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February 10, 2011

The following information is data from our 2010 test plots throughout growing zones 5, 6, 7, and 8. There is also data from a combined strip test near North Loup, Nebraska. Also attached is our 2011 pricelist. All of this information and more can be found on our website www.zanggerpopcornhybrids.com. If you have any questions or comments please contact us.

Northern Illinois Test Plot- The test plot was planted on popcorn residue on 5/19/2010. The soil PH was 7.1. The test plot had no environmental damage and had adequate moisture all season. The test plot was planted on 30 inch rows at a population of 30,000 plants per acre. The test plot was sprayed two times with a fungicide. Observations were made 8/12/2010 and harvested 9/26/2010. This plot was not irrigated

Northern Nebraska Test Plot- The test plot was planted on sandy soil into wheat stubble on 5/8/2010. The soil PH was 6.4. The test plot had some hail damage and 20% leaf loss. The test plot also had Goss Wilt pressure. This test plot was planted on 22 inch rows at a population of 28,000 plants per acre. The test plot was sprayed once with a fungicide. Observations were made 8/17/2010 and harvested 10/18/2010. This plot was pivot irrigated.

Western Nebraska Test Plot- The test plot was planted on sandy clay soil into soybean stubble on 5/8/2010. The soil PH was 6.2. The test plot was pivot irrigated and experienced no environmental damage during the season. The test plot was planted on 30 inch rows at a population of 30,000 plants per acre. Observations were made 8/18/2010 and harvested 10/19/2010.

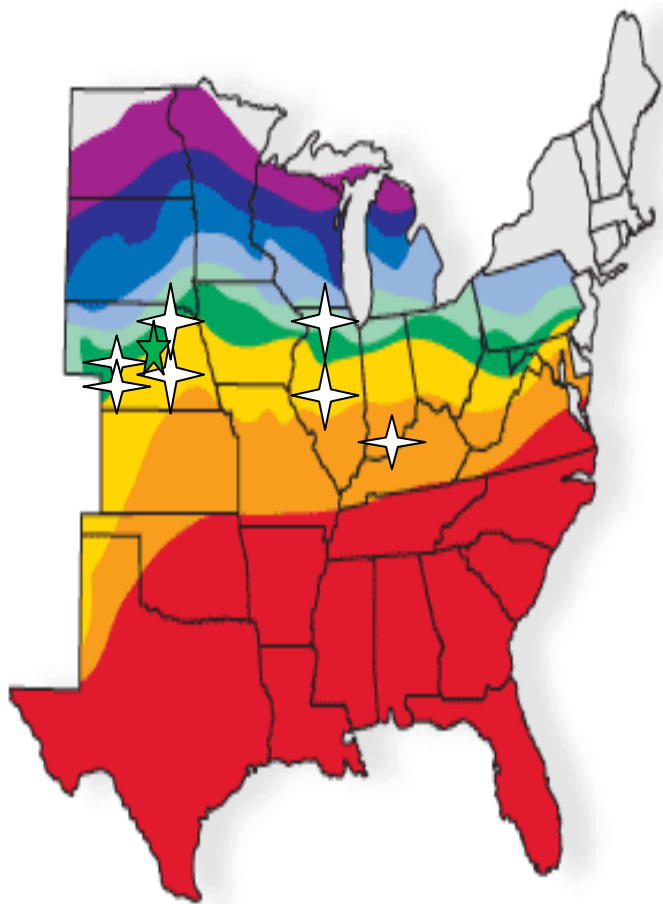
Southwestern Nebraska Test Plot- The test plot was planted 5/25/2010 into popcorn residue. The soil PH was 5.3. The test plot was pivot irrigated and experienced minor environmental damage during the season. The test plot was planted on 30 inch rows at a population of 30,000 plants per acre. The test plot had Goss Wilt pressure. Observations were made 8/19/2010 and harvested 10/20/2010.

Southern Indiana Test Plot- The test plot was planted 5/28/2010 in the mud. This test plot experienced many hot and humid days and accumulated G.D.D. very quickly. There was more leaf disease and blight present including grey leaf spot, eye spot, common rust, and northern corn leaf blight. The plot was not irrigated. The test plot was planted on 30 inch rows at a population of 28,000 plants per acre. Observations were made 8/11/2010 and harvested 9/25/2010.

South Central Nebraska Test Plot- The test plot was planted 5/6/2010 on silt loam soil into soybean residue. The soil PH was 6.2. The test plot was furrow irrigated. The test plot received hail damage at the V6 stage but recovered quite well. The test plot was planted on 30 inch rows at a population of 31,000 plants per acre. Observations were made on 8/16/2010 and harvested 9/28/2010. The test plot was sprayed with a fungicide.

Central Illinois Test Plot- The test plot was planted 5/14/2010 on sandy soil into soybean residue. The soil PH was 6.1. The test plot was pivot irrigated. The test plot received minor hail damage after pollination. The test plot was planted on 30 inch rows at a population of 28,000 plants per acre. This test plot experienced many hot and humid days and accumulated G.D.D. very quickly. There was more leaf disease and blight present including grey leaf spot, eye spot, common rust, southern rust and northern corn leaf blight. Observations were made on 8/14/2010 and harvested 9/26/2010.

North Central Nebraska Strip Tests- The strip tests were planted on 5/13/2010 into soybean residue. The strip tests were pivot irrigated. Each variety was on a 12 row, 2 acre strip. The strip tests received minor environmental damage throughout the season. The strip test was sprayed with a fungicide at 100% tassel. The strip tests were harvested with a John Deere rotary combine on 10/11/2010.



