

2006 ANNUAL REPORT
WHEAT RESEARCH AND PROMOTION BOARD

TITLE: Breeding for Improved Wheat Cultivars

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OBJECTIVES:

Develop and release wheat cultivars with high yield potential, high test weights, straw strength, winter hardiness, early maturity, and resistance to diseases common to Arkansas through pedigree, bulk population, and backcross breeding methods.

Cooperate with other public programs to identify lines adapted to Arkansas which can be released through the Foundation Seed Program and join other institutions in joint releases.

ABSTRACT:

The planting season was ideal for wheat last fall. The breeding trails and Cultivar Performance test was planted at Keiser on October 11 with the head-row material (F₄ and F₅ lines) being planted at Fayetteville on October 14. The breeding yield trails and variety test were planted at Marianna on October 12 and the Cultivar Performance test at Rohwer was planted on October 13. The planting of the Cultivar Performance test in Stuttgart was planted on October 19, with the breeding trials being planted on October 20 and 25. The variety test at Kilber was planted on October 26 with the variety test at Hope being planted on November 7. All of these planting dates were optimum. The F₄ and F₅ lines at Fayetteville grew very well and the inoculation with stripe rust and leaf rust was effective. Although, the infection was not as severe as in the past it allowed for an evaluation of resistance among the lines for the disease. Of the more than 20,000 lines planted, about 400 resistant F₅ lines were harvested for future yield testing. Approximately 9,000 individual plants were also selected to be used to produce F₅ lines for selecting in 2006-07.

The first N application was applied on Feb 16 at Stuttgart and concluded at Marianna on March 1. The second application began on March 7 and concluded at Fayetteville on March 20. Plant establishments were optimum at all locations. Harvest of the Cultivar Performance Trails and the breeding nurseries began on May 25 at Rohwer and concluded on June 14 at Kibler. The head rows at Fayetteville were harvested on June 16. The results from the most advanced nursery are given in Table 1. Table 2 gives the performance of lines in the Advanced Wheat Strains (AWS) nursery at Keiser. Almost all of the experimental lines outperformed the check varieties in the test. However, all the check varieties performed poorly at this location for some reason. While this is true, many of the experimental lines did perform very well. The AWS test was also harvested at Marianna.

During the winter the crossing program to produce future lines was expanded. There were over a hundred successful crosses in four efforts: 1) standard variety development, 2) scab-resistant varieties, 3) stripe rust and leaf rust resistant varieties, 4) specialty types (white wheats). The objective of the crossing efforts are to stress yield potential, test weight, value-added traits, and disease resistance.

INTRODUCTION:

In Arkansas, wheat yields have increased at a rate of about 0.5 bu/A per year since 1924. Yield increases in wheat and other crops are due to improved cultural practices as well as genetic improvement. Studies in other regions have estimated that improved wheat cultivars are responsible for somewhere between 28% to 55% of the yield increases. Pathogens are also under genetic control and will select races which will attack prevalent cultivars. The absence of aggressive breeding programs would not only stop yield increases due to new cultivars but also the yield of cultivars currently grown would decrease since pests would develop which would overcome resistance.

The University of Arkansas' breeding program has stressed cultivar development through the use of adapted crosses to maximize efficiency but has continued to broaden the genetic base of the program to guard against genetic vulnerability and limited genetic improvement. The program uses a combination of the bulk and pedigree methods to minimize cost. In order to obtain high yielding, adapted cultivars, increased emphasis will be given to disease resistance. The Arkansas program unlike other programs is putting major emphasis on the development of high test weight genotypes since a substantial component of test weight is under genetic control.

MATERIALS AND METHODS:

Parents are chosen for their high-yield potential and adaptation to Arkansas conditions. Crosses are being made between genotypes with complementary traits in the greenhouse at Fayetteville. The F₁ generation is also grown in the greenhouse. Beginning with the F₂ generation, a combination of pedigree and bulk breeding methods are followed until sufficient homozygosity is reached to increase seed for yield testing.

Selected lines are then tested and re-selected in replicated yield plots. Lines selected move in a step-wise progression through the following nurseries: Wheat Observation (2 locations with one replication per location), Advanced Wheat Strains (2 locations), and Elite Wheat Lines (3 locations). Locations include Kibler, Stuttgart, Keiser, Marianna, and Rohwer. Numerous locations are used to help ensure selection of genotypes that are adapted to a number of soil types and environments. All lines in the nurseries are harvested for yield, and data is taken on test weight, lodging, maturity date, plant height, and winterhardiness. Reaction type and level of severity of diseases present is also recorded each spring. Lines that appear to have potential as cultivars are entered in the Arkansas Commercial Variety Test. The seed of each line in the Elite Wheat nursery is sent to the USDA Soft Wheat Quality Lab to be tested for baking and milling quality to ensure that the lines released from the program meet industry standards.

Other Universities in the soft wheat region have variety development programs. Evaluation of public lines initially takes place in regional uniform nurseries and then through the commercial variety test. Released lines adapted to Arkansas will be introduced through the foundation seed program to seedsmen.

RESULTS AND DISCUSSION:

Results from this year's research are found on the following pages. The information is divided into three basic sections: 1) New and future releases, 2) Yield nurseries and 3) Early generations.

1) NEW AND FUTURE RELEASES:

Recent releases continue to perform well. AR850-1-1 was licensed through an agreement with Petrus Seed Company which will have exclusive rights to market the variety in Arkansas. It is a full-season maturing variety and has good resistance to stripe rust and Fusarium Head Blight. All available foundation seed of Pat was sold this year. Certified seed sales of both have been good.

This year we are purifying and increasing seed of two selections from the cross Jackson/Pioneer 2643 (AR96077). They are being tested in the State Variety Test and regional yield trials this year in anticipation of possible release.

2) YIELD NURSERIES

The most advanced experimental lines were planted in the Elite Wheat Lines (EWL) nursery at Keiser, Stuttgart, and Marianna. The performance of the experimental lines averaged across the three locations is presented in Table 1. Yields were relatively high at and several experimental lines had yields higher or comparable to the commercial checks. AR 97044-10-2 was entered in the USDA Eastern Regional yield nursery. The experimental lines AR96077-10-1 and AR96077-7-2 were entered in the 2006-07 Arkansas State Variety Test. AR96077-10-1 was entered in the Southern Regional and AR96077-7-2 in the Eastern Regional yield trials for the 2006-2007 growing season. These lines have excellent yield potential and stripe rust resistance. AR 124-4-2 which has good Fusarium Head Blight resistance and also has a comparable grain yield with Pat is also being tested in cooperative regional trials.

