

S. Dillabough

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MICROFICHE

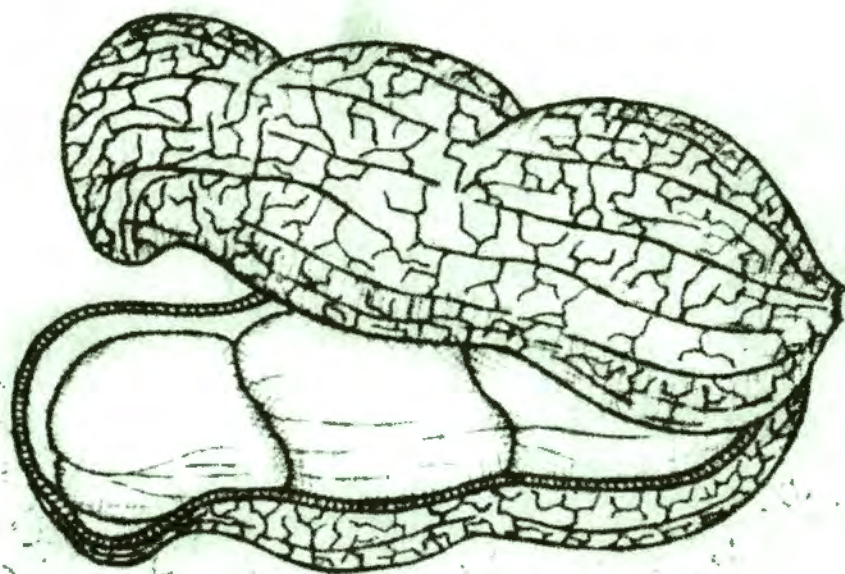
ANGSEN 66754

ANNUAL REPORT
OF THE
GROUNDNUT IMPROVEMENT PROJECT
1984-1985

U.E.M.- MOZAMBIQUE

82-0093/6

FACULDADE DE AGRONOMIA
E
ENGENHARIA FLORESTAL



UNIVERSIDADE EDUARDO MONDLANE

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
P.O. BOX 257
= MAPUTO MOZAMBIQUE =

INTRODUCTION

The sixth annual report of the Groundnut Improvement project gives information for the crop year beginning June 1984 to July 1985. In the south of Mozambique the crop growing season experienced drought conditions where as in some northern provinces the rains were normal. Some of the climatological data is provided in the appendix I.

In the south much of the research was concentrated at the faculty farm and another State farm by name "25th of June" in the district of Boane, Maputo province.

In north, the experiments were carried out at Namialo by Mr. António Panguene, who was trained at ICRISAT. He worked in close collaboration with Eng^o. António Candido Azize who is working in the groundnut seed multiplication project.

During this year information in many of the experiments was lost due to the attack of rats during drying of harvested groundnut as well as due to thefts of groundnut in the field itself. Groundnut is in very short supply both for sowing and for consumption. So it became very difficult to safeguard the crop from thefts.

On-farm trials proved very successful in obtaining useful results which can be transmitted to the groundnut producers for practicing on their farms. On-farm trials are mainly concentrated on the aspects of application of superphosphate for rainfed groundnut, intercropping of maize and groundnut and utilization of groundnut crop residues by animals as feed. In addition trials are continued to understand and improve animal traction, ox-drawn implements etc.

Training of project-staff is continued at all the levels. One medium level field technician, Mr. Ricardo Bencine was sent to ICRISAT for training in groundnut crop improvement. It is already planned to send Eng^o. Marcos Freire for studying M.S. in Agronomy at ICRISAT. Informal and formal training for all the staff linked with the project were planned and executed.

Dr. K.V. Ramanaiah, who worked in the project from the beginning of 1981 was appointed as project advisor in the project consequent on the transfer of Dr. A.D. Malithano to Burundi.

We wish to thank the Universidade Eduardo Mondlane (UEM) and the International Development Research centre (IDRC), Canada for their continued support to the project. Thanks are also due to the National Institute of Agronomic Research (INIA), Mozambique, and National Seed Enterprise for providing help in conducting field experiments. We thank up Vitor Neto, statistician of INIA for analysing the data.

PROJECT PERSONNEL

Eng^o. José Rodrigues Pereira, Director, Faculty of Agronomy, UFM.

Dr. A.D. Malithano, project advisor and professor of plant breeding (upto May 1985)

Dr. K.V. Ramaniiah, project advisor and professor of Agronomy

Eng^o. Marcos Freire, counterpart presently availing posto graduate fellowship of IDRC at ICRISAT (INDIA).

Daide Marioto, Student

B. S. Chilengue, Field assistant

A. Panguene, Field assistant

R. Enosse, Field assistant

Patrício Cesário, Field technicians

Ramazane

ICRISAT REGIONAL GROUNDNUT YIELD TRIAL:

INTRODUCTION:

This experiment was started during 1983 - 1984 with the collaboration with ICRISAT (Malawi) program.

OBJECTIVES

1. To test the varieties under local conditions for their adaptability to local conditions.
2. To compare the yield potentials
3. To test the resistance to local pests.

MATERIALS AND METHODS

Buch cultivars supplied by the ICRISAT (Malawi) program were evaluated at a farm by name "25th of June" in Boane district of Maputo Province. The experimental area was red sandy loams with low nitrogen and phosphorus and high potassium content. The area was having a little slope and there was no erosion at the site. The experiment was conducted under rainfed conditions without any application of manures and fertilizers. The field was ploughed twice with mould board plough and later levelled with hand hoes.

The experimental design was a 6X6 lattice with 4 replications. The gross plot consisted of 3 rows of 6m long and net plot consisted of 3 rows of 5m length. The spacing given was 45cm between the rows and 10cm within the row as recommended to the bunch varieties.

The sowing was done on the October 1984 and the crop was harvested on 30 January 1985.

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RESULTS AND DISCUSSIONS

The yield data is presented in table 1. There were not much diseases. At the time of harvesting the experiment lot of thefts took place.

Due to security reasons the plots were not having watch and ward. So in many plots lot of plants were removed. So the data in the plots, where plants were robbed, was deleted.

ICGMS 14 gave maximum yield followed by ICGMS 11 and the controls gave moderate yield. The low yields were due to drought and poor soil fertility conditions.

ICRISAT (MALAWI) REGIONAL YIELD TRIAL CONDUCTED

AT "25 OF JUNE" PARA. - BOANE (RAINFED) 1984 - 1985

TREAT- MENT No.	VARIETY.	YIELD G/6.75 m ²					YIELD KG/HA
		REP I	REP II	REP III	REP IV	AVERAGE	
T 1	IEGMS / 1	-	492	-	383	438	649.
T 2	" 2	340	389	530	221	370	548.
T 3	" 3	780	563	328	685	589	873
T 4	" 4	440	130	213	-	261	387.
T 5	" 5	654	602	845	731	708	1049.
T 6	" 6	545	475	589	430	510	756.
T 7	" 7	535	445	-	-	490	726.
T 8	" 8	625	324	658	658	566	839
T 9	" 9	745	-	425	-	585	867
T10	" 10	1065	868	400	359	673	997
T11	" 11	978	-	920	448	782	1159
T12	" 12	754	663	510	455	596	883
T13	" 13	470	552	782	808	653	967
T14	" 14	680	1220	852	520	818	1212
T15	" 15	295	141	-	540	325	481
T16	" 16	712	141	194	-	349	517
T17	" 17	291	-	-	212	252	373
T18	" 18	600	-	463	207	423	627
T19	" 19	-	481	537	-	509	754
T20	" 20	615	-	-	241	428	634
T21	" 21	524	600	300	191	404	599
T22	" 22	617	147	565	388	429	636
T23	" 23	722	881	461	417	620	919
T24	" 24	440	316	380	241	344	510
T25	" 25	515	-	600	204	440	652
T26	" 26	620	-	349	370	446	661
T27	" 27	452	600	515	432	500	741
T28	" 28	-	314	631	655	533	790
T29	" 29	928	-	251	-	590	874
T30	" 30	540	132	290	317	320	474
T31	" 31	-	728	750	115	531	787
T32	" 32	290	-	130	269	230	341

