LEGUMES PROGRAM

PIGEONPEA AGRONOMY FIELD EXPERIMENTS

KHARIF 1986

ICRISAT CENTER

ICRISAT

International Crops Research Institute for the Semi-Arid Tropics

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CONTENTS

Project: CP-116(85)IC - Adaptation of chickpea and pigeonpea to low levels of available soil phosphorus and soil moisture.

PA 86/27 - Response of pigeonpea and sorghum to three major elements (N, P and K) on Vertisol and Alfisol. (JA, NA, KO).

Treatments: Main plot: Pigeonpea (ICPL 87), Sorghum (CSH 5)

Sub-plot : 1. 0 (no fertilizer)
2. N (150 kg N/ha)
3. P (65 kg P/ha)
4. K (125 kg K/ha)
5. PK
6. NK
7. NP
8. NPK

Split plot in 3 blocks

4 locations: BP 1, BP 4J, RCE 14A, RCW 8

4 x 6 m plots PP 30 X 10 cm, Sorghum 60 X 15 cm

Basal application of $CaSO_4$ and $ZnSO_4$

Fertilizers incorporated in top 15 cm soil

Rainfed. Sequential sampling + final yield data.

Sown 18 June 1986 BP 1, BR 4J
23 June 1986 RCE 14A
25 June 1986 RCW 8

PA 86/28 - Influence of soil moisture fluctuation on the uptake of phosphorus by pigeonpea. (JA, KO, NA).

Treatments:
1) Pigeonpea without fertilizer P
2) Pigeonpea with 53 kg P/ha as SSP
3) Bare soil without fertilizer P
4) Bare soil with 53 kg P/ha

RBD with 4 blocks.

In BR 4J and RCW 8.

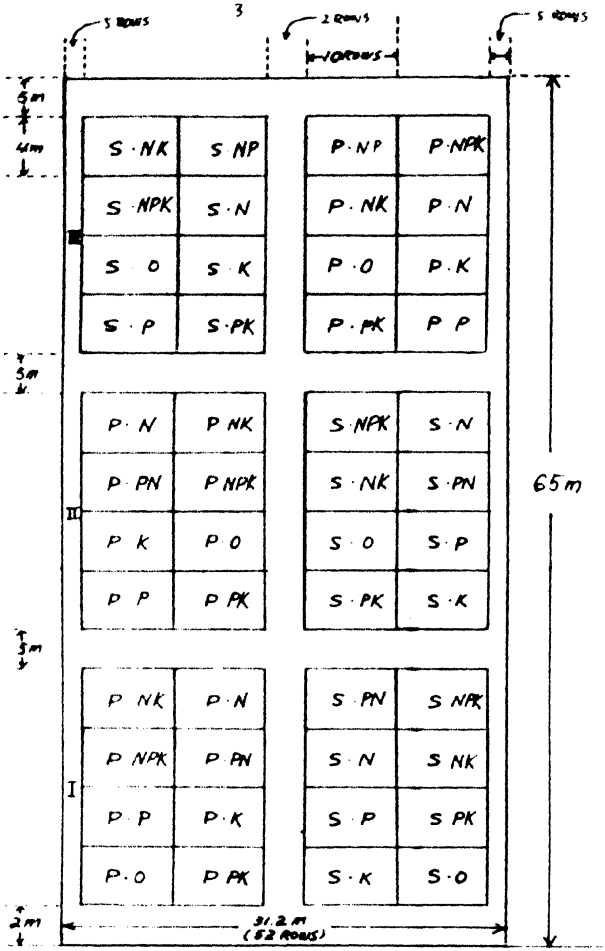
Frequent sequential sampling after rainfall t monitor changes in plant DM and N, P, K content.

Also sequential soil moisture and N, P, K measurem

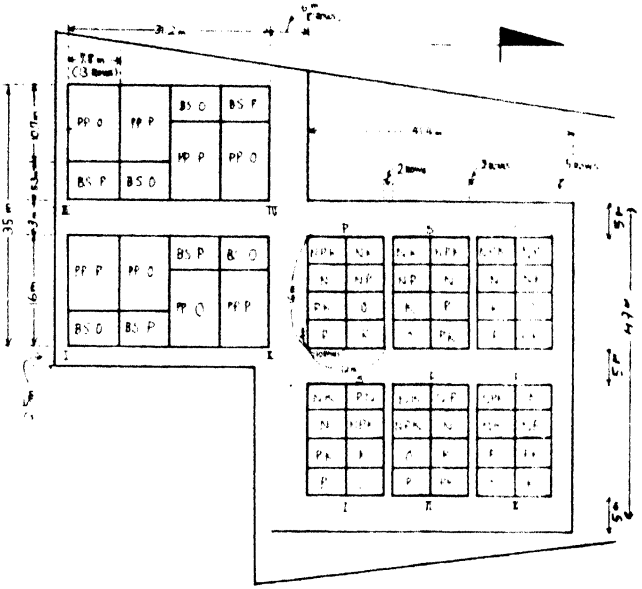
ICPL 87 at 30 X 10 cm spacing.

No irrigation.

