

# 2014 GULF COAST CORN UNIFORM HYBRID TRIALS



## **2014 GULF COAST GRAIN SORGHUM UNIFORM HYBRID TRIALS**

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## **Introduction**

Texas A&M AgriLife Extension conducts the corn uniform hybrid trials each year to provide growers in the region with accurate and unbiased information on hybrid performance. Selection of superior hybrids that are well adapted for a given region is essential for maximizing yield and profit.

This year, six non-irrigated test sites planted in the Gulf Coast Region. Nine corn hybrids were entered at each location. Additional hybrids may have been included at any given location at the discretion of the cooperator. Only official entries are included in regional summaries. Commercial seed companies enter one hybrid at their discretion into each trial sub-region and must be entered at all locations within a sub-region.

Performance trials are conducted by cooperative arrangements between growers, company representatives and Texas A&M AgriLife Extension personnel. Commercial farm equipment is typically used to plant and harvest. Test sites are on privately owned farms or at Texas A&M University AgriLife Research Centers. All entries are randomized and replicated three times at each location. All test sites are managed according to practices common to each production region. If replications are not available, statistical analysis cannot be performed and hybrid performance should be considered equal across hybrids for that site, despite numeric differences in yield or other agronomic traits.

## **Suggestions for Hybrid Selection**

Variety or hybrid selection is often the first decision a grower must make each crop year. The goal is to identify hybrids with superior performance (top yielding) for your environment. Many environments exist in Texas with significant variation within regions and across years, mostly due to variation in weather. Documented, consistent yield performance within a region is essential for selecting hybrids that will perform well on your farming operation. This means that evaluation of hybrids over multiple locations and years (when possible) is the best way to predict future performance. Exercise caution when using single location data to compare hybrid performance.

Following yield performance, other characteristics may be useful for selecting the best hybrid. Maturity or days to flowering may be important for selecting hybrids that are appropriate for your growing season/conditions. Hybrids that possess insect or herbicide traits may be useful for managing various insect and weed pests found on your farm. While consistent yield will be the most important factor affecting hybrid selection, additional plant characteristics or traits could be used to select from hybrids with similar yield performance.

## **Field-Plot Techniques**

Hybrid performance trials are conducted at each location using a randomized complete block design with three replications of each entry (hybrid). Seeds for each hybrid are delivered to centralized pickup points in each sub-region. Plots are generally between 4 and 12 rows wide with row spacing ranging from 30 to 40 inches depending on location. All plots are planted using commercial farm equipment provided by growers or cooperators at each location.

Cultural and agronomic practices adapted for each region are used as determined by the cooperator. Most locations are harvested using commercial farm equipment and yield measured by weighing each plot using “weigh wagons”. Some locations may use hand harvesting of predetermined row lengths followed by mechanical threshing and weighing. Grain moisture and test weight are determined from grab samples and measured using instruments such as the Mini GAC plus or similar instruments.

## **Data Analysis and Reporting**

Data from each location is analyzed statistically using SAS 9.1. Mean values for yield and additional agronomic data are presented in tables for each location. Mean values are derived from the average of all replications for each entry in each trial. Least Significant Difference (LSD) is a statistical test used that determines the minimum difference between two entries required to be considered having different levels of performance. Differences between entries (yield, moisture, etc.) less than the LSD value represents variation in measurements due to factors other than hybrid performance, such as variation in soil type, soil moisture, fertility, insect or disease pressure, planting or harvesting procedures. Although numeric differences in yield or other measurements may exist, if two entries are within the LSD value, they should be considered to have equal performance. The Coefficient of Variation (CV) is used to determine the amount of variability in the data set relative to the mean and can be used to determine if the results are reliable. Generally, CV's greater than 20% indicate that the data is unreliable and is not reported. However, each data set is evaluated individually to determine if results will be reported.

In addition to individual location data, summaries for regional performance are provided. Regional summaries present the data as average relative yield. Relative yields are calculated for each site by calculating the yield for each hybrid as a percentage of the best performing hybrid's mean. For example, if the hybrid A is the top yielding entry at a particular location with a yield of 160 bu/acre and hybrid B yields 140 bu/acre, hybrid A would have a relative yield of 100% and hybrid B would have a relative yield of 87.5%. The relative yields are averaged across all locations for each production region. Average relative yield values less than 90% suggest inconsistent performance.



