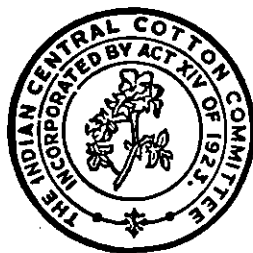


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INDIAN CENTRAL COTTON COMMITTEE TECHNOLOGICAL LABORATORY



CAUSES OF NEPS IN INDIAN COTTON YARNS

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Price Re. 1/-.

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APPENDIX I

TABLE I

Some particulars of yarns studied for the nature of neps

Sample No.	Season	Cotton	Locality	Cleanliness group	Counts	Neps per gramme	Neps per yard	Mean fibre length (mm.)	% proportion of 2/8" + 9/8" and longer fibres	% proportion of long fibres	Mean fibre wt. per cm. × 10 ⁻⁶ gm.	Maturity percentages
1	2	3	4	5	6	7	8	9	10	11	12	13
<i>Gossypium arboreum var. neglectum forma bengalensis (H. & G.)</i>												
6615 ..	1942-43	Jarila	Akulkheda	Extremely leafy.	30s	544.4	9.8	20.6	8.7	6.5	1.79	63-19-18
7288 ..	1943-44	Jarila	Faizpur	Very leafy	20s	188.9	5.1	—	—	—	—	75-15-10
7365 ..	1943-44	Jarila	Nanded	Fair	30s	27.8	0.5	19.7	7.8	5.2	1.90	72-16-12
7365 ..	1943-44	Jarila	Nanded	Fair	24s	35.6	0.8	19.7	7.8	5.2	1.90	72-16-12
7365 ..	1943-44	Jarila	Nanded	Fair	20s	18.5	0.5	19.7	7.8	5.2	1.90	72-16-12
7771 ..	1943-44	35/1	Raya	Leafy	10s	9.3	0.5	18.9	4.1	1.9	2.43	84-10-6
7776 ..	1943-44	36/5b	Raya	Leafy	8s	3.0	0.2	18.0	2.9	1.1	2.22	83-10-7
7776 ..	1943-44	36/5b	Raya	Leafy	6s	2.2	0.2	18.0	2.9	1.1	2.22	83-10-7
7927 ..	1944-45	Seg 403-3	Jalgaon	A little leafy.	16s	35.6	1.2	21.3	7.6	5.9	2.04	77-15-8
<i>G. arboreum var. neglectum forma indica (H. & G.)</i>												
7355 ..	1943-44	Gaorani 6	Nanded	Fair	40s	37.0	0.5	21.5	10.8	9.0	1.67	81-10-9
7355 ..	1943-44	Gaorani 6	Nanded	Fair	30s	44.4	0.8	21.5	10.8	9.0	1.67	81-10-9
7355 ..	1943-44	Gaorani 6	Nanded	Fair	20s	18.5	0.5	21.5	10.8	9.0	1.67	81-10-9
<i>G. herbaceum var. frutescens Delile (H. & G.)</i>												
7508 ..	1943-44	Wagad 8	Dholka	Very leafy contains stalks	12s	17.8	0.8	19.3	6.2	3.8	1.87	60-22-18
7522 ..	1943-44	Wagotar 4-1	Dholka	Leafy	16s	29.6	1.0	19.8	4.0	2.2	1.85	50-25-25
<i>G. hirsutum Linn.</i>												
7064 ..	1942-43	Co. 3-6	Coimbatore	Clean	40s	459.3	6.2	24.5	40.6	39.0	1.49	68-19-13
7064 ..	1942-43	Co. 3-6	Coimbatore	Clean	30s	288.9	5.2	24.5	40.6	39.0	1.49	68-19-13
7064 ..	1942-43	Co. 3-6	Coimbatore	Clean	20s	240.7	6.5	24.5	40.6	39.0	1.49	68-19-13
7198 ..	1943-44	Buri 107	Akola	Clean	40s	370.4	5.0	23.2	25.7	24.2	1.26	65-16-19
6875 ..	1942-43	N. T. 289F	Not Known	Leafy	30s	250.0	4.5	—	—	—	—	83-12-5
7290 ..	1943-44	Upland	Burhanpur	Leafy	20s	407.4	11.0	—	—	—	—	74-14-12
7206 ..	1942-43	199F	Lyallpur	Leafy	20s	214.8	5.8	23.6	30.8	29.4	1.22	66-13-21