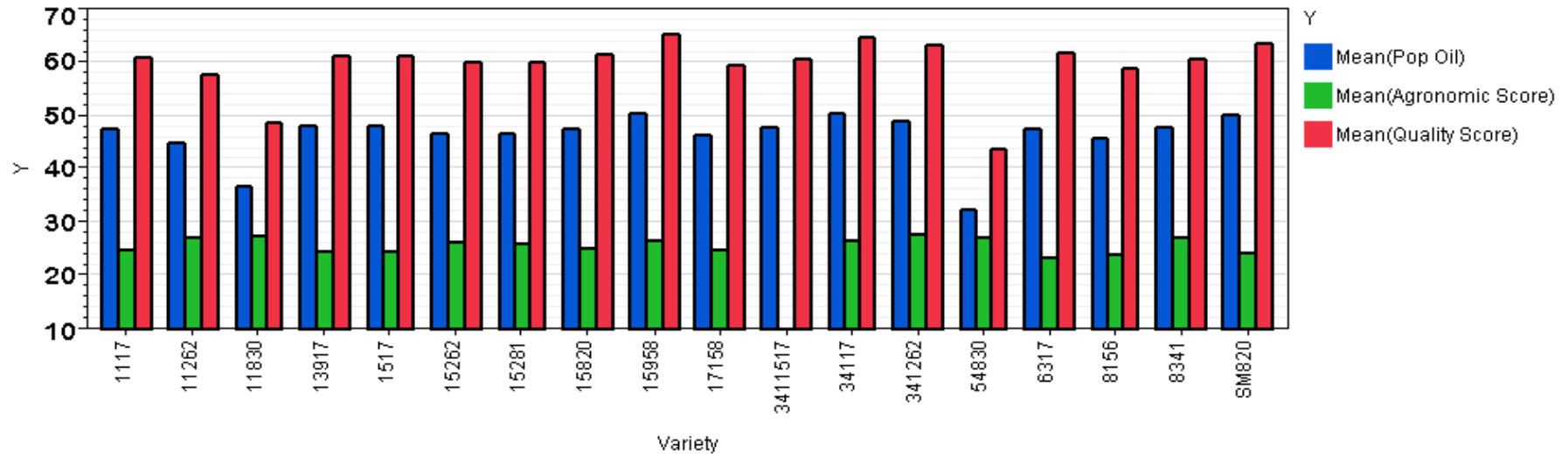
- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4
- ZONE 5
- ZONE 6
- ZONE 7
- ZONE 8
- ZONE 9

- Test Plot Locations 2010
- Zangger Popcorn Hybrids

SOUTH CENTRAL NEBRASKA
ZONE 7

VARIETY	KCT/10GR	MWVT/Oil	BALL%	SHAPE	HARVEST MOISTURE	YIELD/14%	PLANT DISEASE	BROKEN STALK	STALK ROT	AGRONOMIC SCORE	QUALITY SCORE
15262	58	46.8	.	1.6	18.2	8507	5.0	1%	3%	26.4	60
8156	57	45.8	.	2.1	13.6	8348	4.9	1%	13%	24.3	59
341262	56	49.2	.	1.6	17.5	8279	4.8	1%	0%	27.8	63.4
17158	54	46.7	.	2.2	17.2	8229	5.0	3%	5%	24.9	59.6
15958	59	50.7	.	1.9	18.7	8149	4.8	2%	0%	26.9	65.4
8341	57	48.0	.	2.0	15.6	8124	4.9	3%	17%	27.3	60.7
11262	57	45.0	.	1.8	18.0	8052	4.8	2%	3%	27.5	57.9
15820	60	47.7	.	2.0	15.1	7794	4.9	2%	8%	25.3	61.6
1517	61	47.4	.	2.1	17.5	7558	5.0	0%	7%	24.9	60.5
6317	57	47.7	.	2.0	15.8	7416	4.8	6%	5%	23.6	62
11830	48	36.8	80%	1.6	16.1	7162	4.7	4%	10%	27.8	48.7
1117	53	47.7	.	2.0	16.5	7146	4.8	3%	3%	25.1	61.1
15281	73	46.8	.	2.2	18.8	7004	5.0	0%	0%	26.4	60.1
34117	55	50.5	.	1.7	17.2	6806	4.9	3%	5%	21.4	64.7
13917	55	48.2	.	1.9	19.9	6700	4.7	2%	8%	24.8	61.2
SM820	63	50.3	.	2.7	14.8	6650	4.8	9%	37%	24.4	63.6
54830	37	32.5	88%	1.2	14.8	6528	5.0	1%	0%	27.5	43.8
3411517	58	48.0	.	1.4	12.8	6195					60.6
Averages	57	46.4			16.6	7480	4.9	3%	7%	25.6	59.7