The results of Advanced Wheat Strains nursery averaged over the Keiser and Stuttgart locations are presented in Table 2. Sixteen experimental lines had higher yields than the commercial cultivar Delta King 9410. Several of these lines that appeared promising were advanced to the Elite test for further testing in 2006-2007.

The Wheat Observation Yield nursery was planted at Stuttgart and Keiser. The yield results from these two locations is given in Table 3. This represents the first yield data from lines selected from F₆ head rows in 2004-05. Several experimental lines that appear promising were advanced to the Advanced Wheat Strains test for further testing in 2006-2007.

To enhance disease resistant to Fusarium Head Blight (Scab) a special nursery is conducted to screen experimental lines for agronomic traits as well as scab resistance. The results of this nursery are presented in Table 4. Several lines possess the same level of resistance as the resistant check 'Ernie' but have yields similar to 'Pat'.

3) EARLY GENERATIONS

During the winter the greenhouse crossing program to produce future lines was continued. There were 88 successful crosses in four efforts: 1) standard variety development, 2) scab-resistant varieties, 3) imidazolinone herbicide resistant varieties and, 4) specialty types (white and waxy wheats). The resulting offspring of last year's crosses (113 F₁) were grown in the greenhouse over the winter to increase seed. The next three generations (F₂, F₃, and F₄) were grown as bulk populations in the field at Stuttgart. This year there were 109 F₂ populations, 196 F₃ populations, 159 F₄ populations and 172 F₅ populations produced. Individual plants were selected from the F₆ generation at Fayetteville to produce experimental lines which will be planted at Stuttgart and Keiser this fall to begin yield testing.

CONCLUSIONS:

The breeding project has made strides in a number of areas. Approximately 800 experimental lines were tested throughout the state to determine genetic potential for Arkansas wheat producers. For future testing nearly 20,000 new lines were evaluated in the field. In order to produce new experimental lines, over 1200 genetically segregating populations were grown in the field as well as making approximately 100 crosses in the greenhouse to produce new populations. Some specific highlights from this year's work:

- Certified seed of Pat sold.
- AR 910 marketed as Delta King Seed GR9108.
- AR 850-1-1 released and licenced to Petrus Seed.
- Three lines advanced to Regional Soft Wheat testing
- Breeding lines of herbicide-tolerant wheat for Hoelon-resistant ryegrass.
- Five scab resistant lines advanced for regional testing.
- Identification of lines resistant to stripe rust.
- Work in developing speciality (white and waxy) wheat for Arkansas continued.

Table 1. 2005-2006 Elite Wheat Nursery averaged over Stuttgart, Marianna and Keiser.

Obs	entry	Name	Yield	Test Wt.	lodge	ht	Head	Maturity
			bu/A	lb/bu	%	in.	Mo/day	Mo/day
1	36	AR910	94.6578	56.3500	20.000	38.0	407.667	516.667
2	12	AR97044-10-2	92.0803	54.6333	10.000	38.0	408.333	515.667
3	37	PAT	92.0410	58.1250	5.625	38.5	414.667	520.500
4	21	AR97044-10-1	90.3229	54.8455	14.000	36.5	409.667	514.500
5	40	AP BERETTA	89.8131	55.3167	18.375	33.5	414.167	518.000
6	10	AR97143-7-1	87.8052	56.4583	16.375	37.5	409.000	515.500
7	38	AGS 2000	87.7064	58.0250	23.625	34.5	404.333	516.667
8	32	AR97124-4-2	86.4794	57.0917	41.500	38.5	412.500	517.667
9	4	TX02D5406	85.8783	58.6083	16.125	34.5	408.500	515.500
10	7	AR97044-10-3	85.8485	56.2091	6.750	34.5	409.333	515.500
11	17	AR97044-12-3	85.2430	58.4250	12.125	39.0	409.833	515.833
12	16	AR97106-2-1	84.2641	57.9750	20.250	34.0	409.000	517.833
13	29	AR97139-11-2	84.2136	57.5500	49.875	35.5	410.833	518.500
14	5	AR96077-7-3	83.6696	55.9750	15.875	31.5	409.333	515.333
15	31	AR97124-4-3	82.7165	55.5083	41.250	37.5	412.833	517.000
16	20	AR97044-12-1	82.2594	58.6909	14.000	39.0	409.667	515.167
17	23	AR97139-5-1	81.7004	58.1333	65.625	39.0	410.167	517.500
18	14	AR97226-1-1	81.5613	57.3667	20.625	32.5	405.000	514.667
19	1	AR96052-4-3	81.4840	55.1545	20.250	34.0	408.167	515.167
20	2	AR96077-7-2	80.3897	56.1000	12.125	29.5	408.667	514.500
21	15	AR97225-4-1	80.3233	57.8917	28.375	34.5	406.167	515.667
22	33	AR97124-4-1	80.2313	57.7182	40.500	38.5	412.167	517.000
23	13	AR97139-15-1	79.5553	57.3083	26.875	37.0	409.500	517.000
24	8	AR97170-1-1	79.4422	56.0917	18.375	37.0	414.167	519.500
25	28	AR97139-11-1	79.3194	57.5500	46.250	38.0	410.167	519.000
26	3	AR96077-10-1	78.7933	54.8545	19.625	35.0	410.000	515.667
27	22	AR97031-8-1	78.3850	57.4833	31.250	35.0	409.000	515.167
28	39	SABBE	78.1881	55.8250	2.750	34.5	414.000	520.167
29	25	AR97109-9-1	77.6507	53.5417	27.750	36.5	408.667	516.167
30	6	AR96077-3-1	76.9776	56.9545	20.000	33.0	409.833	516.333
31	9	AR97139-15-2	76.5555	57.5583	35.000	36.5	409.167	517.333
32	11	AR97139-9-1	76.4228	56.4417	29.375	36.0	409.333	516.333
33	18	AR97217-1-1	76.4170	58.7250	10.625	38.5	412.667	519.667
34	24	AR97226-1-2	75.6675	56.9167	19.875	36.0	407.167	514.500
35	27	AR97139-14-1	71.2399	57.7083	78.125	38.0	411.000	516.500
36	26	AR97226-6-1	70.2740	57.9167	2.750	36.5	405.333	514.500
37	30	AR97149-8-1	67.8431	57.9000	25.625	33.0	405.833	514.333
38	34	AR97048-1-1	65.0219	55.7583	61.250	35.5	411.667	519.333
39	19	AR97044-3-1	62.9530	58.3111	53.375	35.0	412.667	516.333
40	35	AR97048-4-1	62.7317	56.1545	75.625	40.5	411.333	517.667

Table 2. 2005-2006 Advanced Wheat Strains Nursery averaged over Keiser and Stuttgart.

