	48										5	30	30	2431
397	12420	5	35-cb	172	67										5	31	31	2242
398	12420	5	36-cb	268	64										5	32	32	2278
399	12420	5	37-cb	322	66										5	33	33	2182
400	12420	5	38-cb	80	69										5	34	34	2257
401	12420	5	39-cb	309	54										5	35	35	1360
402	12420	5	40-cb	225	52										5	36	36	2428
403	12420	5	41-cb	261	65										5	37	37	2172
404	12420	5	42-cb	242	62										5	38	38	1625
405	12420	5	43-cb	251	59										5	39	39	2217
406	12420	5	44-cb	120	56										5	40	40	1356
407	12420	5	45-cb	215	45										5	41	41	2104
408	12420	5	46-cb	97	53										5	42	42	1912
409	12420	5	47-cb	230	56										5	43	43	2232
410	12420	5	48-cb	364	56										5	44	44	2764
411	12420	5	49-cb	98	51										5	45	45	2349
412	12420	5	50-cb	572	62										5	46	46	2522
413	12420	5	51-cb	151	44										5	47	47	2399
414	12420	5	52-cb	116	51										5	48	48	2287
415	12420	5	53-cb	92	41										5	49	49	[illegible]
416	12420	5	54-cb	266	58										5	50	50	2222
417	12420	5	56-cb	86	38										5	52	52	3213
418	12420	5	57-cb	131	26										5	53	53	2653
419	12420	5	58-cb	90	60										5	54	54	2736
420	12420	5	59-cb	226	67										5	55	55	2742
421	12420	5	60-cb	139	59										5	56	56	2531
422	12420	5	61-cb	48	46										5	57	57	3185
423	12420	5	62-cb	93	54										5	58	58	2795
424	12420	5	63-cb	140	56										5	59	59	2449
425	12420	5	64-cb	132	64										5	60	60	1627
426	12420	5	65-cb	[illegible]	47										5	61	61	2568

426	12420	5	65-cb	[illegible]	[illegible]										5	61	61	[illegible]
427	12420	5	66-cb	657	60										5	62	62	2807
428	12420	5	67-cb	329	56										5	63	63	2683
429	12420	5	68-cb	183	27										5	64	64	3993
430	12420	5	69-cb	158	57										5	65	65	1713
431	12420	5	70-cb	113	59										5	66	66	1681
432	12420	5	71-cb	346	47										5	67	67	2754
433	12420	5	72-cb	238	58										5	68	68	1911
434	12420	5	73-cb	345	59										5	69	69	1755
435	12420	5	74-cb	160	49										5	70	70	2383
436	12420	5	75-cb	104	54										5	71	71	2442
437	12420	5	77-cb	597	55										5	73	73	2443
438	12420	5	79-cb	109	62										5	75	75	2009
439	12420	5	80-cb	133	68										5	76	76	2443
440	12420	5	81-cb	[illegible]	62										5	77	77	2595
441	12420	5	82-cb	243	54										5	78	78	1934
442	12420	5	83-cb	269	57										5	79	79	2419
443	12440	4	1-1	331	54	75	49	24	95	48	51	59	11	6	4	1	1	1947
444	12440	4	2-1	327	64	78	42	27	159	100	53	77	24	12	4	2	2	2343
445	12440	4	2-2	327	64	78	42	27	137	76	55	74	19	10	4	3	3	2257
446	12440	4	3-1	223	65	72	31	20	251	147	58	72	38	21	4	4	4	3038
447	12440	4	3-2	223	65	72	31	20	286	173	65	72	36	24	1	5	5	[illegible]
448	12440	4	3-3	223	65	72	31	20	298	136	61	72	41	26	4	6	6	2371
449	12440	4	3-4	223	65	72	31	20	194	126	65	72	27	13	1	7	7	2554
450	12440	2	4-1	490	59	78	62	36	326	173	55	78	40	24		8	8	3056
451	12440	2	4-2	490	59	78	62	36	268	103	61	74	22	14	4	9	9	[illegible]
452	12440	1	5-1	262	69	76	34	24	145	85	59	73	17	11	4	10	10	3027
453	12440	4	6-1	267	65	75	36	23	660	501	58	77	112	65	8	11	11	2944
454	12440	4	6-2	267	65	75	36	23	164	95	58	74	22	13	4	12	12	2613
455	12440	4	6-3	267	65	75	36	23	544	347	64	76	72	46	2	13	13	2249
456	12440	4	7-1	267	64	73	37	23	552	358	65	78	71	46	9	14	14	2672
457	12440	4	7-2	267	64	73	37	23	236	151	64	75	31	20	4	15	15	2354
458	12440	4	8-1	230	63	78	29	19	251	161	64	73	33	21	4	16	16	2596
459	12440	4	8-2	230	63	78	29	19	164	109	66	79	21	14	1	17	17	2094
460	12440	4	8-3	230	63	78	29	19	187	123	66	79	24	16	1	18	18	2667
461	12440	8	9-1	499	62	78	64	40	475	276	58	80	59	35	8	19	19	3822
462	12440	4	10-1	349	61	75	47	28	151	78	52	70	22	11	4	20	20	3022
463	12440	4	10-2	349	61	75	47	28	199	115	58	78	26	15	4	21	21	3761
464	12440	4	10-3	349	61	75	47	28	189	116	61	73	26	16	4	22	22	[illegible]
465	12440	1	11-1	216	72	72	30	22	257	158	59	72	34	20	4	23	23	2595
466	12440	1	12-1	201	71	75	27	19	279	179	64	77	36	23	4	24	24	2754
467	12440	1	12-2	201	71	78	27	19	253	154	61	78	32	21	4	25	25	2755
468	12440	4	13-1	153	65	75	20	13	339	195	58	71	48	27	4	26	26	2307
469	12440	1	14-2	163	71	78	21	15	121	76	63	80	15	10	4	28	28	2614
470	12440	4	15-1	251	65	72	35	24	175	109	62	73	23	16	4	29	29	2963
471	12440	4	15-2	251	68	72	35	24	205	108	53	74	28	15	4	30	30	2186
472	12440	1	16-1	234	70	74	32	22	193	127	64	73	27	17	4	31	31	2459
473	12440	1	16-2	234	70	74	32	22	398	261	66	71	56	37	[illegible]	32	32	3974
474	12440	1	16-3	234	70	74	32	22	206	137	61	75	41	28	4	33	33	1962
475	12440	1	16-4	234	70	74	32	22	134	87	65	76	18	11	4	34	34	2037
476	12440	4	18-1	310	68	74	42	27	354	234	64	73	[illegible]	32	4	35	35	2478
477	12440	4	18-2	310	68	74	42	27	262	156	63	71	38	23	4	36	36	[illegible]
478	12440	4	19-1	263	61	76	48	29	311	[illegible]	65	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
479	12440	4	19-2	263	61	76	48	29	261	171	66	76	33	22	4	38	38	[illegible]
480	12440	4	20-1	302	68	76	41	28	[illegible]	235	60	72	49	27	4	39	39	2362
481	12440	4	21-1	209	68	76	25	19	205	127	62	72	28	18	4	40	40	2657
482	12440	4	21-2	209	68	76	28	19	289	194	64	72	40	25	4	41	41	[illegible]
483	12440	4	21-3	209	68	76	28	19	227	145	64	72	32	21	4	42	42	2376
484	12440	4	21-4	209	68	76	28	19	182	116	64	70	26	17	4	43	43	3326
485	12440	4	24-1	360	56	78	46	26	191	94	49	76	25	12	4	44	44	2045
486	12440	4	24-2	360	56	78	46	26	98	52	53	80	12	7	4	45	45	2573
487	12440	4	24-3	360	56	78	46	26	187	107	57	76	25	14	4	46	46	3126
488	12440	1	25-1	162	69	74	22	15	138	84	61	71	19	12	4	47	47	2631
489	12440	1	25-2	162	69	74	22	15	94	56	67	70	12	8	[illegible]	48	48	1741
490	12440	1	25-3	162	69	74	22	15	241	136	56	74	33	18	4	49	49	3037
491	12440	4	26-1	374	63	75	50	31	251	148	59	75	33	20	4	50	50	2645
492	12440	4	26-2	[illegible]	[illegible]	75	50	31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4	51	51	[illegible]

