

**From:** [Bill Rooney](#)  
**To:** ["Brummett, Robert G."](#)  
**Cc:** ["Peterson, Gary C"](#)  
**Subject:** RE: Sorghum Released Lines  
**Date:** Wednesday, September 30, 2009 9:25:00 AM  
**Attachments:** [Release - Tx3301-Tx3360 Sorghum Germplasm.pdf](#)

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Robert:

Attached is the release documentation for Tx3301 to Tx3360. These were from Dr. Rosenow's program.

As for converted and partially converted material, this is derived from the Sorghum conversion program. We have typically distributed this material without charge as all of it predates MTA and licensing work. Having said that, I don't have a list of partially converted material - Gary do you have that?

regards,

bill

Dr. William L. Rooney  
Professor, Sorghum Breeding and Genetics  
Chair, Plant Release Committee  
Texas A&M University  
College Station, Texas 77843-2474  
979 845 2151

-----Original Message-----

**From:** Brummett, Robert G. [mailto:[brummettr@tamu.edu](mailto:brummettr@tamu.edu)]  
**Sent:** Tuesday, September 29, 2009 8:17 AM  
**To:** Peterson, Gary C; Bill Rooney  
**Cc:** Brummett, Robert G.  
**Subject:** FW: Sorghum Released Lines

Drs. Peterson and Rooney,

I'd received a request from Mr. Alston about sorghum a couple of weeks ago and sent him a Material Request form. They've not submitted it yet, but have provided a list of the lines they're interested in.

I'm trying to track down the disclosure on TX3301 – 3360. Do you know what this material is? I can't seem to find any information on it.

What does he mean by "Converted and partially converted lines"?

Thanks,  
Robert

*Robert Brummett,  
Licensing Associate*

*The Texas A&M University System  
Office of Technology Commercialization  
3369 TAMU  
800 Raymond Stotzer Parkway  
College Station, TX 77845  
(979) 862-3002 direct  
(979) 204-0766 cell  
(979) 847-8682 office  
(979) 845-1402 fax  
[brummettr@tamu.edu](mailto:brummettr@tamu.edu)  
<http://technology.tamu.edu>*

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**From:** FREDDY ALSTON [mailto:[fgalston@wildblue.net](mailto:fgalston@wildblue.net)]  
**Sent:** Monday, September 28, 2009 9:38 PM  
**To:** Brummett, Robert G.  
**Subject:** Sorghum Released Lines

Robert,  
Warner Seeds has been looking at the released sorghum lines. We have not seen the cost of the lines. Please send the cost of the lines to me.

Tx2945 - Tx2978  
Tx2929 - Tx2944  
Tx3301 - Tx3360  
Converted and partially converted lines.

Thanks,  
Fred Alston  
806-683-0281

TEXAS AGRICULTURE EXPERIMENT STATION  
PLANT MATERIAL RELEASE NOTIFICATION  
REPORT OF TECHNICAL COMMITTEE ON SEED RELEASE AND INCREASE

The attached proposal for plant release has been examined and reviewed by members of the TAES plant release committee. Based on this review, the following recommendations regarding release are made. Release procedures followed those given in the TAES Policy on the Management & Release of Plant Materials – 1995.

1. Species: **Sorghum (*Sorghum bicolor*)**
2. Breeders: **Darrell Rosenow (and others – see proposal)**
3. Type of Release:                      Cultivar                      Parental Line                      Selected Plant Material  
   Germplasm                      x                      Genetic Stock
4. Recommended for Release:                      Yes
5. Designation to be applied upon release: **Tx3301 – Tx3360 Sorghum Germplasm**
6. Distribution of Breeder's Seed: **Breeder**
7. Increase and maintenance of Foundation Seed Stocks: **n/a**
8. Responsibility for providing seed to state and federal seed laboratories: **Breeder**
9. Publicity (including Station Seed Leaflet): **Breeder**
10. Other Recommendations: **see proposal coversheet for distribution plans/fees. Seed will be distributed with an MOA for use in hybrid production.**
11. Members of plant review committee considering release: **Betran, Byrne, Crosby, Nelson, Peterson, Rooney, Rudd, Smith, Starr**

Personnel to Receive Copies of this Recommendation and Release Proposal:

Director : x           Breeder: x           TFSS: x           TLO: x           Unit:

