



## Mississippi Corn Promotion Board 2014 Progress Report

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Project Title: Standardization of Mississippi Corn Hybrid Trials

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Department: Research Support

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### Project Summary (Issue/Response)

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The 2014 Mississippi Corn for Grain Hybrid trials consisted of a total of 94 entries in 2014. These hybrids were supplied by sixteen participating companies or groups. These hybrids were grown in both irrigated and non-irrigated environments at multiple locations throughout the state. Each participating company was given the opportunity to submit their hybrid in either the irrigated test, non-irrigated test or both. During the 2014 season, the irrigated tests consisted of 84 of the 94 total hybrids. While the non-irrigated locations were made up of 77 hybrids from the total 94 entered in the Mississippi State Corn Hybrid OVT.

The 2014 growing season started off wet and planting was delayed at some locations due to these wet conditions. Conditions at the time of planting were ideal at the earlier planted locations, but heavy rainfall and cooler temperatures were experienced during the month of April. The heavy rainfall resulted in temporary flooding soil saturation to the point that two locations had to be abandoned, due to poor plant stands, causing substantial variability within the tests. The remainder of the growing season was very favorable for corn production, due to the milder temperatures and timely rainfall throughout the season. Harvest was completed without any delays due to weather or equipment and good yields were observed in 2014, even at some of the non-irrigated locations that were planted later than the target date, due to frequent spring rains.

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### Project Results/Outcomes

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The 2014 Corn for Grain Hybrid Trials were divided into irrigated and a non-irrigated tests. The irrigated corn locations consisted of 84 corn hybrid entries that were evaluated for their yield potential within five different environments throughout the state. The mean yields for these five locations ranged between 201.9 to 247.5 bushels per acre. The mean yield across all five locations for the irrigated trials was 231.4 bushels per acre. The irrigated corn hybrid trials have traditionally all been located in the delta region of the state; however, one of the irrigated locations was positioned in the Black Belt region of the state, near Macon, MS.

The non-irrigated locations consisted of 77 corn hybrid entries that were evaluated for their yield potential within four different environments throughout the Hill section of the state; however, yields were only reported from two of the four locations due to poor plant stands as a result of flooded conditions, following planting. The mean yields for the two non-irrigated locations ranged between 170.4 to 186.5 bushels per acre. The mean yield for both of these non-irrigated locations was 178.5 bushels per acre.

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## Project Impacts/Benefits

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The overall goal of this project was to evaluate multiple corn hybrids across multiple environments, both irrigated and non-irrigated to determine which ones have the greatest yield potential within the state of Mississippi. The benefit of these hybrid trials is to allow the producer to be able to view unbiased yield data of these various corn hybrids, supplied by multiple seed company participants. The results of these yield trials can have a tremendous impact on a producer's decision of which hybrids are best suited for his area of the state or particular soil type. By having tests grown under both irrigated and non-irrigated conditions, this data can help one to make management decisions about which hybrids might have the best potential to perform well when soil moisture is limited.

## Project Deliverables

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The Corn Hybrid for Grain publication is available annually in a printed copy or it may be downloaded from the MSU Variety testing website at [mafes.msstate.edu/variety-trials](http://mafes.msstate.edu/variety-trials).



