



Canola Research and Demonstration in the U.P. *1986 - 2005*

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This presentation is a brief summary of canola trial work by MSU in the Upper Peninsula of Michigan from 1986 through 2005.

The trials include several winter and spring canola variety trials, a winter canola planting date trial, a spring canola sulfur fertilizer trial, and a 3-year nitrogen fertilizer rate and timing trial.

1987 Spring Canola Evaluation

- UP Experiment Station, Chatham
 - 9 varieties
 - Avg yield: 818 lbs/a
 - Hi: 1,302 lbs/a -- Lo: 445 lbs/a
- Menominee Co.
 - 3 varieties
 - Avg yield: 1,687 lbs/a
 - Hi: 1,774 lbs/a -- Lo: 1,544 lbs/a
- Iron Co.
 - 3 varieties
 - Avg yield: 2,033 lbs/a
 - Hi: 2,600 lbs/a -- Lo: 1,600 lbs/a

Spring canola variety trials held in 3 U.P. locations in 1987. Number of varieties, average yields at each location, and hi/lo yields for each location are indicated. More complete information is available in the 1987 Upper Peninsula Research Report, MSU Department of Crop and Soil Science

1987 Winter Canola Evaluation

■ UP Experiment Station, Chatham

- 3 varieties
- Avg yield: 1,968 lbs/a
- Hi: 2,015 lbs/a -- Lo: 1,883 lbs/a

■ Menominee Co.

- 3 varieties
- Avg yield: 2,612 lbs/a
- Hi: 2,764 lbs/a -- Lo: 2,480

Winter canola variety trials held in 2 U.P. locations in 1987. Number of varieties, average yields at each location, and hi/lo yields for each location are indicated.

Winter canola varieties yield much better than spring varieties under ideal conditions. However, depredation by deer and winter kill have proven to be too risky when growing winter canola. Spring canola varieties are now preferred.

More complete information is available in the 1987 Upper Peninsula Research Report, MSU Department of Crop and Soil Science

1988 Winter Canola Evaluation

- UP Experiment Station, Chatham
 - 3 varieties
 - Avg yield: 2,000 lbs/a (40 bu)
 - Hi: 2,800 lbs/a -- Lo: 1,900 lbs/a

Winter canola variety trial at Chatham in 1988. Very good yields.

1989 Winter Canola Evaluations

- UP Experiment Station, Chatham
 - 2 variety trials
 - Avg yields: 2,400 lbs/a (48 bu/a)
2,450 lbs/a (49 bu/a)

Two separate winter canola variety trial were conducted at Chatham in 1989, both with excellent yields.

1989 UPES Winter Canola Planting Date Trial

- Planting date 8/12
 - 58 bu/a (2,900 bu/a)
- Planting date 8/20
 - 39 bu/a (1,950 bu/a)
- Planting date 8/30
 - 26 bu/a (1,300 bu/a)

A winter canola planting date trial was conducted at Chatham in 1989. 3 planting dates were included starting on August 12. Plantings were also made on August 20 and August 30. Crop yield dropped precipitously based on later planting date.

UPES Spring Canola Variety Trials 1986 - 1988

- 3 varieties
- 3-year average hi yield 1,581 lbs/a
- 3-year average lo yield 967 lbs/a

U.P. Winter Canola Variety Trials (all locations) 1987 - 1988

- 2 varieties
- 2-year average hi yield 2,271 lbs/a
- 3-year average lo yield 2,138 lbs/a

This slide captures the multi-year averages of spring and winter canola variety trials across all U.P. locations from 1986 through 1988.

1990 UPES Winter Canola Variety Trial

- 5 varieties
- Average yield: 912 lbs/a
- Hi: 1,167 lbs/a -- Lo: 594 lbs/a

A winter canola variety trial at Chatham performed poorly.

1996 UP Winter Canola

- Menominee Co
- 3 varieties
- Average yield: 1,417 lbs/a
- Hi: 1,778 lbs/a -- Lo: 1,224 lbs/a

Winter canola variety trial in 1996, Menominee County. Yields were mediocre.

1996 UP Spring Canola

- Menominee Co
- 5 varieties
- Average yield: 1,143 lbs/a
- Hi: 1,483 lbs/a -- Lo: 636 lbs/a

Spring canola variety trial in Menominee County with poor yields.

1997 Spring Canola Sulfur Fertility Trial

<u>Variety</u>	<u>0 lb S/a</u>	<u>10 lb S/a</u>	<u>20 lb S/a</u>	<u>2lb foliar S</u>
Celebra	825	945	950	845
Oscar	810	1,415	1,375	1,025

10 lbs of sulfur per acre, applied as ammonium sulfate, gave a good yield boost to both varieties of canola on this sandy site.

2002 UP Spring Canola Variety Trials

■ Alger Co. (UPES)

- 9 varieties
- Average yield: 1,253 lbs/a
- Hi: 1,728 lbs/a -- Lo: 950 lbs/a

■ Iron Co.

- 9 varieties (same)
- Average yield: 856 lbs/a
- Hi: 1,020 lbs/a -- Lo: 709 lbs/a

Yields were generally low at both sites on spring canola variety trials in Alger and Iron counties.

Nitrogen Rate and Timing 3-year Trial, UP Experiment Station

	<u>3 yr avg</u>	
<u>Rate (N lbs/A)</u>	<u>At Pltg</u>	<u>Spt App</u>
80	1046	998
120	1164	1072
160	1253	1060
200	1364	1200
Mean	1207	1082
CV	13	13
LSD	142	158

Split application of nitrogen fertilizer appears to have a negative impact on yield, possibly due to low nitrogen availability during the critical growth stages of the crop, machine travel over established canola plants, and possible plant injury from direct contact with fertilizer.