## **Rainfall**

Available soil moisture during the growing season is often a limiting factor for sorghum production in Texas. Available moisture will influence decisions on hybrid selection related to maturity and for selection of appropriate seeding rates. Variation in rainfall patterns can be substantial within a production region and from year to year. Often, it is useful to look at rainfall amounts for a given region based on the water-year. The water-year corresponds with hydrological cycles and runs from October 1 through September 30. In contrast to annual rainfall amounts, water-year analysis includes periods of time when soil profile moisture recharge can occur. The observed water-year is provided in Figure 1.

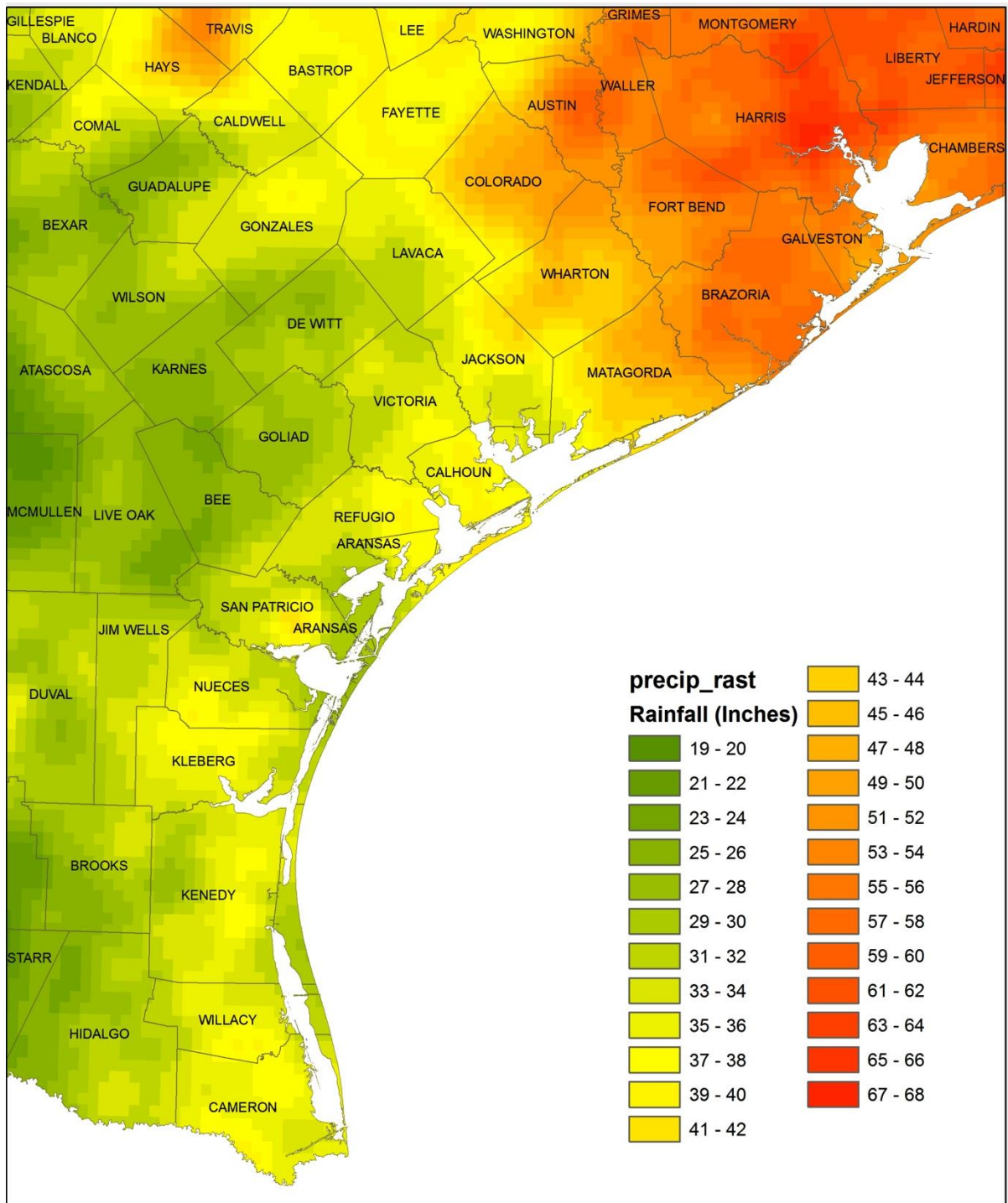


Figure 1. Rainfall in inches for the water year 2014 (October 1, 2013 - September 30, 2014).