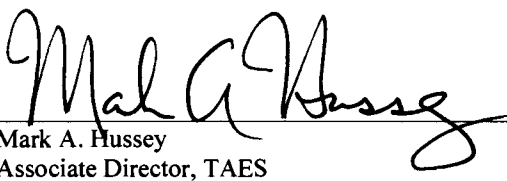
SSPB: responsibility of TFSS           NSSL: responsibility of breeder           Other:

Forwarded by:

Approved as Recommended:

Approved with Changes (see below)

  
W.L. Rooney  
Chair, Plant Review Committee

  
Mark A. Hussey  
Associate Director, TAES

Date: May 17, 2006

Date: 5-20-2006

Changes in Release: n/a


## Plant Materials Release Proposal

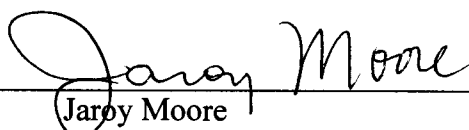
Date: April 27, 2006

1. Crop: *Sorghum bicolor* L. (Moench) Type of Release: Germplasm
2. Proposed Name or Identification: Tx3301 through Tx3360
3. Designation or Name in developmental Stages: Various, see attached release proposal
4. Primary features or advantages: All of the germplasm proposed for release is resistant to Sorghum Downy Mildew pathotypes 1 and 3, as well as to a physiological variant of pathotype 3 with resistance to acylalanine (El Campo, TX area) which includes the seed treatment fungicide metalaxyl and mefenoxam, and to an incompletely described new pathotype that attacks a previously resistant genetic source in a widely grown commercial hybrid (El Campo, Louise TX area), which is also acylalanine resistant. Given the new development of a chemical (acylalanine) resistant variant of pathotype 3, as well as the breakdown of one commercial source of resistance, new sources of genetic resistance has re-emerged as important. .
5. Plant Variety Protection: Yes \_\_\_\_\_ No XX Undecided \_\_\_\_\_
6. Seed available and date: Approximately 1 lb or more of each is currently available.
7. Proposed Seed Distribution: Small samples distributed by Breeder, with an MTA outlining potential uses and expectations in each case.
8. Provisions: None
9. Suggested Fees (for breeding stock): \$600 seed handling and acquisition fee for private companies for the set or \$50/requested line. No fee for public research programs.
10. Supportive Documents:
  - a. Release Proposal
  - b. Registration Article to Crop Science
11. Submitted:

Breeder Signature / Date

Unit Head Signature / Date

 4/28/06  
Darrell T. Rosenow  
Professor Emeritus  
Sorghum Breeding and Genetics,  
TAES-AREC Lubbock

 4-28-06  
Jaroy Moore  
Resident Director  
TAES-AREC, Lubbock

## RELEASE PROPOSAL FOR Downy Mildew Resistant SORGHUM GERMPLASM

Sixty sorghum (*Sorghum bicolor* L. Moench) lines are proposed for release as germplasm based on their resistance to sorghum downy mildew pathotype 3 and two new variants of pathotype 3. In addition, most of these lines are agronomically desirable and they possess unique combinations of grain yield, disease resistance and grain quality traits. While they are proposed for release as germplasm, some may be useful as parental lines.

### PROPOSED NAMES AND SEED HANDLING

These lines were selected, coded, evaluated and increased in the TAES sorghum breeding program managed by Dr. Darrell T. Rosenow (retired) at Lubbock, TX (Table 1). Using the numbering system of the TAES sorghum improvement program, this set of germplasm will be designated as Tx3301 through Tx3360 upon release. After release, the lines will be registered in *Crop Science* and seed of these lines will be sent for storage at the National Seed Storage Laboratory in Fort Collins, Colorado. Seed of these lines will be maintained and distributed upon request by personnel at the Texas Agricultural Experiment Station, Texas A&M University Agricultural Research and Extension Center, 1102 E FM 1294, Lubbock, TX 79403-6603, and will also be maintained by personnel in the Department of Soil & Crop Science, Texas A&M University, College Station, TX 77843-2474. Seed of these lines will be distributed with an MTA indicating that if the lines are used as a parent in hybrids or used for backcrossing, then licensing agreements will be required prior to commercial sale of any of the line or its hybrid.

