

## FIELD EXPERIMENT HISTORY

**Title:** Alfalfa - Corn Response to Rotation (Apogee Trial Embedded).  
**Experiment:** 09AC **Trial ID:** 3680 **Year:** 2014  
**Personnel:** Joe Lauer, Thierno Diallo, Kent Kohn  
**Location:** Arlington, WI **County:** Columbia  
**Supported By:** HATCH

### Site Information

**Field:** ARS333 **Previous Crop:** See Factors **Soil Type:** Plano silt loam  
**Soil Test Date:** 11/11/2014 **pH:** 6.5 **OM (%)** 3.2 **P (ppm)** 26 **K (ppm)** 140

### Plot Management

**Tillage Operations:** No-Till

<b>Fertilizer:</b>	<u>Analysis:</u>	<u>Rate lbs/A:</u>	<u>Date:</u>
<b>Preplant :</b>	N/A	N/A	N/A
<b>Starter :</b>	46-0-0	70	5/20/14
<b>Post plant :</b>	28-0-0	CC and 2C: 130	6/11/14
<b>Manure:</b>	N/A	1C: 90	N/A
<b>Herbicide:</b>	Corn: Defy 16 oz/A 2/12/14 Roundup 28 oz/A 5/12/14 Roundup 18 oz/A 6/12/14 Alfalfa: Raptor 5 oz/A 6/27/14 Roundup 28 oz/A 9/24/14	<b>Insecticide:</b> None	
<b>Irrigation:</b>	None	<b>Hybrid:</b> C: Pioneer N49W 3000GT2 A: WL 352 LHRR	
<b>Planting Date:</b>	C: 5/20/14 A: 5/31/14	<b>Planting Depth:</b> C: 1.5" A: 0.5"	<b>Row Width:</b> C: 30" A: 6"
<b>Target Plant Density:</b>	35000	<b>Planting Method:</b>	C: Kinze PT planter A: JD750 No-Till drill
<b>Harvest Date:</b>	G: 10/31/14 S: 9/19/14 A: 5/29/14; 7/23/14; 9/4/14	<b>Harvest Method:</b>	G: Massey 8XP S: NH 707 A: Almaco Harvester
<b>Notes:</b>			

### Experimental Design

<b>Design:</b> RCB split-split-block	<b>Replications:</b> 3
<b>Plot Size Seeded:</b> MP: 60' x 75' SP: 10' x 34	<b>Experiment Size:</b> 3.47 A
<b>Factors/Treatments:</b>	<b>Harvest Plot Size:</b> G: 5' x 34.5'
<b><u>Rotation - 2014 Treatments:</u></b>	<b><u>Kudos Treatment:</u></b>
1) AAACC-2C 8) AACC- 1C	2.) 13 oz/A. ai: 0.25 kg/ha Alfalfa @ 10 cm
2) AAACC-1A 9) AACC- 2C	3.) 26 oz/A. ai: 0.50 kg/ha Alfalfa @ 10 cm
3) AAACC-2A 10) AACC- 1A	4.) 52 oz/A. ai: 1.0 kg/ha Alfalfa @ 10 cm
4) AAACC-3 11) AACC- 2A	6.) 13 oz/A. ai: 0.25 kg/ha Alfalfa @ 20 cm
5) AAACC-1C 12) AACC- 1C (Silage)	7.) 26 oz/A. ai: 0.50 kg/ha Alfalfa @ 20 cm
6) AACC-1A 13) AACC- 2C (Silage)	8.) 52 oz/A. ai: 1.0 kg/ha Alfalfa @ 20 cm
7) AACC 2A 14) CC- Grain & Silage (S/S,S/G,G/S,G/G)	10.) 13 oz/A. ai: 0.25 kg/ha Alfalfa @ 10 & 20 cm
	12.) Alfalfa UTC
	13.) No Alfalfa UTC
	14.) 13 oz/A.a.i: 0.25 kg/ha No Alfalfa & Alfalfa @ 20 cm

**Results: Tables 1409-01,1409-02,1409-03 and 1409-04**

**Table: 1409 -04 . Silage c orn res pons e to Alfalfa es tablshment techniques.****Arlington, WI-2014**

Treatment id	Product	Kudosrate		Alfalfa Height cm	Dry Matter Yield t/A	Moisture %	Whole Plant						Milkper		Harvest density plts/A	Plant Height inches	
		oz/A	kg/ha				Kemel Milk %	Crude protein %	ADF %	NDF %	<i>In Vitro</i> Digest %	NDFD %	Starch %	T on lbs/T			Acre lbs/T
2	Kudos	13	0.25	10	11.0	60.1	51.7	6.9	25.0	44.1	83.9	63.4	34.1	3459	38072	32138	105
3	Kudos	26	0.5	10	9.1	65.2	61.7	7.7	27.6	48.3	81.9	62.6	30.5	3315	30084	30331	97
4	Kudos	52	1	10	9.9	63.2	53.3	7.0	27.2	47.1	82.1	62.0	31.4	3335	33086	31621	101
6	Kudos	13	0.25	20	10.6	62.0	50.0	6.6	27.0	47.3	82.1	62.2	31.5	3337	35470	32138	104
7	Kudos	26	0.5	20	10.2	61.4	51.7	6.9	25.7	45.8	83.5	64.0	32.8	3425	35026	32138	104
8	Kudos	52	1	20	9.8	61.9	61.7	7.1	25.9	45.9	82.9	62.9	32.9	3392	33299	31750	103
10	Kudos	13	0.25	10 & 20	11.0	60.4	51.7	7.3	24.9	44.5	84.7	65.8	33.6	3503	38654	33686	102
12	Alfalfa UTC		0		10.8	61.9	50.0	6.7	27.1	47.1	82.1	62.2	32.0	3341	36033	31879	107
13	No alfalfa UTC		0		11.0	59.0	46.7	6.9	25.2	44.5	83.2	62.3	34.1	3421	37801	30718	104
14	No alfalfa	13	0.25	10 & 20	9.7	62.5	61.7	7.0	26.8	47.5	82.4	63.0	31.0	3352	32356	31750	97
Mean					10.3	61.8	54.0	7.0	26.2	46.2	82.9	63.1	32.4	3388	34988	31815	102
<b>Probability(%)</b>																	
Kudos Treatment (T)					3.6	24.4	15.1	14.4	41.8	37.2	49.6	48.6	58.3	49.0	5.5	64.3	3.1
<b>LSD(0.10)</b>																	
Kudos Treatment (T)					1.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	4444	NS	5