**Company Information:**

<b>Company</b>	<b>Contact</b>	<b>Phone</b>	<b>Email</b>
Terral Seed	Cord Willms	979-475-8031	cwillms@terralseed.com
CPS-Dyna-Gro	Allen Gabrysch	361-781-2742	allen.gabrysch@cpsagu.com
Golden Acres Genetics	John Rocconi	254-761-9838	jrocconi@gaseed.com
Mycogen Seeds	Ben Benton	806-253-2584	Brbenton@dow.com
Warner Seeds, Inc.	Cheb Krueger	806-364-4470	wsi@warnerseeds.com
Croplan	Chuck Malott	210-218-4262	jcmalott@landolakes.com
Monsanto	Steve Carlson	979-229-8155	steve.carlson@monsanto.com
Syngenta	Tony Driver	254-848-5553	tony.driver@syngenta.com
B-H Genetics	Travis Janak	361-771-8722	travisj@bhgenetics.com

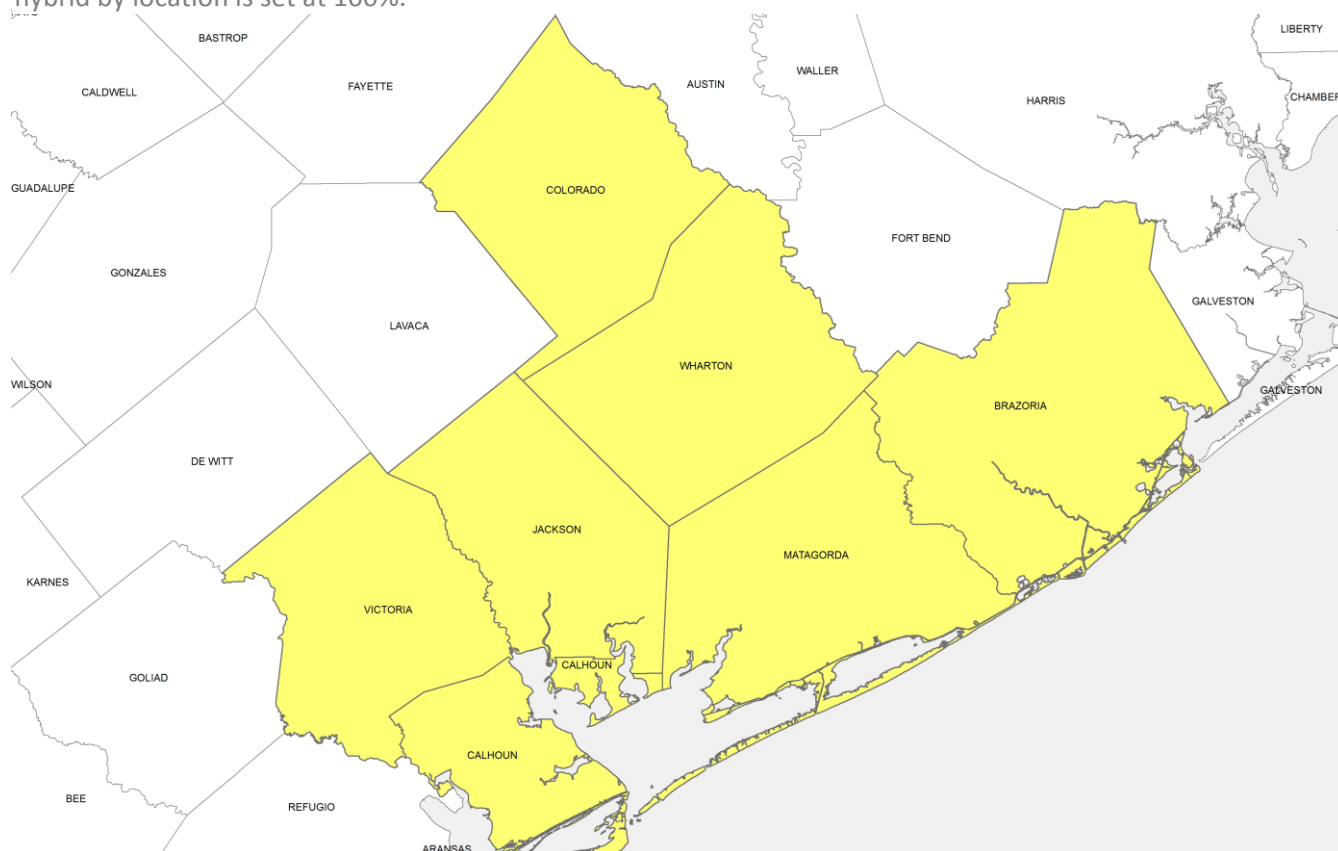


# 2014 Regional Corn Summary Upper Gulf Coast



Company	Brand	Hybrid	Relative Yield (%)
Monsanto	Dekalb	DKC 64-69	94.42
Mycogen Seeds	Mycogen	2C797	93.61
CPS Dyna-Gro	DG	55VP77	93.35
Terral Seed	Terral	REV 26BHR50	92.04
Golden Acres Genetics	Golden Acres	G7601	91.54
Warner Seeds Inc.	Warner Seed	W4790	91.39
B-H Genetics	B-H Genetics	BH 8660	91.13
Croplan	Croplan	6640	87.75
Syngenta	NK	N78S	87.15

Note: Relative yield is presented for each hybrid as the average across all locations where the highest yielding hybrid by location is set at 100%.



# Calhoun County Corn Hybrid Trial 2014



Company	Brand	Hybrid	Trait(s)	Moisture %	Test Weight (lb/bu)	Yield (bu/acre)
Syngenta	NK	N78S	V3111	13.13	58.17	121.3
Mycogen Seeds	Mycogen	2C797	SSX	12.97	57.77	121.0
Golden Acres Genetics	Golden Acres	G7601	GEN VT3P	13.17	59.00	119.8
Warner Seeds Inc.	Warner Seed	W4790	GEN VT3P	13.03	58.77	117.8
Monsanto	Dekalb	DKC 64-69	GEN VT3P	13.03	59.53	117.0
CPS Dyna-Gro	DG	55VP77	GEN VT3P	12.80	59.63	114.5