TABLE II

Percentage incidence of three main types of neps

Cotton	Sample No.	Counts	All fibre neps			Seed coat fragments			Leaf bits, etc.			Chi-Square	Standard Error $\sqrt{\frac{PQ}{N}}$
			I set	II set	Mean	I set	II set	Mean	I set	II set	Mean		
<i>Gossypium arboreum</i> var. <i>neglectum</i> forma <i>bengalensis</i> (H. & G.)													
Jarila (Akulkheda)	6615	30s	90	91	90.5	6	7	6.5	4	2	3.0	0.75	0.0207
Jarila (Faizpur)	7288	20s	83	82	82.5	11	15	13.0	6	3	4.5	1.62	0.0269
Jarila (Nanded)	7365	30s	92	88	90.0	4	12	8.0	4	—	2.0	8.09*	0.0212
Jarila (Nanded)	7365	24s	69	78	73.5	23	19	21.0	8	3	5.5	3.20	0.0312
Jarila (Nanded)	7365	20s	76	81	78.5	18	19	18.5	6	—	3.0	6.19*	0.0291
35/1 (Raya)	7771	10s	40	59	49.5	53	36	44.5	7	5	6.0	7.23*	0.0354*
36/5b (Raya)	7776	8s	76	90	83.0	19	8	13.5	5	2	3.5	6.95*	0.0266*
36/5b (Raya)	7776	6s	68	69	68.5	26	26	26.0	6	5	5.5	0.19	0.0329
Seg. 403-3 (Jalgaon) ..	7927	16s	70	67	68.5	29	32	30.5	1	1	1.0	0.21	0.0329
		Mean			76.0			20.2			3.8		
<i>G. arboreum</i> var. <i>neglectum</i> forma <i>indica</i> .													
17 Gaorani 6 (Nanded)	7355	40s	88	87	87.5	10	13	11.5	2	—	1.0	2.40	0.0234
Gaorani 6 (Nanded)	7355	30s	85	84	84.5	9	10	9.5	6	6	6.0	0.06	0.0256
Gaorani 6 (Nanded)	7355	20s	80	80	80.0	15	12	13.5	5	8	6.5	1.03	0.0283
		Mean			84.0			11.5			4.5		
<i>G. herbaceum</i> var. <i>frutescens</i> Delile (H & G.)													
Wagad 8 (Dholka)	7508	12s	71	64	67.5	18	17	17.5	11	19	15.0	2.52	0.0331
Wagotar 4-1 (Dholka) ..	7522	16s	59	58	58.5	23	16	19.5	18	26	22.0	2.72	0.0349
		Mean			63.0			18.5			18.5		
<i>G. hirsutum</i> Linn.													
Co. 3-6 (Coimbatore)	7064	40s	67	68	67.5	30	32	31.0	3	—	1.5	3.07	0.0331
Co. 3-6 (Coimbatore)	7064	30s	76	76	76.0	24	24	24.0	—	—	—	0.00	0.0302
Co. 3-6 (Coimbatore)	7064	20s	82	73	77.5	15	22	18.5	3	5	4.0	2.35	0.0296
Buri 107 (Akola)	7198	40s	87	80	83.5	12	19	15.5	1	1	1.0	1.87	0.0262
N. T. 289F	6875	30s	70	76	73.0	26	24	25.0	4	—	2.0	4.33	0.0314
Upland (Burhanpur)	7290	30s	83	92	87.5	15	5	10.0	2	3	2.5	5.66	0.0234
199F (Lyalpur)	7206	20s	83	76	79.5	17	20	18.5	—	4	2.0	4.55	0.0286
		Mean			77.8			20.4			1.8		
		Grand Mean			76.6			18.8			4.6		

P = Probability of occurrence of fibre neps.

Q = Probability of occurrence of seed-coat + leaf bits, etc.

N = 200 ; P + Q = 1.

* Limit of significant chi-square value at P = .05

N = 2 = 5.991

* Values significant.

TABLE III

Percentage incidence of various types of neps

Sample No.	Counts	Fibre-Neps				Seed coat fragments			Leaf bits, etc.		
		Matted fibre	Entangled fibres			Ma- ture fuzz	Half mature fuzz	Imma- ture fuzz	Leaf bits	Jute fibres	Wild silk fibre
			Imma- ture fibres over 90%	Ma- ture fibres over 50%	Mixed fibres						
1	2	3	4	5	6	7	8	9	10	11	12
7355 ..	40s	5.0	17.0	7.5	58.0	4.0	1.5	6.0	—	1.0	—
7355 ..	30s	4.0	21.0	5.5	54.0	2.5	1.0	6.0	0.5	4.5	1.0
7355 ..	20s	9.5	12.5	2.0	56.0	8.5	0.5	4.5	3.0	3.5	—
7064 ..	40s	5.5	14.0	2.0	46.0	15.0	4.5	11.5	1.5	—	—
7064 ..	30s	5.0	22.5	3.0	45.5	11.0	4.0	9.0	—	—	—
7064 ..	20s	8.5	16.5	0.5	52.0	9.0	2.5	7.0	2.5	1.5	—
7198 ..	40s	3.0	14.5	5.0	61.0	9.0	1.0	5.5	0.5	—	0.5
7365 ..	30s	5.0	38.5	1.5	45.0	4.0	1.0	3.0	1.0	1.0	—
7365 ..	24s	3.5	13.0	1.0	56.0	9.5	4.5	7.0	—	4.5	1.0
7365 ..	20s	3.0	25.0	2.5	48.0	10.0	2.0	6.5	1.0	1.0	1.0
6875 ..	30s	6.0	14.0	11.5	41.5	15.0	3.5	6.5	1.0	0.5	0.5
6615 ..	30s	12.5	20.0	2.0	56.0	3.5	1.0	2.0	2.5	—	0.5
7290 ..	20s	5.0	29.0	1.0	52.5	3.5	2.0	4.5	2.0	0.5	—
7206 ..	20s	2.5	17.5	2.5	57.5	11.0	2.5	5.0	2.0	—	—
7288 ..	20s	8.0	23.0	2.0	49.5	5.5	0.5	7.0	4.0	0.5	—
7927 ..	16s	7.5	16.0	3.0	42.0	19.5	4.0	7.0	—	—	1.0
7522 ..	16s	5.0	6.0	1.0	46.5	7.5	3.0	9.0	18.0	3.0	1.0
7508 ..	12s	4.0	9.0	2.0	52.5	6.0	1.5	10.0	13.0	2.0	—
7771 ..	10s	6.5	18.5	1.0	23.5	33.0	8.0	3.5	3.0	—	3.0
7776 ..	8s	6.5	17.5	4.5	54.5	9.0	1.0	3.5	—	2.0	1.5
7776 ..	6s	10.5	11.0	4.5	42.5	16.5	4.5	5.0	1.5	—	4.0
Mean ..		6.0	18.0	3.1	49.5	10.1	2.6	6.1	2.7	1.2	0.7
		+0.572	+1.566	+0.571	+1.682	+1.523	+0.407	+0.518	+0.977	+0.326	+0.230

