

2006 Michigan Wildlife Food Plot Variety Trials

East Lansing, MI (42.72°N)

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Results from the 2006 Growing Season

The 2006 season was ideal for plant growth; starting with a winter of ample snow cover and near-normal temperatures. The growing season began with cool-wet conditions that spurred the growth of the cool-season perennials which was followed by timely rainfall during the entire season. In addition, above normal precipitation fell in August which produced high yields from the late-summer seeded 2006 forage brassicas. The first cutting of the 2005 trial was on June 12 and the second on July 24. The regrowth following the second cutting of the 2005 seeding was not harvested, but was left to grow to evaluate late-season plot characteristics. A visual rating of green material and plant height was made in December on this regrowth. Yield, stand ratings and forage quality results are presented in table 2. Since many of the 2006 entries contained brassicas, the perennial trial was established in late-June. As with other forage trials, the ground is prepared for seeding by moldboard-plowing, disking and dragging twice to ensure good soil to seed contact. Plots (5 x 18ft) were drilled with a plot (cone) seeder with double-disc openers and press wheels. Rainfall in July and August was above-average which resulted in good yields forage brassicas. The late-seeding coupled with good seedling vigor eliminated the need for herbicides in most varieties. Plots in the 2006 trial that required weed control were clipped at a height that was above the crop but low enough to remove most of the top-growth and seedheads of the weeds. The first harvest of this trial occurred

September 8th and a second cutting on November 2nd.

Prior to harvest a subsample of each plot in the perennial trials was collected, dried, and ground (1mm screen) for forage quality analysis. Crude protein was estimated from total nitrogen determination via



the Hach modified Kjeldahl method. Neutral detergent fiber (NDF) and Acid Detergent Fiber (ADF) were obtained using the Goering/VanSoest Sequential Fiber Analysis with the addition of 1ml of alpha-amylase for the breakdown of starch. The ADF (cellulose

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and lignin) and NDF (hemicellulose + ADF) content of forages are important measurements because

they provide an estimate of digestibility. The higher the ADF content, the less digestible a forage would be to a ruminant. The higher the NDF content of a forage, the greater the level of satiety (fullness) a ruminant would experience when feeding on that forage, thereby decreasing the



forage intake. Mixtures containing a large amount of legumes result in the highest level of forage quality with crude protein and fiber contents approaching that of high-quality dairy feed. Lactating ruminants require NDF fiber content around 40 %. Many of the perennial species were just about perfect for providing excellent intake potential to ruminants. Crude protein content of perennial species ranged from 11.6 to 19.2%. Crude protein levels of these entries are more than sufficient for all game species feeding on the plants. Crude protein content of this is near the level of high quality alfalfa hay needed for high producing lactating dairy cows. Crude protein and fiber are usually lower in annual food plot materials; however, if harvested by animals at the proper growth stage, they can rival perennial species. This was the case in most of the entries in this trial.

Statistics

Data are analyzed using PROC GLM or MIXED in SAS v. 8.2 software (Cary, NC). Means and Fischer's Least Significant Difference (LSD) are reported at the bottom of each column. The LSD is used to compare values *within* a column and is the minimum difference between two values for a "real" difference to exist. The alpha level for the LSD in these trials was 0.05 or 5%, which means, we are 95% certain that values differing by more than the LSD are not due to chance.

Table 1. 2006 Precipitation (inches)
East Lansing

	Normal*	2006	dev
Apr	2.81	2.33	-0.48
May	2.73	5.61	2.88
June	3.54	2.93	-0.61
July	3.02	3.68	0.66
Aug	3.12	5.62	2.50
Sept	2.50	2.95	0.45
Oct	2.20	3.82	1.62
Total	19.92	26.94	7.02

*30 yr ave.