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TREAT- MENT Nº.	VARIETY	YIELD G/6.75 M ²					YIELD KG/HA
		REP I	REP II	REP III	REP IV	AVERAGE	
T33	ICGMS # 33	533	167	454	460	404	599
T34	" 34	664	304	324	-	431	639
T35	SPANISH-18-38	437	875	166	618	524	776
T36	STARR	827	-	665	418	637	944

Nº. of replications - 4

Gross plot - 3 Rows of 6m. Long

Net plot - 3 Rows of 5 m. Long

Inter rows spacing - 45 cm

Intra row spacing - 10 cm

No manures and Fertilizers applied.

Soils - Red Loams

Location of site - 25 June - Farm

- Hoane District

- Maputo Province

Mozambique

GROUNDNUT-MAIZE INTERCROPPING

INTRODUCTION:- Groundnut is produced mostly intercropped with cassava, maize, beans, sorghum etc. depending upon the locality and season. Some intercropping combinations are profitable to the farmer by way of increasing his profitability and security during severe drought conditions.

OBJECTIVES:-

The objectives of conducting this experiment both on-station and on the farmers fields were;

- to find the ideal component crop in a groundnut-based intercropping system and the best geometry of planting groundnut with maize
- to compare the income obtained from pure crop of maize and groundnut with that of intercropped groundnut and maize, under rainfed conditions

MATERIALS AND METHODS

This experiment was conducted at the faculty farm during the last year (1983-84). This year it is repeated in two sites i.e I. faculty farm and II State farm by name 25 of June at Boane. Unfortunately the harvest data of the experiment at the faculty farm is missing. So the data of the experiment conducted at 25 of June farm is being presented here.

Soils are poor in organic matter, sandy loams in texture, with medium level soil fertility. The soils are having a little slope and the planting is done across the slope to prevent erosion. Local varieties of groundnut (Behiadi Branco) and maize population were planted in this experiment. This experiment was conducted under rainfed conditions. The meteorologic data is given in the annexure.

Date of sowing 16-2-1984

Date of harvesting 2-1-1985

TREATMENTS

- T₁ - Control - Maize and groundnut planted in a zig-zag fashion. Three maize seeds per hole and one groundnut seed per hole were planted as practised by the local farmers.
- T₂ - Groundnut and maize are planted in lines. Spacing in maize 90x90 cm using three seeds per hole. Spacing in groundnut - one line of groundnut between two lines of maize with 10cm distance between plants using one seed per hole.
- T₃ - Line planting - Groundnut and maize Spacing in maize 90x30cm. one seed per hole. Spacing in groundnut: one line groundnut between two lines of maize and 10cm between plants in the line using one seed per hole.
- T₄ - Line planting - Groundnut + maize. Spacing in maize: 135x30cm. one seed per hole. Spacing in groundnut: two lines of groundnut in between two lines of maize with spacing of 45x10cm using one seed/hole.
- T₅ - Line planting - Groundnut + maize Spacing in maize: 130x30cm, using one seed per hole. Spacing in groundnut; three lines groundnut in between two lines of maize with a spacing of 45x10cm using one seed per hole.
- T₆ - Sole crop of maize planted in a zig-zag fashion, using 3 seeds per hole as practised by farmers.
- T₇ - Sole crop of maize planted in a zig-zag fashion using one seed per hole; but with the same plant density as in T₆.
- T₈ - Line planting maize with spacing of 90x90cm using 3 seeds per hole.
- T₉ - Line planting maize with spacing 90x30cm using one seed per hole.
- T₁₀ - Line planting groundnut with spacing 45x10cm using one seed per hole.
- T₁₁ - Sole crop of groundnut planted in a zig-zag fashion; but, with same plant density as in T₁₀
- T₁₂ - Sole crop of groundnut planted in a zig-zag fashion, with 50% seed rate of T₁₀.

OF

RESULTS:- The yield data groundnut and maize are presented in table 1. The following results were obtained.

The yields of maize was greatly reduced when it was intercropped with groundnut. Line planting of maize and groundnut gave higher yields than zig-zag method. Line planting facilitated easy weeding than zig-zag method. But line planting took more labour than zig-zag method of sowing at the time of sowing. This is very important for the farmer as he has to plant as much area as possible to capture the available moisture before it escapes from the ground. In some places where rats and birds problem is sever, line planting is having disadvantage because rats and birds can easily pick-up seeds if they are in line and it becomes difficult if they are sown in zig-zag.

TABLE: 1 Yield of Groundnut and maize at 25 of June farm in Boane area during 1984/85 crop season.

TREATMENT	MEAN YIELD Groundnut	Kg/ha Maize
T ₁	1253	153
T ₂	1097	245
T ₃	838	472
T ₄	1056	228
T ₅	1360	144
T ₆	-	679
T ₇	-	686
T ₈	-	731
T ₉	-	824
T ₁₀	1673	-
T ₁₁	1556	-
T ₁₂	1294	-

ON-FARM TRIALSGROUNDNUT- MAIZE INTERCROPPING.

Based on the results obtained on the experimental site, the following three treatments were selected for testing on the farmers fields.

TREATMENTS:

- T_1 - Control - Groundnut and maize planted in a zig-zag fashion using three maize seeds per hole and one groundnut seed per hole were planted as practised by farmers.
- T_2 - Sole crop of maize planted in a zig-zag fashion using three maize seeds per hole as practised by farmers.
- T_3 - Sole crop of groundnut planted in a zig-zag fashion using one seed per hole as practised by farmers.

LOCATIONS:- These on-farm trials were conducted on the farmers fields in the green belt zones surrounding Maputo. Soils are sandy loams, very light textured, with good drainage, medium in soil fertility and organic matter content. The experiments were conducted by the farmers themselves except for the treatmental differences which were implemented by the field technicians of groundnut project.

The local variety of groundnut (Behiana branco) and local mixture of maize were planted. Except giving groundnut seed, all the inputs were borne by the farmers themselves. No fertilizers were added. Area of each trial varied from 200 M^2 to 5000 M^2 depending upon the availability of land by the farmer.

In most cases the land was having a little slope. Net area harvested varied from 50 M^2 to 150 M^2 .

The date of planting and harvesting were not the same in all the cases. But all the trials were conducted during the same season (during August 1984 to January (1985)). All the cultural practices followed in the trials are the same as practised by the farmers. All the treatments mentioned above are practised by the farmers except pure crop of maize. In case of pure crop of maize farmers usually, plant some other mixed crop at the time of first weeding.

