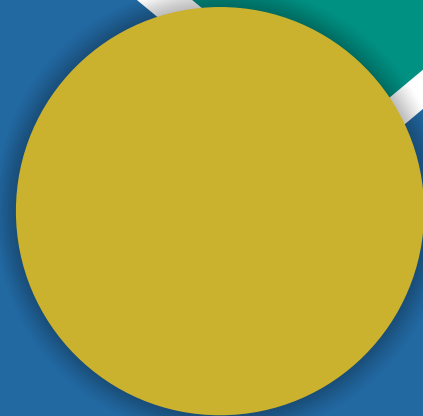


# PB-896 A High Yielding Cotton Strain Developed by Cotton Research Group, PBG



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Keeping in view the importance of cotton in economy of the country, Cotton Research Group in the Department of Plant Breeding and Genetics is maintaining and developing new germplasm having more ginning turnout, good fiber quality traits, and tolerant to biotic and abiotic stresses. Under the current scenario of climate change, cotton research team has developed an elite line PB-896 (Figure 1) that showed overwhelming performance and secured top position among non-Bt group in National Co-ordinated Varietal Trials (NCVT)-2015-16 in Punjab province, conducted by Pakistan Central Cotton

Committee (PCCC) at various research institutes/centers. This bulk is developed by hybridization of local and exotic genotypes available in the germplasm available with group. The bulk has produced 39% higher production than CIM-573 (standard) even though cotton situation was poor during this cropping season in Pakistan (Table 1). This strain has potential of 3000 to 3500 kg/ha. It has 40% ginning out turn and 30 mm staple length (Table 2). Because of high GOT and staple length it would also be preferred by cotton ginners as well as textile industrialists. This elite line has good tolerance against cotton leaf curl disease which is one of the factors for reducing yield in Indo-Pak continent. PB-896 addresses the issues in an excellent manner because it possesses hairiness traits which protect from infestation of sucking insects i.e. whitefly and aphids. In near future, there will be shortage of female pickers in cotton growing areas of Pakistan. To overcome this up-coming problem, PB-896 is suitable for mechanical picking due to its semi-erect plant shape uniform boll opening. UAF is trying to import tractor driven pickers, and this strain will be used on trial bases. In next year cotton season, the potential of PB-896 will be explored by using various agronomic practices with collaboration of Department of Agronomy, UAF. This line can tolerate heat and water stress, therefore, it has potential to boost production in different agro-ecological zones of Punjab. Therefore, it is believed that it would be approved as commercial variety by the Government of the Punjab.



Figure 1. PB-896 an elite line of Dept. of Plant Breeding and Genetics University of Agriculture, Faisalabad



**Table 1. Evaluation of PB-896 in Punjab in National Co-ordinated Varietal Trials (NCVT) 2015-16**

Sr. No	Varieties	Source	Average yield of seed cotton (kg/ha)
1	MPS-29	CRS, M Khas	1250
2	TH-120	ARI, Tandojam	1289
3	TH-20	ARI, Tandojam	1155
4	IUB-75	IUB, Bhawalpur	1103
5	CRIS-585	CCRI, Sakrand	1241
6	NIAB-414	NIAB, Fsd	1422
7	CRIS-543	CCRI, Sakrand	1105
<b>8</b>	<b>PB-896</b>	<b>UAF, Fsd</b>	<b>1497</b>
9	GH-HAMMAD	CRS, Ghotki	961
10	DNH-40	CRS, D.I. Khan	1153
11	FH-442	CRI, Fsd	1113
12	GS- Ali-1	Gohar Seed	956
13	Tahafuz-7	Sungro Multan	1093
14	AA-132	Ali Akbar Seeds	712
15	CIM-620	CCRI, Multan	1287
16	CIM-573 (Standard)	CCRI, Multan	912
		<b>Average</b>	<b>1141</b>

**Table 2. Comparison of fiber quality traits of PB-896 with various genotypes and standard (CIM-573) in NCVT 2015-16**

Varieties	Source	Fiber traits (Average)			
		GOT (%)	Staple length (mm)	Fineness ( $\mu$ g/inch)	Fiber Strength (g/tex)
MPS-29	CRS, M Khas	37	26	5	28
TH-120	ARI, Tandojam	37	26	4	28
TH-20	ARI, Tandojam	38	26	4	27
IUB-75	IUB, Bhawalpur	38	27	5	30
CRIS-585	CCRI, Sakrand	40	28	4	28
NIAB-414	NIAB, Fsd	37	26	5	27
CRIS-543	CCRI, Sakrand	39	27	4	29
PB-896	UAF, Fsd	<b>40</b>	<b>30</b>	<b>4</b>	<b>30</b>
GH-HAMMAD	CRS, Ghotki	38	27	4	27
DNH-40	CRS, D.I. Khan	36	27	4	27
FH-442	CRI, Fsd	38	29	4	30
GS- Ali-1	Gohar Seed	38	27	5	29
Tahafuz-7	Sungro Multan	40	27	5	31
AA-132	Ali Akbar Seeds	42	25	5	22
CIM-620	CCRI, Multan	38	28	5	27
CIM-573	CCRI, Multan	<b>38</b>	<b>26</b>	<b>5</b>	<b>25</b>