Obs	entry	Name	Yield	Test Wt.	Lodge	Ht	Head	Maturity
			bu/A	lb/bu	%	in.	Mo/Day	Mo/Day
1	73	AR910	82.5330	57.8036	70	38	415.0	518.0
2	75	AGS 2000	82.2473	58.0946	80	34	411.5	519.5
3	67	AR98159-5-2	81.9588	59.2049	90	32	416.0	517.5
4	1	AR98001-5-1	81.8036	56.6741	0	37	415.5	517.0
5	20	AR98068-4-1	80.1110	59.2371	30	38	417.0	520.5
6	14	AR98023-5-1	78.0483	56.4096	0	35	416.5	519.0
7	31	AR98083-9-1	77.9442	57.2123	0	34	414.0	517.5
8	35	AR98088-1-2	77.8613	58.5814	100	38	413.0	517.5
9	65	AR98152-4-1	77.5865	56.5806	70	36	412.5	515.0
10	74	PAT	77.4617	58.6000	20	39	417.0	518.5
11	47	AR98096-3-1	76.8665	53.4599	60	31	415.5	518.0
12	24	AR98075-7-1	76.8473	60.7486	60	38	415.0	514.0
13	54	AR98105-4-1	76.8196	58.8314	90	37	416.5	516.5
14	15	AR98023-5-3	75.7695	56.0460	0	32	415.5	517.5
15	9	AR98022-19-3	75.6001	58.6738	20	39	416.5	519.0
16	18	AR98046-6-2	75.3871	58.6612	0	37	413.0	515.0
17	69	AR98172-1-1	75.1964	55.5561	50	37	416.5	516.0
18	49	AR98097-4-1	74.9820	58.4484	80	35	415.5	516.5
19	23	AR98075-5-1	74.3166	58.9978	90	40	416.5	516.5
20	76	DELTA KING 9410	74.3073	57.4506	80	37	416.0	519.0
21	50	AR98097-5-1	74.0361	56.1820	50	36	415.5	515.0
22	33	AR98084-4-1	73.8697	57.2260	80	34	415.0	514.0
23	16	AR98023-6-2	73.7363	56.4788	70	32	415.0	516.5
24	34	AR98088-1-1	73.6979	58.7882	100	37	415.0	517.0
25	40	AR98088-7-1	73.5673	57.1615	100	37	416.5	517.0
26	22	AR98072-2-2	73.5200	57.1134	90	30	411.0	513.0
27	26	AR98083-1-1	73.4043	58.7976	100	38	415.5	516.5
28	64	AR98152-1-1	73.0179	57.7692	100	31	412.5	517.5
29	66	AR98152-9-2	72.9909	58.9758	90	30	416.0	517.5
30	3	AR98003-7-1	72.7115	59.3295	0	35	412.5	515.0
31	41	AR98088-7-2	72.4296	56.8233	100	35	416.0	517.0
32	5	AR98072-3-1	71.8802	59.2238	0	33	411.0	513.5
33	42	AR98093-3-1	71.5462	58.2454	100	33	414.0	515.0
34	68	AR98159-8-1	71.4526	59.4697	90	37	411.5	511.5
35	28	AR98083-1-3	71.2973	59.4918	100	39	414.5	517.0
36	72	AR98172-6-1	71.2771	54.0829	80	36	416.5	518.0
37	48	AR98096-3-2	71.1928	53.1853	60	32	416.0	517.5
38	17	AR98045-1-2	71.1552	57.2435	50	35	415.0	515.0
39	59	AR98106-8-2	71.0045	58.2120	0	34	416.0	520.5
40	6	AR98021-11-2	70.9404	56.8465	50	36	416.5	518.0
41	10	AR98023-1-2	70.8739	58.7784	0	40	416.5	519.0
42	27	AR98083-1-2	70.2960	59.1200	100	37	414.5	516.5
43	25	AR98082-1-1	70.2732	58.6806	0	37	416.0	516.5
44	57	AR98106-4-1	70.2161	57.2661	90	33	413.0	513.0
45	52	AR98105-3-1	70.1670	60.2451	100	39	411.5	515.0
46	62	AR98109-9-4	69.9334	55.8364	60	40	416.5	519.5
47	43	AR98093-5-1	69.8925	57.2487	100	33	412.5	515.0
48	12	AR98023-4-1	69.7099	54.5599	0	35	416.5	519.0
49	56	AR98106-3-1	69.6764	57.9798	100	37	413.0	515.5
50	58	AR98106-8-1	69.4205	59.4068	0	34	416.0	520.5
51	19	AR98063-3-1	69.2788	55.3315	30	36	418.0	521.0
52	44	AR98093-5-2	69.1618	57.2282	90	34	412.5	514.5
53	21	AR98072-2-1	69.0163	57.3910	0	33	411.0	512.5

Table 2. (Cont) 2005-2006 Advanced Wheat Strains Nursery averaged over Keiser and Stuttgart.

	Obs	entry	Name	Yield	Test Wt.	Lodge	Ht	Head	Maturity
in.	Mo/Day	Mo/Day							
	54	30	AR98083-8-1	68.4090	58.2817	0	35	411.5	515.5
	55	46	AR98093-5-4	68.1877	57.7615	90	34	414.0	515.5
	56	70	AR98172-1-2	68.1792	55.0250	90	38	416.5	518.5
	57	13	AR98023-4-2	68.0410	55.3004	0	37	415.5	517.0
	58	7	AR98021-12-3	67.8578	57.4260	40	39	416.0	517.5
	59	8	AR98022-19-2	67.7682	58.3590	80	43	416.5	518.5
	60	29	AR98083-7-1	67.5473	58.1271	100	38	411.5	513.5
	61	63	AR98127-1-1	67.2139	60.4781	0	36	411.5	515.5
	62	45	AR98093-5-3	67.1300	57.3968	90	33	413.5	516.0
	63	71	AR98172-3-1	67.0705	55.2261	60	36	416.5	518.0
	64	53	AR980105-3-2	66.8095	58.9305	100	38	412.0	515.0
	65	51	AR98098-11-2	66.7878	56.0842	90	33	412.0	514.5
	66	39	AR98088-6-2	66.1268	56.5479	100	34	416.5	517.0
	67	55	AR98106-1-1	65.7623	49.8257	100	32	416.5	516.5
	68	4	AR98011-8-2	65.4735	55.7391	20	41	415.0	516.0
	69	60	AR98109-9-2	65.0345	56.1088	90	40	416.5	519.0
	70	36	AR98088-3-1	64.7782	57.1960	100	32	411.0	512.5
	71	2	AR98003-1-1	62.3191	56.8083	100	38	416.0	517.0
	72	61	AR98109-9-3	62.2411	56.8539	90	35	417.0	519.0
	73	32	AR98083-10-1	61.6754	52.5745	0	32	411.0	514.5
	74	38	AR98088-6-1	60.6913	56.3547	100	35	416.5	516.5
	75	37	AR98088-3-2	60.6489	58.4974	100	32	411.0	512.5
	76	11	AR98023-2-2	57.9645	55.1826	30	37	412.0	516.0

Table 3. 2005-06 Wheat Observation Nursery averaged over Stuttgart and Keiser.