Air dried fresh weights were recorded at the time of harvesting of the crops. Due to difficulty in weighing small samples for the determination of moisture percentage, lot of errors were committed by the field staff. Due to these problems the weights which were little air dried were reported. They were not corrected to standard moisture percentage.

Though as many as 19 cooperating farmers were selected in the green belt zones for conducting these trials, we could succeed in conducting 13 locations out of which only 7 places we could get the yield data. The reasons for the failure of the on-farm trials in other places are as follows:

- Lack of transport:- All the on-farm trials are located for interior where there are no roads. So 4 wheeler jeep is necessary. Due to shortage of fuel and due to other difficulties farmers could not be contacted in time.
- Shortage of field staff:- In our project we had 5 field staff who were trained with this work. Among them one was sent abroad (ICRISAT-INDIA) for training. The other staff are still getting experience. So they could not succeed in contacting farmers and implementing the program.
- When the rain started all the farmers wanted to take up planting. These farmers who were approached late had already planted their field. Project staff could not contact all of them in time. Similarly when there was delay in contacting farmers for harvesting, the farmers could not wait for the field staff because of the fear of groundnut will germinate in the field if there are rains.

In spite of the above problems the field staff of groundnut project could succeed in 7 trials. More than the field results, project staff were greatly motivated in learning the methodology of conducting on-farm trials especially:

- to respect farmer experience
- to implement treatments
- to take sample harvesting by using circular plots, rectangular plots etc.
- to gather information from the farmers regarding the treatmental differences.

The results were visible and the farmers agreed the difference in the treatments.

RESULTS

The net plot areas harvested were different in different trials. So all the yield data is converted as kilograms per hectare and presented in table 2.

The groundnut yields are presented as weight of groundnut kernels with shells (pod yields) and maize yields as grain weight.

Having very high heterogenous conditions of experimental sites the results are also variable. The distribution of rainfall was not also uniform on these sites.

In general the groundnut crop intercropping with maize is not always advantageous. In many cases maize suffered a lot due to intercropping with groundnut. The maize crop when associated with groundnut appeared short in height, pale yellow in foliage colour demonstrating nitrogen deficiency and maize plants were infected with stem borers.

Many of the cooperating farmers of the opinion that for selecting component crop with groundnut, it is better to select crops like cassava, Sorghum, beans etc, rather than Maize. Similarly these farmers are now of the opinion that maize should be grown as pure crop and also can be intercropped with beans.

TABLE 2: YIELD OF GROUNDNUT AND MAIZE INTERCROPPING TRIALS ON THE FARMERS
FIELDS. (1984-85) KG/HA

NAME OF THE FARMER	POD YIELDS IN GROUNDNUT PU- RE CROP	YIELDS CROP GROUND- NUT POD YIELD	IN INTER MAIZE GRAIN YIELD	MAIZE YIELDS IN PURE CROP
FELISMINA IWANBA	1071	476	357	833
MATILDE JOSSEFA	385	115	462	885
ARMINDA MAGAIA	885	265	354	564
PAINETA LANGA	654	407	174	465
HANHADE MPFUMO	1876	1010	791	837
FELISMINA PAULO TEMBE	833	611	878	500
RACHEL MATOLA	531	531	88	337

ON-FARM TRIALS WITH PHOSPHATE FERTILIZATION:

Due to continuous cropping, some areas became deficit in available phosphorus. During farm surveys phosphorus deficiency symptoms were observed in groundnut crop grown by small - scale farmers. Some experiments conducted with phosphatic fertilizers on groundnut did not prove to be useful on some of the state farms where there was excess p level in the soils due to continuous application of these fertilizers.

On farm trials on the farmers fields as well as on the fields of co-operative farms were conducted with the following objectives.

- To find the effect of phosphatic fertilizers on the yield of groundnut.
- To get training in working with small farmers for the field staff and students of the agronomy faculty.
- To test the possibility of recommending chemical fertilizers to rainfed groundnut producers.
- To develop embryonic extension services by working with farmers.

MATERIALS AND METHODS

These on-farm trials were conducted in the co-operative farms located in zonas verdes, Maputo Province.

No. of localities:- 5 cooperative farms were selected for these trials. Due to problem of transport, the project could complete harvesting in two places only i.e. FILIPE SAMUEL MAGAIA COOPERATIVE FARM (FSMCF) and TSEMPETE KHAMA COOPERATIVE FARM. (T K C F)

Soils:- Soils are sandy loam in texture.

pH of the soil 6.8 to 7.2

% of organic matter 0.8 to 3.0 low to medium soil fertility.

	<u>FSMCF</u>	<u>TKCF</u>
Date of sowing	27.7.84	31-7-84
Date of harvesting	3.12.84	3-12-84

TREATMENTS - FOUR

F₀ - CONTROL - No fertilizer was applied.

F₁ - 40 Kg. P₂O₅/ha

F₂ - 80 Kg. P₂O₅/ha

F₃ - 120 Kg. P₂O₅/ha

P₂O₅ was applied in the form of single Superphosphate, granular form with 16% available and 18% total P₂O₅.

The granular superphosphate was applied by the method of broad-casting at the time of broad-casting at the time of final preparation of the land with hand hoes. While doing this operation the farmers tried to incorporate the fertilizer as deep as possible.

VARIETY:- Local variety of babiano branco was planted in zig-zag fashion as practised by the farmers. This experiment was conducted under rainfed conditions. Groundnut was grown as pure crop.

All other cultural practices like weeding, harvesting etc are done as practised by the farmers.

At the time of harvesting air dry fresh weights were recorded and samples were collected for moisture determination. These samples for moisture determination were brought to faculty and kept out side for sundrying for some days. During these periods, there was loss of pods due to rats attack and the moisture percentages obtained were viciated. So pod yields were not corrected to a standard percentage of moisture.

The yields of pods obtained in these on-farm trials are presented in table no. 1.

The results indicate very good effect of application of superphosphate on the yields of groundnut.

These areas are showing very much effect of P application on not only groundnut, but also on other crops.

In the on-farm trials farmers are so convinced that some of the member farmers have started PURCHASING superphosphate and applying to their RAINFED groundnut crop. There was doubt among the Govt. officials, who are in charge of these cooperatives, regarding the application methods of superphosphate to rainfed crops. As project staff worked in close cooperation with farmers,

learned the method of applying conect close and incorporating fertilizers as deep as possible.

The positive effect of superphosphate application was so conspicuous, that farmers used to narrate the difference between control and treated plots like this: The effect of phosphorus application was known even for bird pests as these birds are picking up pods from treated plots where groundnut matured earlier and the pods are big and well filled.

These results of on-farm trials influenced very much the cooperative members who in turn are the groundnut producers on their own individual small private farm. Many farmers started applying on their own fields. The department of social communication took a information video film on this work and the same was broad cast on the National TV program.

TABLE: 3

EFFECT OF SUPER PHOSPHATE APPLICATIONS ON GROUNDNUT POD YIELDS (Kg/ha)

	TREAT- MENT	QTY OF SUPER PHOSPHATE APPLIED PER HA	POD YIELDS KG/HA	% INCREASE OVER THE CONTROL.
FILIPE SAMUEL MAGAIA COOPERATIVE FARM (FS MCF)	F ₀	CONTROL NO FERTILIZER	707	100
	F ₁	250 Kg	884	125
	F ₂	500 Kg	1060	150
	F ₃	750 Kg	1414	200
TSERETSE KHAMA COOPERATIVE FARM (TKCF)	F ₀	CONTROL NO FERTILIZER	1060	100
	F ₁	250 Kg	1767	166
	F ₂	500 Kg	1767	166
	F ₃	750 Kg	2121	200

EFFECT OF SPACING ON THE LATE SOWN GROUNDNUT

Objectives

1. To know the effect of spacing on the yield of groundnut.
2. To understand the effect of spacing on the late sown crop in relation to rosette.

