



# ALBERT LEA SEED

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## **Flax** (*Linum usitatissimum* L.)

### **Description**

- Flax is a summer annual broadleaf.
- Most often grown for food, oil production (linseed oil), and fiber to produce linen.
- Seed flax varieties are short, multiple branched and selected for high seed production. Fiber flax varieties are very tall with few branches and low seed production.
- Historically, flax has been grown in every state east of the Mississippi. Currently, most production occurs in the upper Midwest and the Prairie Provinces of Canada.
- Flax has been grown successfully in nearly all Minnesota counties.
- 60 pounds per bushel

### **Management considerations**

- Management practices for oilseed flax are similar to that of spring oats.
- Adapted to soils that are good for wheat or oats, but is not suited to poorly drained soils.
- Should be rotated with other crops to reduce disease potential and improve yields.
- Can be double-cropped with buckwheat if planted and harvested early enough.

### **Optimum Planting Dates**

- Flax can be planted in early spring as its seedlings can survive temperatures down to 28°F., and can tolerate the low 20s after they reach the two leaf stage.
- Sow seed 15–20 days before the last average killing frost of the area, which is the same date as for sowing spring wheat.
- In Minnesota and North Dakota, flax seed sown in April or early May yields best.

### **Seeding Recommendations**

- Flax should be seeded directly into firm, moist soil. A well-prepared, firm seedbed will ensure sowing at the proper depth and will result in more uniform germination and rapid, even emergence.
- Recommended seeding rate is **50 pounds per acre** with a planting depth of 0.75 to 1.5 inches. Planting too lightly can result in excessive weed pressure while planting too heavily reduces branching of the stem leading to lower yields.
- When grown organically, it is sometimes planted in two directions at 70 pounds per acre to improve weed control.
- Plant with a standard grain drill in narrow rows (preferably 6 inches or less).
- Seed treatment with a fungicide is recommended especially for golden varieties.

**Fertilization** *(Consider a soil test and please contact your fertilizer professional for your specific needs)*

- Flax can be grown under fertility levels similar to small grains.
- Yield increases are possible when nitrogen is applied to flax but excessive nitrogen may reduce yield by stimulating more vegetative growth causing greater susceptibility to disease and lodging.
- Apply about 50 to 80 lb N/acre. Use the lower rate if following a legume crop.
- Application rates for phosphorous and potassium should be the same as for oats or wheat.

**Weed and Disease Control** *(This is not intended as a recommendation or endorsement of any specific product but as a list of possible controls. Please contact your chemical professional for your specific needs and always read and follow label directions):*

- Flax is less competitive with weeds than small grains and should be grown on relatively weed-free fields.
- Soil-applied herbicides reduce weed emergence and minimize early weed competition.
- Post-emergence herbicides applied soon after weed emergence usually give better control and allow more time for flax recovery from possible herbicide injury than they do when applied to larger weeds and flax.
- Assure II, Targa, Poast, Clethodim and Select Max are all grass-controlling herbicides that are labeled to control grasses in flax.
- Guard against flax diseases by growing resistant varieties, using seed treatments, planting early, using sound disease-free seed and avoiding planting flax after flax.
- Insects can be problematic in flax. Grasshoppers are a problem especially near or at harvest. Cutworms are known to cut seedlings at the soil level. Armyworms feed on foliage in midseason. Leafhoppers feed on the plant juices and infect the plant with the aster yellow mycoplasma. Aphids have been observed on flax but most years their numbers are not high enough to cause economic loss.
- Know the economic threshold levels for the various insects and apply control measures.

**Harvest Considerations**

- Maturity of flax is judged by the color of the bolls (seed capsules) rather than by the color of the straw. Each boll contains 4 to 10 seeds.
- Flax should be harvested when 90 percent of the bolls turn brown.
- The stems may remain green at harvest, but flax with green stems is very difficult to cut. Sharp, well-adjusted cutter bars are essential.
- Flax can be straight-combined if maturity is uniform and green weeds are not a problem.
- If flax is swathed and combined later, leave a tall stubble to aid in pick up.
- The flax seed coat (especially of yellow-seeded varieties) is easily damaged, so proper combine adjustments are necessary.
- Flax is more difficult to manage in storage than cereal grains so monitoring is required.
- Flax can be safely stored at 10 percent moisture short term and at 8 percent long term. Higher moisture levels can result in heating and mold formation.

