

WICST 10th Technical Report

Appendix I-B. 2004 WICST Input/Output Data - Arlington Research Station

Corn rotations					
CROP-2004	CORN	CORN	CORN	CORN	CORN
Rotation	CS1 + prairie	CS2	CS3	CS4	CS5
Treatment #	1	2	5	10	11
Plot #'s	109, 204, 306, 412, 501, 504, 508	108, 206, 310, 408	106, 202, 307, 411	107, 205, 309, 404	110, 208, 304, 413
Primary Tillage	Chisel plowed 11-11-03	None	Chisel plowed w/sweeps 11-12-03	Chisel plowed 11-11-03	Chisel plow w/sweeps 11-11-03
Secondary Tillage	Field digger 2x 5-4-04	None	Chisel plow 5-17 Soil finisher 5-26 Field digger 6-16	Field digger 2x 5-4-04	Disk 5-17-04 Soil finisher 5-26 Field digger 6-16
Variety	LG 2533	LG 2533	NC+ 34C17	LG 2533	NC+ 34C17
Planting Date	5-4-04	5-4-04	5-27-04	5-4-04	5-27-04
Rate	32,000 seeds/a (Poncho 250 seed trt)	32,000 seeds/a (Poncho 250 seed trt)	Replant ¹ Brunner OR8403 6-16-04 34,500 s/a	32,000 seeds/a (Poncho 250 seed trt)	Replant ¹ Brunner OR8403 6-16-04
Starter Fertilizer	100 lb 5-14-42	100 lb 5-14-42	None	100 lb 5-14-42	None
Fertilizer	160 lb N/a (82-0-0) 6-21-04	160 lb N/a (82-0-0), 6-21-04 100 lb/a potash - plot 310 and 170 lb/a potash -plot 108, 11-7-03	None	None	None
Manure	None	None	None	20 ton/a 11-10-03	15 ton/a 11-10-03
Pesticides/ Herbicides	<u>In planter box</u> Counter (5 lb/a) <u>Post-emerge:</u> 6-14-04 Buctril 1.5 pt/a	<u>In planter box</u> Prozap zinc phosphide 6 lb/a <u>Post-emerge:</u> 6-14-04 Buctril 1.5 pt/a	None	<u>Post-emerge:</u> 6-14-04 Buctril 1.5 pt/a	None
Rotary Hoe	None	None	6-4-04, 7-2-04	None	6-4-04, 7-2-04
Cultivation	None	None	7-12-04	None	7-12-04
Harvest/Yield	10/25/04 193.9 bu/a	10/25/04 189.0 bu/a	10/26/04 1.07 ton DM/a	10/25/04 212.7 bu/a Chop stalks 11/9/04	10/26/04 1.36 ton DM/a Chop stalks 11/9/04
Fall Practices	Chop stalks 11/9/04 Chisel plow 11/16/04	11/9/04	Chop stalks 11/9/04 Chisel plow 11/16/04	Manure 20 t/a 11/11/04 Chisel plow 11/16/04	Manure 15 t/a 11/11/04 Chisel plow 11/16/04
Crop 2005	Corn	Soybean	Soybean	D.S. Alfalfa	Oats/Alfalfa

¹ CS3 and CS5 corn was replanted with 85 d corn due to very poor stand. Corn never reached black layer by end of season. Used custom chopper/processor to remove whole ear (with husk and cob = snaplage).

WICST 10th Technical Report

Appendix I-B (cont'd). 2004 WICST Input/Output data - Arlington Research Station

Soybean and Wheat Rotations			
CROP-2004 Rotation Treatment #	NR Soybean CS2 3	WR Soybean/Wheat CS3 4	Wheat/Red Clover CS3 6
Plot #'s	101, 214, 303, 401	104, 201, 301, 402	102, 212, 313, 407
Primary Tillage	None	Chisel plowed 11-12-03	Field digger 1x 10/8/03
Secondary Tillage	None	Disk 5-17-07 Soil finisher 5-26-04	None
Planting Date	May 17, 2004	SB: May 27, 2004 WW: Oct 7, 2004	WW: Oct 8, 2003 Red clover: 4-3-04, NT drill
Variety Rate	Kaltenberg KB241 (RR) 225,000 seeds/a	Sb: NC+1F61 (food grade) 180,000 seeds/a WW: Patriot (Hard Red) 3 bu/a	Pioneer 25R37: 3.0 bu/a Arlington red clover: 12 lb/a
Fertilizer	None	None	None
Pesticides/ Herbicides	<u>Post-emerg:</u> 5-28-04 Roundup-WMax (21 oz/a) + AMS (3 lb/a) 6-30-04 Roundup-WMax (21 oz/a) + AMS (3 lb/a)	None	None ¹
Rotary Hoe	None	6-4-04, 6-16-04 (2x)	None
Cultivation	None	6-26-04, 6-30-04, 7-12-04	None
Harvest/Yield	10/6/04 49.8 bu/a	10/6/04 33.6 bu/a	Wheat ² : 8-5-04 34.9 bu/a Straw ³ : 8-9-04 0.54 ton DM/a
Fall Practices	None	Disk, Field digger 10/6/04 Drill wheat 10/7/04	Stalk chopper for red clover Chisel plow w/sweeps 11/16/04
Crop 2005	Corn	Wheat / Red Clover	Corn

¹ Spent 7.6 man-hours/acre weeding the CS3 soybeans.