492	12440	4	26-2	374	65	75	30	31	242	149	62	79	33	21	4	51	51	2772
493	12440	4	27-1	130	61	73	18	11	165	101	61	73	23	14	4	52	52	2053
494	12440	1	29-1	231	70	72	32	22	232	142	61	78	30	18	4	53	53	2301
495	12440	1	29-2	231	70	72	32	22	310	171	55	78	40	22	4	54	54	2184
496	12440	1	29-3	231	70	72	32	22	239	153	64	76	31	20	4	55	55	3166
497	12440	8	30-1	467	62	76	61	38	167	110	66	72	23	15	1	56	56	1795
498	12440	8	30-2	467	62	76	61	38	279	194	70	71	39	27	4	57	57	2778
499	12440	8	30-3	467	62	76	61	38	235	161	69	72	33	22	1	58	58	2306
500	12440	4	31-1	238	59	73	33	19	243	160	66	72	34	22	1	59	59	3065
501	12440	4	31-2	238	59	73	33	19	135	95	63	70	19	12	4	60	60	2320
502	12440	4	31-3	238	59	73	33	19	209	134	64	70	30	19	4	61	61	3155
503	12440	4	31-4	238	59	73	33	19	173	115	66	74	23	16	1	62	62	2795
504	12440	4	32-1	256	65	72	36	23	304	178	59	76	40	25	4	63	63	2851
505	12440	4	32-2	256	65	72	36	23	287	253	66	80	48	29	4	64	64	2812
506	12440	4	33-1	248	68	74	33	19	281	174	62	77	36	23	4	65	65	3145
507	12440	4	33-2	248	68	74	33	19	164	103	63	76	21	13	4	66	66	3042
508	12440	4	34-1	144	63	72	20	13	277	166	69	76	36	25	4	67	67	2317
509	12440	4	35-1	168	67	72	23	16	229	146	64	72	32	20	4	68	68	2958
510	12440	4	35-2	168	67	72	23	16	192	124	65	72	27	17	1	69	69	2506
511	12440	4	35-3	168	67	72	23	16	115	77	67	70	16	11	1	70	70	2587
512	12440	4	35-4	168	67	72	23	16	100	65	65	70	14	9	4	71	71	2628
513	12440	4	36-1	257	67	74	35	23	377	245	65	78	45	31	1	72	72	2854
514	12440	4	37-1	212	65	74	29	18	145	84	59	80	18	14	4	73	73	2956
515	12440	4	37-2	212	65	74	29	18	118	78	66	79	15	10	1	74	74	2881
516	12440	4	38-1	271	64	72	38	24	247	148	60	80	31	19	4	75	75	2658
517	12440	4	38-2	271	64	72	38	24	289	223	61	76	51	31	4	76	76	2181
518	12440	4	39-1	149	68	75	20	14	106	66	62	70	15	9	4	77	77	2415
519	12440	4	39-2	149	68	75	20	14	272	158	58	79	34	20	4	78	78	2911
520	12440	4	39-3	149	68	75	20	14	246	144	59	79	31	18	4	79	79	2169
521	12440	4	40-1	189	66	72	26	17	486	295	61	80	60	37	6	80	80	2982
522	12440	4	40-2	189	66	72	26	17	138	80	58	79	17	10	4	81	81	2694
523	12440	4	40-3	189	66	72	26	17	274	173	63	77	36	22	4	82	82	3061
524	12440	4	41-1	261	64	72	36	23	352	203	58	75	47	27	4	83	83	2647
525	12440	4	41-2	261	64	72	36	23	196	129	66	78	28	17	1	84	84	2509
526	12440	4	42-1	220	58	72	31	18	231	147	64	72	32	20	4	85	85	2190
527	12440	4	42-2	220	58	72	31	18	447	271	61	76	59	36	8	86	86	2852
528	12440	4	42-3	220	58	72	31	18	329	212	64	75	43	29	4	87	87	2181
529	12440	4	43-1	265	60	74	36	21	359	227	67	77	44	29	1	88	88	2017
530	12440	4	43-2	265	60	74	36	21	260	163	63	77	34	21	4	89	89	2653
531	12440	4	44-1	265	64	78	47	30	245	141	57	76	33	19	4	90	90	3002
532	12440	4	44-2	265	64	78	47	30	168	96	54	74	23	13	4	91	91	3157
533	12440	8	45-1	497	68	76	77	48	329	192	57	83	39	22	1	92	92	2812
534	12440	8	45-2	497	68	76	77	48	559	324	58	81	71	41	3	93	93	2747
535	12440	8	45-3	497	68	76	77	48	281	177	63	77	36	23	4	94	94	3777
536	12440	8	46-1	519	61	72	72	44	414	254	61	75	55	34	1	95	95	2576
537	12440	8	46-2	519	61	72	72	44	257	165	64	77	35	22	4	96	96	2750
538	12440	4	47-1	292	60	76	39	24	198	120	61	75	25	15	4	97	97	2212
539	12440	4	48-1	272	60	77	48	26	133	75	56	76	18	10	4	98	98	2404
540	12440	4	48-2	272	60	77	48	26	279	165	61	77	37	19	4	99	99	2605
541	12440	4	48-3	272	60	77	48	26	152	94	61	77	20	12	4	100	100	2595
542	12440	4	50-1	210	67	76	28	18	377	229	61	76	50	30	4	101	101	2873
543	12440	4	50-2	210	67	76	28	18	338	196	58	77	43	26	4	102	102	2564
544	12440	4	50-3	210	67	76	28	18	228	134	59	78	29	17	4	103	103	2832
545	12440	1	51-1	198	69	76	26	18	241	152	63	72	33	21	4	104	104	2122
546	12440	1	51-2	198	69	76	26	18	180	128	61	71	24	17	4	105	105	2116
547	12440	1	51-3	198	69	76	26	18	427	256	59	76	58	34	4	106	106	2641
548	12440	4	52-1	171	66	78	22	14	205	125	60	75	27	18	1	107	107	3672
549	12440	4	52-2	171	66	78	22	14	252	158	62	74	34	21	4	108	108	3082
550	12440	4	53-1	125	57	78	16	9	290	180	63	70	41	26	4	109	109	2794
551	12440	4	54-1	244	55	72	34	19	234	142	61	74	32	19	4	110	110	3057
552	12440	4	54-2	244	55	72	34	19	370	223	60	76	49	29	4	111	111	2415
553	12440	4	55-1	130	65	72	18	12	288	174	60	70	41	25	4	112	112	3039
554	12440	4	55-2	130	65	72	18	12	176	104	59	71	25	15	4	113	113	2286
555	12440	4	55-3	130	65	72	18	12	212	123	58	74	29	17	4	114	114	2462
556	12440	2	56-1	449	61	76	59	36	257	160	68	78	30	21	1	115	115	2323
557	12440	2	56-2	449	61	76	59	36	189	111	66	76	22	15	1	116	116	1704
558	12440	2	57-3	449	61	76	59	36	85	50	59	73	11	7	4	117	117	2947

