Brassica Rapa Type Winter Canola Varieties in East-Central Washington

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The drylands of east-central Washington often present a high-stress environment for winter crops, including winter canola, due to dry seed-zone conditions for planting in late summer, cold winters, meager precipitation, and frequent early onset of high temperatures in late spring. The Brassica napus type of winter canola has high yield potential and is generally considered the most promising domestically-produced oilseed feedstock for biodiesel production in the Inland Pacific Northwest. Most breeding and agronomy research has been conducted for B. napus varieties. Another type of winter canola, Brassica rapa, was bred in Sweden for tolerance to cold and other abiotic stresses. The downside to B. rapa winter canola is lower yield potential compared to B. napus types. However, “optimum” yield potential is often not realized in east-central Washington due to the above-mentioned stresses. The upside to B. Rapa winter canola is excellent winter hardiness, early maturity to better avoid high temperatures during flowering, and limited pod shatter. Also, deer do not eat B. rapa canola. We are growing the B. Rapa winter canola variety “Largo” in a long-term cropping systems study at the Ron Jirava farm near Ritzville, WA.

Largo winter canola in a large-scale cropping systems experiment near Ritzville, WA in 2016. Flowers were initiating on April 5 (left) and the crop was in full flower on April 28 (right). The site received 14.56 inches of crop-year precipitation in 2016 (average is 11.5 inches) and the canola grew to a height of nearly six feet. Some lodging occurred. Seed yield of this crop was 2,120 lbs/acre whereas seed yield of B. napus varieties in neighboring fields was more than 3,000 lbs/acre.