2014 corn hybrid yield summary for dryland locations.				
Brand	Hybrid number <sup>1</sup>	Aberdeen	Brooksville	Overall Average
		bu/A	bu/A	bu/A
AgriGold	A6501 VT2 RIB	178.6	185.6	182.1
AgriGold	A6574 STX	170.4	172.8	171.6
AgriGold	A6719 VT2P PRO	168.8	175.2	172.0
AgriGold	A6499 VT2 RIB	162.2	177.5	169.9
AgriGold	A6517 VT3 PRIB	160.8	203.1	182.0
AgriGold	A6559 VT2 RIB	152.6	200.1	176.3
AgriGold	A6573 VT2 RIB	143.3	178.6	161.0
AgriGold	A6659 VT2 RIB	181.1	172.4	176.8
AgriGold	A6687 VT2 PRO	163.8	193.0	178.4
Armor	1330 PRO2	184.1	205.1	194.6
Armor	1414 PRO2	138.7	189.5	164.1
Armor	1555 PRO2	195.9	113.7	154.8
Armor	1616 PRO3	206.8	204.2	205.5
Armor	1550 PRO2	175.6	184.8	180.2
Armor	1880 PRO2	158.6	187.3	172.9
Armor	<i>AXC 3117</i>	186.3	195.1	190.7
Armor	<i>AXC 3117A</i>	159.1	193.5	176.3
Armor	<i>AXC 4119 PRO2</i>	205.2	183.5	194.3
Armor	<i>AXT 3111</i>	178.3	183.2	180.8
Armor	<i>AXT 4116 PRO3</i>	195.4	197.5	196.5
CATALYST	7672	183.5	183.2	183.3
Croplan Genetics	6640VT3 PRO/RIB	182.4	197.4	189.9
Croplan Genetics	6926VT3PRO/RIB	157.6	163.2	160.4
DEKALB	DKC 63-33	166.7	198.6	182.6
DEKALB	DKC 66-97	176.4	190.4	183.4
DEKALB	DKC 67-58	177.7	176.7	177.2
DEKALB	DKC 68-92	192.8	192.6	192.7
DEKALB	DKC 62-08	164.3	200.2	182.2
DEKALB	DKC 64-69	155.0	200.2	177.6
DEKALB	DKC 65-19	153.6	206.8	180.2
DEKALB	DKC 66-40	181.7	193.6	187.6
DEKALB	DKC 66-87	164.7	196.2	180.5
DEKALB	DKC 69-29	158.6	195.0	176.8
Delta Grow	DG 2688	182.3	155.6	169.0
Delta Grow	DG 2863	178.0	206.0	192.0
Delta Grow	DG 2888	171.4	190.3	180.8
Delta Grow	DG 3660	193.9	206.1	200.0
Dyna-Gro	D53VB55	180.9	199.2	190.0
Dyna-Gro	D53VC13	150.5	189.6	170.1
Dyna-Gro	D55VP77	170.0	129.3	149.7
Dyna-Gro	D56VC46	150.0	191.2	170.6
Dyna-Gro	D57VP51	188.9	196.5	192.7
Dyna-Gro	D57VP75	166.5	193.1	179.8
Golden Acres	G6641	176.9	213.8	195.4
Golden Acres	G4598	183.6	202.9	193.2
Golden Acres	G5621	179.9	128.5	154.2
Golden Acres	GA 27V01	175.1	184.0	179.6
MSU	<i>Girth XXX</i>	161.6	153.0	157.3
Mycogen	2C786	181.1	196.4	188.8
Mycogen	2C797	167.3	200.7	184.0
Mycogen	2H877	163.0	182.4	172.7
Mycogen	2V714	157.2	190.0	173.6
Mycogen	2Y816	165.3	193.5	179.4
Mycogen	2Y744	172.0	190.0	181.0
Mycogen	<i>X13751 S3</i>	163.5	185.5	174.5
Mycogen	<i>X13809 VH</i>	128.7	159.4	144.0
Mycogen	2D848	143.6	189.4	166.5
NK Brand	N78S-3111	173.7	201.6	187.6
NK Brand	X75976	185.3	184.4	184.9
Progeny	PGY 4114 VT2P	163.0	182.0	172.5
Progeny	PGY 4117 VT2P	172.8	181.6	177.2
Progeny	<i>PGY EXP 145S</i>	165.2	195.8	180.5
Progeny	PGY 5115 VT2	181.4	187.6	184.5
REV®	REV® 17HR73™	181.1	198.0	189.5
REV®	REV® 24BHR93™	180.2	194.3	187.2
REV®	REV® 26BHR50™	154.3	226.0	190.2
REV®	REV® 27HR83™	165.9	192.4	179.2
REV®	REV® 28HR20™	185.5	166.7	176.1
REV®	REV® 28R10™	164.5	160.5	162.5
REV®	REV® 18BHR84™	176.2	188.7	182.4
REV®	REV® 25BHR44™	132.7	174.7	153.7
REV®	REV® 22BHR84™	180.4	205.2	192.8
REV®	REV®23BHR55™	163.8	203.4	183.6
Steyer	11103 VT2 PRO RIBC	189.7	177.8	183.7
Steyer	11406 GENSS RIBC	155.0	198.1	176.5
Steyer	11407 VT2PRO RIBC	170.3	135.2	152.8
Steyer	11604 VT2 PRO RIBC	150.3	194.1	172.2
Mean		170.4	186.5	178.5
LSD		19.9	20.5	
Error df		228	228	
CV		10	9.5	
R sq		55.2	62.5	