Obs	Entry	Name	Yield	Test Weight	Lodge	Ht	Head	Maturity
			bu/A	lb/bu	%	in.	Mo/Day	Mo/Day
1	25	99015-3-3	85.7817	59.5965	10	41	411.0	513.5
2	175	99110-12-1	84.6739	59.5568	5	36	416.5	517.0
3	32	99016-1-3	84.3965	59.7363	40	40	412.0	514.0
4	196	99129-7-1	84.2157	59.9089	15	39	415.0	517.0
5	29	99016-1-1	83.3639	60.0894	20	39	411.5	514.0
6	187	99122-5-1	82.8794	60.3704	35	33	416.0	518.0
7	33	99016-1-4	82.8370	59.8070	35	41	414.5	516.0
8	30	Pat	82.7747	58.8541	10	40	417.0	519.5
9	26	99015-3-4	82.2391	58.3279	10	35	411.5	513.5
10	31	99016-1-2	81.6319	59.7020	35	41	413.0	514.0
11	177	99110-13-1	81.5988	58.5024	20	38	416.5	517.5
12	152	99097-11-3	81.1661	59.7713	15	39	416.0	518.0
13	174	99110-11-4	81.1146	60.5437	15	38	417.0	519.0
14	20	AR910	80.8962	58.3650	7	38	414.5	515.5
15	178	99112-1-1	80.8601	60.1597	20	42	416.5	515.5
16	176	99110-12-2	80.8493	58.8565	5	39	416.0	515.0
17	50	Pat	80.5812	59.3803	5	40	416.5	518.5
18	208	99138-12-1	80.1332	59.4553	40	34	415.0	514.5
19	40	AR910	79.7441	58.1474	20	39	411.5	514.5
20	173	99110-11-3	79.5332	60.5449	10	36	417.5	519.5
21	24	99015-3-2	79.5230	59.1900	15	38	412.5	513.0
22	156	99100-6-2	79.3463	61.2878	35	38	416.5	516.0
23	80	AR910	78.9588	58.6079	10	39	411.5	513.5
24	70	Pat	78.8983	58.8893	5	38	417.5	519.0
25	52	99027-6-1	78.8589	58.6769	15	37	416.5	519.5
26	190	Pat	78.5610	58.9605	40	40	417.0	519.5
27	200	AR910	78.4804	58.6096	15	38	412.5	515.0
28	68	99033-5-2	78.3864	59.6668	20	38	419.5	520.0
29	151	99097-11-2	78.1175	59.4168	10	39	416.5	518.0
30	141	99097-2-2	77.8507	57.5900	15	38	416.0	519.5
31	28	99015-5-2	77.8476	57.5488	15	38	417.5	518.0
32	53	99027-6-2	77.7982	59.0314	15	39	416.5	519.5
33	106	99081-3-2	77.5708	59.6980	20	40	416.5	519.0
34	180	AR910	77.1056	57.7988	20	39	413.0	515.5
35	230	Pat	77.0184	59.4158	10	40	417.0	519.5
36	76	99039-2-1	76.8997	59.8765	40	39	416.5	515.5
37	186	99122-4-1	76.8613	58.2574	25	36	416.5	519.0
38	168	99110-3-2	76.8134	61.5654	20	35	414.5	515.0
39	150	Pat	76.7466	58.9605	10	39	417.5	519.5
40	280	AR910	76.6747	58.6769	10	39	411.5	515.0
41	23	99015-3-1	76.6338	58.8850	15	40	415.5	513.5
42	73	99033-6-3	76.5977	61.9226	20	40	418.0	516.0
43	292	99270-5-1	76.5842	58.8526	35	39	416.5	518.0
44	27	99015-5-1	76.3741	58.3936	10	34	417.0	518.5
45	236	99174-6-2	76.0266	58.3969	25	37	416.0	517.5
46	55	99027-7-2	75.9643	58.9614	15	38	416.5	519.5
47	71	99033-6-1	75.8834	60.6854	20	40	418.0	517.5
48	72	99033-6-2	75.8455	60.5834	15	39	418.0	516.0
49	22	99015-2-1	75.7931	59.7700	10	36	415.5	513.5
50	234	99174-5-1	75.7790	58.8169	10	36	415.0	518.0
51	197	99129-8-1	75.4417	59.1381	20	39	416.5	519.5
52	60	AR910	75.3888	58.1869	15	39	411.5	515.0
53	207	99138-7-1	75.3803	58.6434	35	34	413.0	514.0

Table 3. (Cont) 2005-06 Wheat Observation Nursery averaged over Stuttgart and Keiser.