B-H Genetics	B-H Genetics	BH 8660	GEN VT3P	13.07	58.60	113.8
Terral Seed	Terral	REV 26BHR50	HX1	13.10	62.07	111.1
Croplan	Croplan	6640	GEN VT3P	12.73	59.17	108.9

Mean	13.00	59.19	116.1
C.V. (%)	2.066	1.180	2.940
L.S.D.		1.21	5.9
P>f (hybrid)	0.535	0.000	0.003

### Agronomic information

Plant Date

Harvest Date

Irrigated

Row Spacing (in)

Number of Rows

Seeds per Acre

Nitrogen (lb/ac)

Phosphorus (lb/ac)

Potassium (lb/ac)

Cooperator:

Agent:

Model : yield = hybrid blk. LSD provided when hybrid significant at  $p < 0.05$ . Yields highlighted in green are not statistically different from the top ranked hybrid. For additional information contact your local county extension agent or:  
 Dr. Ronnie Schnell  
 ronnie.schnell@ag.tamu.edu  
 979-845-2935

# Colorado County Corn Hybrid Trial 2014



Company	Brand	Hybrid	Trait(s)	Moisture %	Test Weight (lb/bu)	Yield (bu/acre)
CPS Dyna-Gro	DG	55VP77	GEN VT3P	13.53	57.70	169.1
Golden Acres Genetics	Golden Acres	G7601	GEN VT3P	13.60	55.97	163.8
Monsanto	Dekalb	DKC 64-69	GEN VT3P	13.53	55.43	160.7
Warner Seeds Inc.	Warner Seed	W4790	GEN VT3P	13.53	55.43	159.8
Mycogen Seeds	Mycogen	2C797	SSX	13.67	54.67	158.1
B-H Genetics	B-H Genetics	BH 8660	GEN VT3P	12.97	55.70	158.1
Croplan	Croplan	6640	GEN VT3P	13.23	56.23	157.9
Terral Seed	Terral	REV 26BHR50	HX1	13.67	56.60	155.0
Syngenta	NK	N78S	V3111	13.70	55.27	144.3
Syngenta	NK	N79T	V3111	13.90	56.00	139.4

Mean	13.53	55.90	156.6
C.V. (%)	4.896	1.443	2.667
L.S.D.		1.38	7.2
P>f (hybrid)	0.879	0.017	0.000

**Agronomic information**

Plant Date

Harvest Date

Irrigated

Row Spacing (in)

Number of Rows

Seeds per Acre

Nitrogen (lb/ac)