TABLE IV

Mean number of fibres in various types of neps

Sample No.	Counts	Fibre-Neps				Seed coat fragments			Leaf bits, etc.		
		Matted fibres	Entangled fibres			Ma- ture fuzz	Half mature fuzz	Imma- ture fuzz	Leaf bits	Jute fibres	Wild silk fibre
			Imma- ture fibres over 90%	Ma- ture fibres over 50%	Mixed fibres						
1	2	3	4	5	6	7	8	9	10	11	12
7355 ..	40s	44	41	22	33	66	47	63	—	40	—
7355 ..	30s	31	39	32	34	56	56	40	6	36	10
7355 ..	20s	52	44	20	39	97	34	49	35	31	—
7064 ..	40s	61	50	41	45	73	60	85	49	—	—
7064 ..	30s	72	36	33	30	77	109	117	—	—	—
7064 ..	20s	45	49	32	33	106	62	85	52	24	—
7198 ..	40s	51	42	50	46	58	98	107	38	—	9
7365 ..	30s	65	49	30	41	92	49	78	30	65	—
7365 ..	24s	41	36	25	33	78	60	58	—	25	5
7365 ..	20s	55	38	27	32	104	40	58	14	22	27
6875 ..	30s	55	59	32	39	75	81	65	20	10	—
6615 ..	30s	42	45	29	36	56	53	55	38	—	15
7290 ..	20s	58	58	37	40	63	107	65	66	73	—
7206 ..	20s	45	58	33	48	84	124	147	47	—	—
7288 ..	20s	67	55	20	38	101	175	109	33	82	—
7927 ..	16s	39	32	30	28	52	80	54	—	—	6
7522 ..	16s	28	28	40	27	49	42	62	24	25	18
7508 ..	12s	38	36	35	28	61	67	60	25	37	—
7771 ..	10s	59	34	29	32	76	78	73	32	—	6
7776 ..	8s	50	39	29	30	61	33	71	—	21	21
7776 ..	6s	43	41	27	33	56	46	44	26	—	17
Mean ..		50	43	31	35	73	71	74	33	38	13
		+2.538	+1.960	+1.581	+1.323	+3.930	+7.638	+5.842	+3.772	+6.102	+2.539

TABLE V

Mean length of fibre pieces in various types of neps (mm.)

