



## Canola Research in Michigan

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### Opportunities

Canola (spring and winter) could be an important crop to help Michigan diversify its agriculture, complement its cropping systems, and maintain a profitable and vibrant rural sector. Canola has the potential to improve Michigan's **economy, health, environment and agricultural systems:**

- Hybrid varieties give high yield potential for farmers (over 3000 lbs/acre)
- Value-added products for rural economic activity (jobs)
- Excellent vegetable oil
- Environmentally friendly bio-based oils and fuels (carbon sequestration)
- Winter canola excellent cover crop

### Challenges

- Infrastructure both at the farm level and in the market system are lacking
- No local markets for canola
- Producer education on agronomic aspects is lacking
- Economics, profitability and price stability of oil for the bio-diesel market are unknown
- Varieties –High yielding winter-hardy varieties are limited – very few plant breeders working on hybrid canola (spring and winter)
- Best production systems and practices for the region are unknown
- Production in tiled fields may cause root clogging of tile lines

Table 1. Canadian 5 year (1986-2009) canola yields.

years	Bushels/acre	Percent increase
2005-2009	32.0	26
2000-2004	25.3	
1995-1999	24.9	
1990-1994	23.2	
1986-1989	22.6	

In 2002 Canada planted 18% acreage as hybrids. In 2005 50% were hybrids Today over 90%.



### Winter-hardiness is an issue for winter canola

Canola hybrids have potential for high yields (hybrid canola varieties are only several years old – like corn around 1960)

**Hybrid Vigor in canola is key to high yields!**



Spring canola provides good yields

Table 2. Winter canola yields (bu) and percent winter survival for 3 years (2008-2010) at East Lansing, MI.

Cultivar	% Winter survival			Yield bu/acre		
	2010	2009	2008	2010	2009	2008
SITRO	93	32	43	49	30	43
KRONOS		12	2		0	0
CWH 081	58			69		
KS 4022		53	77		32	73
WICHITA	95	40		42	34	
HORNET		57	10		41	36
Trial mean	91	34	22	41	29	21

Table 3. Spring canola yields (bu/acre) at two sites in 2009 and 2010.

Cultivar	Lake City, MI	Marion, MI
	2010	2009
INVIGOR 5440	45.9	48.0
INVIGOR 8440	45.2	47.0
DKL 30-42	46.9	42.0
DKL 72-55	45.9	45.0
TRIAL MEAN	41.5 (24 entries)	44.5 (36 entries)
LSD 05	8.0	4.3