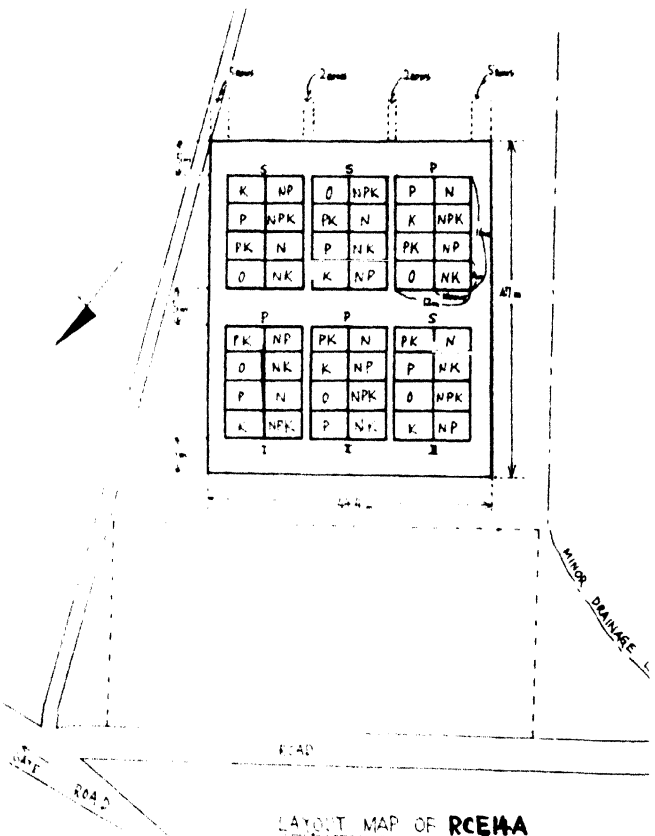
Sown 18 June 1986 BR 4J
25 June 1986 RCW 8



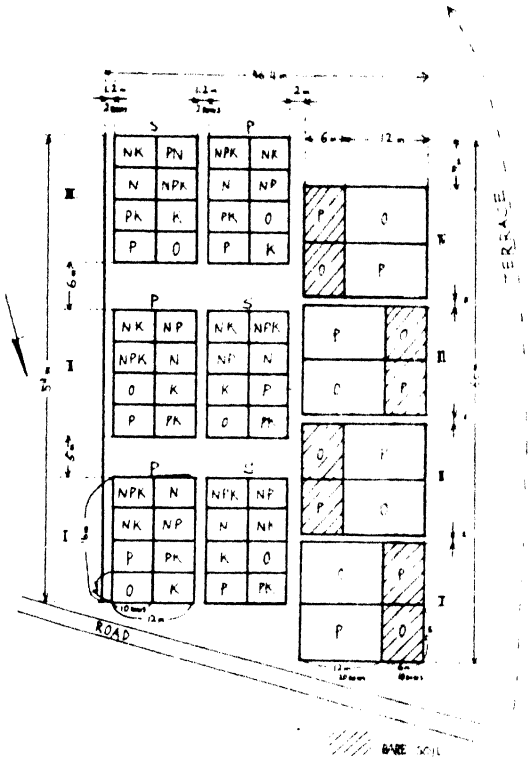
LAYOUT MAP OF **BP - 1**



LAYOUT MAP OF BR4J



LAYOUT MAP OF **RCEHA**



LAYOUT MAP OF **RCW 8**

Project: P-107(85)IC - Climatic adaptation in pigeonpea

PA 86/5 - Effects of quality and thickness of plastic and of duration of solarization on the solarization treatment of pigeonpea. (YSC, CJ, YLN, MPH, SS, KLS, JVDKKR).

Treatments:
1) 125 gauge polythene for 6 weeks
2) 200 gauge polythene for 6 weeks
3) 300 gauge polythene for 6 weeks
4) 400 gauge polythene for 6 weeks
5) 400 gauge polythene for 4 weeks
6) 500 gauge polythene for 6 weeks
7) No solarization

BM 16C, LRG 30

RBD with 4 reps.

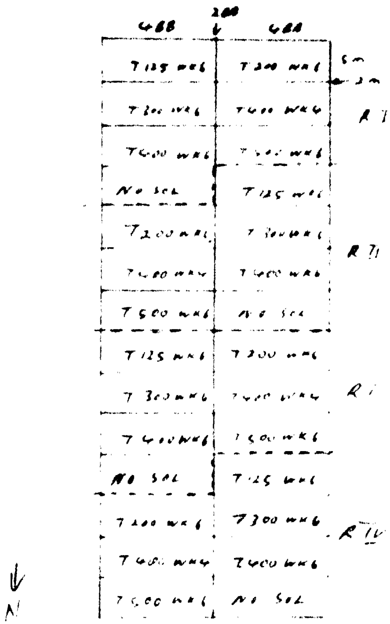
6 X 4 m plots with 75 x 15 cm spacing on BBF

Solarization from 15-4-86 to 4-6-86

Sown 25 June 1986.

PA85/6 Solarisation – effect of polythene thickness

8m/6C



PA 86/6 - Multilocation testing of effects of solarization on pigeonpea and chickpea (YSC, CJ, YLN, MPH, SS, KLS, JVDKKR, OPR, MPS).

Treatments:
1) Solarization with susceptible genotype (LRG 30)
2) Solarization with resistant genotype (ICP 8863)
3) No solarization with susceptible genotype (LRG 30)
4) No solarization with resistant genotype (ICP 8863)

PM RE (Also at Hisar and Gwalior).

Latin square, 4 reps.

6 X 5 m plots with 75 x 15 cm spacing on BBF.

Solarization from 21 - 5 - 86 to 6 - 6 - 86

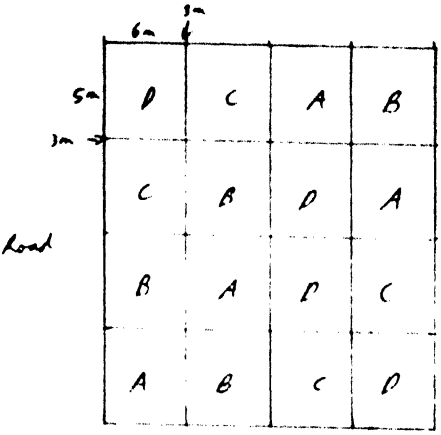
Sown 25 June 1986.