559	12440	4	57-1	370	59	78	47	28	159	97	61	73	22	13	4	116	118	2174
560	12440	4	57-2	370	59	78	47	28	259	160	62	74	35	22	4	119	119	2398
561	12440	4	58-1	333	62	78	43	26	138	85	62	76	18	11	4	120	120	1365
562	12440	4	59-1	309	64	78	40	25	364	217	60	75	49	29	4	121	121	2844
563	12440	4	59-2	309	64	78	40	25	231	140	61	80	29	18	4	122	122	2292
564	12440	4	60-1	288	65	72	37	24	264	166	63	76	35	22	4	123	123	2967
565	12440	4	60-2	288	65	72	37	24	457	301	66	78	60	40	9	124	124	2766
566	12440	4	61-1	282	66	78	36	24	197	129	65	75	26	17	1	125	125	2366
567	12440	4	61-2	282	66	78	36	24	273	168	62	75	36	22	4	126	126	2921
568	12440	4	62-1	220	63	74	30	19	294	181	62	75	39	24	4	127	127	2618
569	12440	4	62-2	220	63	74	30	19	368	178	58	76	41	27	4	128	128	2382
570	12440	4	62-3	220	63	74	30	19	430	259	59	81	55	32	5	129	129	2106
571	12440	4	63-1	284	58	73	39	23	150	66	51	70	19	9	4	130	130	2205
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573	12440	4	63-3	284	58	73	39	23	217	134	62	74	29	17	4	132	132	2222
574	12440	4	64-2	299	59	76	50	31	292	187	64	78	37	24	4	134	134	2783
575	12440	4	65-1	289	59	74	38	22	249	217	62	79	48	28	4	135	135	2127
576	12440	4	66-1	317	63	76	42	26	186	107	58	76	24	14	4	136	136	2078
577	12440	4	66-2	317	63	76	42	26	184	102	55	72	23	14	4	137	137	2381
578	12440	4	66-3	317	63	76	42	26	242	136	56	75	30	18	4	138	138	2884
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581	12440	4	67-3	216	65	72	30	20	155	94	61	70	19	12	4	141	141	2997
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583	12440	4	68-1	172	68	74	23	16	536	311	61	76	67	41	7	143	143	1572
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592	12440	4	73-1	370	58	78	47	27	327	211	65	74	44	29	1	152	152	2704
593	12440	4	73-2	370	58	78	47	27	272	147	54	76	36	19	4	153	153	2510
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596	12440	4	75-1	82	62	73	11	7	345	204	59	81	47	29	4	156	156	1917
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611	12440	5	83-cb	474	53										5	171	171	2771
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613	12440	5	85-cb	449	55										5	173	173	2757
614	12440	5	87-cb	151	61										5	175	175	2287
615	12440	5	88-cb	493	64										5	176	176	3019
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617	12440	5	90-cb	238	60										5	178	178	1897
618	12440	5	91-cb	164	75										5	179	179	1593
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621	12440	5	94-cb	252	57										5	182	182	2342
622	12440	5	95-cb	238	57										5	183	183	2320
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627	12440	5	100-cb	330	54										5	188	188	1237
628	12440	5	101-cb	563	55										5	189	189	2969
629	12440	5	102-cb	369	58										5	190	190	2040
630	12440	5	103-cb	652	59										5	191	191	2581
631	12440	5	104-cb	113	47										5	192	192	2516
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633	12440	5	106-cb	172	66										5	194	194	[illegible]
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654	12440	5	129-cb	219	68										5	217	217	2775
655	12440	5	130-cb	254	65										5	218	218	2340
656	12440	5	131-cb	359	62										5	219	219	2226
657	12440	5	132-cb	296	61										5	220	220	2735
658	12440	5	133-cb	253	61										5	221	221	3391
659	12440	5	134-cb	198	69										5	222	222	1997
660	12440	5	135-cb	283	67										5	223	223	2919
661	12440	5	136-cb	474	63										5	224	224	2413
662	12440	5	137-cb	117	73										5	225	225	3046
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667	12209	1	2-1	157	64	72	22	14	275	158	67	70	39	22	4	3	3	2144
668	12209	1	2-2	157	64	72	22	14	221	137	62	68	33	20	4	4	4	2104
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672	12209	4	3-3	182	53	72	25	13	191	112	59	60	24	14	4	8	8	[illegible]
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688	12209	3	10-1	386	60	72	54	32	269	153	57	74	36	21	4	24	24	2253
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693	12209	4	13-1	274 55 77	36	20	267	160	60	72	37	22	4	29	29 3130
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695	12209	4	14-1	245 59 72	34	20	310	202	65	72	43	28	4	31	31 2826
696	12209	4	14-2	245 59 72	34	20	304	179	59	80	38	22	4	32	32 2972
697	12209	4	15-1	318 64 77	41	26	245	161	66	70	35	23	4	33	33 2687
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699	12209	8	16-1	685 59 72	95	56	230	140	61	72	32	19	4	35	35 2793
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701	12209	4	17-1	254 59 77	33	19	221	126	57	74	30	17	4	37	37 2199
702	12209	3	18-1	347 62 72	48	30	416	250	61	72	55	35	8	39	39 2213
703	12209	3	18-2	347 62 72	48	30	212	143	70	70	30	21	4	40	40 2616
704	12209	1	19-1	296 64 77	38	25	192	123	64	72	27	17	4	41	41 2597
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707	12209	4	20-1	327 60 72	45	27	265	156	59	72	38	22	4	44	44 2971
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709	12209	4	21-1	312 58 72	29	17	223	141	63	71	31	20	4	46	46 2599
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720	12209	4	25-3	372 59 82	45	27	112	67	60	72	16	9	4	57	57 2630
721	12209	4	29-1	395 62 77	40	25	323	191	59	73	44	26	4	58	58 2048
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723	12209	4	30-1	326 61 72	45	28	248	155	60	71	35	22	4	60	60 2349
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765	12209	4	51-2	252	61	77	33	20	353	225	64	80	44	28	4	102	102	2760
766	12209	5	52-cb	235	58										5	103	103	2477
767	12209	5	53-cb	389	51										5	104	104	2189
768	12209	5	54-cb	232	64										5	105	105	2782
769	12209	5	55-cb	157	41										5	106	106	[illegible]
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775	12209	5	61-cb	422	59										5	112	112	[illegible]
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779	12209	5	65-cb	[illegible]	51										5	116	116	[illegible]
780	12209	5	66-cb	427	58										5	117	117	[illegible]
781	12209	5	67-cb	273	59										5	118	118	[illegible]
782	12209	5	68-cb	131	59										5	119	119	[illegible]
783	12209	5	69-cb	463	57										5	120	120	[illegible]
784	12209	5	70-cb	346	48										5	121	121	2026
785	12209	5	71-cb	582	41										5	122	122	[illegible]
786	12209	5	72-cb	190	53										5	123	123	2598
787	12209	5	73-cb	265	57										5	124	124	2371
788	12209	5	74-cb	138	57										5	125	125	3717
789	12209	5	75-cb	472	52										5	126	126	2462
790	12209	5	76-cb	431	59										5	127	127	2571
791	12209	5	77-cb	299	55										5	128	128	3017
792	12209	5	78-cb	178	54										5	129	129	2009
793	12209	5	79-cb	360	50										5	130	130	2306
794	12209	5	80-cb	87	41										5	131	131	1655
795	12209	5	81-cb	518	60										5	132	132	[illegible]
796	12209	5	82-cb	340	53										5	133	133	[illegible]
797	12209	5	83-cb	255	60										5	[illegible]	[illegible]	[illegible]
798	12209	5	84-cb	338	57										5	[illegible]	135	[illegible]
799	12209	5	85-cb	215	54										5	[illegible]	[illegible]	[illegible]
800	12209	5	86-cb	237	56										5	[illegible]	[illegible]	[illegible]
801	12209	5	87-cb	226	51										5	[illegible]	[illegible]	[illegible]
802	12209	5	88-cb	427	55										5	[illegible]	[illegible]	[illegible]
803	12209	5	89-cb	144	58										5	[illegible]	[illegible]	[illegible]
804	12209	5	90-cb	392	49										5	[illegible]	[illegible]	[illegible]
805	12209	5	91-cb	[illegible]	52										5	[illegible]	[illegible]	[illegible]
806	12209	5	92-cb	232	63										5	[illegible]	[illegible]	[illegible]
807	12209	5	93-cb	234	56										5	[illegible]	144	[illegible]
808	12209	5	[illegible]	413	52										5	[illegible]	[illegible]	[illegible]
809	12209	5	[illegible]	270	64										5	[illegible]	[illegible]	[illegible]
810	12209	5	[illegible]	214	55										5	[illegible]	[illegible]	[illegible]
811	12209	5	[illegible]	142	58										5	[illegible]	[illegible]	[illegible]
812	12209	5	102-cb	366	61										5	153	153	[illegible]
813	12209	5	103-cb	354	58										5	154	154	[illegible]
814	12209	5	104-cb	145	45										5	155	155	2547
815	12209	5	105-cb	214	66										5	156	156	[illegible]
816	12209	5	106-cb	435	54										5	157	157	1791
817	12209	5	107-cb	120	57										5	158	158	2953
818	12209	5	108-cb	153	64										5	159	159	3075
819	12209	5	109-cb	318	55										5	160	160	[illegible]
820	12209	5	110-cb	402	59										5	161	161	2089
821	12209	5	111-cb	189	61										5	162	162	3059

Data file [illegible]
Title: Estudio de fotoperiodo [illegible] cultivares Palmira [illegible]

Function: PRLIST
Data case no. 721 to 912
Without selection

0 4 Numero de parcela
1 1 Numero de tratamiento
2 2 Dias a floracion
3 1 Lectura de [illegible]
4 2 Dias a madurez
5 2 Nudo de primera [illegible]
6 3 Longitud de [illegible]
7 2 Numero de [illegible]
8 3 Numero de [illegible]
9 2 Numero de [illegible]
10 2 Numero de [illegible]
11 2 Numero de vainas por [illegible]
12 3 Peso total por planta [illegible]
13 3 Peso de semilla por [illegible]
14 2 Indice de [illegible]
15 2 Numero de [illegible]
16 3 [illegible]
17 2 Contenido [illegible]
18 4 Rendimiento [illegible]
19 1 Bloque (repeticion)
20 1 Fotoperiodo
21 1 Clase de soporte
22 3 Numero de semillas en 15 vainas
23 3 Peso de semilla de 15 vainas en gramos x 10
24 2 Peso de semilla en centigramos
25 2 Numero de semillas por vaina *10
26 2 Duracion del llenado de vainas
27 2 Rendimiento por dia (kg ha-1 dia-1)