² Wheat yields very low due to Scab disease...a lot of light kernels blown out the back of the combine.

³ Straw yields low due to tall red clover.

WICST 10th Technical Report

Appendix I-B (cont'd). 2004 WICST Input/Output Data - Arlington Research Station

Forage rotations						
CROP-2004 Rotation Treatment #	D.S. Alfalfa CS4 9	Estab. Alfalfa I CS4 8	Estab. Alfalfa II CS4 7	Oats/Alfalfa CS5 13	Estab. Alfalfa I CS5 12	Pasture CS6 14
Plot #'s	105, 203, 308, 406	113, 210, 311, 414	111, 209 305, 409	114, 211, 312, 403	103, 213, 314, 410	112, 207, 302, 405
Primary Tillage	Chisel plow 11/11/03	None	None	Chisel plow 11/11/03	None	None
Secondary Tillage	Field digger 2x 4-5-04	None	None	Field Digger 2x 4-5-04	None	None
Planting Date Variety	4-6-04 'Magnum V'	4/14/03 'Magnum V'	4/9/02 'Magnum V'	4-6-04 'Magnum V', 'ForagePlus', Trapper peas	4/14/03 Magnum V, Bay oats, trapper peas	
Rate	12 lb/a			Alf - 12 lb/a oats 50 lb/a Peas - 50 lb/a		
Fertilizer	None	None	None	None	None	None
Manure	20 ton/a 11/6/03	None	None	15 ton/a 11/6/03	None	Grazing
Pesticides/ Herbicides	<u>Herbicide</u> <u>Post-emerge:</u> 6-15-04 Raptor w/NIS + 28% (4 oz/a) <u>Insecticide</u> 6-16-04 Warrior (3 oz/a)	<u>Insecticide</u> 7-19-04 Lorsban 4E (0.75 pt/a)	<u>Insecticide</u> 7-19-04 Lorsban 4E (0.75 pt/a) <u>Herbicide</u> 10-11-04 Express XP (0.125 oz/a), 2,4- D (16 oz/a) Rndup Wmax (21 oz/a) +AMS (3 lb/a)	None	None	Spot sprayed -used about 0.5 gal/a solution (3.5 mls stinger on 2 acres)
Harvest	7-18-04 9-8-04	6-3-04 6-28-04 8-4-04 9-8-04	6-3-04 6-28-04 8-4-04 9-8-04	<u>Oatlage:</u> 6-28-04 <u>Haylage:</u> 9-8-04	6-3-04 7-10-04 9-20-04	5-18-04 7-13-04 8-27-04
Yields	1.85 T DM/a	5.07 T DM/a	5.15 T DM/a	2.73 T DM/a 1.63 T DM/a	4.88 T DM/a	5.48 t DM/a ¹
Fall Practices	None	None	Manure 20 t/a 11/11/04 Chisel plow 11/16/04	None	Manure 15 t/a 11/11/04 Chisel plow w/sweeps 11/16/04	None
Crop 2005	Alf I	Alf II	Corn	Alf I	Corn	Pasture

¹ CS6 was mechanically harvested from a 50 sq ft area (exclusion) in each plot to determine hay yield.

WICST 10th Technical Report

Appendix I-B (cont'd). 2004 WICST Input/Output Data - Arlington Research Station

Satellite – Chemlite plots			
CROP-2004 Rotation Treatment #	Corn (cs3 w/chemical inputs)	WR Soybean/Wheat (cs3 w/chemical inputs)	Wheat/Red Clover (cs3 w/chemical inputs)
Plot #'s	SAT A, E	SAT C, D	SAT B, F
Primary Tillage	Chisel plowed w/sweeps 11/12/03	Chisel plowed 11/12/03	Field digger 1x 10/8/03
Secondary Tillage	Field digger 2x May 4, 2004	Disc 5-17-04, Soil finisher 5-26-04	None
Planting Date	May 4, 2004	SB: May 27, 2004 WW: Oct. 6, 2004	WW: Oct 8, 2003 Red clover: April 3, 2004
Variety Rate	LG 2533 32,000 seeds/a Poncho 250 seed trt	SB: Latham 280 170,000 seeds/a WW: Pioneer 25R47 150 bu/a	Pioneer 25R37: 180 bu/a Arlington red clover: 12 lb/a
Starter Fertilizer	100 lb 9-23-30	None	None
Fertilizer	80 lbs N/a (82-0-0) 6-21-04	None	50 lb N/a (46-0-0) April 7, 2004
Pesticides/ Herbicides	<u>Post emerge:</u> 6-14-04 Accent (0.67 oz/a) 6-25-04 Buctril (1.5 pt/a)	<u>Post emerge:</u> 6-25-04 Raptor 5 oz/a + NIS	
Rotary Hoe	None	6-4-04, 6-16-04	None
Cultivation	6-30-04	6-30-04	None
Harvest/Yield	10/25/04 223.84 bu/a	10/6/04 47.5 bu/a	Wheat ¹ : 8/5/04 38.45 bu/a Straw ² : 8/9/04 0.48 tons DM/a
Fall Practices	Chop stalks 11/9/04 chisel plow 11/16/04	Disk, Field digger 10/6/04 Drill wheat 10/6/04	Chisel plow w/sweeps 11/16/04
Crop 2005	WR Soybeans	Wheat / Red Clover	Corn

¹ Wheat yields very low due to Scab disease...a lot of light kernels blown out the back of the combine.

² Straw yields low due to tall red clover.