

FIELD EXPERIMENT HISTORY

Title: Low Energy Corn Silage Evaluation
Experiment: Low Starch Study **Trial ID:** 08C57 **Year:** 2008
Personnel: M.G. Bertram, J.G. Lauer, K.D. Kohn and T.H. Diallo
Location: Arlington, WI **County:** Columbia
Supported by: Marshfield Ag. Research Station, UWEX Team Forage

Site Information

Field: ARS520 NW **Previous Crop:** Corn **Soil Type:** Plano Silt Loam
Soil Test : **Date:** 10/1/08 **pH** 7.1 **SOM (%)** 2.9 **P (ppm)** 73 **K (ppm)** 242

Plot Management

Tillage Operations: Fall Chisel plow Field Cultivator Cultivate 6/17/08
Fertilizer:

	<u>Analysis</u>	<u>Rate</u>	<u>Date</u>
Preplant	46-0-0	330 lb/A	4/30/2008
Starter	10-34-0	3 gal/A	Planting
Post plant	none	N/A	N/A
Manure	Liquid Dairy	4,300 gal/A	10/31/2007

Herbicide: Hornet WDG 4 oz/A **Insecticide:** Force 3G 4.4lbs/A
 Dual II Magnum 1.5 pt/A
 Accent SP 0.33 oz/A

Irrigation: None **Hybrid:** varies
Planting Date: 5/20/2008 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: varies **plants per acre** **Planting Method:** Almaco Precision Planter
Harvest Date: 10/14/2008 **Harvest Method:** Hew Holland 707 Plot Chopper

Notes:

Experimental Design

Design: RCB **Replications:** 4
Plot Size Seeded: 25' x 10' **Experiment Size:** 0.28 A
Harvest Plot size: 22' x 2.5'

Factors/Treatments:

<u>Treatment</u>	<u>Source/Type</u>	<u>Target Density</u>
Dekalb DKB393	Brazil- Tropical	35,000 ppa
Dekalb DKB499	Brazil- Tropical	35,000 ppa
Dekalb DKB789	Brazil- Tropical	35,000 ppa
Agroceres AG1051	Brazil- Tropical	35,000 ppa
Agroceres AG2060	Brazil- Tropical	35,000 ppa
Pioneer 30F34	Southern US- 132 RM	35,000 ppa
Hyttest HT92-90W	Mexican- 135 RM	35,000 ppa
Kaltenberg KB105LF	Leafy (105 RM)	45,000 ppa
Kaltenberg LH227	Male Sterile	35,000 ppa
Dekalb DKC50-44	Check (100 RM)	35,000 ppa

Results: Table C-47.

**Table C-47. Low Starch Corn Silage Evaluation.
Arlington, WI 2008.**

Treatment		Yield tn/A	Moist %	Plant		CP %	ADF %	NDF %	Lignin %	NDFD %	NFC %	Starch %	TDN %	Milk per	
				height ft	Lodging %									Ton lb	Acre lb
Dekalb	DKB393	9.3	76.6	12.1	0	7.4	35.1	60.8	4.6	63.4	26.5	3.9	56.3	2,522	23,342
Dekalb	DKB499	7.9	74.8	12.6	0	6.9	35.7	62.0	5.3	61.2	26.1	3.3	54.5	2,353	18,488
Dekalb	DKB789	8.4	75.5	12.3	3	6.6	35.4	60.4	5.3	59.7	27.8	4.7	53.7	2,266	19,146
Agroceres	AG1051	7.3	78.2	13.3	1	6.6	38.5	65.4	5.7	59.5	23.1	2.7	54.5	2,333	17,121
Agroceres	AG2060	7.5	75.0	12.8	1	6.4	34.8	61.2	5.2	60.4	27.5	5.1	54.5	2,342	17,523
Pioneer	30F34	6.6	75.2	11.0	1	7.3	29.1	53.8	4.2	64.0	33.4	9.0	56.6	2,549	16,709
Hyttest	HT92-90W	8.8	75.1	12.4	0	6.7	35.5	62.2	5.4	61.1	26.1	3.8	54.6	2,362	20,719
Kaltenberg	KB105LF (Leafy)	7.9	46.3	10.5	0	6.9	23.3	41.4	4.0	57.1	46.8	34.5	64.5	2,999	23,717
Kaltenberg	Male Sterile	2.2	64.0	7.9	0	10.4	28.0	51.9	3.7	62.4	32.2	5.6	54.4	2,370	5,317
Dekalb	DKC50-44 (Check)	8.4	45.3	9.5	0	6.9	18.9	34.1	3.2	59.2	54.1	43.6	67.2	3,225	26,944
Mean		7.4	68.6	11.4	1	7.2	31.4	55.3	4.6	60.8	32.4	11.6	57.1	2,532	18,902
<u>Probability (%)</u>															
Treatment		<0.1	<0.1	<0.1	28.1	<0.1	<0.1	<0.1	6.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<u>LSD 10%</u>															
Treatment		0.8	3.6	0.5	NS	0.5	1.2	1.9	0.3	2.0	1.9	1.6	1.1	109	2,113
<u>CV (%)</u>															
Treatment		9	4	3	280	6	3	3	5	3	5	12	2	4	9