CAS NUM.	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
721	1101	3	42	2	78	8	35	10	14	5	8	15	133	83	62	87	1234	14	2472	1	1	1	83	186	22	55	36	31
722	1102	2	42	2	79	7	45	5	15	4	6	10	121	75	61	88	1341	17	2578	1	1	1	97	232	22	64	37	32
723	1103	4	39	4	76	7	67	18	13	4	9	12	131	93	63	87	1073	14	2181	1	1	1	101	223	22	67	38	28
724	1104	8	42	5	72	8	47	11	13	5	6	11	70	44	62	94	873	14	1725	1	1	1	81	153	18	54	30	23
725	1105	5	42	4	79	7	41	9	16	3	7	12	83	52	62	89	1003	18	1908	1	1	1	95	222	22	63	37	24
726	1106	1	42	4	79	8	48	13	18	5	10	15	103	69	66	87	1123	14	2246	1	1	1	102	218	21	68	37	28
727	1107	6	37	5	75	7	38	20	15	5	9	13	89	61	68	95	728	20	1408	1	1	1	77	136	17	51	38	18
728	1108	7	41	3	79	7	46	14	16	4	7	13	107	89	64	94	1216	15	2434	1	1	1	107	247	22	[illegible]	38	[illegible]
729	1201	4	39	3	75	7	55	10	13	4	6	9	105	73	66	86	973	14	1566	1	1	1	97	194	22	55	36	26
730	1202	7	39	4	76	7	59	12	14	4	8	11	116	76	65	96	1193	16	2279	1	1	1	103	228	22	66	37	24
731	1203	5	42	4	82	7	45	6	15	3	7	10	101	64	63	70	1125	16	2190	1	1	1	84	204	24	61	40	26
732	1204	2	41	3	78	7	50	9	15	4	9	14	115	72	61	80	1135	12	2221	1	1	1	73	190	21	57	37	23
733	1205	8	42	5	72	8	50	16	12	4	8	12	79	46	60	91	612	16	1523	1	1	1	93	155	17	51	33	22
734	1206	6	38	5	75	5	46	16	13	4	3	10	72	45	62	72	519	19	1523	2	1	1	84	161	19	56	37	2
735	1207	3	42	2	79	7	46	9	15	4	8	15	101	52	62	99	1115	15	2271	1	1	1	91	207	21	61	37	25
736	1208	1	43	5	79	8	57	17	18	6	11	16	127	87	67	92	1072	14	2172	1	1	1	87	195	19	60	36	27
737	1301	8	42	5	72	9	45	7	12	4	6	9	59	57	62	95	727	14	1461	1	1	1	81	151	18	54	30	2
738	1302	2	42	3	78	7	52	6	15	4	6	9	81	51	60	90	1101	14	2215	1	1	1	87	192	22	58	32	22
739	1303	7	41	3	79	8	49	13	18	5	5	10	124	72	61	96	1197	14	2227	1	1	1	91	213	22	64	32	23
740	1304	5	42	4	79	7	44	10	14	4	6	11	137	69	64	91	1035	15	2140	1	1	1	92	222	24	[illegible]	37	22
741	1305	4	39	5	72	6	47	12	14	3	7	12	85	56	65	83	934	14	1956	1	1	1	75	225	22	65	33	2
742	1306	1	42	4	79	7	59	10	13	4	8	13	104	71	66	93	1099	17	2208	1	1	1	107	225	21	71	37	2
743	1307	6	39	5	75	6	41	20	13	6	12	18	115	77	66	90	823	14	1705	1	1	1	94	162	19	56	36	22
744	1308	3	42	3	79	8	42	10	14	4	8	15	119	75	63	90	1187	16	2312	1	1	1	87	187	21	58	37	25
745	2101	5	42	3	87	7	44	5	14	3	5	10	95	53	62	93.	987	16	1902	1	1	2	89	211	22	57	41	22
746	2102	6	38	1	87	7	29	7	15	5	7	10	40	22	55	93	634	15	1595	1	1	2	81	152	18	54	45	19
747	2103	1	42	1	85	8	57	7	23	4	12	19	161	109	67	87	1513	14	3037	1	1	2	86	197	22	57	43	35
748	2104	3	43	2	84	7	46	7	14	4	8	14	127	77	60	90	1149	15	2284	1	1	2	96	213	22	64	41	27
749	2105	8	42	3	72	6	42	9	11	4	8	15	93	65	65	94	889	14	1790	1	1	2	74	136	15	49	39	24
750	2106	4	39	4	76	6	49	13	12	4	8	13	104	67	64	75	829	13	1714	1	1	2	94	202	22	62	37	22
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752	2108	7	41	3	72	7	46	6	15	4	5	10	116	73	62	88	782	9	1796	1	1	2	97	217	22	64	31	22
753	2201	6	38	1	82	7	41	18	17	4	11	16	89	59	66	89	861	15	1698	2	1	2	92	170	26	54	45	26
754	2202	2	42	1	79	7	42	6	15	4	7	11	115	75	65	92	1143	14	2276	2	1	2	91	222	24	62	37	29
755	2203	3	42	2	78	8	42	12	13	4	7	14	115	75	65	80	1201	17	2222	2	1	2	96	189	21	61	37	27
756	2204	5	42	4	79	8	46	12	15	4	10	14	123	78	62	85	1039	12	2189	2	1	2	97	196	22	58	37	26
757	2205	4	39	3	73	7	61	16	15	4	10	14	116	73	62	87	1103	17	2201	2	1	2	76	167	21	52	38	22
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759	2207	1	42	1	98	8	52	9	23	4	13	19	179	125	69	87	1452	15	2982	2	1	2	115	227	21	71	36	22
760	2208	8	42	2	74	9	41	10	13	4	10	14	79	52	63	96	804	14	1624	2	1	2	75	133	17	51	32	22
761	2301	7	40	2	75	7	45	8	16	3	7	10	58	37	64	57	962	15	1921	2	1	2	[illegible]	247	22	67	33	24
762	2302	3	43	3	87	7	44	12	15	4	3	14	117	72	66	93	1207	15	2363	2	1	2	102	231	21	55	40	28
763	2303	8	42	2	72	9	48	12	13	6	9	14	97	57	64	85	851	12	1741	2	1	2	83	166	20	57	30	24
764	2304	2	43	2	73	7	48	3	14	3	4	11	107	68	62	58	1141	14	2272	2	1	2	91	217	22	[illegible]	35	27
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767	2307	4	39	2	78	6	44	12	14	4	9	14	87	50	62	82	1171	17	2214	2	1	2	91	201	26	54	33	22
768	2308	6	39	1	55	6	47	14	21	4	12	17	141	59	63	72	1228	17	2352	2	1	2	84	212	19	72	41	27
769	3101	3	42	3	82	7	43	13	15	4	7	17	173	83	60	73	1140	15	2277	1	2	1	101	174	17	67	38	27
770	3102	1	43	4	81	5	56	17	15	5	9	12	109	69	62	52	[illegible]	13	1815	1	2	1	95	[illegible]	16	65	38	22
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772	3104	4	41	3	84	9	45	26	15	7	11	17	59	51	51	35	968	15	1906	1	2	1	95	204	22	32	40	22
773	3105	2	46	2	85	9	40	11	14	5	11	15	149	89	59	94	1372	15	2737	1	2	1	133	204	21	66	37	31
774	3106	8	45	3	62	9	54	15	14	8	11	16	122	74	60	90	1137	16	2250	1	2	1	74	203	21	62	37	27
775	3107	7	38	3	89	7	56	13	16	4	7	12	125	70	56	90	1124	17	2131	1	2	1	114	232	20	76	51	24
776	3108	5	42	3	85	8	53	8	15	3	8	13	128	73	57	94	944	8	2040	1	2	1	55	192	22	51	43	24
777	3201	2	46	2	96	8	47	17	18	5	8	17	172	105	61	88	1289	18	2585	2	2	1	85	196	22	62	40	29
778	3202	4	41	4	84	7	54	15	16	3	7	11	116	70	60	93	1145	15	2277	2	2	1	106	287	27	70	43	27
779	3203	7	40	3	85	8	54	12	16	4	7	11	119	73	61	91	1155	19	2194	2	2	1	92	197	21	61	43	25
780	3204	8	45	4	80	9	56	13	14	7	8	14	104	60	57	91	1064	15	2088	2	2	1	86	162	19	57	35	26
781	3205	5	43	3	83	6	44	6	13	3	5	8	94	50	59	89	1066	14	2101	2	2	1	82	173	23	54	40	25
782	3206	1	43	5	80	9	53	12	16	6	6	10	67	38	56	90	961	17	1819	2	2	1	90	176	19	60	37	22

