

OUTFIELD TESTING OF PROMISING VARIETIES OF SUGARCANE RESEARCH INSTITUTE FAISALABAD AND SHAKARGANJ SUGAR RESEARCH INSTITUTE JHANG

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SIGNIFICANCE OF OUTFIELD VARIETAL TESTING

- ❖ To find most adaptable varieties for cane yield, sugar recovery, agronomic traits, entomological, and pathological aspects
- ❖ To recommend site specific varieties in various ecological zones of Punjab
- ❖ To collect data for varietal approval
- ❖ To find out valuable data as feedback information for researcher, millers, cane managers, and farmers

LAYOUT

Varieties (13)		Management Practices	
S2003-US-114	CPSG-3481	Layout: RCBD Replications: 3 Row spacing: 2.5 feet Fertilizer rate: 168-112-112(NPK) kg ha ⁻¹ Seed rate: 75000 double budded setts ha ⁻¹ Weed control: Ametryn+Atrazine@ 3.75 liter ha ⁻¹ after 1 st irrigation Insect control: 20 kg ha ⁻¹ carbofuran/fipronil at time of sowing 20 kg ha ⁻¹ at 30 DAS 40 kg ha ⁻¹ at 60 DAS 20 kg ha ⁻¹ at 90 DAS	
S2003-US-127	CPSG-437		
S2003-US-633	NSG-59		
S2003-US-658	CPF-246		
S2003-US-778	CPF-247		
S2005-US-54	HSF-240		
S2006-US-832			

Outfield Testing of Promising Sugarcane Varieties...

LIST OF OUTFIELD VARIETAL TRIALS (SPRING 2011)

#	Name of farmer	Address
1	Kazim Ali	Shakarganj Sugar Mills Farm, Kot Khan, Jhang
2	Mian Yasin	Sheikhu Sugar Mills, Kot Addu
3	Adnan Babar	Chak # 313 E.B, Booraywala
4	Muhammad Qasim Butt	Chak # 03 ML, Pipplan, Mianwali
5	Muhammad Saleem	Chack # 198/8-R Tehsil Fortabbas, Bahawalnagar
6	Muhammad Ramzan	Chak # 27 South, Bhaghtawala, Sargodha
7	Col. Muhammad Aslam	Channi Khizar, Chiniot
8	Haji Muhammad Fiaz	Chak # 439 G.B, Fateh Rehan, Samundri
9	Muhammd Ikram Sajid	Pattoki Sugar Mills Farm, Pattoki
10	Dr. Muhammad Afzal	Sugarcane Research Institute, Faisalabad

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SOWING AND HARVESTING DATES

Location	Date of Sowing	Date of Harvesting
Chak # 198/8-R Tehsil Fortabbas, Bahawalnagar	March 19, 2011	Feb 02, 2012
Chak # 313 E.B, Booraywala	March 18, 2011	Feb 01, 2012
Channi Khizar, Chiniot	March 20, 2011	Feb 02, 2012
Sugarcane Research Institute, Faisalabad	April 07, 2011	Jan 25, 2012
Sheikhu Sugar Mills, Kot Addu	March 15, 2011	Jan 30, 2012
Shakarganj Sugar Mills Farm, Kot Khan, Jhang	March 03, 2011	Jan 30, 2012
Chak # 03 ML, Pipplan, Mianwali	March 18, 2011	Feb 07, 2012
Pattoki Sugar Mills Farm, Pattoki	March 25, 2011	March 08, 2012
Chak # 27 South, Bhaghtawala, Sargodha	March 20, 2011	Jan 28, 2012
Chak # 439 G.B, Fateh Rehan, Samundri	March 22, 2011	Jan 25, 2012

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PERFORMANCE OF PROMISING SUGARCANE VARIETIES FOR CANE YIELD (t ha⁻¹) IN TEN OUTFIELD TRIALS DURING 2011-12

Varieties	Sumandri	Sargodha	Jhang	Kot Addu	Boray Wala	Bahawal Nagar	Chiniot	Mianwali	Pattoki	Faisalabad	Average Yield t ha ⁻¹
S2003-US-114	110	140	130	75	85	130	130	65	85	84	103
S2003-US-127	130	145	125	70	90	90	60	100	170	70	105
S2003-US-633	130	-	-	65	-	-	-	-	65	-	87
S2003-US-658	-	170	130	-	80	65	170	45	-	-	110
S2003-US-778	-	150	75	75	80	105	60	110	-	75	91
S2005-US-54	185	-	-	-	-	-	-	-	-	-	185
S2006-US-832	-	140	85	-	95	90	180	65	-	91	107
CPSG-3481	-	-	110	45	-	-	-	-	-	-	78
CPSG-437	-	-	95	-	-	-	-	-	-	-	95
NSG-59	180	215	160	105	90	150	110	160	100	-	141
CPF-246	120	140	100	85	105	100	80	120	80	-	103
CPF-247	135	130	130	80	85	75	130	110	80	89	104
HSF-240	150	155	145	105	85	130	80	65	80	71	107

Outfield Testing of Promising Sugarcane Varieties...