Sample No.	Counts	Fibre-Neps				Seed coat fragments			Leaf bits, etc.		
		Matted fibre	Entangled fibres			Ma-ture fuzz	Half mature fuzz	Imma-ture fuzz	Leaf bits	Jute fibres	Wild silk fibre
			Imma-ture fibres over 90%	Ma-ture fibres over 50%	Mixed fibres						
1	2	3	4	5	6	7	8	9	10	11	12
7355 ..	40s	2.6	2.5	5.0	3.4	1.4	2.7	2.5	—	3.5	—
7355 ..	30s	2.9	3.0	3.9	3.5	2.6	0.5	2.8	1.0	3.1	4.0
7355 ..	20s	2.8	2.4	3.8	3.3	1.7	2.0	1.4	3.0	3.9	—
7064 ..	40s	2.4	2.4	3.2	2.8	2.1	2.1	1.8	2.7	—	—
7064 ..	30s	3.0	2.5	3.3	2.9	2.5	3.0	2.4	—	—	—
7064 ..	20s	3.3	3.3	6.0	3.5	2.4	3.0	2.8	3.6	3.0	—
7198 ..	40s	2.2	1.8	3.2	2.7	1.5	1.5	1.5	4.0	—	3.0
7365 ..	30s	2.7	3.1	4.0	3.5	1.9	1.5	2.2	3.5	5.0	—
7365 ..	24s	2.4	2.0	4.5	2.7	2.2	2.4	2.2	—	3.0	2.0
7365 ..	20s	3.1	2.7	4.2	3.2	2.2	2.2	2.1	5.0	2.5	3.5
6875 ..	30s	2.0	2.8	3.3	2.8	1.7	2.0	1.7	3.5	4.0	—
6615 ..	30s	2.5	2.5	3.8	3.4	2.7	2.5	2.7	3.8	—	2.0
7290 ..	20s	2.5	3.1	3.0	3.4	2.3	2.5	2.3	3.5	4.0	—
7206 ..	20s	2.2	2.1	3.4	2.6	1.6	1.6	2.0	3.8	—	—
7288 ..	20s	2.1	2.0	2.8	2.0	1.0	1.0	1.4	2.1	3.0	—
7927 ..	16s	2.3	3.2	3.8	3.9	1.9	1.6	2.1	—	—	3.0
7522 ..	16s	2.3	2.8	5.0	3.3	2.7	2.8	2.8	2.9	3.8	2.0
7508 ..	12s	3.1	3.3	4.8	3.5	3.0	2.7	2.7	3.0	3.5	—
7771 ..	10s	2.9	3.1	3.5	2.9	2.5	2.7	2.3	2.8	—	1.3
7776 ..	8s	2.7	3.1	4.3	3.4	2.3	2.5	2.3	—	2.5	1.0
7776 ..	6s	3.0	2.9	3.9	3.1	2.1	2.7	2.2	3.0	—	1.8
Mean ...		2.6	2.7	3.9	3.1	2.1	2.2	2.2	3.2	3.4	2.4
		+0.081	+0.100	+0.172	+0.094	+0.109	+0.147	+0.097	+0.223	+0.194	+0.307

TABLE VI

Maturity percentages of fibres in neps
(M-H-I)

Mature-Half-mature-Immature

Sample No.	Fibre neps					Seed coat fragments			Leaf bits, etc.		
	Counts	Matted fibre	Entangled fibres			Mature fuzz	Half mature fuzz	Immature fuzz	Leaf bits	Jute fibres	Wild silk fibre
			Immature fibres over 90%	Mature fibres over 50%	Mixed fibres						
1	2	3	4	5	6	7	8	9	10	11	12
7355	40s	5- 2-93	3-1-96	63-13-24	18-12-70	86- 1-13	7-68-25	4 3-93	—	11- 3-86	—
7355	30s	1- 0-99	2-1-97	67- 9-24	20-10-70	70- 9-21	1-99- 0	3- 3-94	0- 0-100	15-11-74	90-10- 0
7355	20s	4- 2-94	3-2-95	57-14-29	21-11-68	90- 2- 8	12-73-15	10-10-80	29-46-25	13-12-75	—
7064	40s	11-10-79	3-1-96	67- 4-29	14-13-73	83- 3-14	9-76-15	4 2-94	8-14-78	—	—
7064	30s	3- 0-97	3-1-96	61-16-23	15-14-71	92- 2- 6	5-85-10	2- 1-97	—	—	—
7064	20s	4- 2-94	3-1-96	81- 0-19	15-15-70	96- 1- 3	5-93- 2	3- 4-93	1- 3-96	8-10-82	—
7198	40s	8- 5-87	2-2-96	70-11-19	23-13-64	76- 6-18	10-82- 8	4 5-91	76-11-13	—	56-22-22
7365	30s	1- 1-98	2-1-97	79- 9-12	13-10-77	79- 2-19	0-100-0	3- 1-96	6-17-77	10-36-54	—
7365	24s	9- 4-87	3-2-95	54-12-34	15-11-74	88- 3- 9	9- 78-13	4 2-94	—	18-10-72	22-22-56
7365	20s	4- 1-95	2-2-96	64-17-19	15- 9-76	78- 4-18	18-73- 9	4 2-94	31-35-34	18- 0-82	14- 5-81
6875	30s	5- 3-92	3-1-96	69-10-21	20-14-66	87- 2-11	14-83- 3	4 7-89	12- 8-80	50- 0-50	—
6615	30s	5- 2-93	2-2-96	63- 9-28	13-16-71	43-10-47	7-46-47	7-11-82	17-11-72	—	0- 0-100
7290	20s	1- 1-98	2-2-96	74-10-16	13-13-74	77- 5-18	1-93- 6	3- 2-95	8- 2-90	0-11-89	—
7206	20s	5- 1-94	5-1-94	59-17-24	18-14-68	86- 5- 9	3-89- 8	2- 5-93	9-15-76	—	—
7288	20s	3- 1-96	3-2-95	65- 8-27	20-12-68	92- 0- 8	6-86- 8	2- 2-96	11- 8-81	15-12-73	—
7927	16s	5- 6-89	3-2-95	63- 8-29	15-12-73	83- 3-14	2-90- 8	2- 4-94	—	—	23- 8-69
7522	16s	8- 6-86	2-2-96	80- 2-18	16-15-69	72-11-17	9-80-11	10- 4-86	16-17-67	25-15-60	3- 3-94
7508	12s	3- 3-94	2-3-95	59-21-20	13-14-73	87- 5- 8	8-68-24	5- 6-89	11-15-74	21- 9-70	—
7771	10s	2- 0-98	2-2-96	100- 0- 0	15- 8-77	89- 2- 9	4-87- 9	5- 3-92	11-31-58	—	88- 6- 6
7776	8s	3- 1-96	3-1-96	59-15-26	18-13-69	76- 4-20	0-85-15	2- 3-95	—	5-13-82	53- 8-39
7776	6s	10- 2-88	2-1-97	67-14-19	18-13-69	78- 5-17	16-72-12	2- 7-91	10-19-71	—	57-11-32
Mean		5- 3-92	3-1-96	68-10-22	16-13-71	81- 4-15	7-81-12	4 4-92	16-16-68	16-11-73	40-10-50