Chart

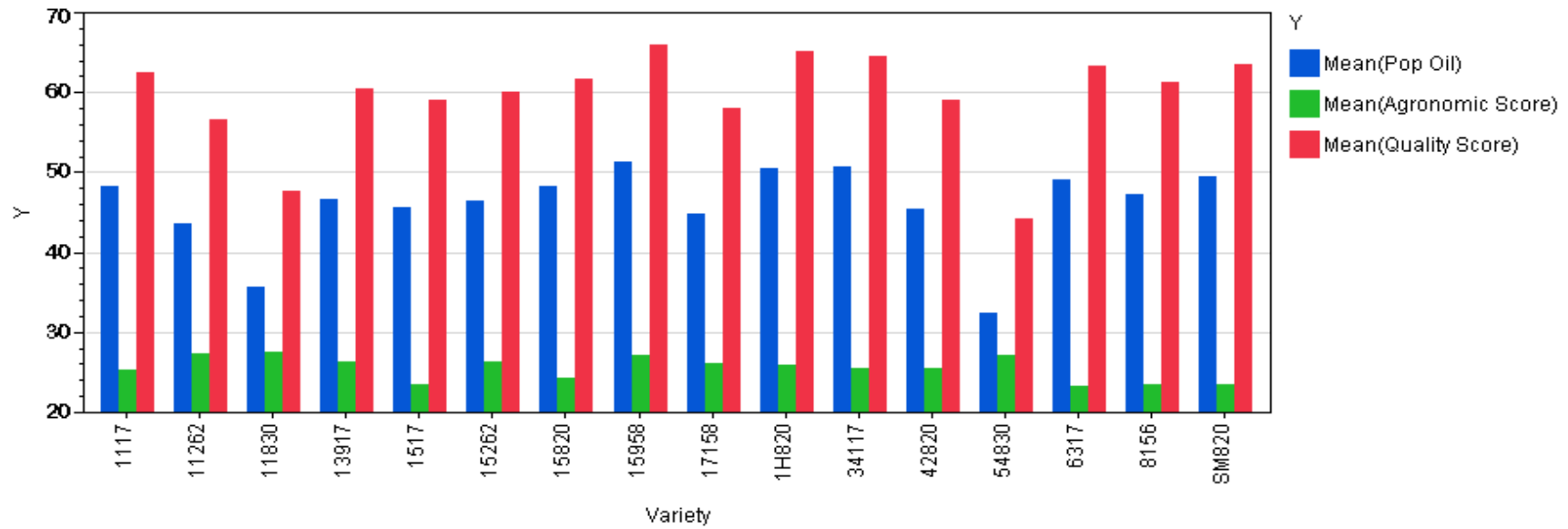


NORTHERN ILLINOIS 2010

ZONE 5

VARIETY	KCT/ ₁₀ GR	MWVT/Oil	BALL%	SHAPE	HARVEST MOISTURE	YIELD/ ₁₄ %	PLANT DISEASE	BROKEN STALK	STALK ROT	AGRONOMIC SCORE	QUALITY SCORE
11262	58	43.7	.	1.7	21.7	8205	4.9	9%	32%	27.4	56.6
1517	59	45.7	.	2.2	24.2	7792	5	4%	23%	23.4	59.1
15262	57	46.3	.	1.7	21.3	7602	5	3%	5%	26.3	60
17158	58	44.8	.	2.2	23.6	7389	4.7	0%	10%	26.2	57.9
42820	56	45.3	.	1.5	18.1	7303	4.6	4%	35%	25.5	59
11830	55	35.7	65%	1.6	18.7	7019	4.8	14%	50%	27.6	47.7
54830	41	32.5	91%	1.3	19.6	7003	4.9	14%	23%	27.1	44.2
15820	59	48.2	.	2.3	22	6985	4.9	2%	25%	24.2	61.6
8156	62	47.3	.	2.2	19.4	6661	5	16%	30%	23.5	61.2
15958	59	51.3	.	1.9	21.1	6608	4.7	0%	3%	27.2	66
1H820	57	50.5	.	2.2	21.2	6494	4.8	9%	25%	25.9	65
1117	58	48.2	.	1.8	21.3	6476	4.6	0%	50%	25.3	62.4
13917	60	46.7	.	2.1	21.5	6254	4.5	1%	33%	26.3	60.4
34117	56	50.7	.	1.8	23.1	5595	4.7	0%	15%	25.6	64.4
6317	57	49	.	1.7	23.1	5163	4.3	3%	60%	23.2	63.2
SM820	58	49.5	.	2.6	20.1	4950	4.7	7%	78%	23.4	63.4
Average	57	46	.		21	6719	4.8	5%	31%	25.5	59.5

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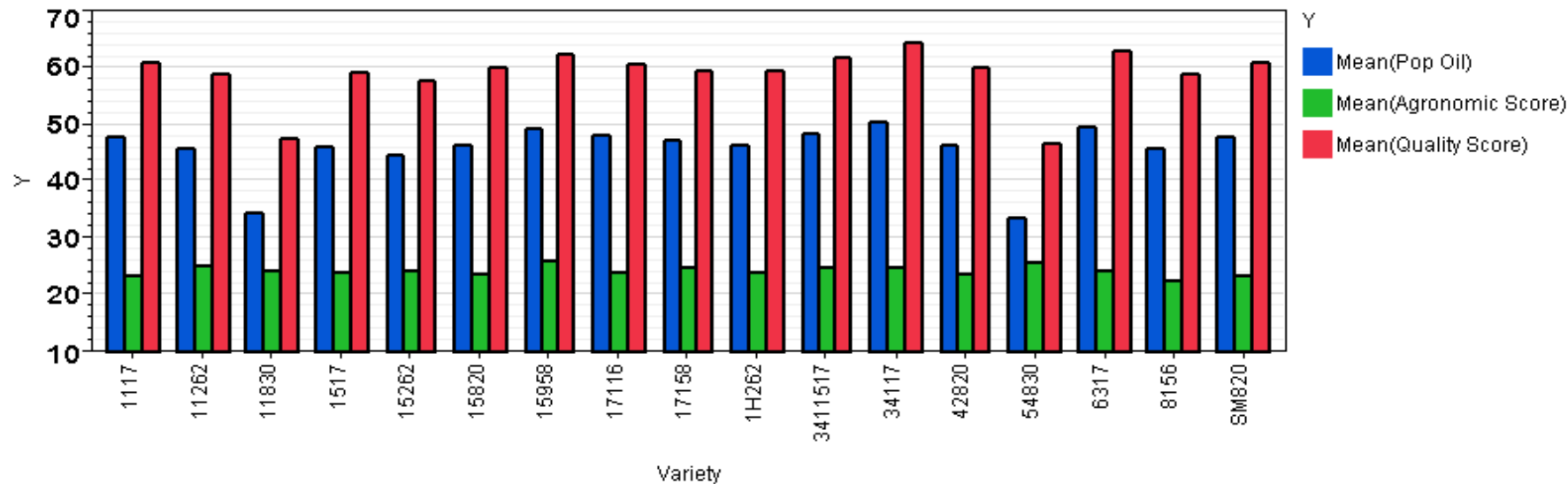