PA 86/6 - Soil moisture multilocation testing

Pigeonpea

RABE

→ N



A = Sol, LRG 30 (susc)

B = Sol, ICP 8863 (res)

C = No sol, LRG 30

D = No sol, ICP 8863

PA 86/8 - Residual effects of solarization on chickpea and pigeonpea.
(YSC, CJ, YLN, MPH, NPS)

Treat-ments	Wilt reaction	Pigeonpea genotype	Solarization
1.	Susc.	LRG 30	No sol. ever
2.	Susc.	LRG 30	Sol. 84 only
3.	Susc.	LRG 30	Sol. 85 only
4.	Susc.	LRG 30	Sol. 84 + 85 + 86
5.	Res.	ICP 8863	No sol. ever
6.	Res.	ICP 8863	Sol. 84 only
7.	Res.	ICP 8863	Sol. 85 only
8.	Res.	ICP 8863	Sol. 84 + 85 + 86

BIL 2[illegible]

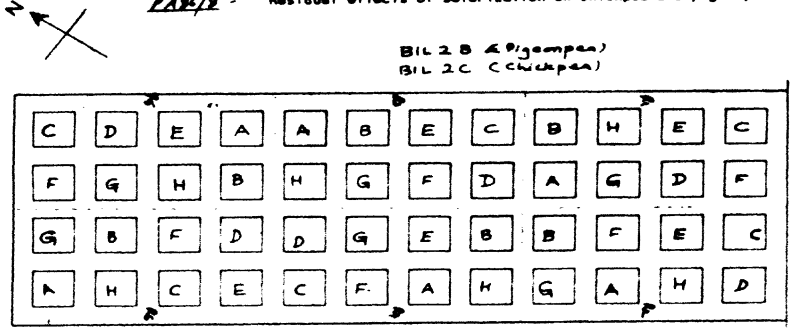
RBD with [illegible] reps.

75 x 1[illegible] cm spacing

Solarization from [illegible] 4 86 to 2 6 86

Sown 25 June 1986

PA84/8 - Residual effects of solarization on chickpea and pigeonpea.



Separate experiments each for pigeonpea and chickpea superimposed upon previous experiments PA 85/9 and PA 85/16, respectively. The treatments are:

	Wilt reaction	Pigeonpea genotype	Chickpea genotype	Solarisation
A.	Susceptible	LRG 30	ICCC 4	No sol. ever
B.	"	"	"	Sol. 84 only
C.	"	"	"	Sol. 85 only
D.	"	"	"	Sol. 84 + 85 + 86
E.	Resistant	ICP 8863	JG 74	No sol. ever
F.	"	"	"	Sol. 84 only
G.	"	"	"	Sol. 85 only
H.	"	"	"	Sol. 84 + 85 + 86

PA 86/9 - The interaction of solarization and rhizobial inoculation in pigeonpea. (JVDKKP, CJ, YSC) (Really under Project CP-113(85)IC).

Treatments:
1) Sol., Inoc. with rhizobia
2) Sol., no inoc.
3) No sol., inoc. with rhizobia
4) No sol., no inoc.

BP 11C.

RBD with 6 reps.

4 x 4 m plots.

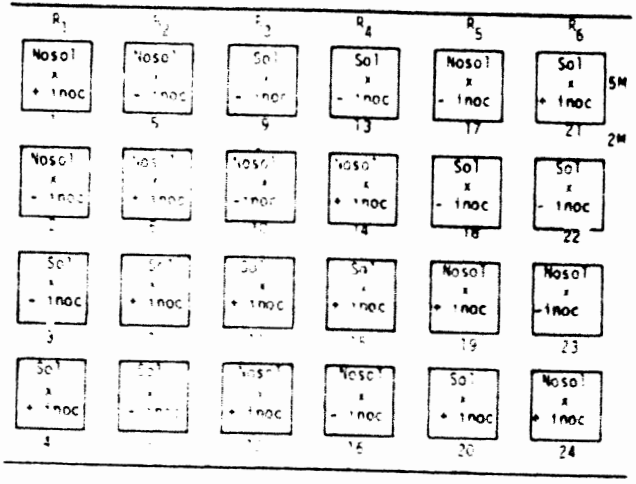
ICP 8863 at 75 x 15 cm on BBF.

Solarization from 25 May to 10-6-86

Sown 19 June 1986.

Experiment No.PA 86/9 Field: BP 11C

The interaction of solarization and rhizobial inoculation in pigeonpea.



PA 86/13 - A growth analysis of promising short duration pigeonpea genotypes, including a hybrid and its parents. (YSC, CJ, NPS, KBS, SCG).

Treatments: Main plots: Genotypes

1) ICPH 8 (indet. hybrid)
2) MS Prabhat (female parent of ICPH 8)
3) ICPL 161 (male parent of ICPH 8)
4) UPAS 120 (indet.)
5) ICPL 151 (det.)
6) ICPL 87 (det.) control

Sub-plots: Spacings

1) 16 plants/m^2 (30 X 20 cm)
2) 33 plants/m^2 (30 X 10 cm)
3) 66 plants/m^2 (30 X 5 cm)

Location: RP 1A, BP 11C, Hisar, Gwalior.

3 reps. at Patancheru & Gwalior and 4 at Hisar.

Split plot with 3 X 6 m plots.

Sequential harvesting to determine DM partitioning, LA, etc.

Light interception at different growth stages.

RP 1A sown 17 June 1986.

BP 11C sown 19 June 1986.

