

UK COOPERATIVE EXTENSION SERVICE

UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

Spelt

Introduction

Spelt (*Triticum aestivum* var. *spelta*) is a subspecies of wheat that is primarily used as an alternative feed grain for livestock. It is generally grown for on-farm use, often as a substitute for oats. Most of the nation's feed-grade spelt is grown in Ohio.



Spelt can also be used in many of the same processed foods as soft red winter wheat (for example, pasta, high fiber cereals, and crackers). Some people with allergies to wheat are not allergic to spelt, making spelt an excellent substitute for wheat in their diets. Spelt products are available through organic and health food stores.

Marketing and Market Outlook

The use of spelt as a food grain is a growing market due to increased interest in whole grain and wheat-free products. Most food-grade spelt is grown on contract with a processing company. Nature's Legacy (formerly Purity Foods, Inc.), a Michigan-based company, specializes in organic and natural food products and is one of the main marketers for spelt flours and pastas. Producers interested in producing a specialty grain will need to contact current processors for contract feasibility.



Production Considerations

Site selection and planting

Like winter wheat, spelt is seeded in the fall and harvested the following summer, although it is late maturing compared with most wheat varieties. Spelt is generally more winter hardy than many soft red winter wheat varieties. Unlike many other grains, spelt can be grown on low fertility soils that are poorly drained; it also grows well on sandy soils. Management is similar to that of wheat, although spelt requires less nitrogen per acre than wheat. Spelt is a common rotational crop on organic farms; however, it should not be planted following other cereal grains.

Pest management

Spelt is considered highly susceptible to loose smut. A fungicide seed treatment helps prevent smut problems, but the fungicide label should be checked for clearance before use on spelt. Reports on spelt's susceptibility to powdery mildew and stem/leaf rust are mixed. Hessian fly, greenbug, and wheat stem sawfly are the main insects that attack spelt. Adhere to the Hessian fly safe date for planting spelt. The thick seed husk provides spelt with some protection from pollutants and storage insects. Weed control begins with managing weeds in the previous crop. Additional strategies include tillage and establishing a dense stand so that spelt is able to compete well with weeds.

Harvest and storage

Spelt can be direct-combined or windrowed and threshed, similar to winter wheat; however, the combine should

be set at a slower cylinder speed. Drying and storage is also similar to wheat. Unlike wheat, the tough hull remains on the spelt kernel through harvest, shipping, and storage. Seed intended for animal feed is ground or milled before use. Spelt seeds that will be processed for human consumption are mechanically de-hulled just prior to milling. This additional step makes spelt more difficult and expensive to process than wheat.

Labor requirements

Labor needs for spelt production and harvest are approximately 2 to 3 hours per acre. Additional labor is needed to de-hull or grind spelt prior to use.

Economic Considerations

Since most food-grade spelt is grown on contract with a processing company, having a contract in place before raising spelt is necessary for a return on investment.

Start-up costs include land preparation and purchase of seed. Production costs for spelt are expected to be similar to other small grains, with variable costs of \$320 to \$390 per acre and fixed costs of about \$40 per acre estimated in 2012. Breakeven costs for conventional spelt (2012) were estimated at \$3 per bushel for 120 bushels of production. Organic spelt may bring a higher return depending on the price premium, marketing cost, and yield. Transportation expenses to an out-of-state buyer, which are not included in these estimates, could significantly decrease returns. Producers must be certain to include the expense of marketing spelt in their pre-production budget estimates.

The inclusion of a commercial Web site as a resource does not represent an endorsement of the company or its products by the University of Kentucky.

Reviewed by Chad Lee, Extension Specialist (Issued 2004)

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Photo courtesy of USDA

Selected Resources

- Profiles in Agricultural Entrepreneurship: Purity Foods, Inc. Okemos, MI (University of Kentucky, 2001)
<http://www.uky.edu/ag/CDBREC/cases/purity.pdf>
- Alternative Field Crops Manual: Spelt (University of Wisconsin and University of Minnesota, 1990)
<http://www.hort.purdue.edu/newcrop/afcm/spelt.html>
- Alternative Wheat Cereals as Food Grains: Einkorn, Emmer, Spelt, Kamut and Triticale (Purdue University site, 1996)
<http://www.spelt.com/spelthistory.html>
- Organic Spelt Trials (North Carolina State University, 2011)
<http://www.organicgrains.ncsu.edu/speltrials.htm>
- Purity Foods/Nature's Legacy
<http://www.natureslegacyforlife.com/>
- Spelt (Agricultural Marketing Resource Center, 2011)
http://www.agmrc.org/commodities__products/grains__oilseeds/spelt.cfm
- Spelt – What Is It? (Purity Foods, 1998)
<http://www.spelt.com>
- Speltz Budget – Horse Drawn/Amish Practices (Ohio State, 2003)
<http://extension.agron.iastate.edu/sustag/enterprisebudgets/speltz.doc>
- What is Spelt? (Ontario Ministry of Agriculture, Food and Rural Affairs, 2003)
http://www.omafra.gov.on.ca/english/crops/field/news/croptalk/2003/ct_0903a2.htm
- Transition to Certified Organic Spelt Enterprise Budget (British Columbia Ministry of Agriculture, Food and Fisheries, 2002)
http://www.agmrc.org/media/cms/transitional_organic_spelt_E382272357ED1.pdf

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For additional information, contact your local [County Extension](#) agent