

Appendix A: Native plant species included in the original Avis prairie seed mix. Plants in bold were observed in 2002 or 2006 in at least one of the three study blocks.

Amorpha canescens (lead plant)
Andropogon gerardii (big bluestem)
Andropogon scoparius (little bluestem)
Asclepias tuberosa (butterfly weed)
Aster azureus (sky-blue aster)
Aster laevis (smooth aster)
Aster novae-angliae (new england aster)
Baptisia spp. (false indigos)
Ceanothus americanus (New Jersey tea)
Coreopsis palmata (prairie coreopsis)
Desmodium canadense (showy tick trefoil)
Desmodium illinoense (Illinois tick trefoil)
Echinacea pallida (pale purple cone flower)
Echinacea purpurea (purple cone flower)
Eryngium yuccifolium (rattlesnake master)
Gentiana flavida (yellow gentian)
Heliopsis helianthoides (oxeye false sunflower)
Lespedeza capitata (round-headed bush clover)
Liatris aspera (rough blazing star)
Liatris pycnostachya (prairie blazing star)
Monarda fistulosa (wild bergamot)
Panicum virgatum (switch grass)
Parthenium integrifolium (wild quinine)
Penstemon digitalis (penstemon)
Petalostemum candium (white prairie clover)
Petalostemum purpureum (purple prairie coneflower)
Potentilla arguta (prairie cinquefoil)
Pycnanthemum spp. (mountain mint spp.)
Ratibida pinnata (yellow cone flower)
Rosa carolina (prairie rose)
Rudbeckia hirta (black-eyed susan)
Silphium integrifolium (rosin weed)
Silphium laciniatum (compass plant)
Silphium perfoliatum (cup plant)
Silphium terebinthinaceum (prairie dock)
Solidago nemoralis (old field goldenrod)
Solidago rigida (stiff goldenrod)
Solidago speciosa (showy goldenrod)
Sorghastrum nutans (indian grass)
Sporobolus heterolepis (prairie dropseed)
Tradescantia ohiensis (spiderwort)
Veronicastrum virginicum (culvers root)
Zizia aurea (golden alexanders)

Appendix B: Weed species identified in the Avis prairie study blocks in 2002 and 2006:

Allium vineale (field garlic)
Ambrosia artemisiifolia (annual ragweed)
Ambrosia trifida (giant ragweed)
Asclepias syriaca (milkweed)
Chenopodium album (goosefoot)
Cirsium arvense (Canada thistle)
Cirsium discolor (field thistle)
Convolvulus arvensis (lesser bindweed)
Daucus carota (wild carrot)
Erigeron annuus (eastern daisy fleabane)
Hypericum perforatum (common St. John's wort)
Ipomoea hederacea (ivyleaf morning glory)
Melilotus officinalis (yellow sweet clover)
Morus alba (white mulberry)
Oenothera biennis (common evening primrose)
Oxalis stricta (wood sorrel)
Plantago rugelii (blackseed plantain)
Polygonum pensylvanicum (knotweed)
Rumex crispus (curly dock)
Solanum carolinense (horse nettle)
Solidago altissima (tall goldenrod)
Taraxicum officinale (common dandelion)
Trifolium hybridum (white clover)
Verbascum thapsus (great mullein)
Vitis vulpina (frost grape)

Appendix C: Block by block data of % cover (\pm standard error) in Year 5 (2006).

	<u>Forb Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	1.278 \pm 0.651	8.22 \pm 2.69	0.389 \pm 0.231	1.444 \pm 0.612
Block 2	12.28 \pm 3.07	11.56 \pm 5.12	13.89 \pm 5.38	9.83 \pm 4.31
Block 3	22.56 \pm 8.21	23.61 \pm 8.05	10.17 \pm 4.54	22.67 \pm 7.73

	<u>Grass Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	79.17 \pm 3.86	69.44 \pm 5.44	60.00 \pm 6.44	75.56 \pm 6.36
Block 2	72.94 \pm 4.59	72.78 \pm 6.23	61.67 \pm 7.31	44.22 \pm 8.01
Block 3	67.11 \pm 6.34	70.56 \pm 6.99	64.22 \pm 7.10	57.11 \pm 8.38

	<u>Prairie Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	80.44 \pm 3.66	77.67 \pm 5.48	6.39 \pm 6.33	77.00 \pm 6.40
Block 2	85.22 \pm 5.15	84.33 \pm 4.61	75.56 \pm 6.05	54.06 \pm 6.63
Block 3	89.67 \pm 4.39	94.17 \pm 3.29	74.39 \pm 6.08	79.78 \pm 6.60

