

**Comparative range of variability available in  
NATIONAL COTTON GENE BANK**

*(under assured rainfall conditions)*

<b>Characters</b>	<b><i>G.hirsutum</i></b>	<b><i>G.barbadense</i></b>	<b><i>G.arboreum</i></b>	<b><i>G. herbaceum</i></b>
<b>1. Yield attributes</b>				
Kapas per plant (g)	15-242	3-106	3-96	15-107
Bolls per plant	5-65	7-26	3-55	7-77
Boll weight (g)	2.3-7.3	2.0-3.5	1.4-5.5	1.2-2.6
Seeds per boll	21-37	20-29	24-48	10-24
Ginning (%)	22-44	25-33	28-41	22-44
Seed index(dg)	44-150	77-117	35-86	35-77
Lint index(dg)	23-83	29-65	17-69	16-52
<b>2. Plant attributes</b>				
Plant height (cm)	42-70	60-105	52-180	78-165
Monopodia per plant	0-7	0-3	1-7	1-8
Sympodia per plant	14-27	10-22	6-30	10-24
Monopodial bolls (%)	-	-	8-53	10-51
Sympodial bolls (%)	-	-	8-55	12-52
Days to maturity	140-226	180-210	155-185	185-240
<b>3. Fibre characters</b>				
Mean halo length (mm)	16-36	22-32	12-30	16-27
Span length (mm)	15-37	22-35	13-27	19-27
Uniformity ratio (%)	34-52	40-52	44-55	42-52
Micronaire value	2.6-5.6	2.5-4.2	3.1-8.0	2.4-6.2
Maturity percent	55-79	52-88	70-93	53-78
Fiber strength (g / tex)	31-56	37-58	32-59	41-58
<b>4. Oil Characters</b>				
Seed oil percent	15-28	14-30	12-23	13-20
Seed oil index	1.0-2.1	1.2-3.1	0.5-1.8	0.5-1.7
<b>5. Biomass characters</b>				
Biomass per plant (g)	61-590	28-145	25-244	99-383
Root weight per plant (%)	3-13	3-25g	3-24g	9-32g
Stem weight per plant(%)	32-63	10-166g	10-86g	57-226g
Harvest index (%)	7-52	20-40	15-58	20-31
<b>6. Leaf Characters</b>				
Leaf length (mm)	74-142	48-102	42-92	37-73
Lead width (mm)	86-157	50-108	38-91	57-89
Lobe length (mm)	39-137	32-84	26-77	31-53
Lobe width (mm)	26-80	24-48	10-26	21-35
Sinus length (mm)	7-74	17-49	9-28	19-31
Petiole length (mm)	55-160	29-102	22-57	28-53
Leaves per plant	17-338	-	125-415	95-335
Veins per leaf	4-7	-	-	6-8
Nectary per leaf	0-3	0.3	0-3	1-3
Mean leaf area (cm <sup>2</sup> )	41-217	-	-	19-46
<b>7. Boll characters</b>				
Petiole length (mm)	11-36	-	12-33	-
Lint weight per boll (dg)	7-24	-	5-18	-
Seed weight per boll (dg)	16-41	-	7-19	-
Bur weight per boll (dg)	8-26	-	3-15	-
Boll diameter (mm)	24-37	18-29	17-36	18-31
Boll length (mm)	22-53	21-60	19-69	16-40
Boll volume (cm <sup>3</sup> )	14-29	-	-	-

<b>8. Seedling characters</b>				
Length of cotyledonary leaf (mm)	14-25	-	14-31	-
Width of cotyledonary leaf (mm)	28-60	-	26-46	-
Seedling height (mm)	160-250	-	73-300	-
Root length (mm)	43-95	-	47-107	-
Seedling dry weight (g)	0.5-1.3	-	0.5-2.3	-
Root shoot ratio	0.05-0.15	-	0.5-2.3	-
<b>9. Boll setting efficiency</b>				
Fruiting points per plant	90-585	-	18-390	-
Boll set per plant	14-92	-	3-55	-
Boll setting percent	7-39	-	8-32	-
Fruiting points per sympodium	5-9	-	4-8	-
<b>10. Seed setting efficiency</b>				
Anthers per flower	80-120	-	-	70-100
Ovules per flower	26-41	-	-	19-28
Seeds per boll	20-37	-	-	10-24
Anther ovule ratio (%)	24-44	-	-	22-31
Seed ovule ratio (%)	59-99	-	-	47-99

*Central Institute for Cotton Research (CICR) was given the mandate of maintenance and management of cotton germplasm of the country by establishing National Centre for Cotton genetic Resources, which was re-designated as NATIONAL COTTON GENE BANK. The Bank contains 5990 accessions of G. hirsutum, 1049 G. barbadense, 1867 G. arboreum, 568 G. herbaceum, 173 wild species and perennials totaling 9607 accessions (2004-05).*

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