FIELD EXPERIMENT HISTORY

Title: Low Energy Corn Silage Evaluation
Experiment: Low Starch Study **Trial ID:** 08C56 **Year:** 2008
Personnel: M.G. Bertram
Location: Marshfield, WI **County:** Wood
Supported by: Marshfield Ag. Research Station, UWEX Team Forage

Site Information

Field: W8 **Previous Crop:** Soybean **Soil Type:** Withee Silt Loam
Soil Test : **Date:** 10/30/06 **pH** 6.7 **SOM (%)** 3.2 **P (ppm)** 32 **K (ppm)** 79

Plot Management

Tillage Operations: Fall Chisel Plow Spring Field Cultivator Cultivated

Fertilizer:	<u>Analysis</u>	<u>Rate</u>	<u>Date</u>
Preplant	none	N/A	N/A
Starter	10-34-0	3 gal/A	Planting
Post plant	28-0-0	40 gal/A	7/1/2008
Manure	none	N/A	N/A

Herbicide: G-Max Lite 2.33 pt/A **Insecticide:** None
 Hornet 2.4 oz/A
 Atrazine 0.2 qt/A

Irrigation: None **Hybrid:** varies

Planting Date: 5/19/2008 **Planting Depth:** 1.5" **Row Width:** 30"

Target Plant Density: varies **plants per acre** **Planting Method:** Almaco Precision Planter

Harvest Date: varies **Harvest Method:** hand harvested

Notes:

Experimental Design

Design: RCB **Replications:** 4
Plot Size Seeded: 25' x 10' **Experiment Size:** 0.25 A
Harvest Plot size: 22' x 2.5'

Factors/Treatments:

<u>Treatment</u>	<u>Source/Type</u>	<u>Target Density</u>	<u>Harvest Date</u>
Dekalb DKB393	Brazil- Tropical	35,000 ppa	10/23/2008
Dekalb DKB499	Brazil- Tropical	35,000 ppa	10/20/2008
Dekalb DKB789	Brazil- Tropical	35,000 ppa	10/17/2008
Agroceres AG1051	Brazil- Tropical	35,000 ppa	10/23/2008
Agroceres AG2060	Brazil- Tropical	35,000 ppa	10/20/2008
Pioneer 30F34	Southern US- 132 RM	35,000 ppa	10/23/2008
Hyttest HT92-90W	Mexican- 135 RM	35,000 ppa	10/23/2008
Kaltenberg KB105LF	Leafy (105 RM)	45,000 ppa	10/10/2008
Kaltenberg LH227	Male Sterile	35,000 ppa	10/17/2008
Garst 8922YG	Check (90 RM)	35,000 ppa	10/3/2008

Results: Table C-48.

**Table C-48. Low Starch Corn Silage Evaluation.
Marshfield, WI 2008.**

Treatment	Yield tn/A	Moist %	Plant		CP %	ADF %	NDF %	Lignin %	NDFD %	NFC %	Starch %	TDN %	Milk per	
			height ft	Lodging %									Ton lb	Acre lb
Dekalb DKB393	4.8	79.2	8.5	1	8.6	31.5	58.9	3.8	62.4	27.3	4.2	56.0	2,479	12,019
Dekalb DKB499	5.1	77.6	9.1	0	8.2	33.5	61.5	4.5	61.0	25.4	2.8	54.9	2,377	12,218
Dekalb DKB789	4.9	79.3	8.5	0	9.2	32.2	59.0	4.2	60.7	26.8	3.2	54.8	2,363	11,476
Agroceres AG1051	4.3	79.4	9.4	7	8.3	34.4	62.8	4.7	60.3	24.1	3.5	55.8	2,423	10,486
Agroceres AG2060	4.7	75.4	9.4	1	7.7	31.9	59.9	4.8	61.8	27.6	4.3	55.1	2,404	11,337
Pioneer 30F34	4.3	76.7	8.3	0	9.1	29.0	55.6	3.9	62.5	29.5	5.2	55.5	2,441	10,536
Hyttest HT92-90W	5.0	75.3	9.1	1	7.9	33.5	61.4	4.9	60.8	26.0	3.7	55.1	2,381	11,938
Kaltenberg KB105LF (Leafy)	6.3	69.1	8.8	0	7.3	25.1	47.5	3.8	60.9	40.2	23.0	62.9	2,927	18,520
Kaltenberg Male Sterile	1.3	76.9	6.5	0	10.2	28.1	54.0	3.8	64.1	30.3	4.5	55.4	2,464	3,116
Garst 8922YG (Check)	7.5	59.9	8.4	0	7.2	20.2	37.7	3.2	59.8	50.1	37.4	66.8	3,200	23,955
Mean	4.8	74.9	8.6	1	8.4	29.9	55.8	4.2	61.4	30.7	9.2	57.2	2,546	12,560
<u>Probability (%)</u>														
Treatment	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
<u>LSD 10%</u>														
Treatment	0.5	1.0	0.6	2	0.4	1.3	1.9	0.3	1.5	1.6	1.3	0.9	83	1,486
<u>CV (%)</u>														
Treatment	9	1	6	207	4	4	3	7	2	4	12	1	3	10