	<u>Weed Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	3.89 \pm 1.69	13.28 \pm 4.62	25.11 \pm 6.57	13.11 \pm 5.96
Block 2	1.167 \pm 0.326	9.83 \pm 3.77	21.06 \pm 5.09	46.61 \pm 6.07
Block 3	6.89 \pm 2.30	3.333 \pm 0.889	26.17 \pm 7.24	13.78 \pm 5.20

	<u>Total Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	84.33 \pm 3.19	90.94 \pm 4.82	85.50 \pm 4.84	90.11 \pm 4.35
Block 2	86.39 \pm 5.04	94.17 \pm 3.30	96.61 \pm 4.69	100.67 \pm 3.19
Block 3	96.56 \pm 4.71	97.50 \pm 3.23	100.56 \pm 2.73	93.56 \pm 4.72

Appendix C continued: Block by block data of % cover (\pm standard error) in Year 5 (2006).

	<u>Forb Relative Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.0178 \pm 0.0101	0.0972 \pm 0.0323	0.00611 \pm 0.00389	0.01500 \pm 0.00653
Block 2	0.1344 \pm 0.0303	0.1128 \pm 0.0442	0.1689 \pm 0.0650	0.0994 \pm 0.0428
Block 3	0.2200 \pm 0.0734	0.2250 \pm 0.0738	0.1033 \pm 0.0451	0.2594 \pm 0.0823

	<u>Grass Relative Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.9339 \pm 0.0213	0.7639 \pm 0.0438	0.7100 \pm 0.0649	0.8506 \pm 0.0613
Block 2	0.8489 \pm 0.0294	0.7856 \pm 0.0639	0.6183 \pm 0.0671	0.4317 \pm 0.0727
Block 3	0.7144 \pm 0.0701	0.7394 \pm 0.0723	0.6522 \pm 0.0711	0.5922 \pm 0.0760

	<u>Prairie Relative Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.9517 \pm 0.0192	0.8611 \pm 0.0441	0.7167 \pm 0.0639	0.8661 \pm 0.0608
Block 2	0.98333 \pm 0.00621	0.8978 \pm 0.0390	0.7878 \pm 0.0502	0.5306 \pm 0.0580
Block 3	0.9344 \pm 0.0209	0.96556 \pm 0.00971	0.7556 \pm 0.0629	0.8511 \pm 0.0556

	<u>Weed Relative Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.0483 \pm 0.0192	0.1389 \pm 0.0441	0.2833 \pm 0.0639	0.1339 \pm 0.0608
Block 2	0.01667 \pm 0.00621	0.1022 \pm 0.0390	0.2122 \pm 0.0502	0.4694 \pm 0.0580
Block 3	0.0656 \pm 0.0209	0.03444 \pm 0.00971	0.2444 \pm 0.0629	0.1489 \pm 0.0556

Appendix D: Block by block data of % cover (\pm standard error) changes from year 1 (2002) to year 5 (2006).

	<u>Forb Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	1.056 \pm 0.712	-3.44 \pm 5.05	-4.78 \pm 1.97	-0.944 \pm 1.14
Block 2	-4.89 \pm 7.00	2.50 \pm 5.02	-9.00 \pm 5.04	-0.0556 \pm 4.71
Block 3	-10.78 \pm 9.64	2.22 \pm 5.97	-7.00 \pm 7.18	4.06 \pm 8.87

	<u>Grass Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.833 \pm 8.54	-20.56 \pm 9.20	-26.94 \pm 6.08	-19.17 \pm 6.32
Block 2	-11.11 \pm 6.75	-17.78 \pm 8.11	-25.72 \pm 5.55	-40.50 \pm 9.03
Block 3	-13.72 \pm 6.80	-19.72 \pm 4.31	-21.06 \pm 9.81	-36.78 \pm 9.43

	<u>Prairie Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	1.89 \pm 8.41	-24.00 \pm 8.21	-31.72 \pm 6.29	-20.11 \pm 6.08
Block 2	-16.00 \pm 4.91	-15.28 \pm 7.23	-34.72 \pm 6.55	-40.56 \pm 5.94
Block 3	-24.50 \pm 7.11	-17.50 \pm 4.26	-28.1 \pm 11.0	-32.72 \pm 6.23

	<u>Weed Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	-21.00 \pm 4.75	-9.39 \pm 8.43	-3.72 \pm 6.61	-5.17 \pm 8.04
Block 2	-1.111 \pm 0.918	2.83 \pm 4.34	8.67 \pm 5.34	35.06 \pm 5.70
Block 3	-6.33 \pm 3.41	-1.17 \pm 1.51	0.222 \pm 10.2	5.72 \pm 5.72

	<u>Total Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	-19.11 \pm 6.99	-33.39 \pm 6.71	-35.44 \pm 6.45	-25.28 \pm 7.17
Block 2	-17.11 \pm 4.87	-12.44 \pm 4.30	-26.06 \pm 7.34	-5.50 \pm 4.05
Block 3	-30.83 \pm 7.92	-18.67 \pm 4.76	-27.83 \pm 7.18	-27.50 \pm 6.81

Appendix D continued: Block by block data of % cover (\pm standard error) changes from year 1 (2002) to year 5 (2006).