NORTHERN NEBRASKA 2010

ZONE 5/6

VARIETY	KCT/ ₁₀ GR	MWVT/Oil	BALL%	SHAPE	HARVEST MOISTURE	YIELD/ ₁₄ %	PLANT DISEASE	BROKEN STALK	STALK ROT	AGRONOMIC SCORE	QUALITY SCORE	GOSS WILT SCORE
11262	52	43.2	.	1.7	15.4	7839	4.7	1%	0%	26.8	55.3	4.9
1517	54	47.8	.	2.1	16.9	7459	4.9	1%	12%	24.7	60.8	5
1117	52	48.7	.	2	12.9	6912	4.7	0%	18%	25.8	62.6	4.8
17158	60	46.5	.	2.3	16.1	6401	4.8	0%	20%	23.6	58.6	4.5
15262	55	46.3	.	1.8	15.8	6349	4.8	0%	5%	25.4	59.8	5
13917	55	48.5	.	2	15.2	6139	4.6	1%	3%	25.4	63.1	4.8
42958	64	49.3	.	1.6	16.2	5587	4.2	3%	22%	25.2	64.9	4.7
6317	54	49.7	.	1.9	13.7	5573	4.7	0%	18%	24.7	64	5
8341	54	49.8	.	1.9	14.5	5522	4.4	6%	48%	24.7	63.6	4.5
11830	52	37.2	64%	1.6	13.5	5469	4.6	5%	45%	24.9	50.8	4
34117	52	49.7	.	1.8	13.9	5466	4.7	0%	8%	25.4	63.5	4.9
15820	60	47.2	.	2.2	13.1	5435	4.6	8%	62%	23.4	60.8	4
8156	60	47	.	2	14	5211	4.5	10%	70%	23.0	60.3	3.4
1H820	54	50.3	.	2.1	13.5	5110	4.5	3%	17%	24.2	64.4	4
SM820	57	50.5	.	2.4	12.4	4928	4.6	14%	78%	22.6	63.3	3.5
15958	58	50.7	.	2.1	13.5	4326	4.5	0%	13%	26.6	66.7	4.5
54830	38	34.3	79%	1.3	14.8	.	4.8	2%	3%	26.3	48.7	5
Averages	55	46.9				5858	4.6	3%	26%	24.9	60.7	4.5

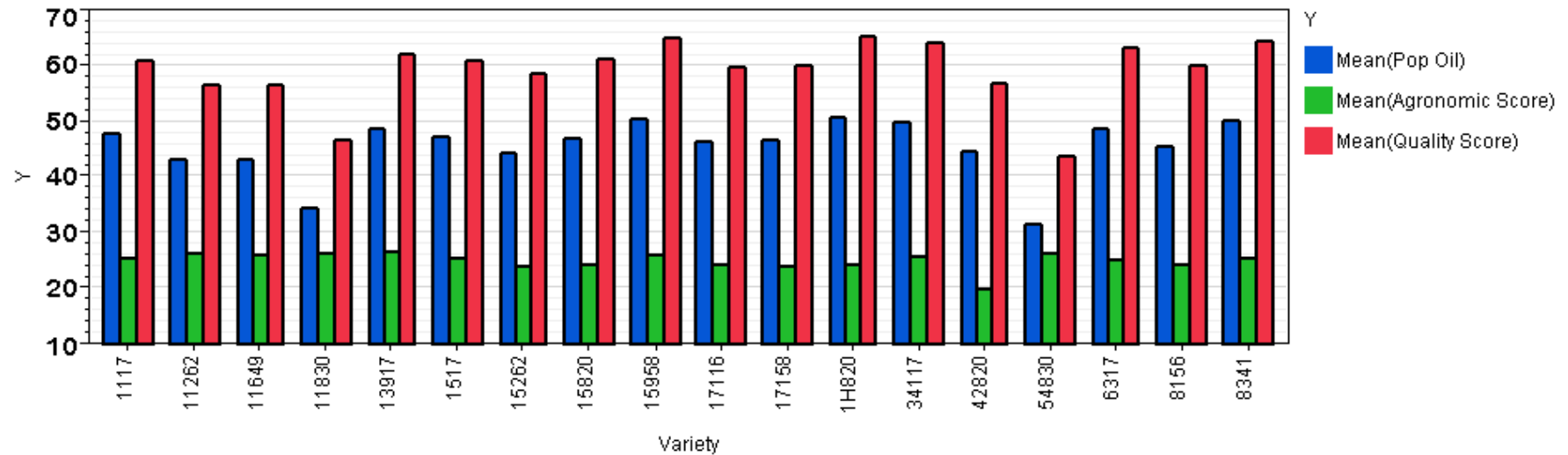
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WESTERN NEBRASKA 2010
ZONE 6/7