TABLE VII
Some miscellaneous data

Sample No.	Counts	Percentage of loose fibres on seed coat bits, etc.	Mean weight per seed coat or leaf fragment 10 ⁻⁵ gm	Mean weight per all fibre neps 10 ⁻⁵ gm	Mean fibre weight 10 ⁻⁶ gm	Observed mean number of fibres in a nep	Calculated mean number of fibres in a nep	Apical ends per fibre nep
1	2	3	4	5	6	7	8	9
7355	40s	24.1	2.9	1.02	1.67	37	24	—
7355	30s	25.0	2.6	1.32				
7355	20s	23.7	3.7	1.32				
7064	40s	22.3	3.4	1.08	1.49	40	28	—
7064	30s	19.7	3.1	1.14				
7064	20s	18.7	3.9	1.44				
7198	40s	30.5	3.5	1.60	1.26	45	50	—
7365	30s	20.3	3.7	1.72	1.90	45	27	—
7365	24s	23.9	2.2	—				
7365	20s	21.1	2.3	—				
6875	30s	26.2	4.3	—	—	—	—	—
6615	30s	25.2	2.9	1.84	1.79	38	33	—
7290	20s	28.0	4.0	—	—	—	—	—
7206	20s	20.3	5.4	1.15	1.22	50	38	—
7288	20s	31.5	3.3	—	—	—	—	—
7927	16s	21.7	3.6	2.14	2.04	30	30	—
7522	16s	30.3	4.2	1.73	1.85	27	29	5.4
7508	12s	23.3	4.2	1.77	1.87	30	27	6.5
7771	10s	45.2	4.6	2.30	2.43	36	33	5.5
7776	8s	38.1	3.5	2.18	2.22	34	31	6.2
7776	6s	31.4	4.6	2.18				
Mean		26.2	3.6	1.62				6.16
		+1.425	+0.174	+0.107				+1.212

TABLE VIII

Name of cotton	Sample No.	Counts	Neps per yard	Neps per gramme	% proportion of short and long fibres	% proportion of short and long fibres x % immaturity	% proportion of long fibres	% proportion of long fibres x % immaturity (x)	Calculated values of Neps per yard. Equation $Y = .9197x - .1440$	Calculated values of Neps per yard. Equation $Y = .3347x + .2230x^2$	Calculated values of Neps per yard. Equation $Y = 1.0008x + 0.3142$
1	2	3	4	5	6	7	8	9	10	11	12
<i>Standard Indian cottons (1944-45)</i>											
1. Jayawant	7908	40s	0.35	25.9	12.2	1.220	11.0	1.100	0.87	0.53	—
2. Gadag	7873	34s	0.50	31.5	7.9	0.790	6.0	0.600	0.41	0.38	—
3. Surat	7962	30s	1.20	66.7	15.8	3.792	14.3	3.432	3.01	2.74	—
4. Wagad	7968	14s	0.10	2.6	6.5	1.560	5.2	1.248	1.00	0.60	—
5. Jarila	7787	30s	0.90	50.0	9.8	1.176	7.9	0.948	0.73	0.47	—
6. Sind Sudhar (Roller ginned) ..	8059	40s	1.20	88.9	41.6	2.496	40.2	2.412	2.07	1.47	—
7. Sind Sudhar (Saw ginned) ..	8056	40s	2.00	148.2	34.9	2.094	33.1	1.986	1.68	1.08	—
8. Sind American M4 (Roller ginned)	8094	34s	1.35	85.0	27.3	2.457	25.3	2.277	1.95	1.34	—
9. Sind American M4. (Saw ginned)	8091	34s	0.75	47.2	28.1	2.529	26.4	2.376	2.04	1.44	—
10. Sind N.R.	8084	8s	0.10	1.5	2.3	0.046	0.7	0.014	—	0.33	—
11. Punjab American 4F.	7837	30s	0.50	27.8	5.0	1.650	3.2	1.056	0.83	0.51	—
12. Punjab American L.S.S.	7863	40s	0.65	48.2	9.3	1.767	7.2	1.368	1.11	0.66	—
13. Mollisoni	7862	10s	0.10	0.2	2.8	0.168	1.1	0.066	—	0.33	—
14. V. 434 (Akola)	7821	30s	0.65	36.1	12.2	0.976	10.9	0.872	0.66	0.45	—
15. Umri Bani	7726	30s	0.90	50.0	9.2	1.288	7.7	1.078	0.85	0.52	—
16. Gaorani	7829	40s	0.65	48.2	7.2	0.720	5.7	0.570	0.38	0.37	—
17. Cambodia, Co. 2... .. .	7973	34s	0.90	56.7	18.6	6.138	16.7	5.511	Not included	—	—
18. Nandyal	7947	40s	0.90	66.7	15.7	2.198	14.2	1.988	1.68	1.09	—
19. Hagari	8001	34s	0.80	50.4	9.4	1.316	8.0	1.120	0.89	0.54	—
20. Koilpatti	8139	20s	0.90	33.3	6.3	1.323	4.3	0.903	0.69	0.46	—
<i>Present samples</i>											
Co. 3-6	7064	40s	6.20	459.3	40.6	5.278	39.0	5.070	4.52	5.73	5.39
Buri 107	7198	40s	5.00	370.4	25.7	4.883	24.2	4.598	4.08	4.75	4.92
199F.	7206	20s	5.80	214.8	30.8	6.468	29.4	6.174	5.53	8.43	6.49
Gaorani 6	7355	30s	0.80	44.4	10.8	0.972	9.0	0.810	0.60	0.43	1.12
Jarila	7365	24s	0.80	35.6	7.8	0.936	5.2	0.624	0.43	0.38	0.94
Wagad 8	7508	12s	0.80	17.8	6.2	1.116	3.8	0.684	0.48	0.39	1.00
Wagotar 4-1	7522	16s	1.00	29.6	4.0	1.000	2.2	0.520	0.33	0.36	0.83
35/1	7771	10s	0.50	9.3	4.1	0.246	1.9	0.114	—	0.33	0.43
36/5b	7776	8s	0.20	3.0	2.9	0.203	1.1	0.077	—	0.33	0.39
Seg. 403-3	7927	16s	1.20	35.6	7.6	0.608	5.9	0.472	0.29	0.35	0.79

