COLD TOLERANT VARIETIES FOR 2002

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Introduction

Seed Source Inc. does not market cotton varieties to growers. The group of varieties described herein have been licensed exclusively to Douglass King Seed Company. All of the six varieties are cold tolerant and are recommended for ultra-early planting. All are competitive in yield, and will also perform well in later plantings.

Cold Tolerance

The common element in these varieties is the ability to survive when planted in the soil under adverse conditions and to eventually emerge and grow normally. Figure 1 illustrates the difference between cold tolerant and non-cold tolerant varieties in early season development.

Varieties Released

Figure 2 shows 2 tall experimental varieties contrasted with 4 CT varieties planted in 38 inch rows on April 6. On the extreme right of the display is open cotton from an April 5 planting in 10 inch rows; this is the same variety to the immediate left which is twice as tall and much later than the UNR plants.

Table 1 provides a brief physical description of the six varieties and some comparative yields. Highest yields were from the April 6 planting, where no commercial checks were included because of the hazard of early planting. Two tests planted on May 4 each had some of the cold tolerant lines, and comparative yields of these lines and four commercial checks included in these or adjacent trials are listed.

Seed block yields are presented also. Production fields were scattered from the lower Rio Grande valley to Muleshoe, all in Texas. Of yields reported to date, the lowest, 1.59 bales per acre, and the highest, 3.72 bales, were produced by the same variety, CT210HQ. Table 2 contains comparative yields for CT210HQ planted early and commercial varieties planted one month later. The early planting was a 14 acre production field while the Uvalde County Cotton Demonstration consisted of 5 acre plots. The early planted CT variety had the highest yield and price per pound.

Table 3 contains data on spinning samples tested in 2000 and 2001. The 2000 samples from ultra early planting had lower mic, longer lint, and stronger yarn than did the 2001 samples from a later planting date. The CT varieties had acceptable lint properties and generally stronger yarn.

Cold Tolerant Cotton Varieties

2000 ⇓

Check SG 125

Check SG 125

PLANTED APRIL 1, 2000, Photo May 23

2001 ⇓

Check PSC 355

CT Line

PLANTED MARCH 27, 2001, Photo April 16

Figure 1. Differential emergence of cold tolerant varieties.

Planted 4/06 in 38 inch rows, left to right: SS9907, X3040, CT120HQ, CT110HQ, CT212HQ, and CT210HQ.
Planted 4/05 in 10 inch rows, extreme right: CT210HQ.

Figure 2. Plants collected on August 13, 2001.

Table 1. INFORMATION ON THE 6 VARIETIES RELEASED:

VARIETY	HEIGHT	LEAF HAIRS	PLANT TYPE	YIELD TESTS PLANTING DATE 4/6	5/4	5/4	SEED BLOCK BALES/A
EARLY MATURING VARIETIES							
CTII0HQ	MID-TALL	SM	MEDIUM	1089	941	919	1.912
CT120HQ	MID-TALL	SM	SPREADING	1175	1041	1062	2.13
MEDIUM EARLY VARIETIES							
CT210HQ	SHORT	SM	COMPACT	NA	NA	866	1.59, 3.72
CT211HQ	SHORT	SM	COMPACT	1022	718	854	2.54
CT212HQ	SHORT	SM	COMPACT	1048	906	NA	NA
MID-LATE VARIETY							
CT310HQ	TALL	SM	COMPACT	NA	NA	NA	2.0
COMMERCIAL CHECK VARIETIES IN THE SAME FIELD							
		PSC 355		957			
		STV474		876			
		DPL 50		797			
		DPL 5415		760			

Table 2. CT210HQ planted early versus commercial varieties planted one month later in UVALDE COUNTY, TX.

VARIETY	LINT/ACRE	LOAN PRICE	INCOME
	PLANTED 2/28/01 HARVESTED 8/30/01		
CT 210 HQ	1785	0.5488	979.61
	PLANTED 3/26/01 HARVESTED 9/26/01		
FM 966	1695	0.5298	898.01
SG 501 BR	1732	0.5031	871.37
SG 821	1621	0.5319	862.21
DP PEARL	1610	0.5299	853.14
FM 958	1602	0.5320	852.26
NATA	1617	0.5240	847.31
PM 1218	1588	0.5238	831.79
FM 832	1540	0.5323	819.74
PSC 355	1628	0.4792	780.14

Table 3. Comparative micronaire, length, and yarn strength.

	2000 SPINNING TEST			2001 SPINNING TEST		
	4/1 planting			5/4 planting		
VARIETY	MIC	2.5% SL	YARN STR	MIC	2.5% SL	YARN STR
CT211HQ	3.8	1.14	135	4.9	1.09	121
CT212HQ	3.8	1.17	134	4.7	1.14	113
CT110HQ	3.4	1.19	133	4.3	1.13	116
CT310HQ	4.1	1.15	133			
CT210HQ				4.5	1.14	115
CT120HQ	3.6	1.17	126	4.9	1.13	112
5/11 planting		COMMERCIAL CHECK VARIETIES				
SG 747	4.6	1.15	120	4.2	1.18	105
PSC355	5.1	1.19	125			

Table 4. Disease ratings for Fusarium at Auburn, AL, and for Verticillium in Spain.

VARIETY	FUSARIUM	VERT.
CT 110 HQ	MR	S
CT 120 HQ	MR	MR
CT 210 HQ	MR	S
CT 211 HQ	MR	NT
CT 212 HQ	MR	MR
CT 310 HQ	MR	MR