PA 86/13 RP 1A

Growth analysis of short duration pigeonpeas

→N

7 ridges

4 m							
	30 x 20 UPAS 120 1	30 x 10 MSP 4	30 x 5 ICPL 151 7	30 x 20 ICPL 87 10	30 x 20 ICPH 8 13	30 x 10 ICPL 161 16	
	30 x 10 UPAS 120 2	30 x 5 MSP 5	30 x 10 ICPL 151 8	30 x 10 ICPL 87 11	30 x 5 ICPH 8 14	30 x 5 ICPL 161 17	R_1
	30 x 5 UPAS 120 3	30 x 20 MSP 6	30 x 20 ICPL 151 9	30 x 5 ICPL 87 12	30 x 10 ICPH 8 15	30 x 20 ICPL 161 18	
	30 x 20 ICPH 8 19	30 x 20 UPAS 120 22	30 x 10 ICPL 87 25	30 x 10 ICPL 151 28	30 x 20 ICPL 161 31	30 x 20 MSP 34	
	30 x 5 ICPH 8 20	30 x 5 UPAS 120 23	30 x 5 ICPL 87 26	30 x 20 ICPL 151 29	30 x 10 ICPL 161 32	30 x 5 MSP 35	R_2
	30 x 10 ICPH 8 21	30 x 10 UPAS 120 24	30 x 20 ICPL 87 27	30 x 5 ICPL 151 30	30 x 5 ICPL 161 33	30 x 10 MSP 36	
	30 x 20 ICPL 87 37	30 x 10 ICPL 161 40	30 x 5 ICPL 151 43	30 x 10 ICPH 8 46	30 x 20 UPAS 120 49	30 x 10 MSP 52	
	30 x 10 ICPL 87 38	30 x 5 ICPL 161 41	30 x 10 ICPL 151 44	30 x 5 ICPH 8 47	30 x 10 UPAS 120 50	30 x 5 MSP 53	R_3
	30 x 5 ICPL 87 39	30 x 20 ICPL 161 42	30 x 20 ICPL 151 45	30 x 20 ICPH 8 48	30 x 5 UPAS 120 51	30 x 20 MSP 54	

PA 86/13 BP 11C

N

Growth analysis of short duration pigeonpeas

Bridges

30 x 20 UPAS 120 73	30 x 20 ICPL 151 76		30 x 5 MSP 79	30 x 10 ICPH 8 82	30 x 10 ICPL 161 85	30 x 20 ICPL 87 88
30 x 5 UPAS 120 74	30 x 5 ICPL 151 77		30 x 10 MSP 80	30 x 5 ICPH 8 83	30 x 20 ICPL 161 86	30 x 5 ICPL 87 89
30 x 10 UPAS 120 75	30 x 10 ICPL 151 78		30 x 20 MSP 81	30 x 20 ICPH 8 84	30 x 5 ICPL 161 87	30 x 10 ICPL 87 90
30 x 10 ICPL 87 91	30 x 5 UPAS 120 94		30 x 20 ICPH 8 97	30 x 5 ICPL 151 100	30 x 10 ICPL 161 103	30 x 10 MSP 106
30 x 20 ICPL 87 92	30 x 10 UPAS 120 95		30 x 10 ICPH 8 98	30 x 20 ICPL 151 101	30 x 5 ICPL 161 104	30 x 5 MSP 107
30 x 5 ICPL 87 93	30 x 20 UPAS 120 96		30 x 5 ICPH 8 99	30 x 10 ICPL 151 102	30 x 20 ICPL 161 105	30 x 20 MSP 108
30 x 20 ICPL 87 109	30 x 20 ICPH 8 112		30 x 5 ICPL 151 115	30 x 5 ICPL 161 118	30 x 5 UPAS 120 121	30 x 10 MSP 124
30 x 5 ICPL 87 110	30 x 10 ICPH 8 113		30 x 10 ICPL 151 116	30 x 10 ICPL 161 119	30 x 20 UPAS 120 122	30 x 5 MSP 125
30 x 10 ICPL 87 111	30 x 5 ICPH 8 114		30 x 20 ICPL 151 117	30 x 20 ICRL 161 120	30 x 10 UPAS 120 123	30 x 20 MSP 126

4 m

R_1 R_2 R_3

R.J

PA 86/14 - Effect of shading during the reproductive phase of short duration pigeonpea genotypes. (YSC).

Treatments: 1) Shades to cut 0, 20, 40, 60, 80, 90% of sunlight

2) Genotypes:

ICPL 87	ICPL 186
ICPL 161	ICPL 8324
T 21	ICPL 84077
ICPL 8308	ICPL 288

Genotypes arranged in RBD in 4 blocks with systemat. arrangement of shading treatments at sub row

RP IA.

2 row plots

Spacing 30 x 10 cm.

Yield and comp ments.

Sown 17 June 1986.

PA 86/14 Shading Experiment ICPL 87

Planting spacing: 30 x 10 cm

15 ridges 15 ridges (30 rows)

6 ridges

	ICPL 161	1	ICPL 87	9	50 cm
	ICPL 8308	2	ICPL 8309	10	
	ICPL 83024	3	ICPL 83024	11	
	ICPL 87	4	ICPL 151	12	
R I	ICPL 8309	5	ICPL 161	13	R II
	ICPL 151	6	ICPL 8308	14	
	ICPL 288	7	ICPL 155	15	
	ICPL 155	8	ICPL 288	16	
	ICPL 8308	17	ICPL 161	25	
	ICPL 151	18	ICPL 8308	26	
	ICPL 87	19	ICPL 288	27	
	ICPL 161	20	ICPL 155	28	
R III	ICPL 8309	21	ICPL 83024	29	R IV
	ICPL 288	22	ICPL 8309	30	
	ICPL 155	23	ICPL 87	31	
	ICPL 83024	24	ICPL 151	32	

15 ridges

N

2 c

PA 86/15 - Effect of weed management on the performance of short, medium and long duration pigeonpea genotypes (YSC).

Treatments: Main plot: Genotypes

1. ICPL 87
2. C 11
3. ICP 8863
4. ICPL 358
5. GW 3

Sub plot: Weed management

1. Weed free
2. Basalin
3. Basalin + 2 X hand weeding
4. Promytrin
5. Basalin + Promytr
6. Weedy check

RP 11C

3 reps.