VARIETY	KCT/ ₁₀ GR	MWVT/Oil	BALL%	SHAPE	HARVEST MOISTURE	YIELD/ ₁₄ %	PLANT DISEASE	BROKEN STALK	STALK ROT	AGRONOMIC SCORE	QUALITY SCORE
11262	57	43.3		1.9	19.6	9347	5.0	15%	1%	26.4	56.8
13917	54	48.8		1.9	20.1	8998	5.0	0%	0%	26.9	62.2
1517	58	47.5		2.1	19.3	8966	5.0	5%	1%	25.5	61
15262	56	44.5		1.7	20.4	8636	5.0	3%	1%	24.3	58.7
17158	57	44.5		2.1	17.8	8531	5.0	3%	0%	24.1	60.1
8341	57	50.2		2.1	14.6	8359	5.0	62%	8%	25.7	64.4
17116	56	46.5		2.1	18.4	8316	5.0	5%	1%	24.5	59.9
15958	58	50.5		2	19	8246	5.0	8%	0%	26.3	65.1
34117	54	50		1.7	19	8128	5.0	0%	0%	25.8	64.1
11649	58	43		2	15	7920	5.0	37%	3%	26.1	56.7
1117	54	47.8		1.8	17.7	7819	5.0	2%	0%	25.6	61
1H820	57	50.8		2.1	16.9	7592	5.0	12%	0%	24.6	65.3
6317	55	48.8		2.1	19	7290	5.0	10%	0%	25.4	63.4
11830	46	34.7	83%	1.6	17.6	7272	5.0	3%	1%	26.5	46.8
15820	61	47		2.2	13	7235	5.0	20%	3%	24.6	61.4
8156	61	45.7		2.2	12.6	7211	5.0	50%	7%	24.5	60.1
54830	38	31.8	85%	1.2	16.5	7118	5.0	0%	0%	26.6	43.9
42820	58	44.7		1.8	14.8	6796	5.0	53%	3%	24.9	56.9
Averages	55	45.6			17.3	7988	5.0	16%	2%	25.5	59.3

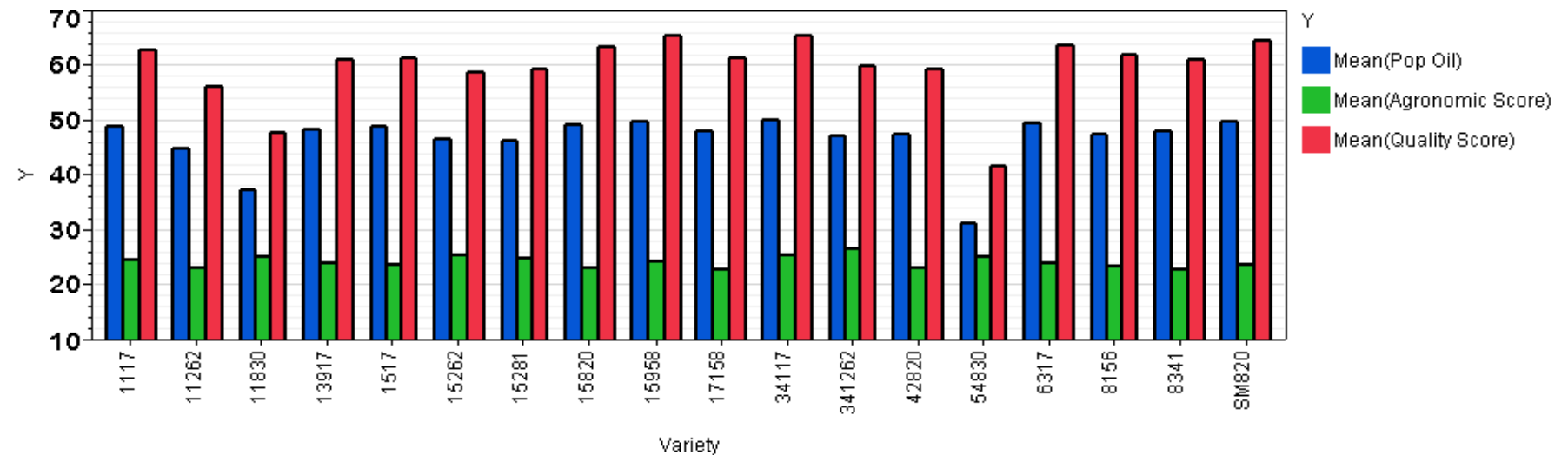
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SOUTHWESTERN NEBRASKA 2010
ZONE UPPER 7

VARIETY	KCT/ ₁₀ GR	MWVT/Oil	BALL%	SHAPE	HARVEST MOISTURE	YIELD/ ₁₄ %	PLANT DISEASE	BROKEN STALK	STALK ROT	AGRONOMIC SCORE	QUALITY SCORE	GOSS WILT SCORE
341262	56	47.5	.	1.6	24.2	8713	5.0	0%	3%	26.8	60.2	4.8
11262	58	45.2	.	1.9	23.1	8354	5.0	0%	30%	23.5	56.5	4.4
15281	63	46.7	.	2.4	26.9	7942	5.0	0%	3%	25	59.5	4.9
17158	57	48.3	.	2.2	20.4	7688	5.0	0%	13%	23	61.5	4.6
15262	57	46.8	.	1.8	22.4	7666	5.0	0%	7%	25.6	59.1	4.8
1517	58	49.2	.	2.1	22.3	7575	5.0	0%	0%	24	61.7	4.8
15820	61	49.3	.	2.2	19.2	7496	5.0	0%	30%	23.3	63.7	4.2
54830	36	31.3	85%	1.2	22.0	7455	5.0	0%	0%	25.4	41.9	4.9
6317	55	49.7	.	1.9	21.4	7403	5.0	0%	3%	24.2	64	4.8
SM820	56	50.0	.	3	20.4	7391	5.0	0%	0.4	23.9	64.8	4.6
34117	52	50.2	.	1.7	23.4	7358	5.0	0%	3%	25.7	65.7	4.8
1117	53	49.0	.	1.7	21.4	7257	5.0	0%	7%	24.8	63.1	4.7
11830	51	37.5	60%	2	21.7	7053	5.0	0%	0.1	25.4	48	4.5
15958	58	50.0	.	2	23.1	6574	4.9	0%	7%	24.5	65.7	4.7
13917	53	48.5	.	1.8	24.1	6512	5.0	0%	7%	24.1	61.2	4.1
42820	62	47.7	.	1.7	17.6	6440	5.0	0%	23%	23.2	59.7	3.8
8156	64	47.7	.	2.2	19.6	6383	5.0	1%	50%	23.7	62.1	3.5
8341	59	48.2	.	1.9	21.6	5021	5.0	0%	52%	23.2	61.4	4.5
Averages	56	46.8			21.9	7238	5.0	0%	16%	24.4	60.0	4.5