783	3207	6	40	5	85	8	32	16	20	5	9	15	89	53	59	78	347	8	809	2	2	1	84	138	16	56	45	9
784	3208	3	40	2	80	7	46	10	14	4	9	17	152	95	62	90	1437	15	2835	2	2	1	86	160	18	57	40	35
785	3301	2	46	2	85	8	48	6	17	4	7	11	121	74	61	81	1289	9	2729	3	2	1	97	218	22	64	39	32
786	3302	8	45	4	82	9	53	12	13	7	7	11	85	51	60	84	858	17	1659	3	2	1	80	170	21	53	37	20
787	3303	5	42	3	82	8	54	15	15	4	9	14	144	92	63	91	1197	18	2322	3	2	1	90	212	23	60	40	28
788	3304	3	42	3	82	7	48	8	15	4	7	12	99	62	62	87	1104	17	2126	3	2	1	97	210	21	64	40	25
789	3305	1	43	4	76	9	57	20	15	6	11	18	127	71	55	87	838	16	1393	3	2	1	97	201	20	64	33	18
790	3306	6	39	5	95	9	40	35	16	6	9	14	75	39	52	88	408	9	693	3	2	1	79	127	16	52	46	10
791	3307	4	42	3	82	8	61	20	15	5	7	11	103	62	60	82	1025	19	1939	3	2	1	93	209	22	62	40	23
792	3308	7	41	3	89	9	48	16	15	6	7	13	149	90	60	92	1072	15	2169	3	2	1	101	221	21	67	48	24
793	4101	7	40	1	86	7	66	18	21	4	11	15	108	69	63	90	1186	15	2324	1	2	2	101	148	14	57	46	27
794	4102	6	42	1	89	10	59	54	27	16	12	21	134	64	47	86	469	9	1059	1	2	2	[illegible]	[illegible]	[illegible]	[illegible]	47	[illegible]
795	4103	1	43	1	86	8	59	9	24	6	11	20	188	119	63	91	1487	15	2975	1	2	2	96	197	20	[illegible]	45	33
796	4104	4	42	1	86	8	62	18	19	5	10	16	189	119	63	87	1198	14	2490	1	2	2	117	290	24	[illegible]	44	28
797	4105	8	45	3	82	10	58	15	13	6	12	21	158	101	63	93	1023	13	2137	1	2	2	75	167	20	53	37	26
798	4106	2	46	3	55	9	49	14	19	5	10	18	174	101	58	90	1561	14	3009	1	2	2	101	234	22	[illegible]	[illegible]	25
799	4107	3	42	3	52	7	43	5	13	4	5	10	94	60	63	89	1157	15	2258	1	2	2	64	160	17	56	40	27
800	4108	5	40	3	82	7	43	7	16	3	5	10	78	57	59	92	1293	17	2566	1	2	2	85	212	[illegible]	[illegible]	[illegible]	[illegible]
801	4201	2	46	2	87	9	54	7	18	4	6	12	131	79	60	94	1032	15	2595	2	2	2	97	195	[illegible]	[illegible]	41	29
802	4202	7	41	1	88	9	55	16	24	5	11	18	191	105	58		1559	19	2952	2	2	2	[illegible]	219	21	[illegible]	[illegible]	[illegible]
803	4203	5	43	1	84	7	52	8	14	7	7	13	116	72	61	96	1059	13	2515	2	2	2	84	196	[illegible]	[illegible]	41	[illegible]
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805	4205	8	45	1	82	9	57	18	14	9	11	20	171	107	62	77	923	14	1906	2	2	2	86	171	[illegible]	[illegible]	[illegible]	[illegible]
806	4206	4	43	1	86	9	73	16	21	6	11	18	172	110	57	91	1026	14	2194	2	2	2	[illegible]	177	[illegible]	[illegible]	[illegible]	[illegible]
807	4207	6	42	1	88	12	44	23	25	6	12	19	132	73	59	87	577	15	1718	2	2	2	[illegible]	122	16	[illegible]	41	[illegible]
808	4208	3	43	1	92	9	51	12	13	6	10	17	127	63	55	91	1169	15	2225	2	2	2	[illegible]	104	[illegible]	[illegible]	[illegible]	[illegible]
809	4301	2	46	1	87	9	56	8	17	4	7	14	140	91	57	90	1474	15	2525	2	2	2	105	222	[illegible]	[illegible]	[illegible]	[illegible]
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811	4303	7	41	1	98	9	55	13	20	6	10	16	156	101	60	88	1150	15	2378	2	2	2	108	228	21	[illegible]	47	26
812	4304	5	42	1	84	9	56	16	17	3	7	11	111	67	60	94	1156	16	2250	3	2	2	87	171	21	58	42	26
813	4305	8	45	1	83	7	63	12	13	6	10	15	122	73	59	92	1189	14	2362	3	2	2	80	147	18	53	38	22
814	4306	6	42	1	70	11	46	37	28	8	16	28	187	108	57	55	842	8	1692	3	2	2	94	137	18	62	48	21
815	4307	1	43	1	88	10	61	12	25	5	12	23	218	143	65	91	1716	19	3120	3	2	2	107	264	24	71	45	35
816	4308	4	41	1	85	9	64	16	16	5	9	15	162	99	61	90	1717	14	2655	3	2	2	107	225	21	65	44	31
817	5101	6	39	5	81	8	57	25	16	6	8	11	64	36	56	88	676	17	1302	1	3	1	86	156	19	57	42	16
818	5102	1	42	5	81	8	53	17	15	5	9	15	103	66	64	94	945	15	1894	1	3	1	106	233	21	[illegible]	39	30
819	5103	3	42	4	92	7	55	14	15	4	9	14	105	65	60	97	1084	14	2162	1	3	1	97	195	20	[illegible]	46	26
820	5104	2	44	2	82	7	54	6	15	4	6	11	118	74	62	90	1127	16	2230	1	3	1	92	162	21	61	38	27
821	5105	8	43	2	75	9	60	19	13	8	12	16	105	61	57	93	776	14	1551	1	3	1	96	177	18	[illegible]	32	21
822	5106	7	41	3	81	8	56	13	16	5	6	10	109	63	58	98	1032	15	2079	1	3	1	[illegible]	223	[illegible]	[illegible]	[illegible]	26
823	5107	5	42	3	80	7	55	8	15	4	6	11	81	47	55	90	1073	15	2082	1	3	1	84	174	22	[illegible]	41	25
824	5108	4	41	4	81	7	70	12	14	4	7	10	97	62	63	95	919	15	1835	1	3	1	[illegible]	212	[illegible]	[illegible]	[illegible]	[illegible]
825	5201	4	41	2	76	7	49	16	14	4	11	16	117	74	63	79	761	14	1555	2	3	1	87	212	[illegible]	55	35	19
826	5202	3	41	2	75	8	52	17	14	5	10	17	129	75	58	86	1116	15	2221	2	3	1	67	165	[illegible]	[illegible]	38	[illegible]
827	5203	6	42	5	85	7	49	33	15	6	11	16	87	50	57	84	437	8	784	2	3	1	[illegible]	147	16	54	40	11
828	5204	1	43	4	81	11	59	25	23	7	12	25	140	86	61	89	1340	15	2494	2	3	1	81	177	[illegible]	[illegible]	32	25
829	5205	5	43	3	82	7	54	7	14	3	5	9	90	51	56	85	1097	15	2122	2	3	1	85	128	[illegible]	[illegible]	39	25
830	5206	7	41	3	77	9	57	18	16	6	8	13	130	80	62	85	1151	15	2271	2	3	1	109	227	[illegible]	[illegible]	[illegible]	[illegible]
831	5207	8	43	5	75	8	44	10	11	6	7	11	74	49	66	87	854	14	1720	2	3	1	[illegible]	182	19	51	22	22
832	5208	2	44	3	79	7	49	9	15	4	6	11	132	[illegible]	58	85	1370	14	2657	2	3	1	[illegible]	192	[illegible]	[illegible]	35	[illegible]
833	5301	4	41	5	78	9	52	14	13	5	9	16	72	39	54	53	630	14	1061	3	3	1	93	127	18	52	28	16
834	5302	1	43	4	79	8	37	13	17	5	11	21	159	103	64	83	947	19	1566	3	3	1	75	164	[illegible]	[illegible]	26	24
835	5303	2	44	3	79	6	51	17	17	6	9	17	157	94	59	81	1145	15	2252	3	3	1	[illegible]	[illegible]	[illegible]	[illegible]	73	28
836	5304	8	43	4	76	8	48	11	13	5	9	14	91	56	63	91	1097	15	2174	3	3	1	65	134	[illegible]	[illegible]	[illegible]	27
837	5305	6	41	5	80	6	52	26	16	4	8	12	78	45	57	85	779	22	1420	3	3	1	[illegible]	172	[illegible]	[illegible]	[illegible]	[illegible]
838	5306	5	43	3	81	8	50	9	13	5	6	11	111	66	57	86	1145	14	2452	3	3	1	75	191	[illegible]	[illegible]	[illegible]	[illegible]
839	5307	7	42	3	81	6	45	8	15	3	7	10	103	64	62	77	1266	15	2480	3	3	1	110	246	21	75	39	30
840	5308	3	43	2	94	8	45	17	14	5	9	16	134	80	59	75	1231	15	2525	3	3	1	101	214	21	57	41	[illegible]
841	6101	6	41	1	90	10	57	44	24	13	16	30	229	143	62	76	1314	8	2893	1	3	2	79	148	18	52	49	32
842	6102	2	43	3	82	7	54	11	15	4	9	16	134	83	61	81	1057	15	2125	1	3	2	65	201	23	56	37	25
843	6103	7	41	1	84	8	67	13	20	5	11	18	162	104	64	96	1414	15	2817	1	3	2	90	209	20	60	43	33
844	6104	3	43	1	84	8	46	10	15	4	8	16	122	74	60	92	1311	13	2620	1	3	2	75	155	19	52	41	31
845	6105	4	40	1	82	7	70	9	14	4	9	12	109	71	65	86	1133	13	2304	1	3	2	90	226	25	60	42	28
846	6106	1	42	1	85	9	59	5	25	4	9	18	159	101	63	90	1724	14	3414	1	3	2	85	193	22	55	43	49
847	6107	5	40	1	83	7	61	5	16	4	6	12	121	75	61	94	1152	14	2327	1	3	2	97	209	21	64	43	28
848	6108	9	43	2	76	8	52	9	14	4	8	15	101	65	64	89	805	16	1606	1	3	2	78	169	21	52	33	21