Phosphorus (lb/ac)

Potassium (lb/ac)

**Cooperator:**

**Agent:**

Model : yield = hybrid blk. LSD provided when hybrid significant at  $p < 0.05$ . Yields highlighted in green are not statistically different from the top ranked hybrid. For additional information contact your local county extension agent or:  
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# Jackson County Corn Hybrid Trial 2014



Company	Brand	Hybrid	Trait(s)	Moisture %	Test Weight (lb/bu)	Yield (bu/acre)
Mycogen Seeds	Mycogen	2C797	SSX	15.53	58.00	140.7
CPS Dyna-Gro	DG	D57VP51	GEN VT3P	15.90	58.50	140.1
Golden Acres Genetics	Golden Acres	G7601	GEN VT3P	16.87	57.00	137.0
Monsanto	Dekalb	DKC 64-69	GEN VT3P	15.27	59.00	135.3
Warner Seeds Inc.	Warner Seed	W4790	GEN VT3P	16.37	57.50	134.4
Syngenta	NK	N78S	V3111	15.73	57.50	133.6
Terral Seed	Terral	REV 26BHR50	HX1	17.33	58.50	131.1
CPS Dyna-Gro	DG	55VP77	GEN VT3P	15.33	60.00	130.9
B-H Genetics	B-H Genetics	BH 8660	GEN VT3P	17.30	56.50	130.9
Croplan	Croplan	6640	GEN VT3P	14.77	58.00	128.4

Mean	16.04	58.05	134.2
C.V. (%)	1.009	0.489	1.952
L.S.D.	0.28	0.49	4.5
P>f (hybrid)	0.000	0.000	0.000

**Agronomic information**

Plant Date

Harvest Date

Irrigated

Row Spacing (in)

Number of Rows

Seeds per Acre

Nitrogen (lb/ac)

Phosphorus (lb/ac)

Potassium (lb/ac)

**Cooperator:**

**Agent:**

Model : yield = hybrid blk. LSD provided when hybrid significant at  $p < 0.05$ . Yields highlighted in green are not statistically different from the top ranked hybrid. For additional information contact your local county extension agent or:  
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 979-845-2935

# Matagorda County Corn Hybrid Trial 2014



Company	Brand	Hybrid	Trait(s)	Moisture %	Test Weight (lb/bu)	Yield (bu/acre)
Mycogen Seeds	Mycogen	2C797	SSX	14.00	58.00	154.4
B-H Genetics	B-H Genetics	BH 8660	GEN VT3P	15.20	60.00	152.1
Monsanto	Dekalb	DKC 64-69	GEN VT3P	15.80	60.00	151.5
Syngenta	NK	N78S	V3111	15.60	57.50	149.4
Terral Seed	Terral	REV 26BHR50	HX1	16.10	62.00	140.7
Warner Seeds Inc.	Warner Seed	W4790	GEN VT3P	14.70	58.50	133.9
CPS Dyna-Gro	DG	55VP77	GEN VT3P	15.10	60.50	131.0
Golden Acres Genetics	Golden Acres	G7601	GEN VT3P	15.40	60.00	130.8
Croplan	Croplan	6640	GEN VT3P	15.30	60.00	125.8

Mean	15.24	59.61	141.1
C.V. (%)			
L.S.D.			
P>f (hybrid)			

**Agronomic information**

Plant Date

Harvest Date

Irrigated

Row Spacing (in)

Number of Rows

Seeds per Acre

Nitrogen (lb/ac)

Phosphorus (lb/ac)

Potassium (lb/ac)

**Cooperator:**

**Agent:**

Model : yield = hybrid blk. LSD provided when hybrid significant at p < 0.05. Yields highlighted in green are not statistically different from the top ranked hybrid. For additional information contact your local county extension agent or:  
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# Victoria County Corn Hybrid Trial 2014



Company	Brand	Hybrid	Trait(s)	Moisture %	Test Weight (lb/bu)	Yield (bu/acre)
Mycogen Seeds	Mycogen	2C797	SSX	12.53	56.70	137.0
B-H Genetics	B-H Genetics	BH 8660	GEN VT3P	13.17	58.57	135.6
Monsanto	Dekalb	DKC 64-69	GEN VT3P	12.67	58.83	134.5
CPS Dyna-Gro	DG	55VP77	GEN VT3P	12.93	58.47	130.8
Syngenta	NK	N78S	V3111	13.33	56.03	130.6
Warner Seeds Inc.	Warner Seed	W4790	GEN VT3P	14.10	57.97	129.1
Croplan	Croplan	6640	GEN VT3P	12.67	57.97	127.6
Syngenta	NK	N79T	V3111	13.47	57.83	125.3
Golden Acres Genetics	Golden Acres	G7601	GEN VT3P	13.23	58.07	125.2
Terral Seed	Terral	REV 26BHR50	HX1	13.57	61.13	118.8