Introduction:

The results on spacing of groundnut in the main season shows that higher plant densities were better. A spacing of 30 x 10cm was better than the spacing of 45x10cm.

In the case of second season (Nov-Dec) the spacing trial was not conducted on groundnut crop especially when the same was planted late.

Materials and methods

The experiments was conducted on the sanday loams of faculty farm. The soil is poor in fertility and organic matter.

The following are the spacings tested in the trial.

T_1 - 30 x 10 cm (30 cm between rows and 10cm between the plants within the row).

T_2 - 30 x 20 cm

T_3 - 45 x 10 cm

T_4 - 45 x 20 cm

T_5 - 60 x 10 cm

T_6 - 60 x 20 cm

Design: R B D

Replications: 5

Plot size gross - 5 M length with variable width depending upon the row spacing.

Date of planting: 16-01-1985

Date of harvesting: 02-05-1985

Variety: Bebião branco (local)

No fertilizer and no irrigation was applied.

Results:

The yield data is presented in table 1. Maximum yields were obtained in the treatment where spacing of 60 x 10cms was given followed by the spacings of 30 x 20 cm and 30 x 10 cms. There was no incidence of rosette in the experiment.

The season there was very less incidence of rosette on groundnut in this groundnut growing zone. There were no foliar diseases on the groundnut during the crop season.

Aphids appeared on some plants and later disappeared after the rains.

Table 1.

Effect of spacing on the yields of groundnut. (Groundnut with shells expressed as Kg/ha.)

Treat- ment	Replicati- on I	Rep. II	Rep. III	Rep. IV	Rep. V	Average
T ₁	389	611	444	711	467	524
T ₂	933	356	478	689	356	562
T ₃	531	321	432	506	506	459
T ₄	309	432	432	444	556	435
T ₅	952	488	488	595	619	628
T ₆	357	523	404	441	512	447

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VARIETAL TRIALS IN NAMIALO,
NAMPULA PROVINCE

Eng^o. Azize and MR. Punguene who used to work in the groundnut project, presently working in the seed production centre at Namialo in Nampula province. They took the responsibility of conducting the following experiments on groundnut at Namialo.

1. Varietal trial with early maturing varieties of groundnut. The following were included in this experiment.

1. 688/73
2. Starr
3. Jonca
4. Tamnut
5. Local selection - Nampula
6. 55-437
7. Bebiano branco
8. Bebiano encarnado
9. Valencia
10. C N - 115 B
11. Virginia R 26
12. White spanish

The data obtained in this experiment was not valid because lot of thefts took place in the field and also while drying in the store. In addition rats also damaged the groundnut before taking the dry weights.

2. Regional yield trial (ICRISAT - Malawi) - (Virginia Bunch)

The following entries were included in this experiment.

- | | |
|-------------|--------------|
| 1. ICGMS 35 | 11. ICGMS 45 |
| 2. " 36 | 12. " 46 |
| 3. " 37 | 13. " 47 |
| 4. " 38 | 14. " 48 |
| 5. " 39 | 15. RMP 12 |
| 6. " 40 | 16. 57-422 |
| 7. " 41 | |

7. ICGMS 41
8. " 42
9. " 43
10. " 44

Some problems as mentioned earlier like thefts of matured plants in the field as well as in the store room and spoilage by rats resulted invalid data.

The following are the reasons for the loss of valuable data.

1. Groundnut being a very scarce commodity needs close watch and ward in the field and store which did not exist at this site in Namialo
2. Lack of supervision Due to insecure condition nobody from Maputo visited this centre nor there was communication from that centre.

So there is need to develop strong program there with the help of one agronomist and another field technician, who was trained at ICRISAT in the field of groundnut production.

DADOS METEOROLÓGICOS NA FACULDADE DE ASTRONOMIA
1984

23

JANEIRO

FEVEREIRO

MARÇO

ABRIL

	JANEIRO				FEVEREIRO				MARÇO				ABRIL			
	Ma.	T ^o Ml.	P.	Ev.	Ma.	T ^o Ml.	P.	Ev.	Ma.	T ^o Ml.	P.	Ev.	Ma.	T ^o Ml.	P.	Ev.
1	030,0	021,0	000,0	008,9	029,0	021,0	040,0	000,0	030,0	021,0	000,0	008,7	025,0	019,8	000,0	003,7
2	031,5	023,6	000,0	009,6	030,2	023,2	000,0	000,0	029,5	022,6	000,0	007,9	026,2	019,0	000,0	005,8
3	028,5	022,5	004,2	006,8	030,5	023,0	115,0	000,0	030,5	023,0	000,0	006,8	026,5	019,0	000,0	004,8
4	029,5	021,0	000,0	007,7	027,6	020,5	000,0	000,0	029,2	024,5	002,8	009,4	027,5	018,5	000,0	003,8
5	029,6	021,9	000,0	009,7	028,2	021,5	000,0	006,5	029,9	024,5	000,0	008,2	028,5	018,5	000,0	005,5
6	029,5	021,5	000,0	010,0	028,6	022,0	000,0	008,0	030,6	023,2	000,0	006,7	030,2	020,2	000,0	003,9
7	029,2	021,5	000,0	007,7	029,0	022,4	000,0	009,9	030,0	024,2	000,0	007,0	028,6	021,4	000,0	004,8
8	028,6	021,5	014,0	004,9	034,5	022,0	000,0	007,5	027,5	020,6	018,6	005,7	029,0	023,5	000,0	002,5
9	029,5	022,2	029,7	007,1	025,0	021,5	000,0	008,4	025,5	019,5	005,8	003,0	028,2	021,8	070,0	000,0
10	029,5	021,6	007,2	008,1	026,4	019,0	000,0	005,6	025,5	019,5	003,0	004,2	025,5	019,8	000,0	005,8
11	030,0	024,2	000,0	006,2	026,0	019,0	001,8	005,4	026,5	020,0	000,0	005,3	026,5	018,5	000,0	007,3
12	031,5	025,5	000,0	007,9	029,0	020,0	000,0	006,8	030,0	019,5	000,0	004,1	025,5	017,2	000,0	005,5
13	025,2	021,8	000,0	006,8	029,0	021,0	004,0	010,2	028,2	022,2	000,0	008,2	028,0	016,9	000,0	004,2
14	023,7	020,0	004,2	003,3	030,0	021,0	000,0	000,0	027,0	021,0	000,0	004,5	027,6	020,0	000,0	005,0
15	024,5	018,2	009,6	002,1	030,6	022,5	000,0	006,2	027,5	019,5	000,5	004,2	027,5	020,5	000,0	005,4
16	027,6	020,0	000,0	005,9	031,0	023,5	000,0	009,3	027,2	019,0	000,0	007,3	027,6	021,0	000,0	003,0
17	028,6	020,8	000,0	008,5	029,5	022,0	000,8	007,5	031,6	019,6	000,0	003,4	027,6	022,5	000,0	004,2
18	029,5	021,5	000,0	006,5	033,6	022,2	000,0	008,5	029,0	020,8	000,0	009,3	025,0	021,0	000,0	003,3
19	029,5	022,4	005,6	009,8	033,0	024,5	002,3	008,2	032,0	022,8	000,0	006,1	025,6	018,8	000,0	004,2
20	030,0	023,0	000,0	007,2	030,5	023,8	000,0	007,3	030,5	022,5	000,0	006,2	026,0	018,0	000,0	003,2
21	030,0	024,8	000,0	007,8	030,5	022,5	000,0	005,3	030,8	024,5	000,0	007,0	026,2	018,4	000,0	003,1
22	030,2	023,2	000,0	008,5	028,5	021,5	000,0	008,5	027,5	022,0	000,6	004,9	026,4	020,0	000,0	004,1
23	029,2	022,2	000,0	009,0	029,0	022,5	000,0	009,0	024,0	020,5	030,0	000,0	027,0	019,8	000,0	004,9
24	028,8	022,2	000,4	007,0	029,0	024,0	021,5	010,5	025,5	021,5	000,5	000,0	027,2	019,5	000,0	003,8
25	030,0	021,5	000,0	009,2	027,0	022,5	009,8	004,9	025,2	022,5	003,8	002,1	026,2	019,5	006,2	003,5
26	029,6	021,5	000,0	009,0	028,0	021,2	000,0	007,6	030,2	021,6	008,8	001,9	029,2	019,5	000,0	004,3
27	030,4	021,0	000,0	008,4	028,2	022,0	002,0	007,3	025,0	020,5	004,0	003,0	024,2	020,5	000,0	008,1
28	029,5	023,0	002,9	008,6	028,5	019,2	000,0	007,3	026,2	020,0	000,0	004,9	023,5	016,4	000,0	005,7
29	025,5	024,0	105,0	000,0	030,0	021,0	000,0	008,7	024,6	020,0	000,0	009,8	025,6	016,0	000,0	004,3
30	027,5	023,8	077,2	000,0					025,8	019,0	000,0	007,9	024,5	019,0	003,5	004,8
31	030,0	023,2	005,0	000,0					026,2	021,0	000,0	003,9				