### BREEDING HISTORY AND METHODOLOGY

All lines were developed from intentional crosses using the pedigree method of plant breeding (Table 1). Most lines are advanced generation (F<sub>10</sub> or more), except for Tx3341-46 and Tx3349-52 which range from F<sub>6</sub> to F<sub>9</sub> generation. Most of the parents in the pedigrees of these germplasms are publicly released with the following exceptions:

**87EON366** is a white-seeded, tan-plant widely adapted line developed from the pedigree of (TAM428\*(Tx432\*CS3541)).

**87BH8606** is a red-seeded, purple-plant of the pedigree (Tx433\*(SC748\*SC630)) with grain weathering resistance.

**R4317** is a red-seeded, tan-plant weathering resistant line selected from a pedigree of (SC170-6-17\*MR4-4671). MR4-4671 is an unreleased Zerazera derivative with weathering resistance.

**TP24R** is a tan-plant, white-seeded random mated population of diverse origin.

**CE151** = CE151-262-A1, a white-seeded, tan-plant Zerazera derived line developed in Senegal and introduced from Mali.

**M50069** is a white-seeded, tan-plant line from ICRISAT.

**88BE2668** is a red-seeded, purple-plant line of the pedigree (Tx2783\*(SC748\*SC630)).

**BHF13** and **BHF14** are both white-seeded, tan-plant selections from different F<sub>2</sub> plants with the pedigree of (BTx643\*BTx635).

**B9501** is a white-seeded, purple-plant line of the pedigree (B7904\*(SC748\*SC630)).

**B7904** is an unreleased sister line of BTx629.

**90CC549** is a white-seeded, tan-plant weathering resistant line with the pedigree of (Sureno\*VG153). **VG153** is an unreleased line received from ICRISAT with weathering resistance.

**ICSV1089BF** is a white-seeded, tan-plant weathering resistant line developed by ICRISAT in Burkina Faso and introduced from Mali.

Selections leading to the development of these lines were completed in numerous different nurseries throughout Texas over the past several years. As conditions warranted, screening for downy mildew resistance was completed primarily under field conditions in nurseries where pathotypes 1 and/or 3 were present, such as at LaWard, Port Lavaca, Edroy, Beeville, and Corpus Christi. In the early years after pathotype 3 developed, some lab screening with conidia was also done. Lines that were resistant were saved and advanced for further testing. This set of sixty lines possesses stable and consistent resistance to downy mildew pathotypes 1 and 3 (both oospore-seedling systemic infection, and conidial infection), as well as to the physiological variant of pathotype 3 with resistance to acylalanine (El Campo, New Taiton area - Fucik field) which includes the seed treatment fungicide metalaxyl and mefenoxam. The lines are also resistant (based on one year of data) to an incompletely described new pathotype that attacks a previously resistant genetic source in a widely grown commercial hybrid that appeared in Wharton County near Louise (Table 2). This new pathotype has similar acylalanine resistance to the downy mildew pathotype in the New Taiton area. The primary source of downy mildew resistance utilized is SC414 (IS2508C), a converted Caudatum-Kafir cultivar from Sudan, while eight B-lines utilize the resistance in the QL3 (India), originally developed in Australia. In addition, there are 7 other downy mildew resistant converted line sources in the set of sixty (Table 1). All of these lines have been selected for general agronomic desirability, grain yield and disease resistance. Based on pedigree, some of these lines could also express some level of either pre- or post-flowering drought tolerance, weathering/grain mold resistance, and lodging resistance (although no claims are made for any of these lines). Some lines in this group should be suitable for hybrid production while others are not, due in some to being too tall or possessing the wrong height gene (Dw 3) in a three height dwarf genotype.

#### ACKNOWLEDGEMENTS

Financial support from the Texas Grain Sorghum Producers Board and the International Sorghum/Millet Collaborative Research Support Program (INTSORMIL), Grant No. LAG-G-00-96-90009-00, funded by USAID, was used in the development of this germplasm.

#### SCIENTISTS and TECHNICAL SUPPORT CONTRIBUTING TO THIS RELEASE

D.T. Rosenow, Professor Emeritus, TAES-AREC, Lubbock  
G.N. Odvody, Associate Professor, TAES-AREC, Corpus Christi  
R.A. Frederiksen, Professor (retired), TAES, TAMU, Plant Pathology and Microbiology,  
College Station  
W.L. Rooney, Professor, TAES, TAMU, Soil & Crop Science, College Station  
K. Schaefer, Research Associate, TAES-AREC, Corpus Christi.  
S.D. Collins, Research Associate, TAES, TAMU, Soil & Crop Science, College Station

J. Remmers, Research Associate, TAES-AREC, Corpus Christi  
G.C. Peterson, Professor, TAES-AREC, Lubbock  
C.A. Woodfin, Assistant Research Scientist (Retired), TAES-AREC, Lubbock  
J.W. Jones, Assistant Research Scientist, TAES-AREC, Lubbock

Table 1. Proposed designation, codes, and pedigrees of the sorghum breeding lines proposed for release. The source of downy mildew resistance is identified in ***bold italicized*** letters.

