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Buckwheat cultivation

Buckwheat flour does not contain gluten; the products suit for consumers who want a gluten free diet. Buckwheat gives a rather low crop which is of relatively high value; it may offer market opportunities especially for organic farmers.

General presentation of buckwheat

The buckwheat is a very ancient plant, originating possibly in the Far East and has obviously been cultivated in Europe for thousands of years. The special feature of the plant is that the flour does not contain gluten and is thus suitable for persons who suffer from celiac disease, or for some reasons feel better with gluten free food or finally like dishes and food products made of buckwheat. However, cultivation of buckwheat is not common in Europe and the plant could have more acreage, farmers could get more income and consumers more domestic products they prefer; buckwheat looks like a potential market.



Photo 1. Buckwheat in Seurasaari open-air museum, Helsinki. Photo: Urszula Ala-Karvia

Discovering and accepting buckwheat

Buckwheat is not well known among farmers and is not generally available as products in the market. Buckwheat (*Fagopyrum esculentum*) is actually not a cereal but a flowering plant which belongs to the family Polygonaceae. The white-pale pink flowers appear circa one month after sowing and buckwheat fields make a beautiful sight as a landscape amenity. It is also very special in that it is not mentioned in EU database of registered plant varieties and thus there are no royalties for breeders to be paid for the seed. As buckwheat is not a cereal, many farmers may have second thoughts about the plant; it needs to be 'accepted' and its growth patterns understood. The cultivator needs to know how it behaves on the special location where it is grown.

Cultivating, milling and consuming buckwheat: the buckwheat web

Buckwheat is a very modest plant which thrives on warm fields with dry, rather poor soils; it is very suitable for organic farming and crop rotations with legumes. It is known for its ability to improve the availability of nutrients for plants to follow it within the crop rotation scheme. It is sensitive to early frost and cool, moist summers, which may harm the seed formation. If the plant suffers a frost it may not produce seeds at all but needs to be ploughed into the soil and re-sown. The organic crop may be around one ton per hectare, with rather



Photo 2. A buckwheat field. Photo: Kaskisen Mylly Oy.

strong variations depending on conditions. Buckwheat produces a triangle-shaped, dark and very hard seed which needs a special mill to make flour, grits, groats, flakes and pasta. Intriguingly, buckwheat contains circa 13% protein, which includes the essential amino acid lysine. The investment in this mill may be challenging due to the need of capital, know-how and network of buckwheat farmers to produce raw material as well as the access to the market by the miller. The food culture which builds on buckwheat can also learn from for instance the Russian kitchen, and innovative approaches can be developed in western Europe. As the gluten contamination of buckwheat products is a serious risk, no other grain containing gluten may be processed on the same premises. For these reasons, buckwheat can be said to be a plant which strongly connects its farmers, millers and consumers to an economic web offering income for farmers as well as health benefits for all actors of the web: farmers, soils and humans.

References

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