

Appendix IV. 2006 Agronomic Calendar for WICST (Fld 440)

ARLINGTON RESEARCH STATION

Corn rotations					
CROP-2006 Rotation Treatment #	CORN CS1 + prairie 1	CORN CS2 2	CORN CS3 4	CORN CS4 8	CORN CS5 13
Plot #'s	109,204,306,412, 501,504,508	108,206*,310,408	104,201,301,402	113,210,311,414	114,211,312,403
Primary Tillage	Fall chisel plow 11-14-05	None	Spring chisel plow 4-27-06	Fall chisel plow 11-14-05	Fall MB plow 11-15-05
Secondary Tillage	Field cultivator 4-27-06	None	Field cultivator 5-4-06, 5-22-06	Field cultivator 4-27-06	Field cultivator 5-4-06, 5-22-06
Variety Planting Date Rate	Dekalb 5878 Bt 4-28-06 34,000 s/a	Dekalb 5878 Bt 4-28-06 34,000 s/a	Viking 5305 (NII) 5-23-06 38,000 s/a	Dekalb 5878 Bt 4-28-06 34,000 s/a	Viking 5305 (NII) 5-23-06 38,000 s/a
Starter Fertilizer	100 lb/a 5-14-42	100 lb/a 5-14-42	120 lb/a 0-0-50 in starter box	100 lb/a 5-14-42	None
Fertilizer	140 lb N/a (28%) per PSNT 6-15-06	120 lb N/a (28%) per PSNT 6-15-06	None	None	None
Manure	None	None	None	6000 gal/a 11-10-05	6000 gal/a 11-10-05
Pesticides	Force 4.4 lb/a in planter 4-29-06 tank mix: Dual II Magnum (24 oz/a), Hornet WDG (4 oz/a)	4-29-06 tank mix: Dual II Magnum (24 oz/a), Hornet WDG (4 oz/a), Mirage + (30 oz/a); spot sprayed 206*	None	4-29-06 tank mix: Dual II Magnum (24 oz/a), Hornet WDG (4 oz/a)	None
Rotary Hoe/tine weed	None	None	RH: 5-31-06 TW: 6-7-06	None	RH: 5-31-06 TW: 6-7-06
Cultivation	None	None	6-13-06 ('Wil-rich') 6-23-06 (disk hiller)	None	6-13-06 ('Wil-rich') 6-23-06 (disk hiller)
Hand weed	No	No	2 man-hr/a (7/6/06)	No	2 man-hr/a (7/7/06)
Harvest & Yield	10-24-06 192.7 bu/a	10-24-06 190.6 bu/a	10-24-06 144.8 bu/a	10-24-06 217.7 bu/a	10-24-06 189.0 bu/a
Fall Practices	Chop stalks 10-27 chisel plow 11-30	none	Chop stalks 10-27 MB plow 11-26	Chop stalks 10-27, 12,000 gpa manure 11-24, chisel plow 11-30	Chop stalks 10-27 8,000 gpa Manure 11-24, chisel plow 11-30
Crop 2007	Corn	Soybean	Soybean	D.S. Alfalfa	Oats/Alfalfa

* due to missing corn from ground squirrels, plot 206 was replanted 6/16/06 and spot sprayed on 6/23/06 with Distinct (4 oz/a), Accent ST (0.5 oz/a), NIS (1 qt/100), AMS (3 lb/a). Stand did not recover so plot data was omitted. Plot 211 cultivated on 6-9-06 for quack control in low area at center of plot.

MISC:

N/S Alleys: Spray in spring; till throughout summer; July 10, Aug E/W alleys replanted August

Border rows in CS3 and CS5: Hand weeded.

Spot sprayed thistles in prairie and pasture in June

Appendix IV (cont'd). 2006 Agronomic Calendar for WICST (Fld 440)

