

PRODUCT DATA SHEET

Common & tartary buckwheat

Botanical names	Fagopyrum esculentum & Fagopyrum tataricum
Seed rate	When grown for seeds: 125 seeds/m ² → 22-36 kg/ha When grown as a catch crop or for flowers and insect protection: 300 seeds/m ² → 55-90 kg/ha
Distance between rows	When grown for seeds: 12-18 cm When grown as a catch crop or for flowers and insect protection: 12 cm
Sowing period	When grown for seeds: mid-May When grown as a catch crop: early July to mid-September When grown for flowers and insect protection: mid-May
Sowing depth	2-3 cm



General information and usage

- ▶ Along with amaranth, quinoa and chia, buckwheat belongs to the group of pseudocereals (= "false" cereals), which, like cereals, also produce starchy grains
- ▶ A plant with a surprisingly wide variety of uses
- ▶ Difference between the various uses
 - For seeds: to obtain high-quality, gluten-free flour
 - As a catch crop: helps to improve soil fertility
 - For flowers and insect protection: component in several flowering mixes for its attractive yields of nectar, pollen and honey

Botany

- ▶ Family: Knotweed family (Polygonaceae)
- ▶ Genus: Fagopyrum
- ▶ Origin: East & Central Asia/Mongolia, cultivated in Germany since the 13th century

Morphology

- ▶ Annual, herbaceous, branched knotweed-like plant, 0.5-1.2 m tall (depending on the variety)
- ▶ Deep taproot with dense fibrous roots
- ▶ Herbaceous, branching, hairless stems
- ▶ Heart-shaped to arrow-shaped, hairless leaves
- ▶ Inflorescence: white (occasionally also yellowish or pink), whorl-forming pseudo-raceme
 - Numerous flowers in the axils of the bracts
 - 10-15 flowering days
 - Exclusively cross-pollinated by insects
- ▶ Seed: white and starchy

Varieties and seeds

- ▶ The number of varieties is small, with 8 varieties currently approved in Germany
- ▶ In Germany, buckwheat is primarily cultivated in catch crop mixtures



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Climate requirements

- In Germany and Central Europe, warm areas are preferred
- Significant tolerance to drought, sufficient soil moisture during flowering enhances yields
- Sensitive to late frosts during sowing

Soil requirements

- Does comparatively well in many soils
- Thrives in sandy and peaty soils as well as in heathland locations → high degree of tolerance to soil acidity, but thrives best in soils with a neutral soil pH
- Does not tolerate waterlogged soils well
- Considered a pioneer plant
 - Well suited for patches of bare soil
 - Suitable for mobilising otherwise fixed soil phosphorus
 - Positively impacts several markers of soil fatigue and compaction
- However, the degree of ground cover and root penetration is lower due to the species-specific plant morphology

Main components of the catch crop mixture TERRA GOLD® 9 Melioration

Crop rotation

- No restrictions, since it is self-tolerant
- Special caution is required with beet crop rotations → potential buckwheat volunteers cannot be treated chemically in beet cultivation
- Crops in which the weed pressure can be well controlled are good preceding crops

Soil preparation

- The aim is to have a well-distributed, even, finely crumbled and weed-free seedbed

Objective	New cultivation
Measures	Basic soil preparation (primary preparation): in heavy soils, clear by ploughing; in areas with light soil, a cultivator can also be used. Secondary processing: use a tiller or rotary harrow for an evenly crumbled, well-distributed seedbed.

Sowing

- Target density:
 - When grown for seeds: 1.25 million plants/ha
 - When used as a catch crop or for flowers and insect protection: 3.00 million plants/ha
- Emergence generally occurs about 5-7 days after sowing

Crop protection

- Danger of intensive early weed growth due to a low degree of ground cover
 - Can be easily compensated in catch crop cultivation by using buckwheat in appropriate mixtures
- No approved herbicides for weed control, mechanical weed control possible
 - Calcium cyanamide (approx. 400 kg/ha) does have a good herbicidal effect (keep in mind when planning N fertilisation)
- Buckwheat triggers hatching stimulus in nematodes → these find no food in buckwheat roots → this causes an interruption of the nematode reproduction cycle

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Fertilisation

▸ Based on soil testing (comply with the fertiliser regulations!)

Annual nutrient losses in kg/ha:

	Total N	P ₂ O ₅	K ₂ O	MgO
Total	60-80	60-80	60-80	15-20

- If planning to use mineral fertiliser: perform prior to sowing, since young plants are very sensitive to elevated salt levels in the soil
 - The type of sulphate should be chosen carefully, especially when using potash fertiliser, since young sunflower plants are particularly sensitive to chloride
 - No liming & no application of organic fertiliser immediately before cultivation
- High demand for trace elements (especially boron and molybdenum)

Harvest and treatment

- Harvest period when grown for seeds: early to mid-August
- Buckwheat ripens unevenly
 - Time to harvest is when most of the grains at the tips of the branches show a brownish shade indicating ripeness
- High yield uncertainty
 - Fluctuating grain yields between 1,000-2,500 kg/ha at 91% DM
- Drying is usually imperative
- Seeds can be threshed using a normal thresher



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Botanical name	<i>Fagopyrum esculentum</i>	<i>Fagopyrum tataricum</i>
Common name	Buckwheat	Tartary buckwheat
Ploidy	2n = 16 → diploid	2n = 16 → diploid
Morphological features	<ul style="list-style-type: none"> • Annual herbaceous plant • Stem: erect, sparsely branched, reddish • Leaves: triangular, hastiform, heart-shaped to arrow-shaped, mostly as long as wide • Fruit: triangular achene 	<ul style="list-style-type: none"> • Annual to biennial herbaceous plant • Stem: erect, sparsely branched, green until mature • Leaves: triangular, hastiform, heart-shaped to arrow-shaped, mostly wider than it is long • Fruit: triangular achene
Hardiness	None, very sensitive to frost, temperatures <3°C are poorly tolerated	Yes
Usage	Grain, catch crop and flowering/nectar gathering	Grain, catch crop and flowering
Harvest and yields	<ul style="list-style-type: none"> • Very good bee plant • Seeds significantly larger • Yield expectation: 1,500-2,500 kg/ha marketable goods 	<ul style="list-style-type: none"> • Only little nectar • Much smaller seeds • Yield expectation: 500-900 kg/ha



Any questions? Please feel free to contact us!

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