PERFORMANCE OF PROMISING SUGARCANE VARIETIES FOR RECOVERY% IN TEN OUTFIELD TRIALS DURING 2011-12 (SRI, QUALITY LAB)

Varieties	Sumandri	Sargodha	Jhang	Kot Addu	Boray Wala	Chiniot	Mianwali	Bahawal Nagar	Pattoki	Faisalabad	Average
S2003-US-114	12.42	13.10	12.30	11.82	14.75	10.61	13.60	13.36	14.04	13.11	12.9
S2003-US-127	11.82	13.40	14.26	12.26	13.68	11.00	12.92	14.48	15.07	14.19	13.3
S2003-US-633	13.50	-	-	12.50	-	-	-	-	14.76	-	13.6
S2003-US-658	-	12.02	12.76	-	13.78	8.98	12.34	13.45	-	-	12.2
S2003-US-778	-	11.38	13.69	13.53	14.29	10.27	13.46	14.27	-	13.65	13.1
S2005-US-54	10.56	-	-	-	-	-	-	-	12.43	12.82	11.9
S2006-US-832	-	10.05	12.99	-	13.31	10.60	13.33	13.39	-	11.99	12.2
CPSG-3481	-	-	10.93	-	-	-	-	-	-	-	10.9
CPSG-437	-	-	13.17	-	-	-	-	-	-	-	13.2
NSG-59	12.12	12.31	12.79	12.79	13.00	12.58	13.25	13.42	13.26	-	12.8
CPF-246	12.51	13.09	13.79	13.10	13.58	12.45	13.59	13.51	14.05	-	13.3
CPF-247	11.33	12.33	13.33	12.93	13.48	12.51	13.00	13.64	13.08	13.68	12.9
HSF-240	12.42	11.50	11.80	11.99	14.02	13.12	13.85	13.20	13.69	13.55	12.9

Outfield Testing of Promising Sugarcane Varieties...

PERFORMANCE OF PROMISING SUGARCANE VARIETIES FOR RECOVERY% IN EIGHT OUTFIELD TRIALS DURING 2011-12 (SSRI, QUALITY LAB)

Varieties	Sumandri	Sargodha	Jhang	Kol Addu	Boray Wala	Bahawal Nagar	Chinlot	Mianwali	Average
S2003-US-114	9.83	8.38	10.40	9.57	11.25	10.98	10.28	10.74	10.2
S2003-US-127	10.39	9.14	11.17	8.53	11.45	11.12	10.52	10.52	10.3
S2003-US-633	10.60	-	-	10.29	-	-	-	-	10.4
S2003-US-658	-	9.77	9.96	-	11.49	11.14	6.38	9.59	9.7
S2003-US-778	-	9.40	9.90	11.39	11.40	11.17	10.24	10.42	10.6
S2005-US-54	10.11	-	-	-	-	-	-	-	10.11
S2006-US-832	-	8.86	8.57	-	11.15	10.55	8.40	10.97	9.8
CPSG-3481	-	-	10.22	10.44	-	-	-	-	10.33
CPSG-437	-	-	10.67	-	-	-	-	-	10.7
NSG-59	10.85	9.82	10.54	10.79	10.96	11.14	10.34	10.38	10.6
CPF-246	11.28	10.25	10.15	11.73	10.59	11.17	8.94	10.73	10.6
CPF-247	8.93	9.94	11.14	10.36	10.98	11.16	9.88	10.73	10.4
HSF-240	10.72	10.25	9.83	11.59	10.26	11.04	10.92	10.52	10.6

Outfield Testing of Promising Sugarcane Varieties...

PERFORMANCE OF PROMISING SUGARCANE VARIETIES FOR YIELD (t ha⁻¹), RECOVERY% AND SUGAR YIELD (t ha⁻¹) IN OUTFIELD TRIALS DURING 2011-12

Varieties	Yield t ha ⁻¹	Recovery % cane		Sugar yield t ha ⁻¹	
		SRI, Faisalabad	SSRI, Jhang	SRI, Faisalabad	SSRI, Jhang
S2003-US-114	103	12.9	10.2	13.34	10.55
S2003-US-127	105	13.3	10.3	13.97	10.82
S2003-US-633	87	13.6	10.4	11.79	9.02
S2003-US-658	110	12.2	9.7	13.42	10.67
S2003-US-778	91	13.1	10.6	11.95	9.67
S2005-US-54	185	11.9	10.1	22.02	18.70
S2006-US-832	107	12.2	9.8	13.01	10.45
CPSG-3481	78	10.9	10.3	8.45	8.01
CPSG-437	95	13.2	10.7	12.54	10.17
NSG-59	141	12.8	10.6	18.06	14.96
CPF-246	103	13.3	10.6	13.74	10.95
CPF-247	104	12.9	10.4	13.47	10.86
HSF-240	107	12.9	10.6	13.75	11.30

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CONCLUSIONS

- ❖ Out of thirteen varieties studied at ten locations throughout Punjab, S2005-US-54 gave maximum cane yield of 185 t ha⁻¹ and was followed by NSG-59 (141 t ha⁻¹)
- ❖ All the varieties were tested for sugar recovery % at SRI Faisalabad and SSRI Jhang
- ❖ SRI, Faisalabad results showed that maximum sugar recovery was recorded in S2003-US-633 (13.6%) and was followed by S2003-US-127 (13.3%), CPF-246 (13.3%), and CPSG-437 (13.2%)
- ❖ SSRI, Jhang data revealed that CPSG-437 gave 10.7% of sugar recovery and was closely followed by S2003-US-778, NSG-59, CPF-246, and HSF-240 with 10.6% sugar recovery
- ❖ Overall, sugar recovery and sugar yield at SRI Faisalabad is significantly higher for all the varieties than at SSRI Jhang
- ❖ Varieties like S2003-US-127, S2003-US-114, S2003-US-633, CPF-246, CPSG-437, and S2003-US-778 are better in yield and sugar recovery and are pipeline varieties in addition to above mentioned varieties