<sup>1</sup>Hybrid in italics denotes an experimental entry

2014 corn hybrid yield summary for irrigated locations							
Brand	Hybrid number <sup>1</sup>	Macon	Minter City	Rolling Fork	Stoneville (clay)	Stoneville (loam)	Overall Average
		bu/A	bu/A	bu/A	bu/A	bu/A	bu/A
AgriGold	A 6501 VT2 RIB	237.9	231.5	234.5	187.4	221.9	222.6
AgriGold	A 6574 STX	220.2	246.3	214.9	207.4	241.2	226.0
AgriGold	A 6719 VT2 PRO	240.4	245.5	244.4	222.4	243.0	239.2
AgriGold	A6499 VT2 RIB	233.9	241.3	234.9	179.3	233.9	224.7
AgriGold	A6517 VT3P RIB	254.9	198.7	225.2	215.0	251.6	229.1
AgriGold	A6559 VT2 RIB	245.7	230.4	225.9	186.6	242.9	226.3
AgriGold	A6573 VT2 RIB	243.0	207.8	226.1	196.7	223.5	219.4
AgriGold	A6659 VT2 RIB	214.0	231.6	219.4	194.4	235.9	219.1
AgriGold	A6687VT2 PRO	244.1	255.0	249.1	204.5	247.5	240.0
Armor	1330 PRO2	254.0	229.8	237.2	181.9	245.5	229.7
Armor	1414 PRO2	246.8	261.7	251.8	201.4	243.5	241.0
Armor	1555 PRO2	201.7	220.3	218.7	202.0	262.6	221.1
Armor	1616 PRO3	226.5	233.4	228.8	194.5	237.7	224.2
Armor	1550 PRO2	222.2	217.2	233.6	174.3	239.8	217.4
Armor	1880 PRO2	231.0	242.2	250.0	204.3	242.8	234.1
Armor	<i>AXC 3117</i>	235.7	231.9	233.2	193.6	236.3	226.1
Armor	<i>AXC 3117A</i>	263.4	262.7	237.2	219.1	259.9	248.5
Armor	<i>AXC 4119 PRO2</i>	232.2	237.2	242.6	219.2	224.2	231.1
Armor	<i>AXT 3111</i>	223.7	231.5	230.1	201.5	242.8	225.9
Armor	<i>AXT 4116 PRO3</i>	236.9	230.8	249.4	188.0	229.0	226.8
Augusta	5566 GTCBLL	237.5	218.7	221.6	198.9	228.9	221.1
Augusta	7767 VT3PRO	255.9	235.4	228.4	212.7	256.8	237.8
Augusta	7768 GT3110	261.8	269.4	277.2	233.6	272.6	262.9
Augusta	8064 VT2 PRO RIB	228.6	204.2	232.7	171.5	236.4	214.7
Augusta	8868 VT3 PRO	242.7	248.5	250.4	220.3	274.2	247.2
B-H Genetics	BH 8660 VTTP	245.0	243.1	245.6	207.4	246.1	237.5
B-H Genetics	BH 8700 SS	206.7	234.7	240.1	211.1	255.8	229.7
B-H Genetics	BH 8735 VT2P	233.1	258.0	245.9	230.2	276.1	248.7
Croplan	6640	249.9	249.8	259.4	225.4	271.6	251.2
Croplan	7927	259.9	278.8	265.7	226.2	268.2	259.8
DEKALB	DKC 63-33	254.6	231.1	237.6	192.4	238.3	230.8
DEKALB	DKC 66-97	255.1	253.2	240.5	211.2	231.7	238.4
DEKALB	DKC 67-58	239.7	251.1	243.5	191.3	228.4	230.8
DEKALB	DKC 68-92	232.0	239.0	225.8	213.5	243.5	230.8
DEKALB	DKC 62-08	229.1	238.9	222.0	213.3	252.4	231.1
DEKALB	DKC 64-69	234.6	236.0	240.5	218.8	252.0	236.4
DEKALB	DKC 65-19	249.2	234.8	213.1	198.6	249.4	229.0
DEKALB	DKC 66-40	267.6	264.0	229.1	216.6	272.3	249.9
DEKALB	DKC 66-87	253.0	259.4	258.6	217.5	257.6	249.2
DEKALB	DKC 69-29	251.3	249.3	244.4	202.8	258.4	241.2
Delta Grow	DG 2688	177.2	217.6	193.3	192.6	239.5	204.0
Delta Grow	DG 2863 VIP	249.1	279.1	272.7	227.9	284.4	262.6
Delta Grow	DG 2888 VIP	244.7	252.8	248.8	203.0	241.0	238.1
