Rapeseed as an Alternative Crop in Wisconsin[1]

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The cultural practices of Rapeseed are similar to other small grains. There are both winter and spring varieties of rapeseed, however, the spring variety is recommended for best survival and higher yields in Wisconsin.

Stand establishment is very important with rapeseed because of its lack of early competitiveness. Anything we can do to get those plants off to a good early start will be beneficial. Good seed to soil contact, proper seeding rates, good weed control and adequate soil fertility are going to help get those young plants off to a good start. Some success establishing rapeseed with reduced tillage has been done.

PLANTING

Planting of rapeseed should be done as early as possible in the spring. Like spring small grains, spring rapeseed generally yields the best with early planting. The crop will germinate and emerge with soil temperatures at 41°F but the optimum is 50°F. Rapeseed can be seeded with the small seed attachment of a grain drill to a depth of ð to 1 inch. Rows should be spaced seven inches or less. A seeding rate of 4-6 lb/a is recommended.

FERTILITY REQUIREMENTS

Rapeseed nutrient requirements are similar to other small grains (Table 1). Rapeseed responds well to nitrogen fertilizer applications, with optimum yields occurring around 80-100 lbs. N/acre. One half of the nitrogen requirement should be applied in the spring, and the remaining ð applied as a top dress. At optimum soil tests 30-40 lbs. of P_2O_5 and 60-80 lbs. of K_2O should be applied per acre. Because rapeseed is sensitive to direct seed contact with fertilizer, applications should be banded at least 2 inches to the side and below the seed or broadcast. Rapeseed is also a heavy user of sulfur, and is most likely to respond to S additions especially on light colored sandy soils.

Table 1. Spring Rapeseed vs. Wheat in usage of various macro nutrients

		Nutrients Removed (lbs./A)			
Crop and Yield Level	Crop Part	N	P	K	S
Wheat at 40 bu./A	Seed	60	24	16	4
	Straw	25	5	48	6
	Total	**85**	**29**	**64**	**10**
Rapeseed at 35 bu./A	Seed	66	32	16	12
	Straw	39	14	67	9
	Total	**105**	**46**	**83**	**21**

WEED CONTROL

The best weed control practices are tillage, establishment of a good stand, and weed control in the previous crop. Treflan in the only herbicide registered in the U.S. for rapeseed. Treflan is applied preplant incorporated and gives good annual grass control, but misses ragweed, mustard, and lady's thumb smartweed. Mustard Family (*Cruciferae*) weeds such as wild radish, wild mustard, pennycress or shepard's purse are nearly impossible to control in rapeseed.

DISEASES

Diseased affecting rapeseed include white mold (*Sclerotinia* stem rot) and blackleg. Blackleg is the most serious of these, however, there are resistant cultivars to this disease. White mold may also be a problem especially when rapeseed follows such crops as soybean or dry edible bean. To avoid disease in general, use a rotation program that separates rapeseed crops by at least two cereal crops. Management of water and fertilizer influence lodging, canopy, and disease incidence.

INSECTS

Many insects may infest rapeseed at various stages of its growth. Probably the greatest problem is caused by the flea beetle, a shiny black beetle about ð inch long which attacks rapeseed particularly at emergence. Seed-applied insecticides and postemergence insecticides are available for flea beetle control. Diamondback moth larvae can be a problem in dry years. The larvae are pale yellow to light green, about ð inch long, and feed on flowers and young pods. Aphids are another insect which can cause damage to rapeseed. If insecticides are used, apply in a manner that will minimize damage to bees, which are present in large numbers when rapeseed is in bloom.

HARVEST

Rapeseed should be ready to harvest mid to late August. Rapeseed dries from bottom to top, requiring close monitoring and excellent management due to its susceptibility to shatter when mature. When 30% to 40% of the seed on the main stem is brownish-red, it will reach maturity in 4 to 6 days, so windrowing should not be delayed. The crop is combined when it has dried to 10% seed moisture. Reduce combine cylinder speeds to 2/3 of that used for cereals. The seeds are lightweight, so fan speeds should be reduced and fan louvers partially closed to shake the seed out of the chaff. Direct combining with the use of a desiccant is possible if the rapeseed is standing well, but determining application time is difficult and field loses are higher.

DRYING AND STORAGE

Rapeseed that is to be stored for six months or more must be dried to near 8% moisture. The small seeds restrict air flow, so thin layers are necessary for drying wet seed. Store rapeseed in tight bins. Inspect the bins often to prevent heating and spoilage. Seed can sweat in storage even at 9 to 20% moisture content.

[1] Condensed from "Canola (Rapeseed)." Alternative Field Crops Manual. Department of Agronomy and Soil Science, College of Agriculture and Life Sciences and Cooperative Extension Service, University of Wisconsin-Madison.

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