3 X 4 m plots.

Spacing 30 X 10 cm for ICPL 87 and
60 X 30 cm for other genotyps

Sown 19 June 1986

PA 86/15

Weed management trial

T4	T5	T4	T2	T6	T2
T2 ICP 8863	T1	T1 ICPL 87	T6	T5 ICPL 358	T1
T3	T6	T5	T3	T3	T4
T6	T2	T1	T3	T4	T1
T5 ICPL 87	T3	T4 NP(WR)15	T5	T6 NP(WR)15	T5
T4	T1	T2	T6	T2	T3
T4	T3	T5	T1	T3	T2
T2 ICPL 358	T1	T4 ICP 8863	T6	T4 C 11	T6
T6	T5	T2	T3	T1	T5
T4	T2	T3	T6	T2	T3
T1 NP(WR)15	T3	T5 C 11	T4	T1 ICP 8863	T5
T5	T6	T1	T2	T4	T6
T6	T3	T5	T2	T1	T4
T5 C 11	T4	T1 ICPL 358	T4	T3 ICPL 87	T2
T2	T1	T6	T3	T5	T6

T1 = Weed free

T2 = Basalin @ [illegible] ha

T3 = Basalin + hand weeding

T4 = Promytrin 1.25 kg ai ha^{-1}

T5 = Basalin + Promytrin

T6 = Weedy check

PA 86/16 - Responsiveness of determinate medium duration pigeonpea genotypes to planting density. (YSC, KBS).

Treatments: Main plot: Genotypes

1. # 5414	4. # 523	7. C 11
2. # 5415	5. # 524	8. BDN 1
3. # 5416	6. # 511	

Sub plot: Spacing

1. 30 X 60 cm (5.5 plants/m^2)
2. 30 X 30 cm (11 plants/m^2)
3. 30 X 10 cm (33 plants/m^2)

BP 11C.

Split plot with 3 reps.

3 X 4 m plots.

Sown 19 June 1986.

N

PA 86/16 Road BP 110

Spacing experiment with medium DT entries

4 m

30 x 10	30 x 30	30 x 10	30 x 60	30 x 30	30 x 10
30 x 60 # 524	30 x 10 # 5415	30 x 60 # 524	30 x 10 C 11	30 x 60 BDN 1	30 x 60 # 511
30 x 30	30 x 60	30 x 30	30 x 30	30 x 10	30 x 30

5 rows

30 x 60	30 x 60	30 x 60	30 x 60	30 x 30	30 x 60
30 x 30 # 523	30 x 30 # 511	30 x 30 # 5416	30 x 10 # 5414	30 x 60 # 5415	30 x 30 # 5414
30 x 10	30 x 30	30 x 10	30 x 30	30 x 10	30 x 10
30 x 10	30 x 60	30 x 60	30 x 60	30 x 30	30 x 60
30 x 60 # 5416	30 x 10 BDN 1	30 x 10 # 523	30 x 30 # 5415	30 x 60 C 11	30 x 30 # 524
30 x 30	30 x 30	30 x 30	30 x 10	30 x 10	30 x 10

30 x 60	30 x 30	30 x 10	30 x 30	30 x 60	30 x 30
30 x 10 C 11	30 x 10 # 5214	30 x 30 BDN 1	30 x 60 # 511	30 x 10 # 5416	30 x 10 # 523
30 x 30	30 x 60	30 x 60	30 x 10	30 x 30	30 x 60

3 m 2 m 1 m

PA 86/19 - Evaluation of the performance of suspected annual progenies in two sowings. (YSC).

Treatments: Main plot: Sowing date

1. mid-June
2. mid-July

Sub plot: Genotypes

1. Line 98
2. Line 157
3. Line 79
4. Line 156
5. BDN 1 (check)
6. C 11

BP 11C.

Split plot with 4 reps.

4 m plots.

60 X 30 cm spacing.

First sowing 19 June 1986

Spacing 60x80 cm

Annual type trial

[illegible]

4 m

BDN 1 15 Jul 1	C 11 15 Jun 7		C 11 15 Jun 13	L 156 15 Jul 19	BDN 1 15 Jul 25	BDN 1 15 Jun 31		L 157 15 Jun 37	L 157 15 Jul 43
C 11 15 Jul 2	L 156 15 Jun 8		L 79 15 Jun 14	BDN 1 15 Jul 20	L 98 15 Jul 26	L 156 15 Jun 32		L 156 15 Jun 38	L 79 15 Jul 44
L 157 15 Jul 3	L 79 15 Jun 9		L 98 15 Jun 15	L 79 15 Jul 21	L 79 15 Jul 27	L 98 15 Jun 33		L 98 15 Jun 39	L 156 15 Jul 45
L 79 15 Jul 4	BDN 1 15 Jun 10		L 157 15 Jun 16	L 98 15 Jul 22	C 11 15 Jul 28	L 157 15 Jun 34		L 79 15 Jun 40	C 11 15 Jul 46
L 98 15 Jul 5	L 98 15 Jun 11		BDN 1 15 Jun 17	C 11 15 Jul 23	L 157 15 Jul 29	L 79 15 Jun 35		C 11 15 Jun 41	BDN 1 15 Jul 47
L 156 15 Jul 6	L 157 15 Jun 12		L 156 15 Jun 18	L 157 15 Jul 24	L 156 15 Jul 30	C 11 15 Jun 36		BDN 1 15 Jun 42	L 98 15 Jul 48

R_1 R_2 R_3 R_4

Road

Project: P-108(85)IC - The alleviation of drought and waterlogging effects on growth, symbiotic nitrogen fixation capacity and yield of pigeonpea.

PA 86/17 - Screening for drought tolerance in short duration pigeonpea. (YSC, CJ, JVDKKR).