	<u>Forb Relative Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.0156 \pm 0.0105	0.0189 \pm 0.0428	-0.0356 \pm 0.0162	-0.00444 \pm 0.0109
Block 2	-0.0100 \pm 0.0619	0.0267 \pm 0.0462	0.00389 \pm 0.0412	0.00611 \pm 0.0510
Block 3	-0.0111 \pm 0.0641	0.0617 \pm 0.0447	-0.0111 \pm 0.0584	0.1267 \pm 0.0853

	<u>Grass Relative Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.1933 \pm 0.0567	0.0106 \pm 0.0786	-0.0228 \pm 0.0545	0.000556 \pm 0.0615
Block 2	0.0267 \pm 0.0644	-0.0617 \pm 0.0626	-0.1239 \pm 0.0489	-0.3744 \pm 0.0817
Block 3	0.0444 \pm 0.0685	-0.0572 \pm 0.0473	-0.0361 \pm 0.0939	-0.2067 \pm 0.0904

	<u>Prairie Relative Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.2083 \pm 0.0570	0.0289 \pm 0.0673	-0.0567 \pm 0.0561	-0.00278 \pm 0.0599
Block 2	0.0167 \pm 0.0166	-0.0333 \pm 0.0448	-0.1211 \pm 0.0480	-0.3689 \pm 0.0545
Block 3	0.0333 \pm 0.0277	0.00333 \pm 0.0143	-0.0461 \pm 0.0899	-0.0806 \pm 0.0576

	<u>Weed Relative Cover</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	-0.2083 \pm 0.0570	-0.0289 \pm 0.0673	0.0567 \pm 0.0561	0.00278 \pm 0.0599
Block 2	-0.0167 \pm 0.0166	0.0333 \pm 0.0448	0.1211 \pm 0.0480	0.3689 \pm 0.0545
Block 3	-0.0333 \pm 0.0277	-0.00333 \pm 0.0143	0.0461 \pm 0.0899	0.0806 \pm 0.0576

Appendix E: Block by block data of density (\pm standard error) in Year 5 (2006).

	<u>Forb Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.167 \pm 0.121	3.11 \pm 1.52	0.1667 \pm 0.0904	0.667 \pm 0.268
Block 2	4.44 \pm 1.39	3.67 \pm 1.48	4.44 \pm 2.10	2.78 \pm 1.48
Block 3	14.22 \pm 5.92	7.89 \pm 2.90	1.722 \pm 0.620	6.50 \pm 1.74

	<u>Grass Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	5.78 \pm 4.68	54.17 \pm 7.93	31.11 \pm 4.69	61.9 \pm 10.6
Block 2	47.28 \pm 5.82	55.83 \pm 7.89	43.17 \pm 9.01	34.44 \pm 7.08
Block 3	45.56 \pm 5.44	49.72 \pm 7.16	37.50 \pm 7.60	43.60 \pm 7.73

	<u>Prairie Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	52.94 \pm 4.64	57.28 \pm 7.54	31.28 \pm 4.67	62.6 \pm 10.6
Block 2	51.72 \pm 6.11	59.50 \pm 7.41	47.61 \pm 8.46	37.22 \pm 6.51
Block 3	59.78 \pm 4.51	57.56 \pm 6.34	39.22 \pm 7.60	49.56 \pm 7.11

	<u>Weed Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	1.444 \pm 0.519	4.11 \pm 1.47	7.44 \pm 1.83	3.06 \pm 1.38
Block 2	1.333 \pm 0.428	1.389 \pm 0.363	2.167 \pm 0.513	8.44 \pm 2.13
Block 3	2.944 \pm 0.891	1.722 \pm 0.529	4.28 \pm 1.68	1.833 \pm 0.738

	<u>Total Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	54.39 \pm 4.58	61.39 \pm 7.77	38.72 \pm 4.00	65.7 \pm 10.2
Block 2	53.06 \pm 6.06	60.89 \pm 7.25	49.78 \pm 8.19	45.67 \pm 5.38
Block 3	62.72 \pm 4.75	59.28 \pm 6.32	43.50 \pm 6.95	51.39 \pm 6.94

Appendix F: Block by block data of density (\pm standard error) changes from year 1 (2002) to year 5 (2006).