TABLE IX

Types of Neps 1	Grey cloth				Bleached cloth			
	Incidence % 2	Mean No. of fibres 3	Mean maturity % 4	Mean length (mm) 5	Incidence % 6	Mean No. of fibres 7	Mean maturity % 8	Mean length (mm) 9
<i>Fibre neps :</i>								
(i) Matted neps	6	34	1- 1-98	1.3	—	—	—	—
(ii) Entangled fibre neps ..	29	57	38-12-50	2.8	48	43	20- 9-71	2.6
<i>Seed coat neps* :</i>								
(i) with mature fuzz	42	50	82- 4-14	2.6	42	55	80- 7-13	2.0
(ii) with half mature fuzz ..	10	52	11-75-14	2.3	4	55	14-73-13	1.5
(iii) with immature fuzz .. .	8	60	9-7-84	2.5	2	112	1- 1-98	4.0
<i>Rest :</i>								
(i) Leaf bits	2	10	37-26-37	3.0	—	—	—	—
(ii) Jute fibres	3	10	74-13-13	1.7	4	26	23-14-63	2.2
(iii) Wild silk fibres.. .. .	—	—	—	—	—	—	—	—

* The seed-coat fragments were absent from bleached cloth, but in their stead there were fuzz neps.

TABLE X
Neps at various stages of yarn manufacture.

Material 1	Total weight (gm.) 2	Weight of fibrous part (gm.) 3	Neps		Seed and leaf bits		Motes	
			Neps per gramme 4	Total Neps columns 3 × 4 5	Per gramme 6	Total columns 6 × 2 7	Per gramme 8	Total columns 8 × 2 9
Raw cotton	3,628.8	3,628.8	419	1,520,467	142	515,290	8	29,030
Blowroom wastes :—								
Horizontal Opener .. .	166.6	84.04	294	24,708	399	66,473	70	11,662
Crighton Opener .. .	56.7	35.48	210	7,451	351	19,902	69	3,912
Scutcher Opener .. .	74.4	15.53	453	7,035	400	29,760	75	5,580
Total				39,194 or 2.6%		116,135		21,154 or 72.9%
Invisible loss	97.5	—	—	—	—	—	—	—
Card Wastes :—								
Licker-in-fly	39.0	39.00	238	9,282	1,269	49,491	—	—
Strip plus cylinder and doffer	248.1	248.10	684	169,700	85	21,089	—	—
Total	682.3			178,982 or 11.8%		186,715 or 36.2%		
Card web	2,946.5	—	391	1,152,082 or 75.7%	14	41,251 or 8.0%	—	
Balance				150,209 or 9.9%		287,324 or 55.8%		7,876 or 27.1%
30s yarn			233					
40s yarn			311					
44s yarn			326					