Treatments: 30 genotypes in RBD with systematic application of line source (LS). 4 blocks.

4 rows 30 cm apart, 15 m long.

Also at each end of test genotypes 16 rows of ICPL 87 for nodulation observations and sampling during growth.

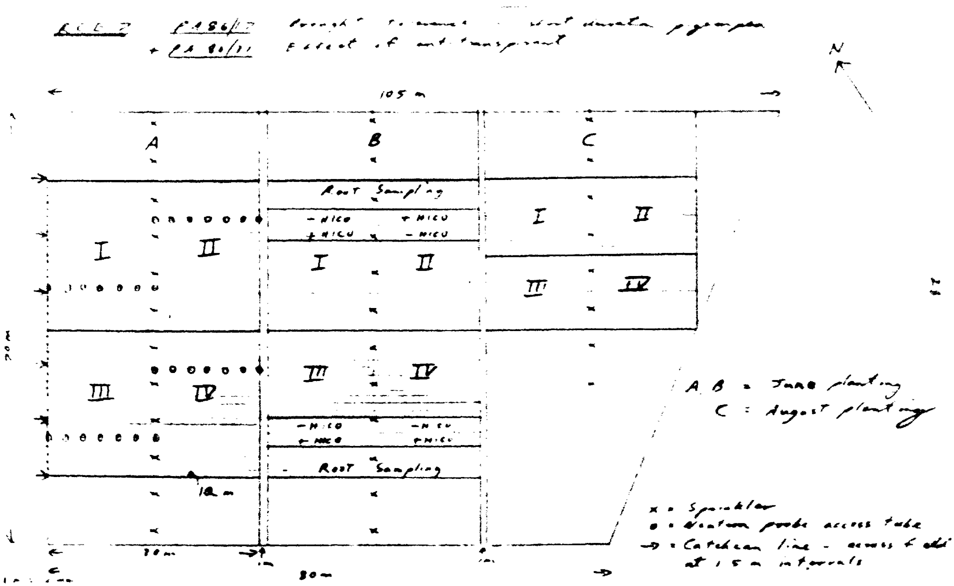
Location: RCE 7 (both June and late August sowings) and Anantapur.

LS at right angles with BBF

Sprinkler irrigate when top 10 cm soil near sprinklers dries out.

Measure water applied, soil moisture with neutron probe (at Patancheru only), PP growth and yield.

First sowing 3/4 - 7- 86



N
105 m
A
B
C
Root Sampling
− NICO
+ NICO
I
II
III
IV
10 m
30 m
80 m
A, B = June planting
C = August planting
x = Sprinkler
● = Neutron probe access tube
→ = Catchcan line – across field at 1.5 m intervals

PA 86/17 - RCE 7

Plot Position	A I	A II	A III	A IV	B I	B II	B III	B IV	C I	C II	C III	C IV
1	7	11	16	17	24	22	26	31	12	25	27	12
2	13	19	20	11	23	21	31	25	30	30	23	4
3	10	8	17	15	26	1	21	30	17	17	4	30
4	11	16	12	8	31	25	27	22	23	12	30	27
5	17	15	1	4	21	27	30	24	7	7	2	7
6	4	2	13	20	29	29	29	2	1	2	12	1
7	12	5	11	3	1	23	25	26	2	3	17	2
8	6	18	6	9	2	30	23	29	3	4	7	3
9	3	9	4	5	27	28	1	27	27	1	1	17
10	16	20	8	13	25	2	2	23	4	27	3	23
11	9	7	7	19	22	24	22	21				
12	20	3	2	16	30	31	24	1				
13	14	10	19	10								
14	15	6	9	2								
15	2	14	5	18								
16	8	4	10	14								
17	18	1	14	7								
18	5	13	18	1								
19	19	17	15	12								
20	1	12	3	6								

Genotypes for short duration pigeonpea drought screening

		Patancheru			Anantapur	Palem
		A	B	C		
1.	ICPL 81	X	X	X	X	X
2.	87	X	X	X	X	X
3.	151	X		X	X	X
4.	161	X		X	X	X
5.	269	X			X	X
6.	288	X			X	X
7.	312	X		X	X	
8.	8304	X			X	X
9.	8306	X			X	X
10.	8315	X			X	X
11.	8319	X			X	
12.	8321	X		X	X	
13.	8322	X			X	X
14.	8327	X			X	X
15	83016	X			X	X
16.	83024	X			X	
17.	84020	X		X	X	
18.	84023	X			X	X
19.	84032	X			X	X
20.	84052	X			X	X
21.	84059		X		X	
22.	85035		X		X	
23.	85037		X	X	X	
24.	85043		X		X	X
25.	840045		X		X	X
26.	850010		X		X	
27.	850052		X	X	X	
28.	850055				X	X
29.	MS Prabhat X ICPL 87		X		X	X
30.	ICPH 8		X	X	X	X
31.	Germplasm composite		X		X	
32.	ICP 8738/9*				X	
33.	ICP 8801/5*				X	

*Due to limited seed, to be grown in adjacent 2-row plots.

PA 86/18 - Screening for terminal drought stress tolerance in medium duration pigeonpea genotypes. (YSC, CJ).

Treatments: Main plot: Irrigation

+ and - from Sept.

Sub-plot : Genotypes

68

RCE 8

Split plot with 3 reps.

4 rows, 4 m long per genotype.

Spacing 60 X 20 cm on 60 cm ridges.

Sown 24 June 1986.

T1 to T17 = Tier 1 to Tier 17

Screening for drought tolerance

Irrl. Unirrl. Irrl. Unirrl.