Release	Evaluation Code	Pericarp color / mesocarp thickness <sup>1</sup>	Glume color <sup>2</sup>	Plant color <sup>3</sup>	Pedigree <sup>4</sup>
Tx3301	82BDM499	W	RP	P	(SC173* <b><i>SC414</i></b> )
Tx3302	86PL2120	R	LR	P	((SC748*SC650)* <b><i>SC414</i></b> )
Tx3303	95ED509	R	P	P	( <b><i>Tx3302</i></b> *87BH8606)-BD19
Tx3304		R	P	P	( <b><i>Tx3302</i></b> *87BH8606)-BD5
Tx3305	92BDM1982-4	R	LR	T	( <b><i>Tx3302</i></b> *87EON366)-BD6
Tx3306	90CW8147	W	T	T	( <b><i>Tx3301</i></b> *87EON366)-HF8
Tx3307	91BD1319	W	T	T	(Sureno* <b><i>Tx3301</i></b> )-BD18
Tx3308	90EON328	W	T	T	(Sureno* <b><i>Tx3301</i></b> )-HD5
Tx3309	96CD635	W	T	T	(SRN39* <b><i>Tx3308</i></b> )-HF4
Tx3310	98CD187	W	R	T	(87EON366* <b><i>Tx3308</i></b> )-HF6
Tx3311	96CD677	W	T	T	(87EON366* <b><i>Tx3308</i></b> )-HF3
Tx3312		W	R	RP	(SC173* <b><i>SC414</i></b> )
Tx3313		W	P	P	( <b><i>SC414</i></b> *TAM428)
Tx3314	03L-B/R905	Wch	P	P	(TAM428* <b><i>SC502</i></b> )
Tx3315	03L-B/R918	W	R	RP	(TAM428* <b><i>SC502</i></b> )
Tx3316		R	PB	P	( <b><i>SC23</i></b> * <b><i>QL3-India</i></b> )
Tx3317		R	R	RP	(R4317* <b><i>SC425</i></b> )
Tx3318		W	R	RP	(Tx432* <b><i>SC38</i></b> )
Tx3319		R	LR	RP	(BTx625* <b><i>SC33</i></b> )-BD5
Tx3320		W	LR	T	(TP24R* <b><i>SC33</i></b> )-B4
Tx3321		R	LR	R	(R4317* <b><i>SC418</i></b> )-B4
Tx3322		Wch	R	RP	( <b><i>Tx3301</i></b> *SC574)-WE6
Tx3323		W	T	T	(?* <b><i>Ethiopian DurraDochna</i></b> )
Tx3324		W	R	T	(SRN39* <b><i>Tx3308</i></b> )-HF3
Tx3325		W	R	T	(87EON366* <b><i>Tx3308</i></b> )-HF6-ED5
Tx3326		W	LR	T	(87EON366* <b><i>Tx3308</i></b> )-HF6-ED6
Tx3327		W	LR	T	(87EON366* <b><i>Tx3308</i></b> )-HD14-BD1
Tx3328		W	LR	T	(87EON366* <b><i>Tx3308</i></b> )-HD14-BD2
Tx3329		W	T	T	(87EON366* <b><i>Tx3308</i></b> )-LD30
Tx3330		W	T	T	(87EON366* <b><i>Tx3308</i></b> )-LD31
Tx3331		W	T	T	(87EON366* <b><i>Tx3308</i></b> )-HD8
Tx3332		W	R	T	(87EON366*(Sureno* <b><i>Tx3301</i></b> ))-HD40
Tx3333		W	T	T	(87EON366* <b><i>Tx2891</i></b> )-BD2
Tx3334		W	LR	T	(Sureno* <b><i>Tx2891</i></b> )-HF17-BE5
Tx3335		W	LR	T	(Sureno* <b><i>Tx3301</i></b> )-HD9
Tx3336		W	T	T	(Sureno* <b><i>Tx3301</i></b> )-14B
Tx3337		Wch	T	T	(Malisor84-7* <b><i>Tx3308</i></b> )-HF14
Tx3338		Wch	T	T	(Malisor84-7* <b><i>Tx3308</i></b> )-HF9
Tx3339		W	R	RP	(CE151* <b><i>Tx3301</i></b> )-LD17
Tx3340		W	R	T	( <b><i>Tx3308</i></b> *CE151)-LD11
Tx3341		W	LR	T	( <b><i>Tx3308</i></b> *CE151)-BD15
Tx3342		W	T	T	( <b><i>Tx3308</i></b> *CE151)-BD18
Tx3343		W	R	T	( <b><i>Tx3308</i></b> *CE151)-LA37
Tx3344		W	R	T	( <b><i>Tx3308</i></b> *CE151)-LA45