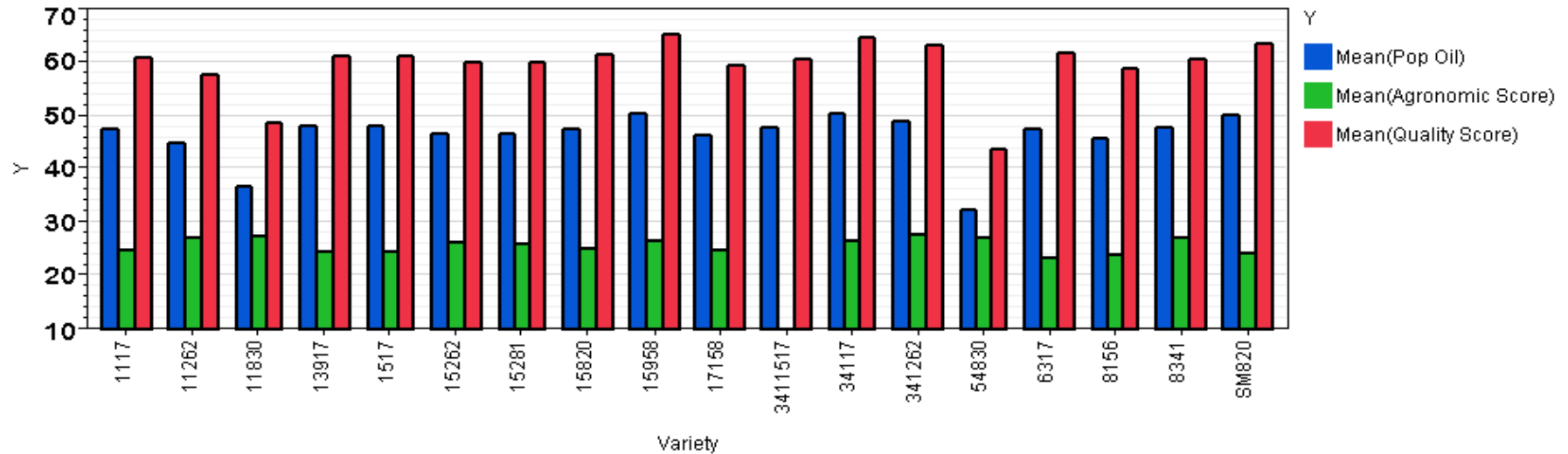
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SOUTH CENTRAL NEBRASKA
ZONE 7

VARIETY	KCT/10GR	MWVT/Oil	BALL%	SHAPE	HARVEST MOISTURE	YIELD/14%	PLANT DISEASE	BROKEN STALK	STALK ROT	AGRONOMIC SCORE	QUALITY SCORE
15262	58	46.8	.	1.6	18.2	8507	5.0	1%	3%	26.4	60
8156	57	45.8	.	2.1	13.6	8348	4.9	1%	13%	24.3	59
341262	56	49.2	.	1.6	17.5	8279	4.8	1%	0%	27.8	63.4
17158	54	46.7	.	2.2	17.2	8229	5.0	3%	5%	24.9	59.6
15958	59	50.7	.	1.9	18.7	8149	4.8	2%	0%	26.9	65.4
8341	57	48.0	.	2.0	15.6	8124	4.9	3%	17%	27.3	60.7
11262	57	45.0	.	1.8	18.0	8052	4.8	2%	3%	27.5	57.9
15820	60	47.7	.	2.0	15.1	7794	4.9	2%	8%	25.3	61.6
1517	61	47.4	.	2.1	17.5	7558	5.0	0%	7%	24.9	60.5
6317	57	47.7	.	2.0	15.8	7416	4.8	6%	5%	23.6	62
11830	48	36.8	80%	1.6	16.1	7162	4.7	4%	10%	27.8	48.7
1117	53	47.7	.	2.0	16.5	7146	4.8	3%	3%	25.1	61.1
15281	73	46.8	.	2.2	18.8	7004	5.0	0%	0%	26.4	60.1
34117	55	50.5	.	1.7	17.2	6806	4.9	3%	5%	21.4	64.7
13917	55	48.2	.	1.9	19.9	6700	4.7	2%	8%	24.8	61.2
SM820	63	50.3	.	2.7	14.8	6650	4.8	9%	37%	24.4	63.6
54830	37	32.5	88%	1.2	14.8	6528	5.0	1%	0%	27.5	43.8
3411517	58	48.0	.	1.4	12.8	6195					60.6
Averages	57	46.4			16.6	7480	4.9	3%	7%	25.6	59.7