R_1 R_2 R_3

Screening for drought tolerance (RCE 8)

S.No.	Genotypes	S.No.	Genotypes	S.No.	Genotypes
1.	ICP 1128	26.	ICP 1196	51.	ICPL 8341
2.	1087	27.	1233	52.	329
3.	2355	28.	195	53.	8357
4.	3312	29.	268	54.	8354
5.	4865	30.	299	55.	84071
6.	7760	31.	382	56.	8349
7.	8741	32.	108	57.	270
8.	8743	33.	3233	58.	304
9.	8744	34.	3320	59.	LRG 36
10.	8748	35.	4595	60.	30
11.	8752	36.	5436	61.	ICPH 2
12.	8754	37.	5466	62.	6
13.	8755	38.	7917	63.	ICPL 138
14.	8758	39.	7923	64.	ICPI-6
15.	8762	40.	7929	65.	APAU 2208
16.	8815	41.	9238	66.	C 11
17.	8803	42.	10655	67.	ICPL 295
18.	8816	43.	ICPL 332	68.	AKT 1
19.	8995	44.	GS 1		
20.	9598	45.	MRG 53		
21.	10820	46.	MRG 66		
22.	12574	47.	GS 21		
23.	12577	48.	BON 1		
24.	ICPL 84060	49.	PBNA 53		
25.	BON 7	50.	ICPL 8340		

PA 86/31 - The effect of "HICO Emulsion 110R" on growth and yield of pigeonpea (CJ)

Treatments: 1) Water spray
2) HICO spray at 4, 7, 11, 14 weeks after sowing and after first flush harvest.

On RCE 7.

RBD with four blocks.

With ICPL 87.

Plot size 3 X 4 m. Spacing 30 X 10

Only life saving irrigation.

Growth observations and first and second flush yield.

See page 28 for layout.

Sown 4 - 7 - 8.

Project: P-109(85)IC - Detection and evaluation of genetic variation in symbiotic nitrogen fixation in pigeonpea.

PA 86/11 - Nitrogen requirements at different growth stages of short duration pigeonpea (continuation of PA 85/11). (CJ, JVDKKKR, YSC, NPS).

Treatments:
1) No N
2) No N less Rhizobium
3) 50 kg/ha N (as urea) at sowing
4) 75 kg/ha N at about 5 weeks after sowing
5) 75 kg/ha N at about 50% flowering
6) 75 kg/ha N at pod filling
7) N at each growth stage as in 3, 4, 5 & 6
8) 75 kg/ha N after first harvest of pods (at ICRISAT Center only)

Location: RP 15C, BW 3B, Gwalior, Hisar

RBD in 4 reps.

4 X 6 m plots. 30 X 10 cm spacing.

ICPL 87.

Basal P, as SSP, 10 kg P/ha at ICRISAT Center and 20 kg P/ha at Gwalior and Hisar.

Optimum irrigation, except BW 3B which is rainfed.

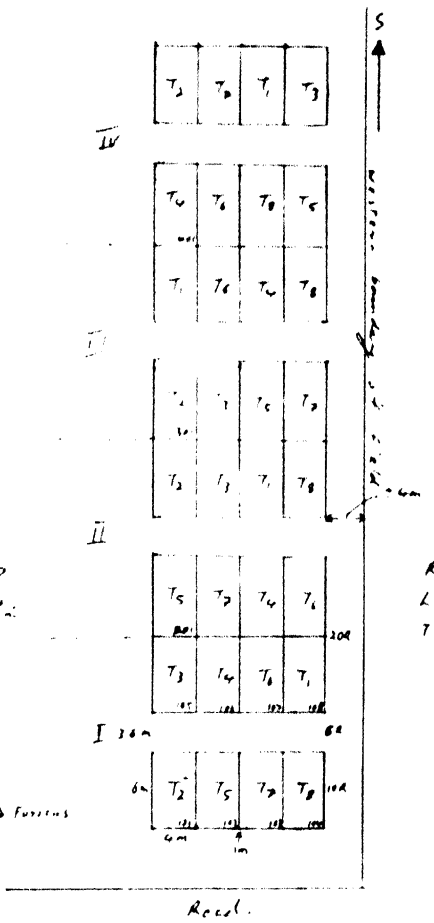
Sequential sampling of tops, yield and components (first flush only at Gwalior & Hisar, subsequent flushes at ICRISAT Center).

RP 15C sown 17 June 1986.

BW 3B sown 18 June 1986.

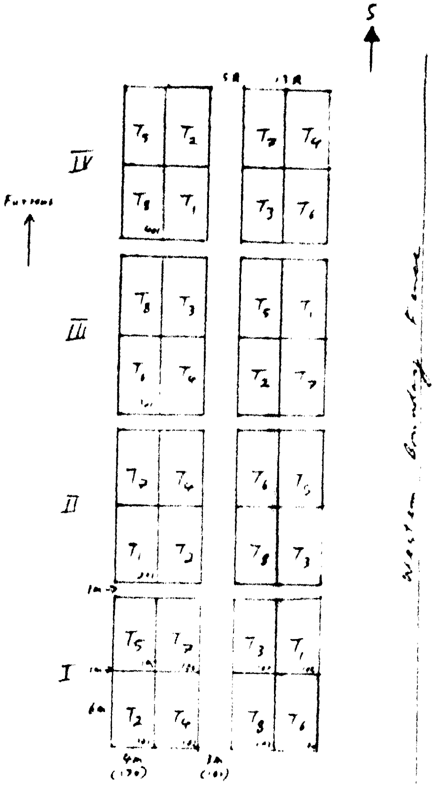
PA 86/11 N Requirements at different growth stages.