DADOS METEOROLÓGICOS NA FACULDADE DE AGRONOMIA

24

1984

	MARÇO	JUNHO	JULHO	AGOSTO
	T ^o Ma. Mi. Prec. Ev.	T ^o Ma. Mi. Prec. Ev.	T ^o Ma. Mi. Prec. Ev.	T ^o Ma. Mi. Prec. Ev.
1	17,5 16,5 000,0 003,7	021,6 013,0 000,0 003,0	028,4 015,2 000,0 004,0	021,5 014,0 002,5 004,7
2	025,0 016,0 000,0 003,9	020,8 012,0 000,0 003,1	029,2 013,5 000,0 002,9	023,2 013,0 000,0 003,0
3	029,2 018,5 000,0 002,3	021,6 015,0 000,0 004,0	022,2 016,5 000,0 004,2	026,0 014,2 000,0 004,5
4	004,8 018,8 000,0 005,4	026,2 014,2 000,0 003,2	025,2 014,2 000,0 004,2	024,5 013,8 000,0 003,7
5	02,5 014,8 000,0 003,5	023,8 011,0 000,0 003,5	026,5 014,5 000,0 003,4	029,5 014,8 000,0 004,7
6	031,6 024,5 000,0 004,1	024,0 017,0 000,0 004,6	023,5 013,5 000,0 006,0	022,5 017,0 000,0 004,7
7	027,2 021,0 000,0 004,3	023,5 016,0 000,0 004,0	019,2 016,4 002,6 005,1	022,0 015,0 000,0 004,2
8	025,2 018,0 000,0 006,4	023,6 015,5 000,0 002,4	022,5 017,0 000,0 002,4	024,2 014,0 000,0 004,0
9	028,2 016,5 000,0 005,6	026,2 015,8 000,0 002,0	022,2 015,0 000,3 005,4	026,0 012,0 000,0 004,4
10	026,6 017,5 000,0 004,2	027,0 015,6 000,0 003,0	020,0 016,0 023,0 001,6	022,0 013,0 000,0 004,1
11	029,5 018,0 000,0 002,8	021,6 015,5 000,0 004,0	021,2 017,0 073,5 000,0	023,5 016,0 000,0 004,5
12	032,0 015,0 000,0 005,6	028,0 012,5 000,0 003,2	022,0 015,5 000,0 003,4	023,0 016,0 000,0 003,0
13	028,5 019,5 000,0 004,2	024,0 016,4 000,0 004,6	025,6 015,6 000,0 003,0	023,5 014,0 000,0 004,2
14	030,5 016,2 000,0 004,1	015,0 012,0 003,5 006,0	029,0 015,6 000,0 002,6	025,5 016,5 000,0 002,4
15	034,6 020,2 000,0 005,0	021,0 011,6 002,0 006,5	024,5 016,0 000,0 003,4	024,0 016,5 000,0 005,6
16	035,2 020,0 000,0 008,8	0019,0 012,8 000,0 003,2	021,6 015,4 000,0 004,8	023,2 015,2 000,0 003,5
17	028,5 026,5 000,0 009,1	021,0 013,6 000,0 003,8	022,8 014,6 000,0 002,8	023,4 016,2 000,0 005,4
18	026,5 019,2 000,0 006,0	024,2 013,0 000,0 003,0	025,2 014,0 000,0 002,7	022,6 015,0 000,0 002,7
19	024,6 019,0 000,0 005,4	024,6 013,0 000,0 001,4	023,0 013,6 000,0 005,0	026,2 013,4 000,0 004,6
20	025,2 016,8 000,0 003,4	022,6 013,8 000,0 004,5	023,6 017,0 000,0 002,7	029,0 014,8 000,0 004,1
21	027,0 016,0 000,0 004,6	0022,5 015,5 000,0 003,2	024,0 015,2 000,0 002,8	025,5 016,0 000,0 005,7
22	024,5 019,0 000,0 003,6	022,6 015,6 000,0 002,8	019,5 013,5 024,8 006,4	024,5 018,5 000,0 005,0
23	024,6 016,8 004,3 007,2	020,4 015,8 000,0 003,8	021,5 015,5 000,0 002,9	030,0 017,0 000,0 004,2
24	024,0 016,2 000,0 002,6	022,8 015,5 022,8 002,2	023,0 015,2 000,0 002,8	030,2 015,0 000,0 005,4
25	024,6 014,5 000,0 004,1	022,6 014,6 000,0 002,2	020,2 016,6 007,0 003,0	025,0 014,5 000,0 009,6
26	025,5 015,2 000,0 002,9	023,0 016,2 000,0 002,0	024,2 014,8 000,0 002,6	021,5 015,2 000,0 004,2
27	029,0 015,2 000,0 005,2	022,5 017,0 000,0 002,2	022,5 012,4 000,0 004,2	024,5 014,5 002,0 001,9
28	024,2 016,2 000,0 005,2	023,4 017,5 000,0 002,1	022,8 015,0 000,0 002,2	023,5 015,0 000,0 006,1
29	023,0 014,5 000,0 004,7	025,2 015,6 000,0 001,7	023,5 016,8 000,0 002,2	022,8 015,4 000,0 003,7
30	020,6 013,6 000,0 005,7	026,5 014,5 000,0 002,8	024,5 017,8 000,0 002,1	023,5 015,0 000,0 002,9
31	020,5 013,5 008,5 004,7		022,6 018,4 000,0 004,9	022,0 017,0 006,8 000,0