Obs	Entry	Name	Yield	Test Weight	Lodge	Ht	Head	Maturity
			bu/A	lb/bu	%	in.	Mo/Day	Mo/Day
54	54	99027-7-1	75.3680	58.8917	15	39	416.5	519.5
55	120	AR910	75.1260	58.1847	5	39	412.0	514.5
56	242	99174-14-1	75.0734	56.4949	10	37	416.5	520.5
57	172	99110-11-2	74.8811	59.9477	25	40	417.5	520.0
58	69	99033-5-3	74.7818	59.5608	15	37	419.5	520.0
59	167	99110-3-1	74.7286	61.2506	20	39	414.5	515.5
60	107	99081-3-3	74.6756	58.3269	15	41	416.5	519.0
61	243	99174-16-1	74.4542	59.9446	10	40	417.5	521.0
62	220	AR910	74.4340	57.0942	15	39	412.5	515.0
63	237	99174-8-1	74.2281	57.0576	15	35	411.0	516.5
64	34	99016-5-1	74.2038	58.4307	10	46	417.0	520.0
65	56	99027-7-3	74.1656	57.9397	15	40	416.5	519.5
66	51	99027-5-1	73.7991	58.1157	10	38	416.5	519.5
67	290	Pat	73.7416	59.2396	15	38	417.0	518.5
68	39	99023-7-1	73.6688	58.5386	10	41	417.5	519.0
69	229	99172-2-1	73.5490	55.4707	25	38	416.5	519.5
70	149	99097-11-1	73.5205	59.2787	15	37	416.5	515.5
71	105	99081-3-1	73.1498	60.2289	25	39	416.5	519.5
72	4	99009-2-1	72.9623	55.8350	25	40	417.0	517.5
73	188	99127-2-1	72.9054	59.3810	30	41	416.0	518.5
74	203	99138-3-1	72.8914	59.2055	25	34	415.0	515.0
75	140	AR910	72.8273	58.4317	5	39	412.5	514.5
76	246	99174-21-2	72.8044	58.9617	20	36	416.5	517.0
77	293	99270-5-2	72.7457	58.8914	15	36	416.0	517.5
78	205	99138-6-1	72.4710	58.4303	40	35	416.0	515.0
79	57	99027-7-4	72.4517	58.1512	15	38	416.5	519.5
80	77	99044-3-1	72.4054	58.2926	25	39	416.5	519.0
81	210	Pat	72.3861	58.7498	15	38	417.0	518.5
82	206	99138-6-2	72.3512	59.4164	45	36	416.0	515.0
83	181	99114-2-1	72.2946	59.5230	25	41	416.0	518.5
84	279	99238-6-1	72.2213	60.3701	20	37	411.5	513.0
85	62	99030-8-1	72.0400	58.9588	30	39	416.5	519.0
86	63	99030-8-2	72.0290	59.5565	35	39	417.0	518.5
87	202	99136-13-2	71.9850	59.1018	20	38	416.0	517.0
88	247	99174-21-3	71.9131	58.7134	25	35	416.5	518.0
89	249	99174-25-1	71.7446	60.4732	20	38	418.0	518.5
90	270	Pat	71.7233	59.0286	5	40	417.0	519.0
91	154	99099-5-1	71.6862	59.3101	25	43	416.5	517.5
92	64	99030-8-3	71.6457	59.3493	20	37	417.0	519.0
93	43	99024-7-4	71.6409	58.5029	5	40	417.0	518.0
94	67	99033-5-1	71.5338	60.0537	25	38	419.5	519.5
95	36	99020-3-1	71.3779	60.9321	45	43	416.0	517.0
96	278	99238-4-1	71.3068	58.9610	20	35	412.5	514.5
97	171	99110-11-1	71.2105	60.0172	15	40	417.5	514.5
98	170	Pat	71.1867	58.9246	15	39	417.5	515.0
99	244	99174-19-1	71.0655	59.1346	15	40	417.5	520.5
100	49	99026-5-2	70.9825	58.2926	10	39	416.5	519.5
101	235	99174-6-1	70.8176	58.2526	25	35	416.0	517.0
102	212	99148-1-2	70.6833	58.6403	20	42	416.0	517.0
103	251	99180-5-1	70.5107	60.5118	10	40	416.0	520.0
104	192	99127-9-1	70.4887	59.5225	35	42	414.0	513.0
105	252	99185-2-1	70.4598	57.8697	20	35	416.0	519.5
106	133	99095-10-2	70.4333	60.7199	10	43	416.0	517.5

Table 3. (cont) 2005-06 Wheat Observation Nursery Averaged over Stuttgart and Keiser.

Obs	Entry	Name	Yield	Test Weight	Lodge	Ht	Head	Maturity
			bu/A	lb/bu	%	in.	Mo/Day	Mo/Day
107	139	99097-2-1	70.3620	59.6318	25	38	416.5	519.5
108	209	99138-12-2	70.3554	59.4182	35	36	414.5	513.5
109	48	99026-5-1	70.1846	59.2765	20	37	414.0	516.0
110	44	99023-7-5	70.1839	58.1469	5	40	417.0	518.5
111	255	99187-8-1	70.1806	59.6668	20	40	413.0	516.5
112	5	99009-3-1	70.1628	58.5300	25	40	413.0	519.0
113	74	99037-3-1	70.0067	58.2919	50	43	417.0	519.5
114	245	99174-21-1	69.9850	58.9588	15	39	416.5	520.5
115	6	99009-3-2	69.8878	59.2100	25	41	416.5	519.5
116	126	99093-1-1	69.7022	59.6632	5	42	417.5	520.0
117	130	Pat	69.3926	59.2410	10	39	417.0	520.5
118	250	Pat	69.3763	59.3455	10	40	417.0	519.5
119	41	99023-7-2	69.3206	58.4324	5	39	417.5	519.0
120	19	99012-1-3	69.2686	59.9500	5	38	418.0	518.5
121	136	99095-18-1	69.2644	60.4384	35	43	417.0	518.0
122	35	99016-5-2	69.1400	56.1100	35	46	416.5	520.5
123	198	99129-10-1	69.1127	60.3339	35	39	417.0	519.5
124	9	99010-1-1	69.0902	57.0750	15	40	414.5	513.5
125	147	99097-5-3	69.0120	58.2884	20	37	416.5	518.0
126	283	99241-1-1	68.9442	57.6893	25	40	416.5	521.5
127	100	AR910	68.9376	58.7493	15	39	411.5	513.5
128	110	Pat	68.9234	59.2055	7	38	417.5	519.5
129	61	99030-5-2	68.7887	56.0326	25	36	416.0	519.0
130	268	99230-6-2	68.7309	55.6447	15	38	416.0	513.0
131	42	99023-7-3	68.7191	58.2179	5	41	417.0	518.0
132	66	99032-2-1	68.4547	60.6504	25	39	417.0	517.5
133	191	99127-7-2	68.3782	60.1597	60	38	414.0	512.5
134	267	99230-6-1	68.3467	54.6615	20	35	416.0	515.0
135	240	AR910	68.3226	57.7992	15	38	412.0	516.0
136	134	99095-15-1	68.2420	59.9125	15	44	416.0	514.0
137	291	99270-3-1	68.1517	58.1850	35	36	416.5	519.0
138	189	99127-7-1	68.1255	60.0897	25	39	414.0	514.5
139	104	99081-1-1	68.1020	58.5724	20	40	417.5	520.0
140	253	99187-5-1	68.0111	59.8758	15	34	416.0	520.0
141	146	99097-5-2	67.9774	57.5522	25	40	416.5	518.5
142	199	99129-12-0	67.7921	60.2994	30	39	417.0	519.5
143	37	99022-3-1	67.7840	59.1372	60	40	416.0	515.0
144	193	99127-10-1	67.6690	58.4336	30	39	415.0	512.5
145	117	99086-4-2	67.5150	59.4522	60	46	416.5	515.5
146	204	99138-5-1	67.4891	59.6663	35	35	415.5	515.0
147	179	99112-2-1	67.4527	58.6793	20	39	416.0	516.0
148	219	99163-3-1	67.4456	60.1239	20	44	416.0	516.5
149	58	99027-8-1	67.4088	59.8072	10	40	416.0	518.5
150	182	99114-2-2	67.3721	59.4192	20	41	416.0	519.0
151	273	99232-3-1	67.2271	60.3344	15	37	415.5	517.5
152	218	99161-4-1	67.1620	59.9125	35	33	416.5	517.0
153	217	99161-1-1	67.1380	60.3330	20	34	416.0	515.0
154	160	AR910	67.1221	58.5376	15	38	411.5	513.5
155	113	99086-2-1	67.1209	60.0520	30	42	416.0	517.5
156	277	99238-3-1	67.0333	61.0373	30	32	417.0	518.0
157	215	99154-2-1	67.0153	60.1232	10	37	416.5	520.0
158	109	99086-1-1	66.9554	59.8420	15	42	416.5	516.0
159	116	99086-4-1	66.9418	59.2760	50	39	416.5	515.0

Table 3. (cont) 2005-06 Wheat Observation Nursery Averaged over Stuttgart and Keiser.

