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Buckwheat
(*Fagopyrum esculentum* Moench)

Description

Buckwheat is a quick-growing, broad-leaved summer annual. Buckwheat is not frost tolerant and will be killed by cool temperatures. It matures in 70 to 90 days and produces abundant growth. These qualities make it a superior summer cover crop that suppresses weed growth. Buckwheat produces large amounts of blossoms that attract beneficial pollinators and are an optimum summer source of nectar for honeybees. The root system is small, usually comprising only 3 percent of the total plant weight compared to 6 to 14 percent in cereal grains. This makes buckwheat very easy to control as a cover crop. The brown seeds, not true cereal grain, are shaped like rounded pyramids and have marketability as harvested grain. Pollinators are required for flower pollination & seed set.

Overview

Uses: Cover Crop—Grain Crop

Strengths: Thrives in poor soil
Rapid establishment and growth.
Can scavenge soil phosphorus and other nutrients
Easy to control / kill as a cover crop

Weaknesses: Susceptible to severe growing conditions (frost, high temperatures, drying winds and drought)
Sensitive to carryover of soil-applied, residual herbicide (trifluralin, atrazine, sulfonamide products).
Can reseed itself over the course of the season

Plant Information

Winterhardiness: Poor
Drought-Tolerance: Medium
Wet soil tolerance: Poor
Average Nitrogen Fixation: -
Forage Yield Range: -
Relative Forage Quality: -

Seed and Seeding Info

Seeds per lb:	15,000
Seeding Rate Alone:	45-60 lbs/acre (grain); 50-100 lbs /acre (cover crop)
Seeding Rate in Mixtures:	20-30 lb /acre
Range of Seeding Dates:	May 15 to August
Methods of seeding:	Drill or Broadcast
Best seeding depth:	½ to 2 in
Best Soil types:	Most except heavy, wet soils
pH tolerances:	Can tolerate acid soils

Cultural and Harvest Information

As a cover crop?

Buckwheat can be turned under or killed when it reaches at least 8 in. in height or more. Optimum incorporation or kill time is 7 to 10 days after flowering and prior to seed set. Careful management is warranted when plant flowers to prevent seed set. Crop can be mowed as well. Due to its rapid growth, two or more crops of buckwheat can be planted in a single growing season in succession. The tissue of buckwheat is very succulent and decomposition is rapid. Growing buckwheat is very competitive against annual & perennial weeds.

As a grain crop?

Generally, specified food-type varieties must be planted if buckwheat is to be sold for grain. Buckwheat should be planted when danger of spring frost has passed and requires 10 to 12 weeks after planting to reach maturity. A lower seeding rate is recommended (45-50 lbs/acre) to allow for branching & stem thickening. The crop begins to flower four to five weeks after sowing and continues to flower and produce seed until freeze up. Pollinators are required to fertilize buckwheat flowers and ensure optimum seed set. The crop should be swathed prior to a killing frost at a stage when it appears the crop will produce the largest seed yield. The optimum time for swathing to obtain maximum yields is when flowering is near completion and about 25 percent of the seeds are still green. The crop should be swathed in the morning when the crop is wet with dew or in damp periods to avoid seed shattering. Buckwheat will generally yield 1000 to 1500 lbs/acre but 2000 lbs/acre have been reported.

Websites & Resources

Thomas Jefferson Agricultural Institute: Buckwheat

<http://www.jeffersoninstitute.org/pubs/buckwheat.shtml>

NDSU: Buckwheat Production

<http://www.ag.ndsu.edu/pubs/plantsci/crops/a687w.htm>

Alternative Field Crops Manual: Buckwheat

<http://www.hort.purdue.edu/newcrop/afcm/buckwheat.html>

Buckwheat Production: Harvesting

nmsp.cals.cornell.edu/publications/factsheets/factsheet51.pdf

Cornell University: Extension Information for Buckwheat Growers

<http://www.hort.cornell.edu/bjorkman/lab/buck/main.php>

Northern Grain Growers Association: Buckwheat

northerngrowing.org/wp-content/uploads/BUCKWHEAT.pdf

SARE Managing Cover Crops Profitably: Buckwheat

<http://www.sare.org/Learning-Center/Books/Managing-Cover-Crops-Profitably-3rd-Edition/Text-Version/Nonlegume-Cover-Crops/Buckwheat>

Cornell University: Buckwheat Cover Crop Handbook

<http://www.hort.cornell.edu/bjorkman/lab/covercrops/pdf/bwbrochure.pdf>

eXtension: Buckwheat for Cover Cropping in Organic Agriculture

<http://www.extension.org/pages/18572/buckwheat-for-cover-cropping-in-organic-farming>

University of Missouri Extension: Buckwheat

<http://extension.missouri.edu/p/G4306>

Albert Lea Seed House Product Information Guide

The information presented here is based on the best agronomic information we could cull from University Publications and other sources (usually identified). The cultural and agronomic information is relevant only to farming in the upper mid-west. This information is not infallible and is not a substitute for experience and/or education.

We **do not guarantee** farming results based on this information.