Release	Evaluation Code	Pericarp color / mesocarp thickness <sup>1</sup>	Glume color <sup>2</sup>	Plant color <sup>3</sup>	Pedigree <sup>4</sup>
Tx3345		W	R	T	(Tx3308*CE151)-LA49
Tx3346		W	R	T	(Tx3308*CE151)-LA59
Tx3347		R	LR	T	(Tx3302*M50069)-
Tx3348		R	LR	RP	(88BE2668*Tx3301)-HD14
Tx3349		W	R	T	(Tx3308*Kuyuma)-BE7
Tx3350		W	T	T	(Tx3308*ICSV1089BF)-BE9
Tx3351		W	T	T	(Tx3308*90CC549)-BE6-BD2
Tx3352		W	T	T	(Tx3308*90CC549)-BE10-BD1
Tx3353		W	T	T	((BTx623*QL3-India)*BHF13)-HL3
Tx3354		W	R	T	((BTx623*QL3-India)*BHF13)-HL7
Tx3355		W	R	T	((BTx623*QL3-India)*BHF13)-HL15
Tx3356		Rch	R	RP	((BTx623*QL3-India)* (BTx643* B9501))-HL14
Tx3357		Wch	R	R	((BTx623*QL3-India)* (BTx643* B9501))-HL30
Tx3358	03LB/R614	Wch	T	T	((BTx623*QL3-India)*BHF14)-HL13--PR3
Tx3359	03LB/R615	W	LR	T	((BTx623*QL3-India)*BHF14)-HL13--PR2
Tx3360	03LB/R616	Wch	T	T	((BTx623*QL3-India)*BHF14)-HL13--PR7

<sup>1</sup> Pericarp color - W = white, R - red: Mesocarp Thickness - all are thin or translucent unless “ch” given which indicates a thick or chalky mesocarp. All lines are without a testa or undercoat, except for Tx3322.

<sup>2</sup> Glume color: T = tan, R = red, P = purple, LR = lite red, RP = reddish purple, PB = purplish black. A red or lite red glume color on a tan-plant color produces a sienna or lite sienna colored glume.

<sup>3</sup> Plant color: P = purple, T = tan, RP - reddish purple, R = red.

<sup>4</sup> Converted lines used in pedigrees of the 60 germplasm lines:

a) Downy mildew resistant

SC23 (IS12543C) Durra/Durra, Ethiopia

SC33 (IS12553C) Durra/Durra, Ethiopia

SC38 (IS12558C) Durra/Durra, Ethiopia

SC414 (IS2508C) Caudatum/Caudatum - Kafir, Sudan

SC418 (IS1335C) Caudatum/Caudatum - Kafir, Tanzania

SC425 (IS3579C) Caudatum/Caudatum - Durra, Sudan

SC502 (IS3598C) Caudatum/Durra - Nigricans, Sudan

b) Non-downy mildew resistant

SC173 (IS12664C) Caudatum/Zerazera, Ethiopia

SC574 (IS8337C) Caudatum/Caudatum - Nigricans, Pakistan

SC650 (IS2856C) Caffrorum/Kafir, S. Africa

SC748 (IS3552C) Caudatum/Caudatum - Guineense, Sudan

Table 2. Important agronomic characteristics and the downy mildew reaction of Tx3301 to Tx3360 and relevant checks.