Obs	Entry	Name	Yield	Test Weight	Lodge	Ht	Head	Maturity
			bu/A	lb/bu	%	in.	Mo/Day	Mo/Day
160	294	99270-6-2	66.9183	58.7497	25	36	415.5	515.5
161	254	99187-7-1	66.8963	60.5092	15	37	412.0	517.5
162	90	Pat	66.8796	58.9591	15	40	417.0	519.0
163	145	99097-5-1	66.7733	57.6538	25	37	416.5	518.5
164	263	99206-9-1	66.7014	58.6793	30	37	414.5	518.0
165	233	99174-4-2	66.6839	58.1147	5	36	416.5	518.5
166	137	99095-18-2	66.5991	59.7682	35	43	416.5	518.0
167	7	99009-3-3	66.5660	59.1600	30	40	413.5	519.0
168	132	99095-10-1	66.5178	60.4037	10	41	416.0	516.0
169	79	99045-1-2	66.3720	58.0072	0	36	417.0	520.0
170	262	99196-3-1	66.2452	60.7237	10	31	412.5	517.5
171	46	99026-2-1	66.1644	59.2057	40	45	416.0	517.5
172	166	99109-5-1	66.1568	60.7573	45	34	414.5	515.0
173	114	99086-2-2	66.0705	60.1925	30	43	415.5	517.5
174	248	99174-22-1	66.0545	59.5938	20	39	417.5	517.5
175	216	99154-2-2	66.0253	60.2282	10	39	415.5	519.5
176	165	99109-4-1	65.8062	56.5992	30	33	414.0	514.0
177	201	99136-13-1	65.6898	58.9255	25	37	416.0	517.0
178	115	98086-2-3	65.6616	58.6091	30	42	418.0	515.5
179	213	99148-1-3	65.6133	58.8522	25	40	416.0	518.5
180	264	99216-1-1	65.2667	57.3740	5	35	416.0	520.5
181	231	99174-1-1	65.0603	58.7115	30	33	413.5	513.5
182	232	99174-4-1	64.9800	56.7047	5	35	417.0	518.5
183	131	99095-7-1	64.9430	60.2994	10	39	416.0	516.0
184	65	99030-9-1	64.8518	60.1230	20	40	417.0	519.0
185	81	99045-1-3	64.8443	57.6536	5	34	417.5	521.0
186	148	99097-5-4	64.8181	57.9403	15	38	416.5	517.5
187	284	99241-2-1	64.8061	56.4580	10	37	417.0	522.0
188	195	99129-1-2	64.7748	60.2261	15	40	416.0	518.5
189	89	99050-1-1	64.7321	60.4032	10	40	416.0	518.0
190	91	99051-1-1	64.7239	56.8100	20	43	417.0	517.5
191	138	99095-21-1	64.3409	59.8042	30	38	413.0	514.5
192	111	99086-1-2	64.2976	59.9113	30	45	416.5	517.0
193	269	99230-10-1	64.0571	56.9511	15	39	412.5	512.5
194	223	99163-8-1	63.8532	61.1449	55	43	415.5	518.0
195	266	99230-4-2	63.7605	57.9374	25	34	415.5	517.5
196	265	99230-4-1	63.7524	58.1469	20	35	415.5	517.0
197	225	99166-1-1	63.7428	62.2035	20	38	413.5	516.5
198	47	99026-3-1	63.6504	59.2064	40	45	416.0	516.5
199	261	99192-7-1	63.4728	58.3617	0	38	416.5	520.5
200	103	99078-11-2	63.3871	59.3143	15	36	416.0	514.5
201	224	99164-7-1	63.3335	58.8169	70	39	416.0	517.0
202	96	99069-2-3	63.2706	61.9211	10	42	416.5	516.5
203	128	99093-6-2	63.2613	59.1003	7	39	417.5	520.0
204	10	Pat	63.0904	59.1750	5	39	417.0	520.0
205	112	99086-1-3	62.9908	59.8405	35	44	417.5	517.5
206	260	AR910	62.9593	57.7971	15	39	411.5	515.0
207	226	99166-1-2	62.8876	62.1678	15	38	415.0	517.0
208	2	99001-1-2	62.8864	61.3100	15	37	413.0	518.5
209	3	99001-2-1	62.8659	60.4750	15	44	415.0	516.0
210	1	99001-1-1	62.8497	61.0900	5	41	413.5	518.0
211	127	99093-6-1	62.7035	59.3472	7	38	417.5	520.0
212	285	99241-2-2	62.5241	58.9222	0	36	417.5	522.5

Table 3. (Cont.) 2005-06 Wheat Observation Nursery Averaged over Stuttgart and Keiser.