APPENDIX II

PLATE I



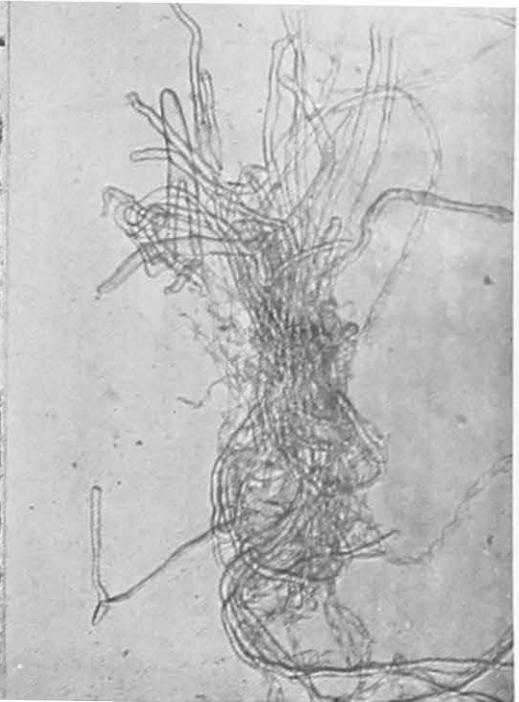
1. Matted fibre-nep $\times 100$



2. Immature fibre-nep $\times 100$



3. Mature fibre-nep $\times 100$

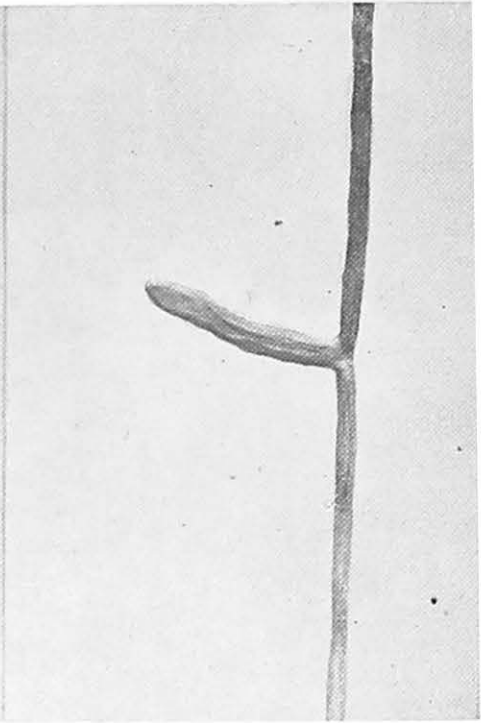


4. Mixed fibre-nep $\times 50$

PLATE II



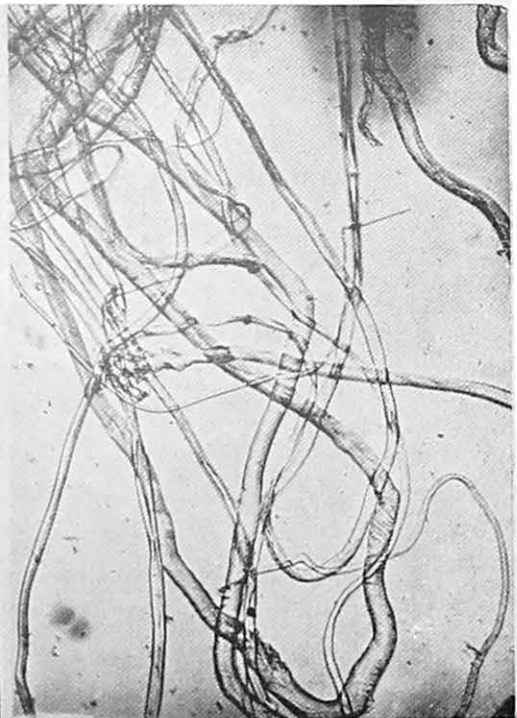
1. Spurred and kinked fibres in a nep $\times 100$



