Table 4. Organoleptic Quality

Quality Traits	PAH-10 Jack	Pechiparai Local
Carpel		
Brix (%)	28.0	23.0
pH	5.0	5.2
Ascorbic acid (mg/100g of edible pulp)	7.92	7.25
Total sugars (%)	9.97	8.76
Reducing sugars (%)	9.53	8.23
Acidity (as Citric acid/100 g edible pulp)	0.391	0.350
Seed		
Cooking quality	Edible, Highly palatable	Edible, palatable

The fruit quality is good with sweet and pleasant aroma, firm and attractive creamy yellow carpels. The total soluble solids percentage is 28 in PAH.10 as against 23 in the local. The pH is 5.0 (Table 4) in PAH.10 while that of Pechiparai local is 5.2 The Ascorbic acid content per 100 g edible pulp is slightly more in PAH.10 (PPI-1) is 7.92 mg as against 7.25 in Pechiparai local. The reducing sugar total sugars and acidity are more in PAH.10 (PPI-1) than in Pechiparai local. The seeds are medium in weight and also edible with high palatability. The percentage of carpels to the whole fruit is 40.28 with only mere 18 unfertilised carpels out of 352 carpels. The trunk bearing accounted for 80 per cent. As the tree is short and medium spreading, this PAH.10 (PPI-1) jack can be highly suitable for commercial cultivation, mixed gardens and home gardens in the tropical and sub-tropical areas of Tamil Nadu.

In view of the above desirable attributes, the new clonal selection PAH.10 has been released as Pechiparai-1 (PPI-1) jack for general cultivation in Tamil Nadu.

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RAJENDRA SADA PAT-1 : A NEW HIGH YIELDING JUTE VARIETY

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ABSTRACT

A high yielding *Corchorus capsularis* Jute culture KTC-1 has been developed through pure line selection. It recorded a mean fibre yield of 3123 kg/ha, registering 15.41, 23.93 and 23.88 per cent increased fibre yield over the ruling varieties JRG 7447, JRG 212 and JRC 321 respectively. It has better quality fibre particularly in respect of fibre fineness. The incidence of major pests and diseases was relatively less in new culture. This culture has been released as Rajendra Sada Pat-1 for general cultivation in Jute growing tracts of Bihar.

KEY WORDS : Jute, New Variety, Rajendra Sada Pat-1

Jute is mainly grown as rainfed cash crop in an area of about 1.30 lakh ha in Bihar. Although *olitorius* jute fibre fetches attractive returns compared to *capsularis* but, recently the use of *capsularis* fibre biending with cotton for making garments and use of its pulp in paper industry is gaining momentum. Moreover, *capsularis* jute has wider adaptability as well as wider time for sowing as pure crop and inter cropping in low lying areas of Kosi zone of Bihar. Interestingly enough as on date only three standard varieties in *capsularis* jute, developed long years ago, still remain by for the most popular varieties among the jute farmers. Hence development of high yielding *capsularis* jute varity with better fibre qualilty is of paramount importance for enhancing jute production as well as economic status of the jute grower. Research efforts were carried out at the Jute Research Station, Katihar and the results are reported.

Table 1. Performance of KTC-1 in Station Trials

Year	Fibre yield (kg/ha)				% of increase over		
	KTC-1	JRC 7447	JRC 212	JRC 321	JRC 7447	JRC 212	JRC 321
1985	2861	2120	2416	2342	34.95	18.42	22.16
1986	2593	2528	2185	2389	2.57	18.67	8.53
1987	3318	2770	-	2392	19.78	-	38.71
1989	3115	2965	2460	2468	5.06	26.63	26.21
1990	3015	2728	2307	2770	10.52	30.69	8.84
1991	3839	3126	3234	2765	22.81	18.71	38.84
Mean	3123	2706	2520	2521	15.41	23.93	23.88

MATERIALS AND METHODS

With a view to develop high yielding variety having better fibre quality, more than 261 *capsularis* jute germplasms were evaluated based on yield contributing traits at Jute Research Station, Katihar under Rajendra Agricultural University, (RAU) Bihar. A single plant from the entry I C 30730 was identified with high yield and the progenies of this plant were evaluated in subsequent years. Among the progenies evaluated, a superior performing line was named as KTC-1. This new culture was tested at Katihar and other research stations of RAU and in All India Co-ordinated Research Project on Jute and Allied Fibres trials in different states against national checks JRC 7447, JRC 212 and JRC 321 during 1985-1991. The performance of KTC-1 was also assessed at farmers field in different districts under adaptive research trials (ART) during 1991-1993. Fibre quality assessment was performed by Jute Technological Research Laboratory, Calcutta.