2005 Perennial Wildlife Food Plot Variety Trial, 2006 Harvest

Ingham County, Michigan
non-irrigated

Product Name	Company	Spring Stand Rating	11-Dec height	11-Dec rating	cut 1 12-Jun	cut 2 24-Jul	2006 Total	2005 Total	2-yr. Total	2006 Quality**		
		1 to 5*	inches	1 to 5†	yield dry tons/acre						CP	ADF
Whitetail Select- Infinity	Get Outdoors Hunting,LLC	4.4	7.7	3.8	2.54	1.16	3.70	0.85	4.55	13.2	30.6	42.1
D-K Drought Deer	Kester's Wildlife Food Nursery	4.4	10.3	4.2	2.31	0.98	3.29	1.06	4.35	11.6	35.7	47.3
Farmscapes Champion Clover	Grassland Central	3.6	3.1	5.0	1.87	0.72	2.59	0.79	3.38	13.5	27.3	39.5
Imperial Whitetail Clover	Whitetail Institute of N. Amer.	5.0	3.0	5.0	1.32	0.36	1.68	1.20	2.88	15.8	25.7	33.8
Synergy	ProSeeds Marketing Inc.	4.3	3.9	5.0	1.49	0.49	1.98	0.63	2.61	15.5	27.5	37.4
Farmscapes Deer & Wildlife Mix	Grassland Central	5.0	5.2	5.0	1.18	0.60	1.78	0.62	2.40	16.1	25.5	35.8
Mean		4.4	5.5	4.7	1.78	0.72	2.50	0.85	3.36	14.3	28.7	39.3
LSD‡ (0.05)		0.4	3.0	0.8	0.35	0.30	0.27	0.45	0.46	1.3	3.5	4.6

Location: Mich. State Univ. Exp. Station, East Lansing
 Design: RCB, plot size 3 x 25' (3 x 22' harvested)
 Seeded: 18-May-05
 Soil Type: Capac loam, tile drainage
 Cuttings: one in seeding year
 Fertility: Soil test taken April 2005: pH: 7.4, P:26 ppm, K:124 ppm
 Herbicide: None

*Visual rating (1=0-20% stand...5=80-100% stand)

**CP:Crude protein= Total Nitrogen content x 6.25, ADF: Acid Detergent Fiber (Lignin + Cellulose), NDF: Neutral Detergent Fiber (Hemicellulose + ADF)

†Green material visual rating:1=0-20% of stand green...5=80-100% of stand green

‡ Least Significant Difference- based on error due to sampling, this is the minimum difference between means for a "real" difference to exist

2006 Wildlife Food Plot Variety Trial, 2006 Harvest

Ingham County, Michigan
non-irrigated

Product Name	Company	8-Sep Stand Rating 1 to 5*	Yield			Quality**		
			8-Sep dry matter	2-Nov	2006 tons/acre	CP	ADF %	NDF
Brier Ridge Rut & Ready	Michigan State Seed Solutions	5	3.05	0.19	3.24	17.2	22.0	35.4
Wildlife Perfect brassica mix	AMPAC Seed	5	2.24	0.56	2.80	17.2	20.9	34.3
Infinity	Get Outdoors Hunting	3.6	2.49	0.13	2.62	18.3	22.2	40.6
Great Lakes Deer & Wildlife Mix	Michigan State Seed Solutions	4.6	0.93	1.32	2.25	19.2	23.4	54.0
Wildlife Perfect Ultimate Plus	AMPAC Seed	4.4	1.10	0.64	1.74	17.9	24.8	43.0
Wildlife Perfect Grazing mix	AMPAC Seed	4.4	0.80	0.56	1.36	17.2	23.1	48.4
Chickadee	DLF International	3.6	0.97	0.27	1.24	17.1	23.1	48.1
Chicory Plus	Whitetail Institute of North America	3	0.45	0.34	0.79	17.2	23.5	51.8
	Mean	4.2	1.50	0.50	2.01	17.7	22.9	44.5
	LSD‡ (0.05)	1.0	0.74	0.43	0.96	NS	7.0	5.2

Location: Mich. State Univ. Exp. Station, East
Lansing
Design: RCB, plot size 5 x 18' (3 x 14' harvested)
Seeded: 30-Jun-06
Soil Type: Capac loam, tile drainage

*Visual rating (1=0-20% stand...5=80-100% stand)

**Crude protein- Total N*6.25, NDF-Neutral Detergent Fiber, ADF- Acid Detergent Fiber

‡ Least Significant Difference- based on error due to sampling, this is the minimum difference between means for a "real" difference to exist (NS-no significant difference between values at the 95% confidence interval)

Seed marketer contacts

AMPAC Seed www.ampacseed.com 317-357-7013

DLF International www.dlf.com

Get Outdoors Hunting www.getoutdoorshunting 888-826-3849

Grassland Central www.farmscapes.net 952-492-2990

Kester's Wild Game Food Nurseries www.kestersnursery.com 920-685-2929

Michigan State Seed Solutions www.seedsolutions.com 800-647-8873

Pro Seeds Marketing www.proseeds.ca

Whitetail Institute of North America www.whitetailinstitute.com 800-688-3030