849	6201	3	43	1	84	7	48	6	14	3	6	11	100	62	62	90	1321	14	2596	2	3	2	89	198	22	59	41	30
850	6202	7	42	1	79	21	56	11	16	9	13	9	139	88	63	85	1276	14	2574	2	3	2	111	260	23	74	37	32
851	6203	6	41	1	89	8	49	17	22	5	9	18	121	77	63	89	1608	17	3040	2	3	2	78	133	17	52	48	34
852	6204	8	43	2	76	7	55	9	12	4	8	13	87	52	59	83	539	14	1116	2	3	2	78	139	17	52	33	14
853	6205	1	43	1	85	8	60	8	24	4	10	17	167	111	66	91	1508	16	2975	2	3	2	105	232	22	70	42	35
854	6206	2	42	1	82	7	58	7	17	4	8	15	162	101	62	91	1210	14	2466	2	3	2	86	213	24	57	40	30
855	6207	5	42	1	82	7	53	8	15	3	7	12	127	80	62	88	1200	15	2379	2	3	2	83	199	23	55	40	29
856	6208	4	41	2	76	7	60	14	14	3	9	13	100	61	61	84	1134	15	2234	2	3	2	100	256	25	66	35	29
857	6301	3	43	3	82	8	48	13	15	4	9	16	143	90	62	92	1330	17	2578	3	3	2	92	197	21	61	39	31
858	6302	4	41	2	76	6	56	12	13	4	9	13	86	53	61	90	889	14	1731	3	3	2	86	203	23	57	35	23
859	6303	6	41	1	85	9	54	22	22	4	12	18	136	86	63	88	1494	18	2867	3	3	2	86	150	17	57	44	33
860	6304	8	43	1	76	7	61	12	13	5	6	10	71	43	60	91	1016	15	1963	3	3	2	72	134	18	48	33	25
861	6305	2	43	1	83	7	55	6	18	3	8	16	154	91	59	83	1251	13	2551	3	3	2	95	215	22	63	40	30
862	6306	1	43	1	85	8	60	7	25	4	9	12	127	82	64	88	1631	14	3212	3	3	2	104	229	22	69	42	37
863	6307	7	42	1	84	9	50	13	23	6	9	17	181	110	60	97	1529	16	3008	3	3	2	106	212	21	66	42	35
864	6308	5	42	1	83	5	34	7	16	3	7	12	118	73	61	90	807	15	1658	3	3	2	105	257	24	[illegible]	41	19
865		1	42	4	79	8	55	14	16	5	10	15	110	74	67	90			2195		6	1			20	67	37	27
866		2	42	3	78	7	49	7	15	4	7	11	107	66	61	84			2235		1	1			22	62	36	29
867		3	42	2	79	8	41	10	14	4	8	15	125	80	62	87			2323		1	1			21	58	37	29
868		4	39	4	74	7	56	14	13	4	7	10	107	71	66	87			2029		1	1			22	67	36	27
869		5	42	4	80	7	43	8	15	3	7	11	97	62	63	90			2045		1	1			24	61	38	25
870		6	38	5	75	6	42	22	14	5	10	15	72	43	57	93			1552		1	1			18	54	37	21
871		7	40	3	78	7	51	14	16	4	8	12	124	79	63	95			2073		1	1			22	63	35	29
872		8	42	5	71	8	47	9	13	4	7	11	69	43	61	93			1590		1	1			18	54	29	22
873		1	42	1	86	8	53	8	23	4	13	20	171	107	63	87			2674		1	2			[illegible]	66	44	31
874		2	42	2	79	7	45	6	15	4	7	12	117	74	63	85			2304		1	2			22	11	37	29
875		3	43	2	82	7	44	10	14	4	8	14	120	75	62	93			2225		1	2			21	63	37	23
876		4	39	3	77	6	51	14	14	4	9	14	106	65	63	81			2043		1	2			22	56	38	26
877		5	42	3	82	8	46	8	15	4	7	11	101	63	62	89			2073		1	2			23	55	40	25
878		6	38	1	84	7	38	13	18	4	10	14	77	50	63	89			1682		1	2			19	55	46	22
879		7	41	3	78	7	49	10	16	4	7	12	118	74	63	91			1912		1	2			22	67	37	24
880		8	42	2	73	8	44	10	12	5	9	14	91	60	65	93			1731		1	2			18	51	31	23
881		1	43	4	79	9	55	16	15	6	9	14	101	59	58	86			1692		2	1			19	63	36	21
882		2	46	2	85	8	45	10	16	5	7	14	147	89	60	88			2649		2	1			21	62	39	31
883		3	41	3	81	7	47	11	15	4	8	15	128	79	61	83			2413		2	1			19	63	40	29
884		4	41	3	83	8	55	18	15	5	8	12	106	61	57	87			2041		2	1			24	65	42	24
885		5	42	3	83	7	50	10	14	3	7	12	119	72	60	91			2154		2	1			23	57	41	25
886		6	43	5	85	9	37	28	19	6	10	15	97	42	48	83			973		2	1			16	53	42	10
887		7	40	3	88	8	53	14	16	5	7	12	131	78	59	88			2176		2	1			21	68	40	24
888		8	45	4	81	9	54	13	14	7	9	14	104	62	59	88			1992		2	1			20	57	35	24
889		1	43	1	87	9	58	9	24	6	11	19	186	117	63	91			3165		2	2			21	65	44	36
890		2	46	2	86	9	51	10	18	4	8	15	149	87	58	88			2841		2	2			21	67	42	32
891		3	43	2	82	8	47	10	14	5	8	14	111	65	59	85			2190		2	2			19	61	37	26
892		4	42	1	86	9	66	17	19	5	10	16	174	105	60	87			2442		2	2			22	67	44	25
893		5	42	2	83	8	50	8	16	3	6	11	108	65	59	94			2444		2	2			22	57	41	23
894		6	42	1	89	11	50	37	27	10	13	22	151	57	34	86			1551		2	2			12	62	47	17
895		7	41	1	87	5	59	16	22	5	11	16	152	92	61	87			2508		2	2			19	69	42	27
896		8	45	2	82	8	59	15	20	7	11	19	151	94	61	87			2141		2	2			19	54	37	26
897		1	43	4	80	9	56	19	19	6	10	21	174	85	53	89			1955		3	1			21	57	37	24
898		2	44	3	80	7	31	9	16	5	7	12	126	76	60	83			2095		3	1			21	59	36	25
899		3	42	3	82	9	51	16	14	5	9	16	124	73	59	82			2439		3	1			21	57	41	27
900		4	41	4	78	7	57	14	14	4	9	12	95	55	56	82			1638		3	1			22	59	37	22
901		5	43	3	82	7	52	8	14	4	6	16	94	55	59	87			2228		3	1			27	59	40	27
902		6	41	5	83	7	32	25	16	5	9	13	76	44	57	86			1255		3	1			18	57	42	14
903		7	41	3	80	8	53	17	16	5	7	11	114	70	61	92			2317		3	1			22	71	37	25
904		8	43	4	75	8	51	13	12	6	7	14	90	56	62	90			1735		3	1			19	54	32	23
905		1	43	1	85	8	60	7	25	4	9	16	151	93	64	90			3206		3	2			22	65	42	37
906		2	43	2	82	7	56	8	17	4	8	16	150	92	61	95			2381		3	2			23	59	39	29
907		3	43	2	83	8	47	10	15	4	8	14	122	75	61	91			2595		3	2			21	57	40	31
908		4	41	2	78	7	62	12	14	4	9	13	98	62	62	87			2106		3	2			24	61	37	27
909		5	41	1	83	7	56	7	16	3	7	12	122	76	61	91			2121		3	2			23	62	42	25
910		6	41	1	88	9	54	28	23	7	12	22	162	102	63	84			2913		3	2			17	54	47	33
911		7	42	1	82	13	58	12	20	7	11	15	161	101	62	91			2800		3	2			22	67	40	34
912		8	43	2	76	7	56	10	13	4	7	13	86	53	61	88			1562		3	2			19	51	33	20

Data file ef80p130
Title: est fotop 80 gen Palm 12+18

Function: PRLIST
Data case no. 1 to 62
Without selection

0 3 No de entrada del genotipo
1 2 Numero de dias a floracion
2 1 Tamano de hojas a los 40 dias
3 3 Posicion de la primera flor en nudos 12 [illegible]
4 3 Posicion de la primera inflorescencia en el [illegible]
5 3 Numero de nudos en el tallo 12 h
6 3 Numero de nudos en las ramas 12 h
7 3 Numero de vainas por planta 12 h
8 3 Numero de racimos por planta 12 h
9 3 Longitud de tallo nud 12 en [illegible]
10 2 Numero de dias a madurez fisiologica 12 [illegible]
11 4 Peso total de 5 plantas gms 12
12 3 Peso de raiz 5 plantas gms 12 h
13 3 Peso de semilla 5 plantas gms 12 h
14 2 Indice de cosecha 12 h
15 2 Rel. raiz parte aerea corc. 12 h
16 2 Peso de 100 semillas grs 12 h
17 2 Semillas por vaina 12 h
18 3 No de ramas por planta 12 h
19 2 No de dias a floracion 18 h
20 1 Tamano de hoja 40 dias 18 h
21 3 Posicion de la primera flor en nudos 18 h
22 3 Posic primera inflorescencia tallo 18 h
23 3 No de nudos en el tallo 18 h
24 3 No de nudos en las ramas 18 h
25 3 Vainas por planta 18 h
26 3 Racimos por planta 18 h
27 3 Longitud del tallo [illegible]

CAS NUM.	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	1	35	1	51	71	142	209	175	111	457	68	[illegible]	62	65	52	5	15	[illegible]	42	76	[illegible]	[illegible]	74	[illegible]	131	145	[illegible]	456
2	2	37	1	55	79	139	281	195	126	466	74	[illegible]	64	99	56	5	20	47	55	78	1	[illegible]	[illegible]	174	[illegible]	[illegible]	[illegible]	475
3	3	39	1	51	75	152	187	177	99	[illegible]	75	152	34	89	57	5	22	[illegible]	[illegible]	77	[illegible]	[illegible]	[illegible]	154	251	[illegible]	[illegible]	[illegible]
4	4	40	1	56	71	141	179	225	125	409	75	156	72	96	[illegible]	4	15	[illegible]	48	41	1	55	98	136	[illegible]	214	110	501
5	6	79	2	60	71	153	160	179	161	[illegible]	76	162	26	98	[illegible]	2	19	51	41	79	2	[illegible]	75	[illegible]	179	[illegible]	[illegible]	559
6	7	33	2	62	57	66	173	152	191	[illegible]	69	126	47	74	58	3	[illegible]	[illegible]	78	33	2	[illegible]	69	[illegible]	162	175	[illegible]	[illegible]
7	8	32	2	75	75	150	215	[illegible]	119	517	77	[illegible]	95	127	[illegible]	4	21	[illegible]	[illegible]	[illegible]	2	74	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	9	32	2	85	68	92	202	220	[illegible]	397	73	175	65	94	57	2	29	[illegible]	58	63	1	126	[illegible]		55	290	[illegible]	
9	10	35	1	73	77	97	181	[illegible]	124	[illegible]	67	[illegible]	[illegible]	65	50	5	21	[illegible]	51	59	1	[illegible]	[illegible]	140	45	[illegible]	[illegible]	415
10	11	38	2	69	69	129	164	177	79	537	63	122	46	74	57	[illegible]	15	57	71	47	2	[illegible]	140	[illegible]	[illegible]	255	[illegible]	[illegible]
11	12	39	2	66	74	169	272	226	127	505	75	[illegible]	[illegible]	133	59	4	19	56	55	42	2	79	97	177	[illegible]	[illegible]	[illegible]	445
12	13	39	2	67	73	186	299	312	172	458	75	258	102	158	59	4	20	57	46	41	2	[illegible]	57	165	[illegible]	[illegible]	128	474
13	16	33	1	43	59	142	175	197	127	597	69	124	30	79	63	2	20	50	49	30	1	42	53	145	[illegible]	[illegible]	[illegible]	624
14	17	37	2	64	71	163	187	164	99	511	73	154	70	94	60	4	22	56	44	38	2	61	95	164	[illegible]	198	97	514
15	18	37	1	57	67	146	172	153	96	502	71	128	46	79	61	3	21	55	33	35	2	53	87	195	[illegible]	177	119	578
16	22	31	2	67	65	79	70	90	56	307	62	96	42	64	69	5	35	41	49	32	2	70	59	71	79	97	52	341
17	25	35	1	47	69	188	299	208	140	575	71	219	66	131	59	3	21	63	52	37	1	67	95	180	191	133	89	558
18	26	33	2	50	64	205	193	222	127	541	70	207	71	122	59	3	21	60	37	32	2	55	65	204	170	173	106	551
19	27	36	2	53	70	127	179	159	101	490	67	109	72	64	58	7	18	50	46	57	2	99	159	184	610	250	138	516
20	28	37	2	64	71	154	145	147	78	543	71	152	75	91	59	5	22	63	42	44	2	75	119	191	281	183	101	553