Obs	Entry	Name	Yield	Test Weight	Lodge	Ht	Head	Maturity
			bu/A	lb/bu	%	in.	Mo/Day	Mo/Day
213	155	99100-6-1	61.8369	59.2792	35	39	417.5	518.5
214	157	99106-3-1	61.8068	60.5476	50	34	412.0	515.5
215	276	99238-2-1	61.7439	60.5084	15	40	417.0	519.0
216	125	99087-7-3	61.6176	58.8542	35	39	417.5	520.5
217	185	99118-5-2	61.6025	58.8564	0	36	416.5	520.0
218	97	99077-6-1	61.4863	57.7251	15	36	416.0	517.5
219	184	99118-5-1	61.4529	59.3118	5	37	416.5	520.0
220	102	99078-11-1	61.4177	59.2396	15	35	416.0	514.5
221	12	99010-4-1	61.3777	59.9700	0	36	416.5	513.0
222	108	99085-1-1	61.2334	59.1001	25	43	416.5	517.5
223	129	99093-6-3	60.9917	59.0318	10	38	417.5	520.0
224	286	99241-3-1	60.8671	59.6318	25	41	418.0	518.5
225	16	99011-6-1	60.8262	61.5050	20	40	413.5	514.5
226	135	99095-16-1	60.7684	60.8282	10	42	416.0	516.0
227	222	99163-5-1	60.7332	60.4777	55	45	416.0	517.0
228	239	99174-9-2	60.5007	56.5276	20	38	414.5	517.0
229	274	99236-1-1	60.2536	60.1934	40	42	415.5	517.5
230	194	99129-1-1	60.1796	59.4184	15	39	416.0	518.5
231	45	99024-3-1	59.9539	60.5794	20	38	417.0	517.0
232	87	99047-2-1	59.9326	60.1582	5	38	418.5	521.0
233	101	99078-9-2	59.9229	61.7463	5	46	416.0	515.0
234	21	99012-7-1	59.9019	57.2500	15	34	416.5	516.0
235	272	99232-2-2	59.8982	59.2436	0	41	415.0	519.0
236	163	99108-9-1	59.8982	59.5963	25	36	412.0	515.5
237	8	99009-4-1	59.8408	58.8550	25	41	413.5	519.5
238	11	99010-1-2	59.7349	55.6950	10	37	416.5	513.5
239	214	99148-2-1	59.6506	56.0706	30	41	416.0	518.0
240	227	99168-4-1	59.1682	60.7556	25	42	413.0	513.5
241	38	99022-4-1	59.1517	58.5703	70	45	417.0	520.5
242	124	99087-7-2	59.0793	58.7815	30	40	417.5	520.5
243	162	99108-4-2	59.0015	59.0313	5	36	416.5	521.0
244	75	99037-6-1	58.7567	59.4872	30	41	417.5	517.5
245	86	99047-1-2	58.5178	59.4163	5	37	419.0	521.5
246	256	99192-1-1	58.2876	59.3108	20	38	412.0	516.5
247	238	99174-9-1	58.1413	58.4329	10	35	416.0	518.5
248	211	99148-1-1	57.9539	59.2041	5	38	421.5	523.5
249	228	99168-5-1	57.8844	58.0447	5	44	415.5	521.0
250	94	99069-2-1	57.8678	62.0238	20	43	416.5	517.0
251	92	99059-2-1	57.5739	62.5545	25	48	417.5	514.5
252	123	99087-7-1	57.4280	58.7825	25	39	417.5	521.0
253	289	99270-1-1	57.2760	55.6447	35	37	417.0	518.5
254	95	99069-2-2	56.9408	61.8521	15	40	416.0	517.0
255	271	99232-2-1	56.6414	59.7360	5	45	416.0	512.5
256	98	99078-6-1	56.0508	60.4025	20	45	416.0	518.0
257	288	99242-4-2	55.8182	58.4291	5	36	417.5	522.5
258	164	99108-9-2	55.5769	58.7853	25	37	412.0	515.0
259	275	99236-4-1	55.3049	59.4177	45	36	415.5	514.5
260	257	99192-1-2	55.1288	58.2562	20	37	412.0	516.5
261	142	99097-3-1	54.9700	57.1281	7	35	419.0	520.5
262	93	99059-4-1	54.9649	62.8350	25	44	416.0	514.0
263	85	99047-1-1	54.7675	59.4863	5	37	417.0	521.5
264	282	99240-2-1	54.4654	57.0578	20	39	417.5	520.0
265	99	99078-9-1	54.2830	61.8126	20	44	416.0	515.0

Table 3. (Cont) 2005-06 Wheat Observation Nursery Averaged over Stuttgart and Keiser.

Obs	Entry	Name	Yield	Test Weight	Lodge	Ht	Head	Maturity
			bu/A	lb/bu	%	in.	Mo/Day	Mo/Day
266	17	99012-1-1	53.9888	58.6300	5	37	418.0	520.0
267	159	99108-3-1	53.9015	59.3839	60	39	416.0	514.5
268	59	99030-5-1	53.7420	56.0699	0	33	419.5	521.0
269	287	99242-4-1	53.6241	58.1126	5	37	417.5	522.5
270	161	99108-4-1	53.6076	57.3716	0	34	417.0	521.0
271	241	99174-11-1	53.5492	58.7149	0	38	416.0	523.5
272	13	99011-3-1	53.4213	57.2950	5	37	416.5	520.0
273	121	99086-5-3	53.0951	58.9224	30	44	416.0	515.0
274	14	99011-5-1	53.0263	55.7550	20	35	416.5	516.5
275	18	99012-1-2	52.6312	59.7000	0	37	418.0	518.5
276	144	99097-3-3	52.5126	57.3405	20	36	419.0	520.5
277	15	99011-5-2	51.8789	55.5700	25	35	415.5	515.5
278	281	99238-9-1	51.5985	57.7962	20	30	412.5	515.0
279	88	99047-2-2	51.3000	56.8100	5	36	417.0	520.5
280	118	99086-5-1	50.3800	56.8800	75	41	417.0	517.5
281	258	99192-3-1	50.2857	58.1850	25	37	413.0	514.5
282	143	99097-3-2	49.8269	57.0934	20	36	418.5	520.5
283	82	99045-3-1	48.3194	57.3757	7	38	417.5	522.0
284	78	99045-1-1	48.2141	57.2307	0	38	420.0	523.5
285	84	99045-6-1	48.0362	56.7062	10	38	417.0	520.0
286	221	99163-4-1	45.8392	59.4867	40	46	415.0	512.0
287	83	99045-3-2	45.4153	58.2217	10	41	417.5	522.0
288	122	99086-5-4	45.2211	58.5376	20	38	416.0	515.0
289	158	99106-7-1	43.6477	58.9610	60	38	416.5	520.0
290	169	99110-5-1	43.3480	54.3059	30	32	416.0	514.0
291	183	99115-2-1	42.1758	51.1000	60	38	416.5	519.0
292	153	99097-13-1	41.5746	55.6830	10	38	417.0	521.5
293	119	99086-5-2	41.0300	57.0900	70	40	416.5	518.0
294	259	99192-5-1	33.5072	54.8002	30	36	412.5	511.0

Table 4. 2005-2006 Fusarium Head Blight Nursery averaged over Marianna and Stuttgart.