RESULTS AND DISCUSSION

The culture KTC-1 was tested for six years (1985-1991) along with national checks at J.R.S., Katihar and fibre yield are presented in Table 1. The fibre yield of KTC-1 varied from 2593 to 3839 kg/ha with an average yield of 3123 kg/ha. The increase in fibre yield over JRC 7447, JRC 212 and JRC 321 were 15.41, 23.93 and 23.88 per cent respectively. The selection KTC-1 was evaluated along with other promising cultures and national checks under All India Co- ordinated Research Project on Jute and Allied Fibres in West Bengal, Bihar, Assam and Uttar Pradesh for five years (1987-1991). The mean performance of KTC-1 at different locations is presented in Table 2. The maximum fibre yield of 3839 kg/ha was recorded at Katihar during 1991. It recorded a mean fibre yield of 2199 kg/ha as against 2047, 1932 and 1910 kg/ha by JRC 7447, JRC 212 and JRC 321 respectively. The increase in fibre yield over JRC

Table 2. Mean performance of KTC-1 in All India Co-ordinated Trials

Year	No. of locations	Fibre yield (kg/ha)				% of increase over		
		KTC-1	JRC 7447	JRC 212	JRC 321	JRC 7447	JRC 212	JRC 321
1987	5	2370	2147	-	2023	10.70	-	17.15
1988	5	2239	2223	-	2038	0.72	-	9.90
1989	4	2203	2074	1984	1981	6.17	10.99	11.16
1990	4	2066	1899	1947	1710	8.80	6.11	20.82
1991	4	2118	1892	1864	1800	11.95	13.62	17.67
Mean	22	2199	2047	1932	1910	7.40	13.82	15.13

Table 3. Mean performance of KTC-1 in farmer's field under ART

Year	No. of locations	Fibre yield (kg/ha)				% of increase over		
		KTC-1	JRC 7447	JRC 212	JRC 321	JRC 7447	JRC 212	JRC 321
1991	5	3294	3006	2840	2691	9.58	15.99	22.41
1992	2	2715	2430	2190	2015	11.73	23.97	34.74
1993	2	3065	2795	2625	2570	9.66	16.76	19.26
		3.25	2744	2552	2425	10.24	18.53	24.74

Table 4. Quality analysis of *capsularis* jute varieties

Variety	Quality parameters		
	Root content (%)	Fibre fineness (Tex)	Fibre tenancity (g/tex)
KTC-1	10.00	1.20	15.50
JRC 7447	48.00	2.10	14.40
JRC 212	25.00	1.30	13.10
JRC 321	10.00	1.30	14.30

7447, JRC 212 and JRC 321 were 7.40, 13.82 and 15.13 per centrespectively.

Under ART conducted at farmers field in different Jute growing districts of Bihar during 1991-1993 along with national checks, the fibre yield of new culture ranged between 2715 and 3294 kg/ha (Table 3). It recorded a mean fibre yield of 3025 kg/ha as against 2744, 2552 and 2425 kg/ha recorded by JRC 7447, JRC 212 and JRC 321 respectively. The increase in fibre yield over JRC 7447, JRC 212 and 321 were 10.24, 18.53 and 24.74 per cent respectively. In fibre quality analysis, the selection KTC-1 recorded less root content, more fineness and high fibre tenacity as compared to the national checks (Table 4). Besides this culture is moderately resistant to major pests like yellow mite, *Apion*, Bihar hairy caterpillar and root rot and stem rot diseases in comparison to the national checks.

Based on the above desirable features, the new culture KTC-1 was released as Rajendra Sada Pat-1 for general cultivation in Jute growing tracts of Bihar by 1994 *Kharif* Research Council Meeting of Rajendra Agricultural University, Bihar, Pusa. The morphological and fibre characteriestics of Rajendra Sada Pat-1 are as follows:

Plant height (cm)	360-390
Basal diameter (cm)	2.0-2.3
Pigmentation grade	'0' i.e. Full green type
No.of days taken to 50% flowering	125-130
Reactions to major pests and diseases	: Moderately resistant
Suitable sowing time	1st week March to 1st week April
Yield potential	30-35 Q/ha in 125-130 days
Fibre fineness	1.20 (Tex)
Fibre tenacity	15.50 (g/tex)
Root content	10.00%

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CO H 1: THE FIRST PIGEONPEA HYBRID FOR TAMIL NADU

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ABSTRACT

The pigeonpea hybrid Co H 1 was developed using genetic male sterile line ms T 21 as female parent and ICPL 87109 as male parent. This short duration hybrid matures in 115 to 120 days and is photo insensitive. It is suitable for both irrigated and rainfed conditions. It gives an average grain yield of 936 kg/ha. The *dhal* has got higher protein content of 22.3 per cent with good cooking quality and over all acceptability.

KEY WORDS : Genetic male sterility, Co H 1, Hybrid pigeonpea, Tamil Nadu.

Grain legumes are the important source of protein for our people who are mostly vegetarians. The economy of the Indian people can't afford the costly animal protein as an alternative source for their daily consumption. The production and productivity of pulses in general has remained almost static for past two decades. Among the P. occupies second place in area, production and productivity in India. In order to break the yield plateau, heterosis breeding was attempted. Having observed the appreciable degree of heterosis for yield and other attributes and taking advantage of the high degree of natural out crossing in pigeonpea (0-70%), synthesis of hybrids was taken up, which