21	29	38	2	66	71	193	334	181	119	517	76	149	59	89	58	4	20	57	58	41	2	65	96	233	381	193	129	677
22	30	39	2	61	74	154	272	201	123	393	74	180	67	111	61	3	17	65	57	46	2	73	77	159	212	158	96	490
23	31	42	1	73	123	201	361	175	104	437	76	181	63	112	61	3	21	61	71	44	1	82	156	208	237	129	79	471
24	32	40	2	69	73	172	207	159	90	491	76	152	71	91	59	4	19	70	47	42	2	75	95	169	228	151	85	508
25	34	39	2	65	78	193	265	259	139	538	76	248	71	159	64	3	20	67	53	41	2	81	91	210	203	206	101	619
26	35	39	2	65	74	170	169	175	95	565	77	173	73	98	57	4	21	63	43	41	2	75	91	169	184	129	72	569
27	36	38	2	72	73	183	233	218	143	440	76	238	122	136	57	5	24	64	44	40	2	78	93	167	158	157	83	501
28	37	28	2	37	51	142	90	153	75	534	61	105	40	66	63	3	18	49	31	45	3	127	120	261	139	155	39	579
29	39	38	2	64	76	150	149	167	92	507	72	143	70	88	59	4	20	65	46	39	2	57	87	135	155	151	83	524
30	40	38	1	59	71	174	310	227	123	475	79	194	75	107	55	4	18	60	64	39	1	62	107	173	309	135	107	378
31	41	38	2	61	74	155	238	209	116	540	75	200	98	120	60	4	19	65	47	38	1	60	77	163	151	172	98	499
32	42	40	2	62	69	160	204	182	117	545	81	166	97	94	56	5	18	61	42	41	2	74	90	154	163	138	110	577
33	43	39	2	70	71	183	205	183	109	542	77	203	113	112	55	5	20	69	47	39	2	77	85	159	179	197	99	590
34	44	37	1	74	77	175	299	216	128	453	70	195	83	115	61	4	20	65	47	39	1	75	89	177	215	155	101	448
35	45	39	2	65	76	171	302	232	143	511	77	207	92	117	56	4	19	59	47	40	2	71	65	170	270	168	109	505
36	46	38	3	66	71	163	110	167	102	527	72	167	79	100	59	4	22	61	43	56	3	107	178	211	280	191	95	519
37	47	39	1	63	73	170	227	198	116	421	76	164	86	100	60	5	20	60	41	40	1	83	89	167	233	169	121	447
38	48	37	1	53	51	159	155	215	105	475	74	157	104	91	58	7	16	63	31	39	2	59	59	161	183	196	130	539
39	49	39	2	67	71	157	109	168	99	578	73	166	79	97	58	4	21	62	39	56	2	106	166	221	237	217	150	553
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42	52	37	2	65	71	148	147	173	91	610	68	140	52	80	56	3	17	62	37	38	1	64	71	147	156	150	57	657
43	53	37	2	51	66	141	170	175	103	577	69	133	55	73	58	4	18	59	37	38	1	57	67	143	167	136	75	540
44	54	37	1	61	70	147	194	207	132	528	68	147	68	80	56	5	16	57	41	37	2	63	74	172	137	157	115	578
45	55	33	1	43	71	159	296	245	159	491	71	151	61	115	59	3	21	52	59	33	1	44	57	163	271	131	115	778
46	56	39	2	67	73	181	243	181	101	457	73	150	57	95	63	3	19	58	43	41	2	73	112	174	203	170	97	473
47	57	39	2	61	70	97	154	156	103	401	69	119	46	61	55	4	16	61	73	38	1	57	77	182	237	191	177	501
48	58	37	2	69	66	105	147	182	109	435	70	125	49	76	61	3	20	55	70	55	2	94	146	160	190	52	34	546
49	60	36	1	51	73	141	177	159	95	482	66	121	70	62	52	6	16	56	47	55	2	92	119	165	406	160	77	591
50	61	39	2	59	73	146	170	145	63	526	71	136	61	77	56	4	22	51	45	66	3	104	120	182	326	132	80	562
51	63	37	1	61	73	136	240	179	115	552	63	143	58	84	58	4	16	65	55	37	1	52	73	136	213	152	101	533
52	65	39	2	54	80	150	159	163	91	515	75	160	91	98	59	6	21	59	48	41	2	62	88	156	151	170	75	551
53	66	31	2	67	64	71	99	109	74	311	66	126	70	68	56	6	28	37	67	34	2	72	63	78	125	118	75	369
54	67	30	1	41	51	139	85	161	91	450	62	119	54	72	60	4	17	54	30	30	1	41	43	131	60	136	71	575
55	68	34	2	50	67	208	205	199	131	517	68	133	55	78	57	4	18	52	49	38	2	59	80	126	421	289	165	538
56	69	34	1	45	70	184	229	166	118	658	68	151	47	93	60	3	22	54	45	35	2	60	77	186	235	184	106	715
57	75	38	2	56	76	160	261	215	129	465	75	175	75	108	61	4	21	57	54	46	2	67	132	153	216	182	130	587
58	76	3	2	71	73	155	189	195	99	557	70	175	60	105	59	3	23	60	49	62	2	121	130	180	432	172	86	488
59	77	38	2	69	81	157	219	184	105	457	72	151	69	89	58	4	17	53	56	79	2	65	38	163	219	135	79	490
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61	79	37	2	51	69	161	162	182	101	493	74	161	78	99	61	3	19	65	42	38	2	59	71	152	109	137	94	566
62	80	34	2	45	64	182	157	182	104	437	77	155	89	108	56	5	21	65	35	56	2	109	138	217	215	111	65	559

Data file [illegible]
Title: est fotop. 30 gen [illegible]

Function: [illegible]
Data case no. [illegible] to [illegible]
Without selection

28 2 Dias a madurez fisiologica 18 h
29 4 Peso total de 5 plantas gms 18 h
30 3 Peso de raiz de 5 plantas gms 18 h
31 3 Peso de semilla de 5 plantas gms 19 h
32 2 Indice de cosecha 18 h
33 2 Relacion raiz parte aerea porciento 18 h
34 2 Peso de 100 semillas gms 18 h
35 2 Semillas por vaina 18 h
36 3 Ramas por planta 18 h
37 2 Diferencia en dias a floracion
38 2 Diferencia en tamaño [illegible] dias
39 3 Diferencia en posicion primera flor
40 3 Diferencia en posicion [illegible]
41 3 Diferencia en no. de [illegible]
42 4 Diferencia en no. de [illegible]
43 4 Diferencia en no. de vainas por planta
44 4 Diferencia en no. [illegible]
45 4 Diferencia en longitud del [illegible]
46 3 Diferencia en dias a madurez
47 3 Diferencia en peso total 5 pl
48 3 Diferencia en peso de raiz 5 pl
49 4 Diferencia en peso de semilla 5 pl
50 2 Diferencia en indice de cosecha
51 3 Diferencia en relacion raiz parte [illegible]
52 3 Diferencia en peso de [illegible] semillas
53 3 Diferencia en semillas por vaina
54 3 Diferencia en ramas por planta
55 3 Diferencia en vainas por racimo [illegible]

CAS NUM.	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
1	68	88	66	45	51	8	16	49	45	1	0	19	3	5	-27	-34	-20	-1	0	-35	4	-20	-1	3	-2	-2	-3	-1
2	75	146	91	30	55	6	20	52	67	1	0	5	28	-15	5	-178	-7	29	1	-25	7	-19	-1	1	0	[illegible]	[illegible]	-15
3	90	97	98	36	37	11	18	54	67	18	1	56	100	2	64	-62	-29	82	15	-55	14	-52		6	-4	[illegible]	15	-2
4	75	143	70	76	52	5	14	62	69	1	0	-1	27	15	48	-11	-5	62	0	-13	-3	-20	-9	1	-1	[illegible]	[illegible]	0
5	73	162	76	89	55	4	17	64	51	0	0	3	4	7	16	15	11	9	-3	0	10	-9	-5	1	-2	3	10	-1
6	69	120	46	67	55	3	22	46	88	0	0	11	6	10	-5	-17	-7	74	0	-6	-1	-7	-3	0	-1	-1	9	-1