Release Designation	Fertility <sup>1</sup>	Midrib <sup>2</sup>	Days <sup>3</sup> to 50% Flower		Plant height <sup>4</sup>		Downy mildew reaction <sup>5</sup>			
			CS	LB	CS	LB	2003	2004	2005	
							El Campo (Fucik)	El Campo (Fucik)	El Campo (Fucik)	Louise
Tx3301	R	I	78	70	41	37	43/0-	14/0-	76/0-	40/0-
Tx3302	R	D	80	80	38	34	10/0-	13/0-	29/0-	54/0-
Tx3303	R*	J	66	66	40	36	48/0-	20/0-	100/0-	118/1-
Tx3304	R*	D	74	82	38	31	62/0-	183/0-	102/0-	90/0-
Tx3305	R	J	82	83	46	42	35/0-	48/0-	87/0-	67/0-
Tx3306	R	J	76	75	38	34	32/0-	4/0-	73/0-	71/0-
Tx3307	R	J	85	83	40	37	7/0-	42/0-	113/0-	101/0-
Tx3308	R	J	81	75	52	46	93/0-	159/0-	75/0-	66/0-
Tx3309	R	I	83	76	53	43	42/0-	92/0-	65/0-	69/0-
Tx3310	R	I	80	80	54	46	33/0-	109/0-	54/0-	31/0-
Tx3311	R	J	75	71	38	38	39/0-	80/0-	28/0-	15/0-
Tx3312	R*	I	77	75	42	36	31/0-	34/0-	64/0-	61/0-
Tx3313	R*	D	77	71	46	36	45/0-	39/0-	63/0-	67/0-
Tx3314	R*	I	72	74	36	35	20/0-	36/0-	30/0-	40/0-
Tx3315	R*	D	74	79	32	35	56/0-	35/0-	40/0-	6/0-
Tx3316	?	I	76	78	33	36	26/0-	28/0-	53/0-	55/0-
Tx3317	R*	J	78	76	33	34	4/0-	7/0-	82/0-	51/0-
Tx3318	R*	I	77	76	37	43	31/1-	66/0-	87/0-	76/0-
Tx3319	?	J	75	79	36	39	33/0-	22/0-	104/0-	86/0-
Tx3320	R*	J	78	84	50	42	39/0-	20/0-	86/0-	67/0-
Tx3321	R*	J	74	77	37	37	48/0-	24/0-	47/0-	54/0-
Tx3322	R*	J	74	82	34	41	53/0-	51/0-	114/0-	97/0-
Tx3323	R*	I	71	70	41	40	49/0-	30/0-	95/0-	84/0-
Tx3324	R*	I	75	84	56	50	13/0-	24/0-	106/0-	90/0-
Tx3325	R*	J	77	80	43	39	21/0-	29/0-	59/0-	65/0-
Tx3326	R*	J	80	78	39	42	18/0-	34/0-	58/0-	78/0-

Release Designation	Fertility <sup>1</sup>	Midrib <sup>2</sup>	Days <sup>3</sup> to 50% Flower		Plant height <sup>4</sup>		Downy mildew reaction <sup>5</sup>			
			CS	LB	CS	LB	2003	2004	2005	
							El Campo (Fucik)	El Campo (Fucik)	El Campo (Fucik)	Louise
Tx3327	R*	J	71	72	42	40	10/0-	139/0-	79/0-	82/0-
Tx3328	R*	J	76	79	47	44	8/0-	54/0-	75/0-	67/0-
Tx3329	R*	J	78	83	41	46	46/0-	46/0-	54/0-	67/0-
Tx3330	R*	J	77	82	34	35	3/0-	16/0-	41/0-	21/0-
Tx3331	R*	I	80	79	48	47	--	44/0-	69/0-	70/0-
Tx3332	R*	J	78	79	45	42	14/0-	1/0-	99/0-	109/0-
Tx3333	R*	J	83	77	36	35	16/0-	36/0-	67/0-	85/0-
Tx3334	R*	J	80	82	43	40	64/0-	740-	80/0-	62/0-
Tx3335	R*	J	75	78	45	40	30/0-	48/0-	28/0-	65/0-
Tx3336	R*	J	76	78	46	35	30/0-	37/0-	90/0-	48/0-
Tx3337	R*	J	75	76	43	42	12/0-	39/0-	72/0-	78/0-
Tx3338	R*	J	73	76	49	44	--	13/0-	80/0-	60/0-
Tx3339	R*	J	72	74	47	43	60/0-	27/0-	76/0-	66/0-
Tx3340	R*	J	75	82	42	49	43/0-	160/0-	31/0-	30/0-
Tx3341	R*	J	78	77	46	38	2/0-	13/0-	38/0-	/0-**
Tx3342	R*	J	70	75	43	41	12/0-	11/0-	87/0-	50/0-
Tx3343	R*	J	69	73	44	42	17/0-	11/0-	88/0-	66/0-
Tx3344	R*	J	78	83	43	41	10/1-	10/0-	12/0-	/0-**
Tx3345	R*	J	74	72	39	45	33/0-	75/0-	59/0-	41/0-
Tx3346	R*	J	75	72	50	37	10/0-	34/0-	70/0-	32/0-
Tx3347	R*	J	83	79	42	44	--	20/0-	60/0-	38/0-
Tx3348	R*	I	74	77	32	28	4/0-	17/0-	97/0-	40/0-
Tx3349	R*	I	80	78	38	40	5/0-	20/0-	99/0-	75/0-
Tx3350	R*	J	80	84	46	45	15/0-	19/0-	23/0-	/0-**
Tx3351	R*	J	-	-	-	-	--	20/0-	10/0-	/0-**
Tx3352	R*	J	80	79	37	38	15/0-	75/0-	30/0-	/0-**
Tx3353	B*	J	82	85	40	39	10/0-	8/0-	122/0-	60/0-
Tx3354	B*	J	83	84	36	36	12/0-	49/0-	65/0-	44/0-