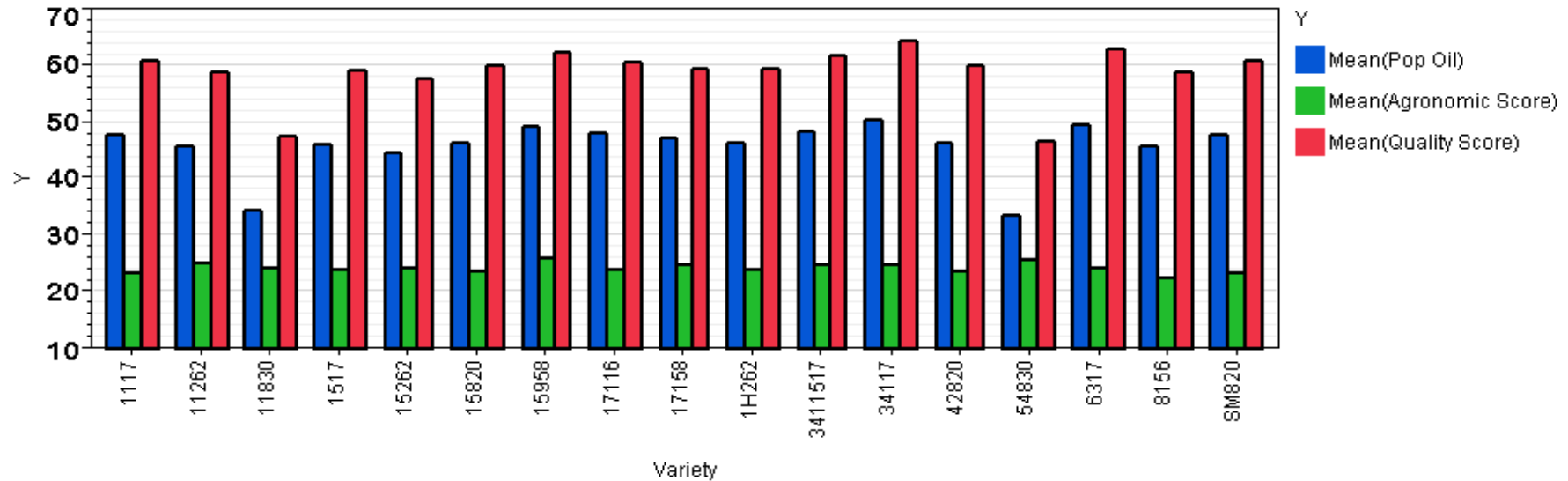
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CENTRAL ILLINOIS 2010
ZONE LOWER 7

VARIETY	KCT/10GR	MWVT/Oil	BALL%	SHAPE	HARVEST MOISTURE	YIELD/14%	PLANT DISEASE	BROKEN STALK	STALK ROT	AGRONOMIC SCORE	QUALITY SCORE
17158	66	47.3		1.9	14.1	6427	4.2	5%	45%	25.2	59.7
1H262	60	46.7		1.7	17.4	6056	3.8	8%	50%	24.2	59.7
8156	68	45.8		2.1	15.0	5885	3.9	12%	85%	22.9	59.1
17116	65	48.2		1.9	14.3	5817	3.9	7%	70%	24.2	60.7
54830	42	33.8	83%	1.3	15.2	5718	4.3	3%	50%	26	46.7
15262	65	44.8		1.7	19.4	5661	4.7	6%	12%	24.4	57.8
15820	67	46.5		2.2	16.5	5632	4.2	16%	82%	23.9	60.3
1517	67	46.3		2.3	15.5	5427	4.0	4%	45%	24.2	59.2
15958	64	49.3		1.9	15.5	5411	4.0	6%	43%	26.1	62.6
42820	68	46.5		1.7	15.4	5383	3.8	35%	100%	24	60.2
11830	58	34.5	71%	1.6	14.4	5371	3.4	1%	65%	24.5	47.6
SM820	65	47.8		2.5	15.6	5242	3.8	29%	100%	23.5	60.9
11262	67	45.8		1.8	18.4	5124	3.5	3%	75%	25.4	58.9
1117	63	47.8		1.7	15.5	4780	3.5	3%	60%	23.7	61
6317	65	49.7		1.9	13.9	4701	3.6	1%	90%	24.6	63.1
34117	64	50.7		1.7	15.2	4682	3.6	7%	55%	25.1	64.5
3411517	68	48.5		2.1	14.6	4448	3.8	6%	70%	25.1	61.8
Averages	64	45.9			15.6	5398	3.9	9%	65%	24.5	59.0

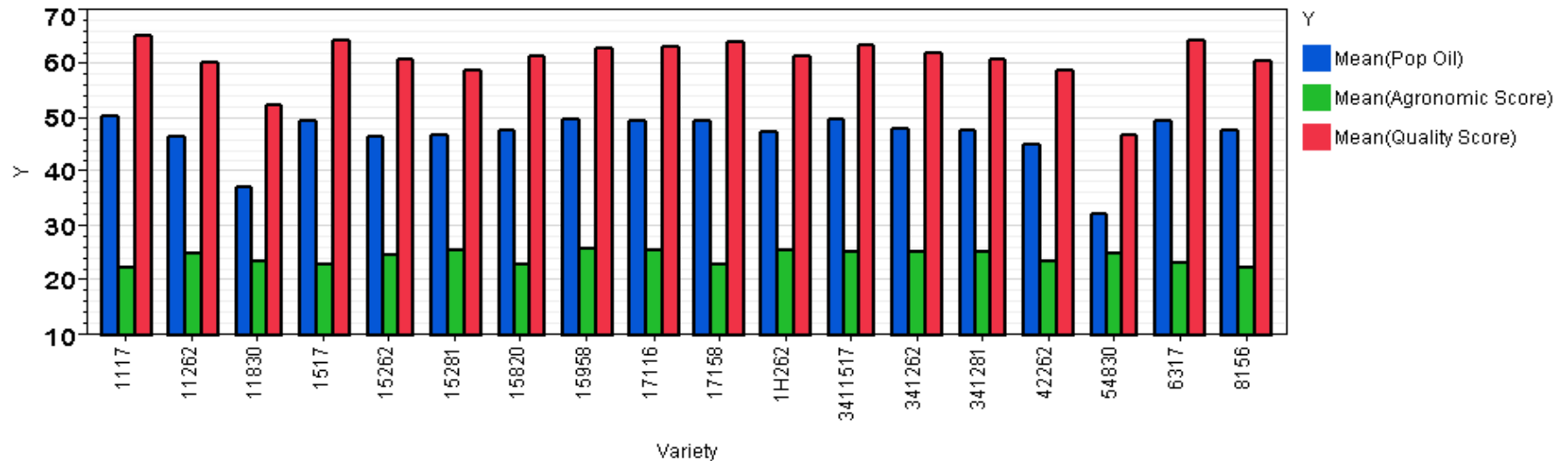
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SOUTHERN INDIANA
ZONE 8