2. A long spur in cotton fibre $\times 100$



3. Damaged cotton fibre pieces in a nep $\times 100$



4. Apical ends in a nep $\times 100$

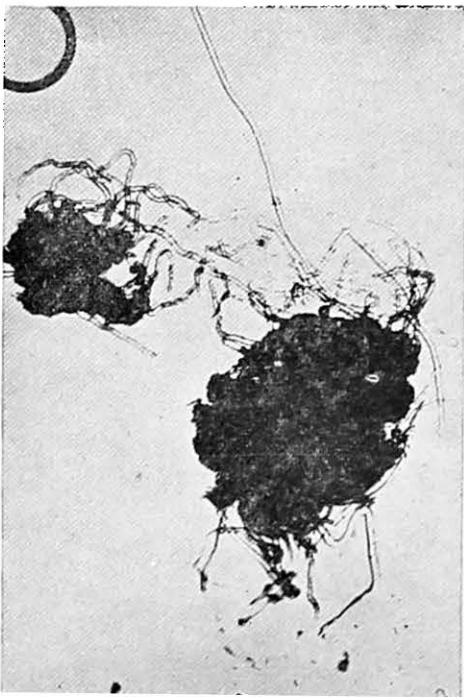
PLATE III



1. Seed-coat with immature fuzz $\times 50$



2. Seed-coat with half mature fuzz $\times 50$

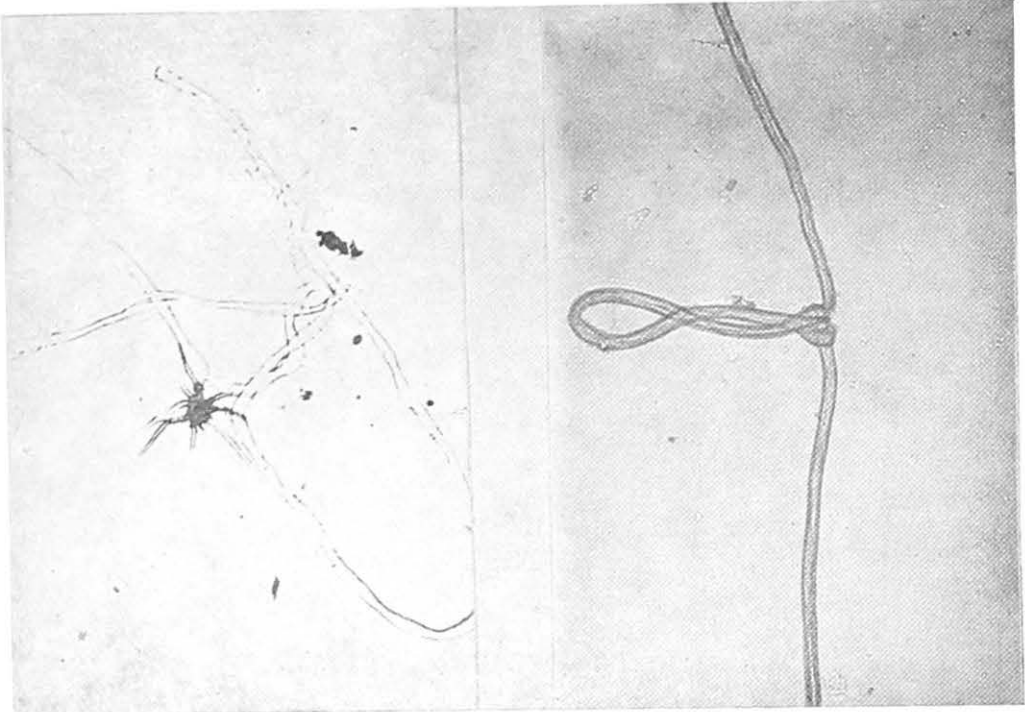


3. Seed-coat with mature fuzz $\times 50$



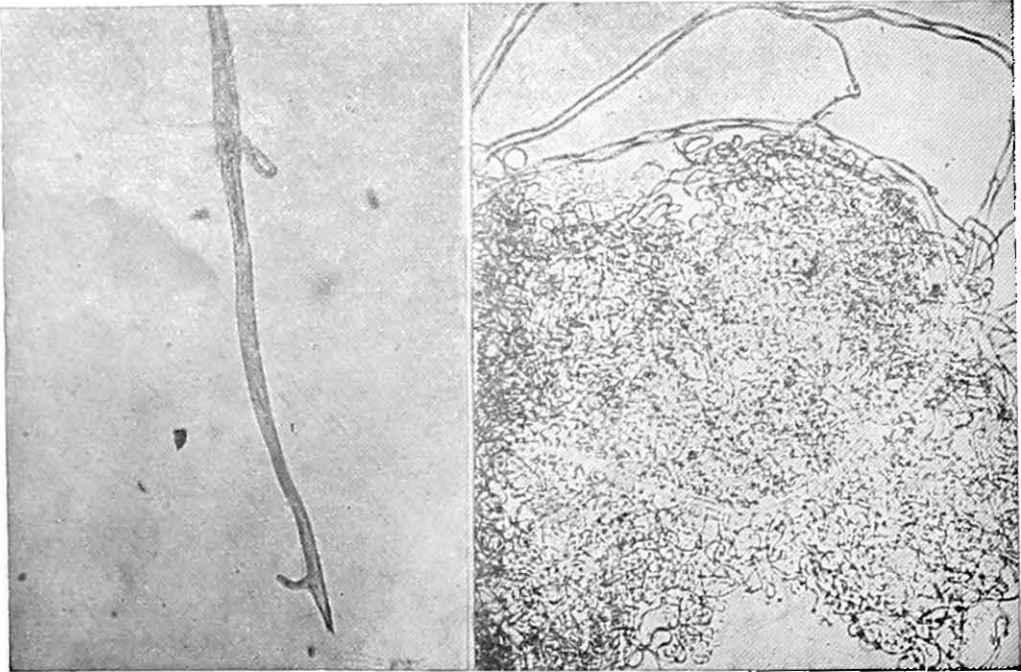
4. Leaf bit $\times 50$

PLATE IV



1. Stellate leaf hair entangled with fibres $\times 50$

2. A knotted cotton fibre $\times 50$



3. A cotton fibre with two branches $\times 100$

4. Wild silk fibre-nep $\times 50$

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