



About Yield10

Yield10 Bioscience, Inc. is an agricultural bioscience company that is developing improved Camelina varieties for the production of biofuel feedstock oils, protein meal for animal feed, and over the longer-term PHA bioplastics and omega-3 (EPA, DHA) oils.

Contracting

Yield10 Bioscience is offering growers **100% offtake camelina production contracts** with **no up-front grower seed costs** for the 2023 winter growing season and **net returns similar to Canola**.

What is Camelina?



Camelina sativa is an oilseed plant in the **Brassicaceae** family related to canola or mustard seed. Camelina has been **grown for 3000+ years** in Europe for food, and more recently has attracted interest as a biofuel feedstock because of its high oil content and low carbon footprint. Camelina is a hearty plant that **performs well in drought or low water conditions**. **Winter Camelina** is notable as it is extremely **cold tolerant**.

Growing Season & Expected Yields



Winter Camelina should be planted in early September so that plants have at least three weeks to establish before going into cooler temperatures. Harvest is expected in late June to early July in Alberta, Montana, North Dakota and Idaho depending on geography and seasonal variation. Expected **dry land yields** range from **1,250 pounds (24 bushels) to 1,550 pounds (31 bushels)** per acre.

Growing Camelina

Field Selection



Due to limited crop herbicide options for broadleaf weeds, growers should select fields with low weed pressure. Care should also be taken for Group 2 herbicide residues in the soil as Camelina can show injury from these chemistries. Canola plant-back restrictions apply to Camelina.

Seeding



Camelina can be planted using a drill or broadcast on the field, **no special equipment required**. The recommended seeding rate is 6 pounds per acre, which will be provided with **no upfront seed costs**. Seed must be planted shallow ($\frac{1}{4}$ – $\frac{1}{2}$ inch) with good seed-to-soil contact..

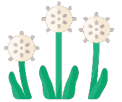
Fertilizer



Winter Camelina has **lower fertilizer requirements** compared to brassicas like Canola and we recommend targeting 80% of recommended rates for area-average Canola yields based on soil sample results.

If warranted, a pre-seed burn down application of glyphosate would be beneficial. Due to no current in-crop broadleaf weed control, it is recommended to apply a pre-emergent herbicide such as ethalfluralin or trifluralin (example: SONALAN™ or EDGE™) and grassy weeds can be controlled in crop using Quizalofop (example: ASSURE™) herbicides.

Weeds



Insects



At this this time there has been **no insect pressures** identified as having an economic impact on winter Camelina production in Alberta, Montana, North Dakota or Idaho.

While Camelina is **resistant to most diseases**, it is susceptible to Downy Mildew and Sclerotinia.

Disease



Harvest



Camelina has **natural pod shatter resistance** and can be straight cut using rotary or conventional combines. Due to the small seed size, care needs to be taken setting the combine to prevent losses. Alfalfa seed settings are a good starting point but always be sure to check combine losses. Target a harvest moisture of 8% or less for best storage.

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