Delta Grow	DG 3660	242.9	215.0	228.6	227.5	264.3	235.7
Dyna-Gro	D53VB55	248.8	242.5	253.7	175.7	248.4	233.8
Dyna-Gro	D53VC13	219.9	235.4	240.2	197.0	224.1	223.3
Dyna-Gro	D55VP77	194.1	232.4	240.0	187.4	248.4	220.5
Dyna-Gro	D56VC46	252.0	251.1	224.6	204.1	259.9	238.3
Dyna-Gro	D57VP51	222.4	240.0	218.9	216.5	243.4	228.2
Dyna-Gro	D57VP75	238.8	261.9	271.4	212.5	256.6	248.3
CATALYST	7672	226.5	211.4	206.4	206.9	264.6	223.2
Golden Acres	G6611	241.1	248.2	255.0	203.0	254.7	240.4
Golden Acres	G5531	257.1	231.3	248.6	203.3	260.4	240.1
Golden Acres	26V21	207.8	186.0	220.5	197.9	226.2	207.7
Golden Acres	27V01	213.5	199.7	222.0	186.2	254.3	215.1
Great Heart Seed	HT 7240 VT2P RIB	244.5	227.5	228.1	180.6	236.9	223.5
Great Heart Seed	HT 7261 VT3P RIB	248.3	232.4	236.6	199.6	245.8	232.6
Great Heart Seed	HT 7778 VT3P RIB	248.1	261.5	268.5	233.0	268.8	256.0
Mycogen	2C786	230.9	219.0	239.3	202.0	226.5	223.5
Mycogen	2C797	245.8	220.3	241.8	202.0	234.4	228.9
Mycogen	2H877	233.4	215.7	198.8	208.2	241.2	219.5
Mycogen	2Y816	247.9	219.9	213.7	178.6	250.1	222.0
Mycogen	2Y744	220.1	213.8	230.5	206.3	268.3	227.8
Mycogen	<i>X13751 S3</i>	225.0	210.3	211.4	180.0	230.8	211.5
Mycogen	<i>X13809 VH</i>	212.3	242.4	229.3	193.4	236.0	222.7
Mycogen	2D848	250.5	235.2	225.8	206.5	253.9	234.4
NK Brand	N785-3111	247.9	223.9	247.0	196.3	261.1	235.2
NK Brand	N83D-3000GT	238.0	228.8	235.2	204.4	233.2	227.9
Progeny	PGY 4114 VT2P	254.4	242.8	241.5	172.2	256.4	233.5
Progeny	PGY 4117 VT3P	235.0	236.9	252.3	184.4	247.9	231.3
Progeny	<i>PGY EXP 145S</i>	227.0	200.1	225.9	205.1	231.1	217.8
Progeny	PGY 5115 VT2	243.3	221.1	235.2	193.5	245.4	227.7
REV®	REV®17HR73™	210.7	209.1	223.6	178.6	213.0	207.0
REV®	REV® 22BHR43™	235.2	212.6	237.7	182.9	244.3	222.6
REV®	REV® 24BHR93™	218.7	247.7	268.6	220.0	255.4	242.1
REV®	REV 26BHR50TM	255.1	252.9	280.3	220.6	268.8	255.5
REV®	REV® 27HR83™	218.5	242.7	237.8	202.9	249.7	230.4
REV®	REV® 28HR20™	215.4	256.7	233.0	217.3	286.1	241.7
REV®	REV® 28R10™	204.6	226.2	222.0	205.0	242.2	220.0
REV®	REV® 18BHR84™	212.0	218.7	213.6	173.9	209.0	205.4
REV®	REV® 25BHR44™	217.6	228.2	225.6	213.8	263.4	229.7
REV®	REV® 23BHR55™	252.3	248.3	257.2	212.7	267.1	247.5
Steyer	11103 VT2 PRO RIBC	219.5	230.6	222.2	179.1	218.0	213.9
Steyer	11406 GENSS RIBC	231.4	242.1	246.8	189.0	227.1	227.3
Steyer	11407 VT2 PRO RIBC	240.4	266.0	221.4	206.2	279.1	242.6
Steyer	11604 VT2 PRO RIBC	242.8	245.8	226.1	187.6	244.7	229.4
Mean		235.6	235.7	236.4	201.9	247.5	231.4
LSD		19.4	18.9	20.4	12.5	20.3	
Error df		255	255	255	255	255	
CV		7.1	6.9	7.4	5.3	7	
R sq		59.9	64.2	56.7	74.2	54.1	

<sup>1</sup>Hybrid in italics denotes an experimental entry