DADOS METEOROLÓGICOS NA FACULDADE DE AGRONOMIA

25

1984

SETEMBRO

OUTUBRO

NOVEMBRO

DEZEMBRO

Nº.	T ^o				T ^o				T ^o				T ^o			
	Ma.	Mi.	Pres.	Ev.	Ma.	Mi.	Pres.	Ev.	Ma.	Mi.	Pres.	Ev.	Ma.	Mi.	Pres.	Ev.
1	020,0	017,5	000,4	007,6	027,0	012,4	000,0	007,0	030,6	013,5	000,0	002,2	027,2	019,5	000,0	004,3
2	031,6	017,5	000,0	006,6	026,0	020,5	000,0	007,6	021,5	017,5	001,5	007,5	035,0	021,8	000,0	003,7
3	035,0	018,5	000,0	004,3	027,0	021,5	000,0	002,4	025,0	017,0	002,5	003,5	029,5	022,0	001,3	006,7
4	023,5	018,0	000,0	004,3	026,2	020,5	000,0	005,8	026,0	016,5	000,0	006,0	029,2	021,8	000,0	006,3
5	027,0	014,5	000,0	004,0	034,5	021,6	000,0	003,4	027,2	018,6	000,0	006,9	029,2	025,0	000,0	005,6
6	020,5	018,0	000,0	003,8	031,2	020,0	000,0	007,5	025,5	026,0	000,0	003,6	026,5	016,0	000,0	003,4
7	025,0	014,5	000,0	007,6	026,6	020,0	000,0	003,3	026,5	017,6	000,0	005,3	027,5	021,5	000,0	003,9
8	025,2	017,0	000,0	003,6	028,6	020,5	000,0	004,5	025,5	019,0	000,0	008,3	028,6	019,0	000,0	004,1
9	025,2	017,2	000,0	004,3	026,4	020,5	000,0	006,0	026,6	019,0	000,0	005,5	029,0	021,0	000,0	004,1
10	025,2	015,0	000,0	005,2	022,6	018,2	000,0	005,0	027,2	020,0	000,0	004,8	029,6	023,0	000,0	004,9
11	022,6	017,5	016,5	002,8	020,2	017,6	000,0	003,5	027,8	020,8	000,5	006,7	026,0	021,0	001,0	005,8
12	027,6	016,6	000,0	004,7	024,7	018,0	002,8	001,7	027,8	021,0	000,0	005,2	032,5	023,0	002,0	005,1
13	024,0	018,2	000,0	003,7	024,6	020,0	000,0	003,4	027,6	018,0	012,0	000,4	031,5	023,5	000,0	000,0
14	018,2	014,0	014,0	003,8	032,8	020,5	000,0	002,9	023,5	017,0	000,5	005,3	030,6	024,5	000,0	004,2
15	022,0	020,0	000,4	004,6	024,6	020,2	005,5	002,8	025,0	019,5	000,0	003,9	030,5	022,4	000,0	004,8
16	022,6	015,6	000,0	003,9	020,2	017,8	005,5	002,8	028,6	020,2	000,0	004,9	030,0	021,2	000,0	004,8
17	023,6	017,0	000,5	002,7	024,2	016,8	000,2	003,0	028,6	018,6	005,0	007,8	032,6	023,5	000,0	009,1
18	024,5	017,2	000,0	003,1	025,0	017,5	000,0	005,2	028,5	019,2	000,0	003,4	034,5	023,0	000,0	009,2
19	020,0	017,5	000,0	003,0	027,2	016,0	000,0	004,7	023,5	019,4	001,7	006,7	034,0	024,5	000,0	008,2
20	025,5	018,2	000,0	005,3	020,2	018,2	000,0	005,9	029,5	020,0	000,0	006,6	030,6	023,0	004,5	006,1
21	025,2	015,0	000,0	005,0	023,5	017,4	000,0	005,6	032,0	019,5	018,0	005,9	028,0	023,6	000,0	007,5
22	030,0	019,0	000,0	003,3	025,2	017,5	000,0	003,8	027,2	018,0	000,0	008,7	029,5	022,5	003,5	007,0
23	024,0	021,0	000,0	005,1	026,0	020,0	000,2	003,1	030,5	019,2	000,0	006,2	031,2	022,0	000,0	007,6
24	024,5	017,5	000,0	004,6	026,6	018,5	000,0	007,3	027,6	021,6	000,0	006,9	038,5	024,0	000,0	006,6
25	032,0	018,4	000,0	005,0	027,2	021,2	000,0	003,7	025,2	023,0	000,0	005,9	037,5	017,6	000,0	007,2
26	025,0	020,0	000,0	006,7	025,6	020,5	001,2	005,2	027,2	020,5	000,0	003,8	031,5	018,5	000,0	007,8
27	026,5	020,8	000,0	003,2	021,2	018,6	000,0	004,0	025,5	022,0	003,2	007,1	029,5	021,2	000,0	006,6
28	023,5	021,0	000,0	004,0	032,5	021,0	000,0	005,7	032,5	021,5	000,0	005,1	038,7	020,4	000,0	009,7
29	025,5	020,6	000,0	003,5	029,6	022,5	000,0	007,2	026,2	023,0	000,0	005,4	026,0	021,8	002,3	005,3
30	026,0	019,2	000,0	003,1	026,2	022,6	014,0	007,4	023,0	019,5	003,7	004,3	029,2	021,0	000,0	005,7
31					025,7	020,0	018,5	000,0					030,0	020,5	000,0	006,3

