

# Michigan Wildlife Food Plot Variety Trials, 2008 harvest

East Lansing, MI (42.72°N)

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## Results from the 2008 Growing Season

Cool temperatures in the spring resulted in late first cuttings and reduced first cutting yields. Temperatures across the state dipped into the mid-20 degree F range in late-April and again on May 28 which resulted in damaging frost and reduced growth. Seasonal total Growing degree days (GDD's) were below average statewide. East Lansing precipitation was near normal until a dry period in late July through early September that reduced growth of shallow-rooted species (perennial ryegrass, white/ladino clover). Growing season precipitation amounts are presented for each location in Table 1.

Visual ratings of stand density were made in mid-May. An average of ratings made by two people standing at opposite ends of each plot is reported in the first column of each table (2 and 3). Trials were harvested on the same schedule with the first cutting on Jun. 19, the second cutting on Aug. 1, and the third on Oct. 17. The first cutting produced more than 50% of the yield for the season. Some mixtures in the 2005 trial did not produce harvestable biomass in the third cutting.

Prior to harvest a subsample of each plot 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 and lignin) and NDF (hemicellulose + ADF) content of forages are important measurements because they provide an estimate of potential intake and 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. The crude protein and fiber levels of all mixtures evaluated were at adequate levels for wild game. Yield, stand ratings and forage quality results are presented in tables 2 and 3. This was the final year of data collection for the 2005 trial. The 2006 trial will be rated and harvested in 2009 and this will be its final year.

Table 1.  
2008 Precipitation (inches)  
East Lansing

	Norm*	2008	dev
Apr	2.81	2.15	-0.66
May	2.73	1.36	-1.37
June	3.54	4.80	1.26
July	3.02	3.72	0.70
Aug	3.12	0.50	-2.62
Sept	2.50	8.42	5.92
Oct	2.20	1.61	-0.59
Total	19.92	22.56	2.64

\*30 yr ave.

## 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.

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**Table 2.**  
**2005 Perennial Wildlife Food Plot Variety Trial**

Ingham County, Michigan

non-irrigated

Product Name	Stand Rating 1 to 5*	yield dry matter tons/acre								2008 Quality**		
		19-Jun	1-Aug	17-Oct	2008	2007	2006	2005	4-yr.	CP	ADF %	NDF
D-K Drought Deer Mix	4.3	2.33	1.17	0.52	4.02	4.11	3.29	1.06	12.48	11.8	35.1	42.4
Whitetail Select- Infinity	3.4	2.05	1.07	0.47	3.59	3.65	3.70	0.85	11.79	15.5	33.1	42.1
Farmscapes Champion Clover	1.8	0.79	0.31	0.00	1.10	1.78	2.59	0.79	6.26	12.5	26.6	34.2
Imperial Whitetail Clover	2.1	0.89	0.39	0.00	1.28	1.77	1.68	1.20	5.93	13.8	27.8	34.2
Synergy	2.1	0.64	0.52	0.00	1.16	1.76	1.98	0.63	5.53	13.8	27.1	35.4
Farmscapes Deer & Wildlife Mix	2.4	0.73	0.29	0.00	1.02	1.46	1.78	0.62	4.88	15.5	28.2	36.7
Mean	2.68	1.24	0.63	0.5	2.03	2.42	2.50	0.85	7.81	13.8	29.7	37.5
LSD‡ (0.05)	0.77	0.51	0.27	NS	0.68	0.77	0.27	0.45	1.38	NS	6	NS

*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 2005, two in 2006, three in 2007

*Soil test taken April 2005:* pH: 7.4, P:26 ppm, K:124 ppm

*Herbicide:* None

\*Visual rating (1=0-20% stand...5=81-100% stand)

\*\*CP:Crude protein= Total Nitrogen x 6.25, ADF: Acid Detergent Fiber, NDF: Neutral Detergent Fiber (average over cuttings)

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

NS: no statistical difference at the 95% confidence interval

**Table 3.**  
**2006 Wildlife Food Plot Variety Trial, 2008 Harvest**  
 Ingham County, Michigan  
 non-irrigated

Product Name	Stand Rating 1 to 5*	Yield dry matter tons/acre							Quality**		
		19-Jun	1-Aug	17-Oct	2008	2007	2006	3-yr	CP	ADF %	NDF
Wildlife Perfect Ultimate Plus	4.5	3.61	0.49	0.18	4.28	7.13	1.74	13.15	17.2	24.8	38.7
Great Lakes Deer & Wildlife Mix	4.5	2.72	0.96	0.79	4.47	5.91	2.25	12.63	13.8	29.5	49.7
Wildlife Perfect Grazing mix	3.4	2.49	0.73	0.23	3.45	7.26	1.36	12.07	16.7	23.3	40.9
Infinity	3.2	2.00	0.80	0.44	3.24	5.67	2.62	11.53	19.9	26.0	43.5
Chickadee	1.8	1.16	0.49	0.18	1.83	6.51	1.24	9.58	14.6	23.4	40.3
Mean	3.48	2.40	0.69	0.36	3.45	6.50	1.84	11.79	16.4	25.4	42.6
LSD‡ (0.05)	0.97	0.67	0.32	0.29	0.73	1.28	0.96	2.46	2.9	3.6	7.4

*Location:* Mich. State Univ. Exp. Station, East Lansing

*Design:* RCB, plot size 5 x 18' (3 x 14' harvested)

*Seeded:* 30-Jun-06

*Cuttings:* two in 2006, three in 2007

*Soil Type:* Capac loam, tile drainage

*Herbicide:* None

\*Visual rating (1=0-20% stand...5=81-100% stand)

\*\*Crude protein- Total N\*6.25, NDF-Neutral Detergent Fiber, ADF- Acid Detergent Fiber (average over cuttings)

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

NS: no statistical difference at the 95% confidence interval

## Seed marketer contacts

AMPAC Seed      [www.ampacseed.com](http://www.ampacseed.com)      866-663-0129

DLF International      [www.dlf.com](http://www.dlf.com)

Get Outdoors Hunting      [www.getoutdoorshunting](http://www.getoutdoorshunting)      888-826-3849

Grassland Central      [www.farmscapes.net](http://www.farmscapes.net)      952-492-2990

Kester's Wild Game Food Nurseries      [www.kestersnursery.com](http://www.kestersnursery.com)      920-685-2929

Michigan State Seed Solutions      [www.seedsolutions.com](http://www.seedsolutions.com)      800-647-8873

Pro Seeds Marketing      [www.proseeds.net](http://www.proseeds.net)      541-928-9999

Whitetail Institute of North America      [www.whitetailinstitute.com](http://www.whitetailinstitute.com)      800-688-3030