Mean	13.17	58.16	129.5
C.V. (%)	1.786	0.564	2.109
L.S.D.	0.56	0.56	4.7
P>f (hybrid)	0.000	0.000	0.000

### Agronomic information

Plant Date

Harvest Date

Irrigated

Row Spacing (in)

Number of Rows

Seeds per Acre

Nitrogen (lb/ac)

Phosphorus (lb/ac)

Potassium (lb/ac)

Cooperator:

Agent:

Model : yield = hybrid blk. LSD provided when hybrid significant at  $p < 0.05$ . Yields highlighted in green are not statistically different from the top ranked hybrid. For additional information contact your local county extension agent or:  
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 ronnie.schnell@ag.tamu.edu  
 979-845-2935

# Wharton County Corn Hybrid Trial 2014



Company	Brand	Hybrid	Trait(s)	Moisture %	Test Weight (lb/bu)	Yield (bu/acre)
Dupont	Pioneer	P2088	AM1	14.77	57.17	147.3
Mycogen Seeds	Mycogen	2C797	SSX	14.57	56.00	140.7
Monsanto	Dekalb	DKC 64-69	GEN VT3P	14.63	58.00	138.9
Terral Seed	Terral	REV 26BHR50	HX1	15.43	59.83	138.0
Warner Seeds Inc.	Warner Seed	W4790	GEN VT3P	14.57	57.00	134.4
B-H Genetics	B-H Genetics	BH 8660	GEN VT3P	14.87	57.67	131.8
Golden Acres Genetics	Golden Acres	G7601	GEN VT3P	14.73	57.00	130.5
CPS Dyna-Gro	DG	55VP77	GEN VT3P	14.63	59.00	127.4
Croplan	Croplan	6640	GEN VT3P	14.57	57.00	122.7
Syngenta	NK	N78S	V3111	15.33	55.50	119.0

Mean	14.81	57.42	133.1
C.V. (%)	2.458	0.898	2.653
L.S.D.		0.88	6.1
P>f (hybrid)	0.064	0.000	0.000

**Agronomic information**

Plant Date

Harvest Date

Irrigated

Row Spacing (in)

Number of Rows

Seeds per Acre

Nitrogen (lb/ac)

Phosphorus (lb/ac)

Potassium (lb/ac)