DADOS METEOROLÓGICOS DO CAMPO AGRÍCOLA, 1985

	JANEIRO	FEVEREIRO	MARÇO	ABRIL
	Ma. T. Má. T. Méd. Ev. Pluv. Rel. Hum. Ev. Pluv. Rel. Hum. Ev. Pluv. Rel. Hum. Ev. Pluv. Rel. Hum.	Ma. T. Má. T. Méd. Ev. Pluv. Rel. Hum. Ev. Pluv. Rel. Hum.	Ma. T. Má. T. Méd. Ev. Pluv. Rel. Hum. Ev. Pluv. Rel. Hum.	Ma. T. Má. T. Méd. Ev. Pluv. Rel. Hum. Ev. Pluv. Rel. Hum.
1	02,6 021,5 000,0 006,3	030,2 024,0 000,0 006,2	035,0 022,5 000,0 007,1	028,0 021,0 002,2 003,5
2	030,0 023,0 000,0 006,0	030,5 025,2 000,0 007,4	036,5 024,2 000,0 007,6	028,0 021,5 000,0 003,0
3	034,0 023,4 000,0 005,8	030,5 024,0 000,0 007,6	024,8 023,5 029,3 009,9	028,6 020,8 000,0 006,0
4	033,0 022,5 000,0 004,8	030,5 023,4 000,0 008,4	029,6 022,5 019,0 003,7	030,5 021,4 000,0 004,8
5	033,0 021,8 000,0 004,8	030,4 024,0 000,0 006,8	029,6 021,6 000,0 005,7	029,5 021,8 000,0 005,6
6	033,0 023,4 002,3 004,5	031,0 025,2 000,0 008,3	025,6 022,6 000,0 006,5	033,0 022,0 000,0 003,9
7	031,5 022,8 000,0 005,6	033,8 024,0 000,0 008,0	024,6 020,6 002,5 003,8	036,0 025,4 000,0 006,9
8	031,4 021,2 035,9 000,0	023,0 022,0 058,0 000,0	028,6 021,5 002,0 001,8	026,6 014,5 001,8 009,4
9	029,5 021,4 002,7 007,2	024,5 018,8 058,0 000,0	027,2 022,0 000,0 003,6	027,0 017,0 000,0 008,1
10	031,5 022,0 000,0 007,3	029,6 021,0 066,0 000,0	029,5 021,6 000,0 006,7	027,5 019,8 000,0 006,0
11	031,2 022,5 000,0 008,2	028,0 023,2 107,0 000,0	029,6 021,5 000,0 006,7	026,6 019,5 000,0 005,2
12	031,6 023,5 000,0 008,5	025,0 022,2 031,0 000,0	029,5 022,5 000,0 005,9	026,0 018,6 000,0 004,6
13	032,0 023,2 000,0 007,4	029,2 022,0 000,0 005,5	029,6 023,4 000,0 005,7	027,0 018,6 000,0 006,3
14	030,6 024,2 000,0 006,0	027,2 021,5 000,0 006,8	032,2 023,6 000,0 005,7	024,6 018,6 003,5 005,6
15	030,5 024,5 000,0 007,8	029,6 023,0 002,0 006,3	035,5 023,4 000,0 004,8	028,2 017,8 000,0 002,0
16	029,6 023,8 011,2 011,3	029,6 023,0 000,0 005,8	032,0 024,2 002,0 007,2	028,8 020,2 000,0 004,0
17	031,5 024,0 000,0 005,2	030,5 024,0 000,0 009,1	020,0 022,2 020,3 003,3	029,2 020,0 000,0 004,2
18	032,5 025,2 000,0 007,1	030,0 023,2 000,0 004,6	029,5 024,8 000,0 004,7	028,0 019,5 000,0 004,1
19	032,2 022,6 050,6 000,0	030,6 023,5 000,0 007,6	031,5 022,8 000,0 005,6	028,2 020,4 000,0 004,0
20	032,4 021,8 000,0 003,2	028,0 021,0 003,5 005,9	028,5 021,5 000,0 007,1	027,0 020,6 012,2 003,8
21	029,0 020,8 000,0 005,7	029,6 021,5 000,5 005,2	030,0 021,0 000,0 004,4	027,5 020,2 000,0 004,2
22	02,6 022,5 000,0 007,1	02,6 022,5 000,0 006,3	029,5 022,0 000,0 004,4	023,0 01,6 000,0 003,9
23	029,5 024,5 006,4 010,1	030,0 023,0 000,0 006,9	031,6 023,2 000,0 003,8	029,0 020,0 000,0 004,6
24	029,6 023,8 000,0 005,5	030,0 023,5 000,0 003,7	029,5 022,5 000,0 003,7	027,6 021,5 000,0 004,1
25	027,2 022,2 000,0 008,1	031,0 025,2 000,0 005,6	030,0 028,8 000,7 004,1	027,0 019,0 000,0 005,2
26	029,0 022,0 000,0 007,1	030,5 024,5 000,1 007,6	034,0 023,6 000,0 004,9	026,6 020,2 000,0 003,4
27	030,5 024,0 000,0 004,1	030,0 023,5 000,0 006,0	029,5 024,0 001,2 006,9	026,6 021,0 003,0 000,4
28	030,5 023,0 008,4 008,1	030,5 021,5 000,0 007,4	028,0 020,0 004,5 006,8	029,2 019,8 000,0 004,8
29	030,0 023,5 000,2 007,1		020,5 019,0 000,0 006,5	027,5 020,5 000,0 007,1
30	030,6 024,0 000,0 007,5		028,0 020,5 000,0 005,2	026,5 021,0 000,0 005,4
31	030,0 022,8 064,8 000,0		029,5 020,5 006,0 003,6	

	MAIO				JUNHO				JULHO				AGOSTO			
	T° Prec. Ev.				T° Prec. Ev.				T° Prec. Ev.				T° Prec. Ev.			
1	Max.	Min.	Prec.	Ev.	Max.	Min.	Prec.	Ev.	Max.	Min.	Prec.	Ev.	Max.	Min.	Prec.	Ev.
1	026,2	017,5	000,0	003,3	022,0	015,6	000,0	004,2	023,6	016,2	000,0	004,2	025,5	014,5	000,0	003,6
2	025,6	020,0	000,0	004,6	021,4	014,5	000,0	004,4	022,0	016,0	000,0	005,5	029,2	013,4	000,0	003,4
3	026,6	019,0	000,0	002,1	022,5	014,4	000,0	004,2	025,5	014,2	000,0	003,2	023,5	018,0	000,0	005,0
4	026,4	019,5	000,0	003,5	024,0	014,5	000,0	005,0	024,5	013,5	000,0	004,2	023,6	017,8	000,0	002,9
5	022,0	017,4	000,0	003,6	024,2	016,2	000,0	004,4	030,0	014,0	000,0	003,0	027,2	014,6	000,0	002,9
6	026,2	013,5	000,0	004,8	024,0	016,0	000,0	005,6	032,0	016,0	000,0	004,8	032,2	017,0	000,0	004,2
7	029,0	017,8	000,0	002,4	024,2	025,5	000,0	003,8	024,6	016,0	000,0	005,0	029,8	020,6	000,0	007,5
8	021,0	019,8	001,3	004,3	025,6	014,5	000,0	003,7	027,5	016,4	000,0	004,7	024,5	017,4	008,0	006,6
9	026,0	019,5	000,0	004,0	025,0	013,8	000,0	003,9	025,2	017,4	000,0	003,5	033,5	016,5	000,0	004,0
10	025,0	019,4	000,0	004,0	024,5	014,6	000,0	002,7	026,2	016,0	000,0	004,2	024,5	018,4	000,0	003,8
11	026,2	018,8	000,0	003,2	024,0	013,5	000,0	003,4	030,2	016,5	000,0	006,0	024,0	015,4	000,0	004,6
12	021,2	017,0	000,0	003,9	024,5	011,5	000,0	004,3	019,6	015,0	001,2	006,7	028,2	015,2	000,0	005,0
13	021,5	012,4	002,5	004,0	030,0	011,5	000,0	004,0	020,0	014,5	000,0	002,9	025,0	018,5	000,0	004,9
14	023,2	017,5	000,0	005,0	024,5	018,0	000,0	004,2	022,5	014,6	003,0	005,2	028,0	016,0	000,0	003,2
15	023,5	014,5	000,0	005,7	023,2	014,6	000,0	003,4	020,5	015,5	000,0	005,0	025,0	016,0	000,0	004,6
16	024,2	015,2	000,0	003,0	025,0	016,0	000,0	003,0	025,5	015,6	000,0	002,7	024,5	016,5	000,0	004,4
17	026,0	013,5	000,0	003,8	023,2	016,4	000,0	004,6	022,5	015,0	000,0	002,6	024,8	016,6	000,0	003,8
18	024,2	013,5	000,0	004,2	022,0	013,0	000,0	003,6	022,5	013,6	000,0	004,3	024,5	016,0	000,0	003,4
19	026,0	014,5	000,0	003,7	012,0	014,0	000,0	002,2	022,0	016,4	000,0	004,1	024,5	016,0	000,0	004,5
20	027,5	013,2	000,0	006,2	023,5	017,0	000,0	003,2	023,2	014,5	000,0	003,9	025,6	016,5	000,0	003,7
21	027,2	015,5	000,0	003,9	025,5	014,5	000,0	002,6	024,0	013,2	000,0	002,7	024,6	017,0	000,0	003,6
22	028,6	015,2	000,0	004,4	026,0	013,0	000,0	003,6	023,5	013,0	000,0	004,2	029,2	015,5	000,0	004,6
23	026,6	017,5	000,0	004,2	024,6	015,5	000,0	003,2	023,5	015,0	000,0	004,6	025,2	016,5	000,0	005,7
24	025,8	018,0	000,0	004,0	023,0	017,0	000,0	002,4	025,5	015,0	000,0	003,0	030,0	016,0	000,0	005,7
25	025,2	018,0	000,0	004,8	023,4	016,2	000,0	003,2	021,5	013,0	000,0	004,4	019,8	018,5	000,0	003,8
26	024,0	015,4	000,0	004,8	022,0	017,8	000,0	002,2	028,0	014,0	000,0	003,8	022,0	014,5	000,0	004,5
27	024,0	015,6	000,0	004,0	024,0	018,0	000,0	002,6	022,5	015,5	000,0	004,9	022,5	012,2	000,0	004,1
28	025,0	014,6	000,0	002,8	022,5	015,6	000,0	002,3	021,5	013,0	000,0	003,5	024,2	012,8	000,0	004,8
29	024,6	016,0	000,0	003,0	024,2	017,0	000,0	002,7	025,6	015,4	000,0	002,6	027,0	013,4	000,0	004,6
30	022,0	016,2	002,5	004,9	023,6	017,0	000,0	005,0	026,6	013,5	000,0	004,6	026,2	014,5	000,0	004,4
31	024,8	017,2	000,0	003,4					024,5	016,2	000,0	003,6	025,0	018,0	002,5	003,7