7	74	155	83	88	58	5	16	67	51	2	0	-1	12	-10	-15	-26	-23	12	-3	-58	-12	-39	-1	1	-5	-1	6	1
8	99	273	80	98	35	3	21	30	180	25	-1	40	94		-144	77	77		26	97	15	4		0	-8	-3	112	-3
9	90	115	91	45	39	8	22	35	216	20	0	28	44	43	269	-45	34	-13	23	-20	18	-23		3	1	4	125	-7
10	88	215	70	94	44	3	16	57	95	9	0	42	71	81	75	82	39	17	20	87	24	20		0	-2	4	24	0
11	74	70	47	28	40	7	14	27	77	3	0	13	23	8	85	1	-10	-59	-1	-153	-46	-105		3	-5	-33	22	1
12	77	155	72	83	52	5	16	57	72	2	0	194	16	-20	4	-83	-44	16	2	-113	-30	-75	-6	1	-4	0	26	-1
13	68	132	40	82	62	3	19	51	49	0	0	-1	-6	3	-13	5	1	27	-1	8	10	3	-1	1	-1	1	0	0
14	72	139	62	78	55	4	20	56	50	1	0	-3	24	1	50	-6	0	3	-1	-15	-8	-16	-5	0	-2	0	6	-1
15	70	157	60	65	43	4	17	53	69	1	1	-4	16	42	180	24	23	36	-1	29	14	-14		1	-4	-2	34	-2
16	61	78	37	45	57	5	26	39	52	1	0	3	-6	1	9	7	-4	34	-1	-18	-5	-19		0	-9	-2	3	2
17	69	118	37	68	57	3	19	60	47	2	0	20	16	-8	-108	-75	-51	-20	-2	-101	-29	-63	-2	0	-2	-3	-5	0
18	68	150	61	84	56	3	21	64	35	-1	0	5	1	-1	-23	-49	-21	10	-2	-57	-19	-38	-1	0	0	4	-1	-2
19	91	199	135	67	33	7	13	40	178	21	0	46	89	57	431	91	37	26	24	90	53	3		0	-5	-10	92	2
20	89	158	95	70	44	6	15	61	92	7	0	11	48	37	136	36	23	10	17	6	20	-21		1	-7	-2	51	-1
21	77	148	62	79	53	4	17	53	87	3	0	-1	25	40	47	12	10	160	1	-1	3	-10	-5	0	-3	-4	29	-1
22	74	125	75	68	54	6	18	51	44	7	0	12	3	4	-60	-43	-27	97	0	-58	5	-43	-7	2	1	-14	-12	0
23	75	118	50	64	54	4	16	66	59	2	0	9	30	7	-124	-46	-23	34	-1	-63	-10	-48	-7	1	-5	5	-12	-1
24	75	159	72	93	58	4	20	72	65	2	0	6	22	-4	21	-7	-5	17	-1	7	1	2	-1	0	1	2	13	[illegible]
25	74	196	72	110	55	3	17	58	53	2	0	16	10	17	-62	-59	-38	72	-2	-52	1	-47	-9	6	-3	-3	[illegible]	1
26	77	139	83	70	48	5	18	68	54	2	0	10	17	-1	13	-46	-27	4	0	-24	10	-28	-9	2	-2	3	[illegible]	-1
27	74	158	86	81	50	5	18	65	47	2	0	6	21	-16	-75	-61	-60	61	-2	-80	-26	-55	-7	0	-6	-1	[illegible]	2
28	79	139	76	52	36	6	17	53	39	17	1	50	65	119	69	2	14	45	18	34	26	-14		7	1	4	12	-2
29	71	118	63	61	50	5	16	61	32	1	0	-7	11	5	6	-16	-9	17	-1	-30	-7	-27	-5	1	-4	-4	7	0
30	78	152	77	82	52	5	17	61	65	1	0	4	36	-1	-1	-42	-16	-47	6	-42	2	-27	-7	1	-1	1	[illegible]	-2
31	75	142	75	84	59	5	16	65	57	0	-1	-1	3	3	-67	-37	-18	-41	0	-58	-12	-26	-1	1	-3	0	2	-1
32	75	169	95	86	48	6	16	60	52	1	0	12	11	4	-41	16	-7	22	-2	3	-2	-8	-5	0	-2	-1	[illegible]	2
33	77	149	80	75	50	5	15	71	49	0	0	7	14	-24	-26	4	-9	48	0	-54	-22	-37	-5	2	-5	2	6	1
34	73	121	45	66	55	3	17	55	47	2	0	1	12	2	-84	-61	-27	-5	3	-74	-28	-53	-6	-1	-2	-16	[illegible]	2
35	74	122	66	66	54	5	18	55	61	1	0	6	9	-1	-32	-64	-34	-6	-3	-85	-25	-51	-2	1	-1	-4	12	-1
36	68	193	118	91	44	7	17	63	74	18	0	41	107	48	170	24	-7	-8	16	26	39	-9		0	-5	2	21	[illegible]
37	75	125	72	69	53	6	17	57	50	1	0	20	15	-3	-4	-29	-15	16	-1	-39	-14	-31	-7	1	-3	-3	[illegible]	-1
38	74	116	66	61	52	6	14	56	38	2	1	6	7	2	28	-29	-35	63	0	-41	-33	-39	-6	-1	-2	-7	7	2
39	91	279	138	138	49	5	17	66	100	18	1	39	95	64	248	109	51	19	18	113	59	41	-9	1	-4	4	21	1
40	67	113	52	59	52	4	14	61	41	0	0	3	7	3	-54	-26	-24	-45	-1	-41	1	-34	-8	1	-3	0	2	1
41	68	88	57	43	48	6	14	59	41	1	-1	-8	4	-7	-7	-35	-14	22	0	-37	12	-35		3	-5	3	2	-2
42	68	107	57	56	53	5	15	56	35	1	-1	-1	0	-1	9	-20	-8	37	0	-33	5	-26	-6	2	-2	-6	2	-1
43	69	140	63	80	56	4	16	61	40	1	-1	6	1	4	-3	5	-8	63	0	7	8	2	-2	0	-2	2	1	1
44	68	142	57	81	56	4	17	57	46	0	1	5	4	25	3	-10	13	40	0	-1	-11	1	0	-1	1	0	5	-4
45	72	139	45	87	60	3	21	45	50	0	0	1	-4	9	-25	-64	-41	-113	1	-52	-16	-23		0	0	-2	-5	-1
46	72	118	53	64	53	4	15	57	51	2	0	11	29	-7	-40	-8	-8	-4	-1	-30	-4	-71		1	-4	-1	3	[illegible]
47	77	124	71	59	47	6	10	58	118	0	0	-4	7	56	126	40	34	70	8	15	25	-2	-8	2	-3	-7	45	-1
48		59	103	8	13	22	8	41	74	21	0	25	91	87	47	-136	-75	61		-66	59	-68		10	-12	-14	[illegible]	-2
49	79	116	87	46	38	5	14	58	111	19	1	31	46	24	223	1	-18	109	12	-5	17	-15		2	0	2	2	4
50	92	142	134	42	29	10	18	35	46	27	1	45	47	36	165	13	-7	36	21	6	73	-35		2	-4	-16		-1
51	68	117	60	63	53	5	16	52	52	1	0	-9	3	0	-27	-26	-14	-19	0	-26	2	-21	-5	1	-2	-17	7	[illegible]
52	70	123	74	68	55	6	15	60	46	2	0	0	5	6	-8	-32	-16	36	-5	-39	-17	-30	-4	[illegible]	-7	7		[illegible]
53	67	132	54	69	52	4	36	76	30	0	0	5	-1	4	26	9	1	55	1	12	-16	1	-4	-2	-2	-1	[illegible]	[illegible]
54	59	91	32	63	69	3	19	57	22	0	0	0	-3	-8	-25	-15	-10	115	-3	-13	-22	-4	[illegible]	1	1	[illegible]	[illegible]	
55	75	193	86	36	45	4	14	56	73	4	0	9	10	18	246	90	34	31	7	60	31	3		[illegible]	-4	-2	2	2
56	68	158	44	101	65	2	20	54	39	1	1	15	7	2	6	18	-12	57	[illegible]	[illegible]	-7	3	7	-1	-1	[illegible]	[illegible]	[illegible]
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58	89	152	142	59	38	10	10	68	109	59	0	50	119	35	267	-22	-10	-61	19	-22	82	-46			-11	8	[illegible]	
59	71	104	53	55	50	5	15	56	61	1	0	[illegible]	[illegible]	9	-9	-47	-25	3	-1	-47	-16	-34	-8		-2	7	8	-1
60	72	123	79	60	49	6	18	59	51	1	0	3	5	0	-25	11	7	-46	-2	-12	-4	-11	-7	[illegible]	-7	-6	[illegible]	-1
61	75	124	79	70	53	7	17	69	50	1	0	5	2	2	-22	-42	-17	77	1	-17	1	-26	-1	2	-2	[illegible]	[illegible]	-2
62	88	133	113	79	26	11	12	31	56	22	1	64	74	34	152	-71	-39	72	11	-52	24	-69		1	-5	-14	[illegible]	-1