VARIETY	KCT/10GR	MWVT/Oil	BALL%	SHAPE	HARVEST MOISTURE	YIELD/14%	PLANT DISEASE	BROKEN STALK	STALK ROT	AGRONOMIC SCORE	QUALITY SCORE	LEAF BLIGHT
11262	65	46.8		1.8	16.2	5112	4.0	20%	50%	25.4	60.4	1.1
1117	64	50.7		1.8	11.8	5065	4.1	6%	40%	22.7	65.3	0.5
15262	63	46.8		1.9	18.3	5055	4.8	2%	5%	25.1	60.9	0.7
1H262	61	47.7		1.6	15.8	4607	4.2	1%	15%	26.1	61.7	1.7
8156	66	48.0		2.1	16.0	4547	4.5	50%	50%	22.8	60.7	1.4
15958	65	50.0		2.1	16.1	4534	4.7	3%	8%	26.2	63	1.1
6317	67	49.7		1.8	9.6	4492	4.1	0%	58%	23.5	64.5	1.3
15820	66	48.0		2.3	16.0	4350	4.5	30%	23%	23.4	61.5	0.7
1517	67	49.8		2.0	19.1	4297	4.7	2%	13%	23.4	64.4	1.5
3411517	61	50.0		1.7	16.7	4232	4.2	0%	20%	25.5	63.7	1.5
42262	72	45.3		1.6	15.0	4072	4.3	5%	0%	24	58.9	1.9
54830	41	32.7	85%	1.2	15.6	3980	4.7	6%	15%	25.4	47.1	0.2
17158	63	49.7		1.9	18.0	3978	4.6	0%	20%	23.3	64.1	1.3
17116	62	49.7		2.0	17.5	3939	4.4	0%	35%	26	63.5	1.3
341262	68	48.3		1.5	20.6	3832	4.3	5%	30%	25.7	62.1	1.6
11830	62	37.7	65%	1.6	14.4	3643	4.3	6%	35%	23.9	52.5	1.3
341281	72	48.0		1.6	14.3	3317	4.4	0%	50%	25.5	61.1	1.8
15281	74	47.0		2.2	20.1	3152	4.6	0%	0%	25.9	59	0.9
Averages	64	47.0			16.2	4234	4.4	8%	26%	24.7	60.8	1.2

Chart



NORTH CENTRAL NEBRASKA TEST STRIPS 2010
ZONE 6

VARIETY	Population	KCT/10 GR	MWVT	BALL%	COLOR	KERNAL SHAPE	BROKEN STALK	STALK ROT	HARVEST MOISTURE	YIELD/ ACRE
1517	32000	61	44.0	.	4.6	2.3	5%	10%	19.1	6975
17158	29000	61	45.5	.	4.4	2.3	10%	30%	17.6	6917
15262	30333	62	45.5	.	4.3	1.7	0%	0%	18	6127
11262	31025	59	46.5	.	4.0	2.1	2%	10%	16.8	6116
1117	29000	59	47.5	.	3.9	2.0	5%	50%	17	5893
15820	30000	63	45.5	.	4.4	2.2	35%	60%	13.6	5734
8156	30000	64	45.5	.	4.4	2.2	50%	70%	13.5	5682
34117	27000	54	50.5	.	4.2	1.7	5%	10%	18.8	5315
11830	33000	53	34.0	61%	3.4	1.6	5%	35%	16.5	5294
6317	28000	59	50.0	.	4.6	2.3	5%	25%	16	5150
54830	23000	37	31.0	95%	3.7	1.3	0%	10%	16.1	4975

The Research Plot data was derived by the following means:

Oil Expansion: A metric weight to volume test. The seed is popped in the new model Cretors popper. A 250 gram sample was cleaned and ran over a 13/64 screen. They were popped in peanut oil. Samples were conditioned to 13.5% moisture in our conditioning room and stored for at least three weeks before popping them. The samples were all hand shelled. We have popping samples that were combined on some of our hybrids please contact us for that info.

Harvest Moisture: Moisture of kernels at harvest

% Broken Stalks: Percent of broken stalks below the ear at harvest

% Stalk Rot: Percent of stalks showing rot below the ear

Agronomic Composite Score: Numerical score achieved by adding values from the following weighted values: Ear tip condition, Ear size, Leaf size, Lodging, Stalk, Brace roots, and Plant disease. The higher score the better the varieties agronomics.

Quality Composite Score: Numerical score achieved by adding values from the following weighted values: taste, hulls, kernel color, and ear tip condition. This is then added to popping expansion. The higher the score the better quality of the variety

Replications: Hybrids were replicated in each plot 3 times and then the average was reported.

Yield Data: Any entries with missing plants or other circumstances which led to data errors were removed from the averages.

Goss Wilt Score: In Northern Nebraska and Southwest Nebraska the rating system is 1- totally devoured to 3- 50% of the leaf tissue area shows blight to 5- No blight or lesions from Goss Wilt.

Kernel Shape: A score of 1.0 is a perfectly round kernel. A score of 3.0 is a pointed kernel. A score of 2.0 is a kernel that is more flat with a rounded top.