	<u>Forb Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.111 \pm 0.137	-2.33 \pm 3.41	-0.833 \pm 0.519	0.278 \pm 0.289
Block 2	-13.94 \pm 6.83	-3.72 \pm 1.98	-5.94 \pm 2.49	-0.611 \pm 2.41
Block 3	-16.1 \pm 12.6	-2.17 \pm 2.69	-4.61 \pm 2.51	0.0556 \pm 2.24

	<u>Grass Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	-35.6 \pm 14.9	-32.9 \pm 16.6	-53.4 \pm 11.2	-28.6 \pm 14.8
Block 2	-65.1 \pm 27.3	-37.3 \pm 14.8	-58.3 \pm 12.8	-58.9 \pm 15.3
Block 3	26.1 \pm 14.6	-36.2 \pm 13.3	-27.1 \pm 11.6	-36.9 \pm 12.8

	<u>Prairie Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	-35.5 \pm 14.9	-35.2 \pm 15.9	-54.2 \pm 11.1	-28.3 \pm 14.8
Block 2	-79.1 \pm 26.2	-41.1 \pm 14.3	-64.2 \pm 12.4	-59.6 \pm 13.6
Block 3	-42.2 \pm 13.3	-38.3 \pm 13.5	-31.7 \pm 11.3	-36.9 \pm 12.7

	<u>Weed Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	-9.11 \pm 1.86	-2.22 \pm 2.34	0.667 \pm 2.13	0.0556 \pm 1.55
Block 2	-2.83 \pm 1.69	-0.0556 \pm 0.521	-0.722 \pm 1.02	4.83 \pm 2.45
Block 3	-3.67 \pm 1.67	-2.000 \pm 0.904	-4.89 \pm 3.76	-2.28 \pm 1.33

	<u>Total Density</u>			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	-44.6 \pm 14.7	-37.4 \pm 15.5	-53.6 \pm 10.6	-28.3 \pm 15.0
Block 2	-81.9 \pm 25.6	-41.1 \pm 14.2	-64.9 \pm 11.9	-54.7 \pm 12.8
Block 3	-45.9 \pm 13.4	-40.3 \pm 13.1	-36.56 \pm 9.76	-39.2 \pm 12.6

Appendix G: Block by block data, % N in *Andropogon gerardii* (\pm standard error) in Year 5 (2006).

	% N			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	1.9220 \pm 0.0459	1.9493 \pm 0.0424	2.5233 \pm 0.0426	2.2973 \pm 0.0703
Block 2	1.7260 \pm 0.0557	1.8053 \pm 0.0346	2.0067 \pm 0.0358	2.1707 \pm 0.0396
Block 3	1.7773 \pm 0.0393	1.7640 \pm 0.0259	2.2550 \pm 0.0734	2.3287 \pm 0.0624

	Shoot mass (in g)			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.6158 \pm 0.0542	0.6680 \pm 0.0478	0.6085 \pm 0.0885	0.6500 \pm 0.0727
Block 2	0.5467 \pm 0.0457	0.7253 \pm 0.0495	0.7520 \pm 0.0721	1.0227 \pm 0.0889
Block 3	0.5453 \pm 0.0414	0.4238 \pm 0.0583	0.6236 \pm 0.0550	0.5120 \pm 0.0366

	g of N per shoot			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	0.011800 \pm 0.000917	0.013133 \pm 0.000970	0.01553 \pm 0.00216	0.01473 \pm 0.00118
Block 2	0.009467 \pm 0.000930	0.01313 \pm 0.00101	0.01500 \pm 0.00137	0.02213 \pm 0.00182
Block 3	0.009667 \pm 0.000735	0.006933 \pm 0.000686	0.013667 \pm 0.000797	0.011933 \pm 0.000581

	<i>Andropogon gerardii</i> density			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	52.78 \pm 4.68	54.17 \pm 7.93	34.52 \pm 4.69	61.9 \pm 10.6
Block 2	47.28 \pm 5.82	55.56 \pm 7.91	43.17 \pm 9.01	33.89 \pm 6.94
Block 3	44.72 \pm 5.46	48.67 \pm 8.32	37.22 \pm 7.68	43.06 \pm 7.73

	g of N/m ²			
	Control	5g/m ²	10g/m ²	20g/m ²
Block 1	2.5157 \pm 0.0601	2.8299 \pm 0.0615	1.9155 \pm 0.0324	3.700 \pm 0.113
Block 2	1.7952 \pm 0.0579	2.9287 \pm 0.0561	2.5986 \pm 0.0463	3.0013 \pm 0.0548
Block 3	1.7276 \pm 0.0382	1.4735 \pm 0.0217	2.0816 \pm 0.0678	2.0427 \pm 0.0547