RP 15 C

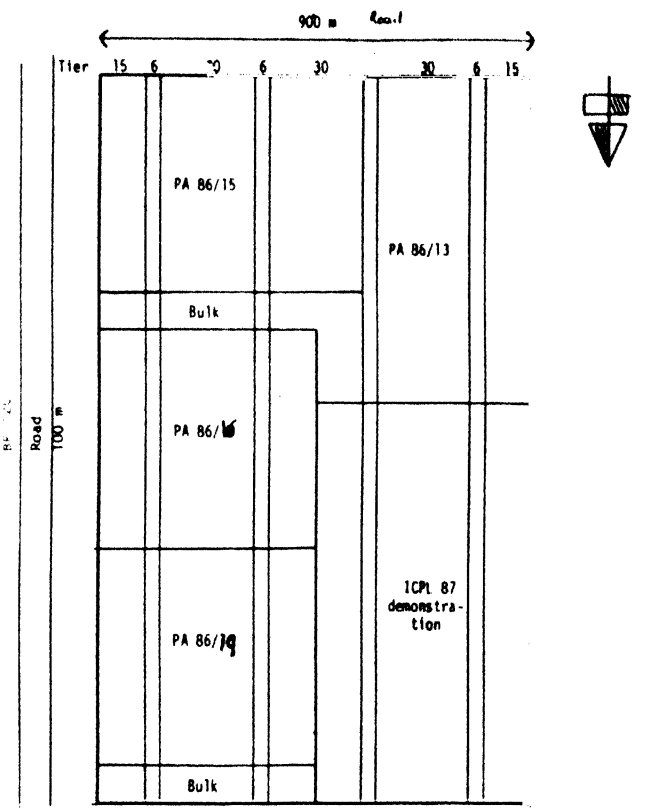


<u>CA86/11</u> N Requirements at different growth stages

<u>BW 3B</u>

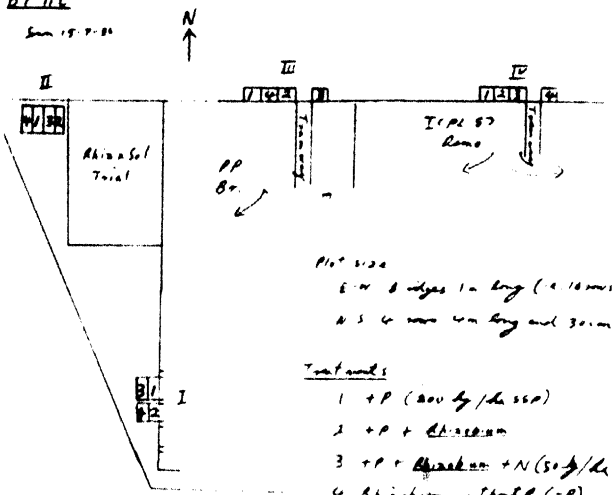


Agronomy (Physiology) experiment locations in BP 11C field

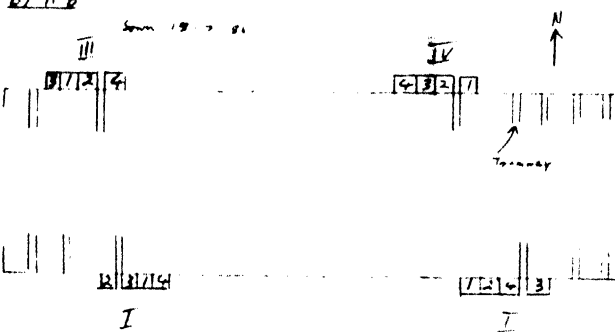


Mini-NP Trials - Khartoum 1986

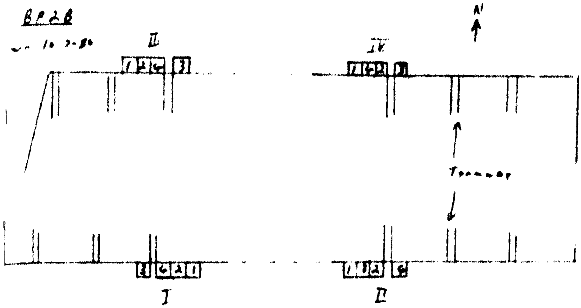
BP II C

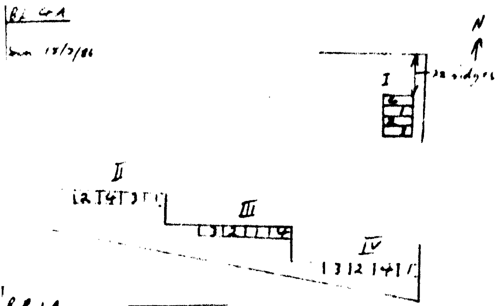


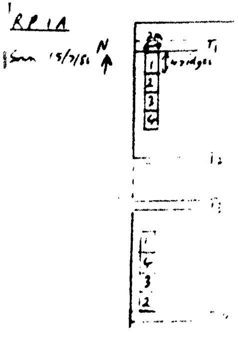
BP II B

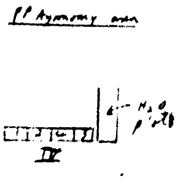


Mini-NP Trials - Khamit 1986



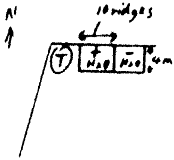






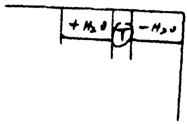
Wet and Dry Plots - Kharif 1986

BP2B Sown 16/7/86

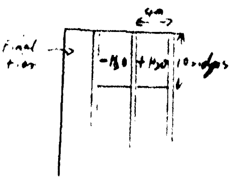


BP11C

Sown 26-6-86

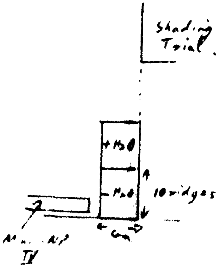


BL4A Sown 16/7/86



RP1A

Sown 26



− H_2O : To receive no irrigation, bunded off if necessary

+ H_2O : Water to be added, from tanker if necessary to maintain plot free from water stress (top of soil should remain moist.