BUCKWHEAT

Beech Wheat

Fagopyrum esculentum Polygonaceae

ECHO® PLANT INFORMATION SHEET

Description

Buckwheat originated in East Asia. Buckwheat is both a food grain and a feed grain. It is called a pseudocereal, as buckwheat is not a grass species like the true cereals such as maize, rice, or wheat.

Uses

Buckwheat flour normally is blended with cereal flours to produce pancake flour or, in Japan, a traditional noodle dish called soba. Dehulled buckwheat grains, called groats, are used in porridge and as a breakfast cereal. Groats can be baked as a vegetable dish like rice or used in appetizers, soups, and desserts. Buckwheat flour, low in gluten, is prized for baking crêpes. Buckwheat seedlings, used in salads, are marketed as buckwheat lettuce. The leaves also may be eaten in salads. Buckwheat flowers provide abundant nectar, used by bees to make a dark-colored honey. Whole grains are used in bird feed mixtures and as chicken feed. Middlings, a protein-rich by-product from buckwheat milling, are used as cattle food. Buckwheat hulls may be used as a soil mulch or as chicken litter. Buckwheat is grown as a ground cover, green fodder, or green manure species.

Common Names

- Spanish
    - Grano Sarraceno

Cultivation

Buckwheat matures in 75-90 days. It does not flower or set seed well where daytime temperatures exceed Buckwheat seed may be broadcast or drilled 2-5 cm (1-2 in) deep, 5-10 cm (2-4 in) apart in rows 35-40 cm (14-16 in) apart. Seedlings emerge 4 to 5 days after planting. Flowering is initiated 5 to 7 weeks after planting. Phosphate fertilizer or a chicken manure addition at planting time is recommended, especially on poor soils. Avoid use of high-nitrogen fertilizers as they encourage weak stem growth (leading to stem lodging), and retard seed set.

- Elevation- 0-1500 m (5,000 ft) Buckwheat is a crop of temperate and subtropical areas, but may be grown successfully at higher elevations in the tropics.
- Rainfall- drought sensitive
- Soil- Buckwheat has higher tolerance to soil acidity than any other grain crop. It is best suited to light to medium textured, well-drained soils such as sandy loams, loams and silt loams.
- Temperature - below 25C (77F) ; frost-sensitive

Harvesting and Seed Production

A recommended hand-cutting harvest period is when 75% of the seeds are mature on the upper 1/3 of the plant. Hand harvests should be done in the early morning or when plants are wet to reduce seed shattering. Machine harvests may be done later in the season when more of the seeds are mature. All plants should be harvested immediately following a frost, as seeds shatter rapidly after exposure to freezing temperatures. Buckwheat is self-fertile. It depends upon cross pollination to set seed. If possible, supply bee hives near the crop during flowering time to improve seed set.

Pests and Diseases

Insect pests usually do not cause serious buckwheat crop damage. Japanese beetles, which feed on flowers; aphids; and wireworms may produce local crop damage requiring pest control measures. Buckwheat normally is not seriously damaged by plant diseases, although leafspot disease and a root rot disease have been reported as problems. Mice and rats may cause crop losses, especially in fields with lodged stems. Deer and birds also are reported buckwheat predators in some localities.

Cooking and Nutrition

Buckwheat protein has an amino acid composition superior to the true cereal grains. Buckwheat's lysine composition (6% of total protein) makes this grain a useful complement to a cereal like maize which is lysine deficient. Buckwheat flours and groats are best used fresh as they turn rancid in storage due to their high fat content. Buckwheat products should be used in moderation in the diet. Large amounts taken frequently may lead to skin rash reactions. Buckwheat is classified as a nutraceutical. It produces rutin, a substance used as a medication in the regulation of cholesterol levels and as a preventive for high blood pressure.

References

Pavek, P.L.S. 2016. Plant Guide for buckwheat (Fagopyrum esculentum). USDA-Natural Resources Conservation Service, Pullman Plant Materials Center. Pullman, WA.PublishedSeptember 2014, Revised March 2016
https://plants.usda.gov/plantguide/pdf/pg_faes2.pdf

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http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=2285