Soybean and Wheat Rotations			
CROP-2006 Rotation Treatment #	NR Soybean CS2 3	WR Soybean/Wheat CS3 6	Wheat/Berseem Clover+oats CS3 5
Plot #'s	101, 214, 303, 401	102, 212, 313, 407	106, 202, 307, 411
Primary Tillage	None	Fall MB plowed 11-15-05	Fall field cultivator 1x after soybeans 10-5-05
Secondary Tillage	None	Field cultivator 5-4-06, 5-22-06	None
Planting Date	May 10, 2006	SB: May 23, 2006 WW: October 9, 2006	WW: 10-5-05 Berseem clover/oats: No-till drilled Aug 11, 2006
Variety Rate	Renk 253 RR 225,000 seed/a (3000 sd/lb) inocul = cell tech	Sb: Viking 1832 (feed grade) 190,000 seeds/a; (2700 sd/lb) inocul = cell tech WW: untrt Pioneer 25R47, 1.6 million viable seed/a	Arapahoe HR WW: 150 lb/a Berseem/oats: 12 and 40 lb/a
Fertilizer	11-14-05 plots 101 and 401 100 lb/a 0-0-60	102 and 212 got 120 lb/a 0-0-50 in starter box	None
Pesticides	6-1-06, 6-29-06 Mirage + (32 oz/a), speedway 1 qt/100 gal (= 3.2 oz/a)	None	None
Rotary Hoe/tine weed	None	RH: 5-31-06 TW: 6-2-06, 6-7-06, 6-20-06	None
Cultivation	None	6-13-06 ('Wil-rich') 7-17-06 (disk hiller)	None
Hand weed	None	2 man-hours/acre	None
Harvest & Yield	10-25-06; 63.8 bu/a	10-6-06; 58.7 bu/a	Wheat: 7-18-06; 66.6 bu/a Straw: 7-19-06; 1.04 bu/a
Fall Practices	None	Leveled ridges with disc; then soil finisher; then drilled (no-till) wheat 10-9-06;	7-20, 7-28 Quack digger; 8-11 chisel, disk, cultipack (1x each) before summer seeding berseem clover/oats
Crop 2007	Corn	Wheat / Berseem Clover-Oats	Corn

Appendix IV (cont'd). 2006 Agronomic Calendar for WICST (Fld 440)

Forage rotations						
CROP-2006 Rotation Treatment #	Dir. Sd. Alfalfa CS4 7	Estab. Alfalfa I CS4 10	Estab. Alfalfa II CS4 9	Oats/Alfalfa CS5 12	Estab. Alfalfa I CS5 11	Pasture CS6 14
Plot #'s	111, 209, 305, 409	107, 205, 309,404	105, 203, 308,406	103, 213, 314, 410	110, 208, 304,413	112, 207, 302, 405
Primary Tillage	Fall chisel plow 11-14-05	None	None	Fall MB plow 11-15-05	None	None
Secondary Tillage	Soil Finisher 2x 4-5-06	None	None	Soil Finisher 2x 4-5-06	None	None
Variety Planting Date	Magnum V 4-6-06	-----	-----	'Forage Plus' oats, 'WL346 LH' alf, 4-6-06	-----	'Elgon' per. Ryegrass, Red clover 3-29-06
Rate	12 lb/a			62 and 12 lb/a		4 and 10 lb/a
Fertilizer	None	0-0-60	0-0-60	None	250-500 lb/a 0-0-50	June 50 lb N/a, 250 lb/a 0-0-60 on 302
Manure credit	9,000 gal/a 11-10-05	None	None	9,000 gal/a 11-10-05	None	Graze May 2- Oct 27
Pesticides	Herbicide Post-emerge: 6-1 Raptor 4 oz/a, AMS, NIS Insecticide 6-1, 6-7 Warrior 2 oz/a	Insecticide 7-15 Warrior 2 oz/a	Insecticide 7-15 Warrior 2 oz/a Herbicide 10-6 Mirage plus 2 pt/a; Express XP 0.125 oz/a, 2,4-D 1 pt/a	None	None	Spot sprayed thistles with Stinger in June
Harvest & Total yield	July 7 Aug 1 Sept 1 2.81 ton DM/a	June 1 June 30 July 30 Sept 1 4.32 ton DM/a	June 1 June 30 July 30 Sept 1 3.85 ton DM/a	June 16 July 21 Sept 1 4.62 ton DM/a	June 9 July 7 Aug 1 Sept 8 4.39 ton DM/a	June 1 July 20 Aug 28 Oct 20 5.80 ton DM/a
Fall Practices	None	None	4,000 gpa Manure 11-24 and fall chisel (disk ripper) 1-3-07	None	4,000 gpa Manure 11-24 and Fall MB plow 11-26-06	None
Crop 2007	Alf I	Alf II	Corn	Alf I	Corn	Pasture

Appendix IV (cont'd). 2006 Agronomic Calendar for WICST (Fld 440)