**Cooperator:**

**Agent:**

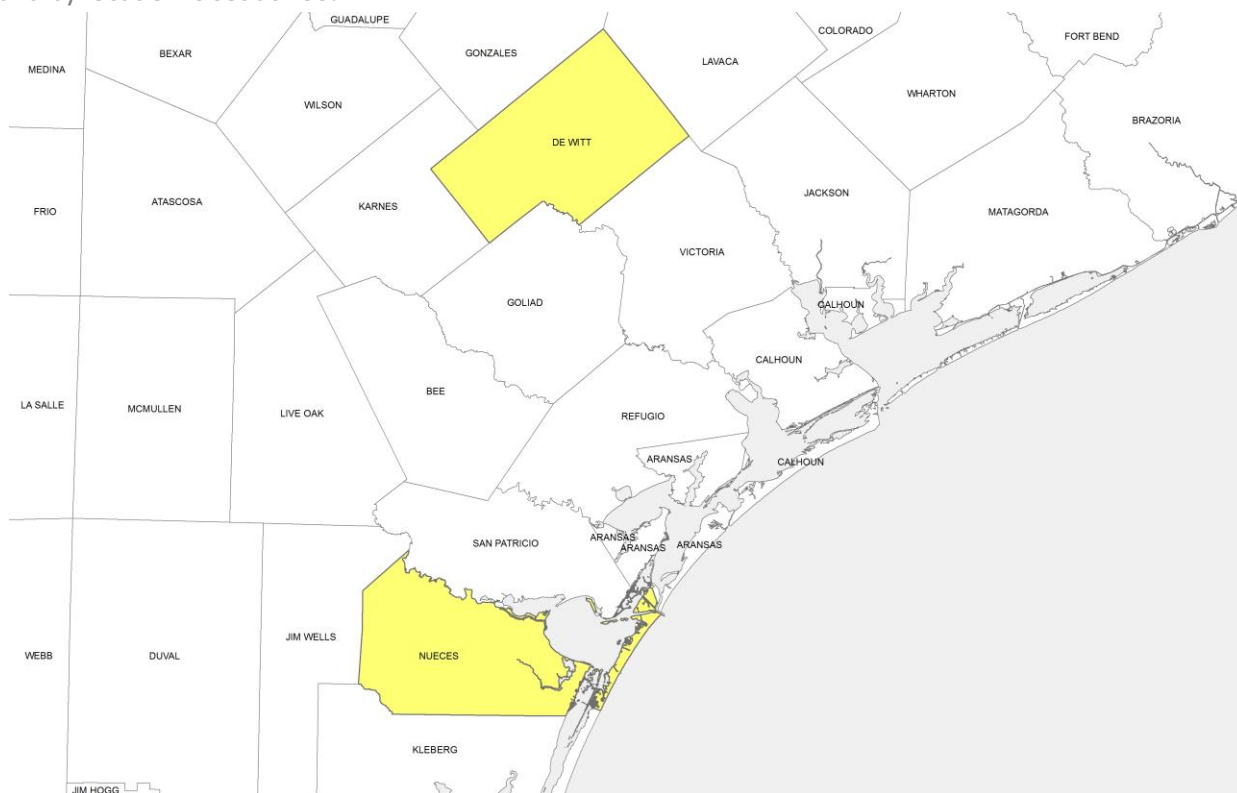
Model : yield = hybrid blk. LSD provided when hybrid significant at  $p < 0.05$ . Yields highlighted in green are not statistically different from the top ranked hybrid. For additional information contact your local county extension agent or:  
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 979-845-2935

# 2014 Regional Corn Summary Coastal Bend



Company	Brand	Hybrid	Relative Yield (%)
B-H Genetics	B-H Genetics	BH 8660	98.74
Croplan	Croplan	6640	97.77
Mycogen Seeds	Mycogen	2C797	95.83
Warner Seeds Inc.	Warner Seed	W4790	93.74
Monsanto	Dekalb	DKC 64-69	89.56
Golden Acres Genetics	Golden Acres	G7601	89.47
Terral Seed	Terral	REV 22BHR43	89.32
Syngenta	NK	N78S	89.27
CPS Dyna-Gro	DG	55VP77	80.95

Note: Relative yield is presented for each hybrid as the average across all locations where the highest yielding hybrid by location is set at 100%.



# De Witt County Corn Hybrid Trial 2014



Company	Brand	Hybrid	Trait(s)	Moisture %	Test Weight (lb/bu)	Yield (bu/acre)
B-H Genetics	B-H Genetics	BH 8660	GEN VT3P	12.00	57.67	124.2
Mycogen Seeds	Mycogen	2C797	SSX	9.67	56.00	124.2
Croplan	Croplan	6640	GEN VT3P	11.00	57.33	123.7
Warner Seeds Inc.	Warner Seed	W4790	GEN VT3P	11.33	57.33	118.6
Syngenta	NK	N77P	V3111	12.33	55.67	117.1
Syngenta	NK	N78S	V3111	13.67	55.67	116.3
Golden Acres Genetics	Golden Acres	G7601	GEN VT3P	13.00	56.67	114.5
Monsanto	Dekalb	DKC 64-69	GEN VT3P	13.00	57.67	112.7
Terral Seed	Terral	REV 22BHR43	HX1	11.00	58.33	111.1
CPS Dyna-Gro	DG	55VP77	GEN VT3P	11.67	58.00	101.3

Mean	11.87	57.03	116.4
C.V. (%)	5.280	0.791	1.771
L.S.D.	1.07	0.77	3.5
P>f (hybrid)	0.000	0.000	0.000

**Agronomic information**

Plant Date

Harvest Date

Irrigated

Row Spacing (in)

Number of Rows

Seeds per Acre

Nitrogen (lb/ac)

Phosphorus (lb/ac)

Potassium (lb/ac)

**Cooperator:**

**Agent:**

Model : yield = hybrid blk. LSD provided when hybrid significant at  $p < 0.05$ . Yields highlighted in green are not statistically different from the top ranked hybrid. For additional information contact your local county extension agent or:  
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