DADOS METEOROLÓGICOS DA FACULDADE DE AGRONOMIA
1985

28

	Setembro				Outubro				Novembro				Dezembro			
	T ^o				T ^o				T ^o				T ^o			
	Ma.	Mi.	Prec.	Ev.	Ma.	Mi.	Prec.	Ev.	Ma.	Mi.	Prec.	Ev.	Ma.	Mi.	Prec.	Ev.
1	024,8	018,0	000,0	004,0	034,5	020,5	000,0	004,4	024,6	021,0	000,8	005,3	024,6	019,6	028,0	000,0
2	021,0	017,0	000,0	002,7	032,0	021,0	000,0	003,8	030,0	020,5	000,5	004,4	037,5	020,5	000,0	006,4
3	034,6	016,4	000,0	005,0	031,0	019,2	000,0	004,8	030,5	020,4	022,5	005,7	030,5	021,0	000,0	005,5
4	021,5	018,5	000,0	005,8	028,6	022,0	000,0	002,8	028,5	021,5	000,0	005,8	027,5	022,2	011,5	006,8
5	021,0	017,0	000,0	004,4	031,0	020,0	000,0	005,1	033,6	022,2	000,6	004,0	027,5	022,0	000,0	006,0
6	020,2	019,0	000,0	003,6	026,0	020,0	000,0	005,6	031,6	024,2	000,0	006,6	027,5	021,6	005,0	004,8
7	020,2	018,5	000,0	004,7	026,5	016,8	000,0	005,3	030,0	023,8	000,0	007,6	028,0	023,0	000,0	004,8
8	021,0	017,4	002,2	004,6	028,2	017,0	000,0	003,8	030,0	022,4	000,0	005,7	029,6	022,2	007,7	004,3
9	027,5	018,0	000,0	005,7	024,2	020,5	002,2	005,6	022,5	021,2	000,8	007,1	033,0	023,0	000,5	006,7
10	033,6	017,8	000,0	005,0	026,0	017,2	001,6	004,8	023,6	018,6	000,0	002,6	031,0	024,0	000,0	005,9
11	026,2	020,4	000,0	005,3	027,0	018,5	000,0	005,2	025,5	017,5	000,0	005,4	025,0	022,0	000,0	005,9
12	033,5	024,5	000,0	005,9	027,2	016,6	000,0	004,2	025,8	018,0	000,0	004,6	028,0	021,5	000,8	006,2
13	024,6	016,2	000,0	005,1	031,6	017,0	000,0	004,2	026,5	017,2	000,0	004,6	029,5	023,6	000,0	005,0
14	028,6	015,6	000,0	006,1	028,5	020,6	000,0	005,2	027,5	018,2	000,0	004,8	034,6	024,5	000,0	006,6
15	024,0	016,8	008,9	004,8	027,6	020,5	000,0	005,0	029,2	020,0	000,0	004,0	027,6	022,2	003,0	005,0
16	025,0	017,5	000,0	005,1	028,6	022,8	000,0	004,4	027,2	021,2	000,0	004,8	028,0	022,5	000,0	004,5
17	023,2	016,4	002,5	006,0	024,2	020,0	003,5	005,1	028,0	022,5	000,8	005,0	029,2	022,0	000,0	005,3
18	024,5	015,5	000,0	004,2	026,6	019,5	000,0	004,6	027,5	020,4	000,9	004,5	028,5	023,0	000,0	007,5
19	034,5	015,4	000,0	004,6	027,2	020,0	000,0	005,8	028,0	021,5	000,0	003,4	027,5	023,2	000,0	008,7
20	025,0	020,0	000,0	004,2	027,5	018,5	000,0	005,1	027,8	019,6	000,0	004,0	027,0	021,5	000,0	006,0
21	023,2	016,4	000,0	006,8	029,0	018,5	000,0	004,8	028,6	019,0	000,0	003,8	030,0	020,0	000,7	005,1
22	023,5	017,0	000,5	003,9	029,2	019,5	000,1	004,9	033,5	020,0	000,0	003,8	025,6	020,5	002,5	005,4
23	023,6	015,7	000,0	002,4	028,2	019,8	000,0	005,0	029,5	018,0	000,0	005,4	028,2	020,4	000,0	007,2
24	034,5	019,0	000,0	004,6	029,0	022,0	000,0	005,3	029,5	024,5	000,0	004,0	028,6	021,0	000,0	007,0
25	034,5	021,8	000,0	004,6	029,0	021,5	000,0	005,8	030,5	021,6	000,0	004,4	033,5	023,0	000,0	006,4
26	024,6	020,5	000,0	004,6	029,0	020,5	001,5	006,9	029,0	024,0	000,0	005,8	029,0	021,6	003,5	007,5
27	025,0	018,0	000,5	004,3	029,2	021,2	000,0	005,2	029,0	022,0	000,0	004,8	029,0	022,6	003,2	004,6
28	032,5	020,4	000,0	004,8	029,6	021,5	000,0	006,2	028,6	021,0	000,0	005,2	034,5	023,0	000,0	005,7
29	033,0	020,0	000,0	005,9	031,5	022,2	000,0	007,4	027,2	021,0	025,6	007,8	031,5	023,5	000,0	006,8
30	027,6	020,0	000,0	005,2	022,5	019,0	007,5	000,0	027,0	020,0	000,0	004,8	033,8	026,2	000,0	009,2
31					025,0	020,5	001,5	003,1					028,6	023,5	000,0	008,9