FIELD EXPERIMENT HISTORY

Title: Low Energy Corn Silage Demonstration
Experiment: Low Starch Study **Trial ID:** 08C55 **Year:** 2008
Personnel: M.G. Bertram
Location: Stratford, WI **County:** Marathon
Supported by: Marshfield Ag. Research Station, UWEX Team Forage

Site Information

Field: 413 **Previous Crop:** Alfalfa/Grass **Soil Type:** Withee Silt Loam
Soil Test : **Date:** 10/1/07 **pH** 6.5 **SOM (%)** 3.5 **P (ppm)** 26 **K (ppm)** 57

Plot Management

Tillage Operations: Fall Chisel Plow Spring Field Cultivator Cultivated
Fertilizer:

	<u>Analysis</u>	<u>Rate</u>	<u>Date</u>
Preplant	none	N/A	N/A
Starter	9-11-30	150 lb/A	Planting
Post plant	28-0-0	40 gal/A	7/3/2008
Manure	none	N/A	N/A

Herbicide: G-Max Lite 2.33 pt/A **Insecticide:** None
 Hornet 2.4 oz/A
 Atrazine 0.2 qt/A

Irrigation: None **Hybrid:** varies
Planting Date: 5/19/2008 **Planting Depth:** 1.5" **Row Width:** 30"
Target Plant Density: 35,000 plants per acre **Planting Method:** John Deere 1750 planter
Harvest Date: 10/27/2008 **Harvest Method:** Case forage chopper

Notes:

Experimental Design

Design: Demo strips **Replications:** 2
Plot Size Seeded: 600' x 15' **Experiment Size:** 3.72 A
Harvest Plot size: 595' x 15'

Factors/Treatments:

<u>Hybrid</u>	<u>Source/Type</u>
Dekalb DKB393	Brazil- Tropical
Dekalb DKB499	Brazil- Tropical
Dekalb DKB789	Brazil- Tropical
Agroceres AG1051	Brazil- Tropical
Agroceres AG2060	Brazil- Tropical
Pioneer 30F34	Southern US- 132 RM
Hyttest HT92-90W	Mexican- 135 RM
Spangler 324G	Check (92 RM)
Pioneer 34N44	Check (110 RM)

Results: Table C-49.

**Table C-49. Low Starch Corn Silage Evaluation.
Stratford, WI - 2008.**

Treatment	Yield tn/A	Moist %	Plant		CP %	ADF %	NDF %	Lignin %	NDFD %	NFC %	Starch %	TDN %	Milk per		
			height ft	Lodging %									Ton lb	Acre lb	
Dekalb DKB393	3.9	80.6	9.2	0	8.3	35.8	65.1	4.6	57.3	22.2	3.0	54.9	2,358	9,140	
Dekalb DKB499	3.7	78.2	10.3	3	7.8	37.4	66.4	5.3	55.7	21.6	3.0	53.7	2,244	8,294	
Dekalb DKB789	3.6	78.4	9.1	0	8.6	35.8	63.9	5.1	55.5	23.0	2.8	52.9	2,177	7,743	
Agroceres AG1051	2.9	79.8	10.1	9	8.9	36.8	66.2	5.5	53.7	20.8	3.0	53.8	2,213	6,372	
Agroceres AG2060	3.5	76.8	10.7	1	7.6	35.1	64.5	5.1	55.4	23.9	3.4	52.9	2,177	7,681	
Pioneer 30F34	2.9	76.9	9.7	4	9.0	32.9	61.5	4.4	58.1	24.9	2.9	54.0	2,313	6,681	
Hyttest HT92-90W	3.3	75.6	10.2	0	8.3	36.8	66.1	5.3	56.4	21.6	2.2	53.8	2,265	7,542	
Spangler 324G (Check)	4.1	55.2	8.5	1	7.6	22.9	42.5	3.3	57.5	45.0	33.5	64.1	3,028	12,485	
Pioneer 34N44 (Check)	4.3	61.3	8.7	0	7.7	25.4	47.0	3.6	57.4	40.7	26.6	63.1	2,949	12,765	
Mean	3.6	73.6	9.6	2	8.2	33.2	60.4	4.7	56.3	27.1	8.9	55.9	2,414	8,745	
<u>Probability (%)</u>															
Treatment	<0.1	<0.1	<0.1	0.1	0.3	<0.1	<0.1	6.5	9.4	<0.1	<0.1	<0.1	<0.1	<0.1	
<u>LSD 10%</u>															
Treatment	0.2	1.0	0.5	NS	0.5	1.4	1.9	0.3	2.3	1.7	1.9	1.3	136	838	
<u>CV (%)</u>															
Treatment	3	1	3	69	3	2	2	3	2	3	12	1	3	5	