Release Designation	Fertility <sup>1</sup>	Midrib <sup>2</sup>	Days <sup>3</sup> to 50% Flower		Plant height <sup>4</sup>		Downy mildew reaction <sup>5</sup>			
			CS	LB	CS	LB	2003	2004	2005	
							El Campo (Fucik)	El Campo (Fucik)	El Campo (Fucik)	Louise
Tx3355	B*	J	74	77	36	37	29/0-	189/0-	89/0-	51/0-
Tx3356	B*	J	75	82	39	40	29/0-	170/0-	84/2-	51/1-
Tx3357	B*	J	70	83	42	45	40/0-	110/0-	29/0-	39/0-
Tx3358	A/B	J	78	88	39	46	--	261/0-	172/0-	97/0-
Tx3359	A/B	J	77	86	40	43	--	65/0-	96/0-	57/0-
Tx3360	A/B	J	77	84	38	39	10/0-	46/0-	77/0-	89/0-
Checks										
Tx430	R	J	71	78	44	39	26/2++	2/1++	62/0++	37/0++
SC414	R	D	71	68	42	36	80/0-	49/0-	74/0-	35/0-
Tx7078	R	J	65	67	34	34	100/62++	92/8++	136/15++	39/2++
QL3 (India)	B	J	-	-	-	-	71/0-	60/0-	20/0-	--
ATx399*Tx430	-	J	-	-	-	-	89/44++	193/17++	75/2++	62/1++

<sup>1</sup> Fertility: A/B = both an A-line and a B-line are available for distribution; B = line is a maintainer of sterility in A1 cytoplasm, no A-line is available; and R = line is a restorer of fertility to the A1 cytoplasm sterility system. \*presumed fertility reaction based on parentage or on sister or similar pedigrees tested. ?=Pedigree a B\*R line, reaction unknown.

<sup>2</sup> Midrib: J = juicy midrib; I = intermediate; and D = dry midrib.

<sup>3</sup> Number of days to anthesis when grown in College Station (CS) and Lubbock (LB), Texas in 2005.

<sup>4</sup> Plant height (cm) when grown in College Station (CS) and Lubbock (LB), Texas in 2005.

<sup>5</sup> Reaction to downy mildew pathotype 3 variant and potential new pathotype (caused by *Peronosclerospora sorghi*). The first number is the total number of plants in plot, the second being the number of these plants showing systemic infection. The numbers are followed by a “-“ or “+” with a “-“ = absence of local lesions, and “+” = presence of local lesions. Disease ratings were measured in Wharton County, Texas in areas of high natural infection. The Fucik site had a physiological variant of pathotype 3 with resistance to acylalanine. The Louise site had an incompletely described new pathotype that attacks a previously resistant source in a widely grown commercial hybrid in addition to acylalanine resistance.

\*\*Not evaluated at Louise in 2005. Initial counts in 2006 indicate 0 systemic, and no local lesions in two reps. Initial counts at Louise in April, 2006 indicate all 60 lines with resistance, with no systemics, and absence of local lesion infection.