Satellite – Chemlite plots			
CROP-2006 Rotation Treatment #	Corn (cs3 w/chemical inputs)	WR Soybean/Wheat (cs3 w/chemical inputs)	Wheat/Red Clover (cs3 w/chemical inputs)
Plot #'s	SAT C, D	SAT B, F	SAT A, E
Primary Tillage	Spring chisel plow, 4-16-06	Fall chisel plowed 11-14-05	Fall Field dug 1x prior to planting wheat, 10-5-05
Secondary Tillage	Field cultivator 4-27-06	Field cultivator 4-27-06 and 5-4-06	None
Planting Date	4-28-06	SB: 5-23-06 WW: 10-9-06	WW: 10-5-05 Red clover: 3-29-06
Variety Rate	Dekalb 5878 Bt 34,000 seeds/a	IA-1008 (non-organic) 170,000 seeds/a (2450 sd/lb) inocul = cell tech	Pioneer 25R47, 150 lb/a 'Marathon' RC, 12 lb/a
Fertilizer (see map for rates)	100 lb/a 5-14-42 80 lbs N/a (28%) 6-15-06	none	60 lb N/a (urea) 4-7-06
Pesticides	4-29-06 tank mix (half rate broadcast): Dual II Magnum (12 oz/a), Hornet WDG (2 oz/a)	<u>Post emrg</u> 6-23-06: Raptor 2.5 oz/a broadcast	None
Rotary Hoe Tine Weed	None	5-31-06 6-2-06, 6-7-06	None
Cultivation	6-13-06 ('Wil-rich') 6-23-06 (disk hiller)	6-13-06 ('Wil-rich') 7-17-06 (disk hiller)	None
Harvest	10-24-06; 199.8 bu/a	10-6-06; 54.2 bu/a	Wheat: 7-18-06; 109.7 bu/a Straw: 7-19-06; 1.13 ton DM/a
Fall Practices	Chop stalks 10-27 Chisel plow with twisted shank 11-30-06	Leveled ridges with disc; then soil finisher; then drilled (no-till) wheat 10-9-06	Disk ripper on clover 11-30-06
Crop 2007	WR Soybeans	Wheat / Red Clover	Corn

Appendix V. 2006 Agronomic Calendar on the Organic Grain Plots (Arl 403)

Crop 2006	CORN	ALFALFA-PER RYE	SOYBEANS	WHEAT/ALFALFA
Strip #	1	2	3	4
Plot	A, B*	C, D	E, F*	G, H
STK '05 (ppm)	74, 70	71, 69	78, 61	83, 131
Primary Tillage	Spring chisel w/sweeps April 19; disk April 27	None	Spring chisel w/twisted shank April 25 th ; disk April 27	None
Secondary Tillage	Field cultivate May 8 and May 23	None	Field cultivate May 8 and May 23	None
Variety Plant Date Rate	Viking 5305 May 23, 2006 38,000 seed/a	Planted Aug 17, 2005	Viking 1832 May 23-24, 2006 190,000 seed/a + cell tech inoculant	Planted Oct. 7, 2005
Manure credit	April 19, 2006 (4800 gal/a)	None	None	None
Fertilizer	None	500 lb/a K ₂ SO ₄ , split	none	None
Rotary Hoe**	5-30-06, 6-3-06	None	5-30-06	None
Tine Weed**	None	None	6-7-06, 6-17-06	None
Cultivation	6-16-06, 6-30-06 plot B only	None	6-20-06, 7-17-06	None
Handweed/ Scout (# man- hours/plot)	Allow 75 minutes on center 36 rows	None	Allow 75 minutes on center 24 rows	None
Plant Popln	31,000 plants/a	n/a	n/a	n/a
Harvest Date & Yield	November 9, 179.8 bu/a	June 3 July 6 Aug 1 4.72 tons DM/a	October 9, 65 bu/a	July 18 82 bu/a
Market	\$4.75/bu local dairy	fed on-farm	\$12/bu Cashton	\$5/bu Cashton
Fall soil test 0-6” on 11-20-06 STP ppm STK ppm	74, 69 105, 119	56, 83 116, 130	59, 66 146, 137	66, 77 137, 179
Fall Practices	spring till	spring till	No-till ‘Pion 25R47’ winter wheat and ‘Esker’ spring oats	12,000 gpa manure then summer seeded alfalfa ‘Pion. 54H91’
Crop 2007	SOYBEANS	CORN	SMALL GRAINS	ALFALFA

* corn and soybean variety trials in plots B and F

Alleys seeded to winter rye in September '05 with no-till drill

Cropped North-South alleys with 30” soybeans (Blue River var 2.2 RM planted June 12, 2006);
west alley left for winter rye seed production.