Obs	Entry	Name	Yield	Test Wt.	Lodge	Ht	Head	Maturity
			bu/A	lb/bu	%	in.	Mo/Day	Mo/Day
1	9	AR96077-7-2	83.5605	55.1477	20.0000	31.5000	409.25	515.500
2	2	AR97124-4-2	81.9314	56.5487	44.1667	39.2500	412.25	518.500
3	20	BESS	80.4231	56.7826	41.6667	37.5000	412.25	517.750
4	19	PAT	80.2322	57.2804	0.0000	38.7500	413.50	518.750
5	18	AR850-1-1	78.9436	57.1391	2.8333	39.5000	414.00	518.250
6	14	AR97048-8-1	75.9582	57.9563	41.6667	38.2500	410.75	519.750
7	3	AR97124-4-1	74.5506	57.1684	43.3333	37.7500	412.00	518.750
8	21	TRUMAN	70.3238	56.0294	1.1667	35.0000	418.75	520.750
9	1	AR97124-4-3	70.3232	55.7791	39.1667	39.2500	412.00	519.000
10	10	AR97002-2-1	68.9673	53.8790	70.0000	34.2500	409.00	518.500
11	11	AR97002-10-2	68.3192	53.8973	39.1667	34.2500	413.75	519.000
12	22	ERNIE	67.1574	56.3868	71.6667	35.2500	408.00	513.250
13	17	AR98127-1-1	66.8805	58.7708	21.1667	38.2500	407.00	514.250
14	15	AR93035-4-1	66.5284	55.0301	12.0000	36.5000	412.50	519.000
15	16	AR97007-4-1	64.9000	55.4223	50.0000	37.0000	409.25	517.000
16	8	AR97007-12-1	64.0037	52.8905	28.3333	36.7500	410.75	517.750
17	12	AR97007-7-1	63.9361	53.4830	41.6667	39.2500	410.00	519.500
18	5	AR97048-9-1	63.3358	52.9208	38.3333	38.7500	409.75	519.500
19	13	AR97048-7-1	58.4414	54.2256	48.3333	38.0000	412.00	520.000
20	4	AR97048-7-2	58.1709	53.6953	49.1667	37.0000	412.25	520.500
21	23	AR857-1-2	58.0130	55.9671	20.3333	40.0000	408.75	515.500
22	7	AR97048-4-1	56.8779	54.5409	79.1667	40.0000	410.75	519.750
23	6	AR97048-1-1	53.9462	54.5016	62.5000	39.7500	409.50	516.750
24	24	AR8587-1-1	51.8056	54.7667	23.3333	36.0000	416.00	513.000
25	24	AR957-1-1	34.9925	54.6251	15.0000	37.6667	408.00	519.667

Table 6. List of crosses made in the greenhouse during the winter of 2006.

06001	AR01097/AR01085	06044	AR98084-4-1/VAFE24-5-11
06002	AR01097/COKER 9553	06045	BESS/AR97124-4-1
06003	AR01097/UGA971127-14-6-6	06046	BESS/PAT
06004	AR01135/TERRAL TV8558	06047	CAYUGA/BESS
06005	AR02066/AR839-10-1-1	06048	CAYUGA/COKER 9553
06006	AR02066/AR97002-2-1	06049	COKER 9553/AR930035-4-1
06007	AR02066/TERRAL TV 8558	06050	COKER 9553/AR98084-4-1
06008	AR02066/VA00W-526	06051	COKER 9553/VA00W-526
06009	AR02136/AR930035-4-1	06052	COKER 9663/AR930035-4-1
06010	AR02136/LA95181BUB-0-1	06053	COKER 9663/PAT
06011	AR02136/P9613413-2-2	06054	COKER 9663/UGA 91127-14-6-6
06012	AR02136/UGA951216-2E26	06055	LA95181BUB40-1/AR01097
06013	AR02136/VA00W-526	06056	LA95181BUB40-1/AR839-10-1-1
06014	AR02136/VA01W-476	06057	LA95181BUB40-1/P9613413-2-2
06015	AR800-1-3-1/AR02066	06058	P961341A3-1-2/AR96052-4-2
06016	AR800-1-3-1/BESS	06059	P961341A3-1-2/AR96052-4-2
06017	AR800-1-3-1/COKER 9663		
06018	AR800-1-3-1/COKER 9663		
06019	AR800-1-3-1/COKER 9663		
06020	AR800-1-3-1/UC66049		
06021	AR800-1-3-1/VA00W-526		
06022	AR800-1-3-1/VA00W-526		
06023	AR800-1-3-1/VA00W-526		
06024	AR800-1-3-1/VA01W-476		
06025	AR910-9-1/AR930035-4-1		
06026	AR910-9-1/BESS		
06027	AR96052-4-2/AR01135		
06028	AR96052-4-2/P961341A3-1-2		
06029	AR96052-4-2/P98154A1-10-4-5-3		
06030	AR96052-4-2/P98154A1-10-4-5-3		
06031	AR96077-7-2/AR01135		
06032	AR96077-7-2/AR01135		
06033	AR96077-7-2/AR930035-4-1		
06034	AR96077-7-2/AR97002-2-1		
06035	AR96077-7-2/AR98084-4-1		
06036	AR96077-7-2/P961341A3-1-2		
06037	AR96077-7-2/VA00W526		
06038	AR97124-4-1/AR839-10-1-1		
06039	AR97124-4-1/AR910-9-1		
06040	AR97124-4-1/AR930035-4-1		
06041	AR97124-4-1/AR96077-7-2		
06042	AR97124-4-1/PAT		
06043	AR97124-4-1/UC66049		

06060 P961341A3-1-2/AR96052-4-2
06061 P961341A3-1-2/VA01W-476
06062 P981542A1-10-4-5-3/AR96077-7-2
06063 P981542A1-10-4-5-3/COKER 9663
06064 P981542A1-10-4-5-3/VAFE24-5-11
06065 PAT/BESS
06066 PAT/UGA971127-14-6-6
06067 PIONEER 25W33/LA95181BUB-40-1
06068 PIONEER 25W60/AR930035-4-1
06069 PIONEER 25W60/AR96077-7-2
06070 PIONEER 25W60/COKER 9663
06071 TERRAL TV 8558/AR839-10-1-1
06072 TERRAL TV8558/VAN98W-342
06073 UC 66049/PAT
06074 UC66049/VA00W-526
06075 UGA951216-2E26/AR02066
06076 UGA971127-14-6-6/AR02066
06077 UGA971127-14-6-6/AR02070
06078 UGA971127-14-6-6/AR910-9-1
06079 UGA971127-14-6-6/AR97002-2-1
06080 UGA971127-14-6-6/BESS
06081 VA00W-526/AR800-1-3-1
06082 VA00W-526/AR910-9-1
06083 VA00W526/AR96077-7-2
06084 VA00W-526/PIONEER 25W33
06085 VAFE24-4-6/AR01135
06086 VAFE245-11/AR97002-2-1
06087 VAFE24-5-11/AR97002-2-1
06088 VAFE24-5-11/P961341A3-1-2