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About CERERE

Through a balanced, multivector network of researchers and communities of practitioners, the project promotes innovation by producing and disseminating accessible enduser materials and training products for farmers, food manufacturers, consumers, researchers and policy makers.

CROP MANAGEMENT FOR UNDERUTILISED AND MINOR GRAINS

PROBLEM

There is relatively little practical information on production, and market options for minor cereals in the UK.

SOLUTION

Here we provide information production and marketing of minor six cereal based on experience from UK producers.

Outcomes

This should enable farmers to have a better understanding of the opportunities and risks of growing minor and heritage cereals.

Marketing Recommendations

- Small size of the markets for minor cereals – highly recommended to grow only on contract.
- No current market for feed-grade minor grains - not economically viable for a higher-value cereal, processing/transportation costs for small quantities are prohibitive.
- Supermarkets now have special diet sections, driving the market, but this remains niche.

Practical Recommendation

	Einkorn	Emmer	Rye	Buckwheat	Quinoa/amaranth
Yield	Low	Moderate	5.0-5.5t/ha conventional, 3 t/ha organic	3-4t/ha organic	Good, 2t/ha organic
Seed date	Autumn	Autumn and spring	Autumn and spring	May	Spring
Drilling rate	Avoid high seedrates	Aim for higher seeding rate	160-200 kg/ha	70 kg/ha	7-10 kg/ha
Weed cover	Fair	Good, esp. when tall	Good, esp. when tall	Good, and quick to establish	May need mechanical weeding; slower to establish
Combining	Premium crop - harvest as priority; value drops if Hagberg FN < 200	Premium crop - harvest as priority; value drops if Hagberg FN < 200	Longer to harvest (grain ready while straw can be green!); harvest early and dry to optimise quality ¹	Harvested in autumn; best swarthed and left 7-10 days, weather permitting	Late to harvest, handling difficult as seed is small.
Extra tips			More disease/weed resistant than wheat; limited seed availability	Needs good autumn weather; gluten free if not contaminated with other cereals; special requirements for dehulling	Choose low saponin varieties; drought-tolerant; dislikes heavier soils

Further Information

Organic Research Centre's Organic Farm Management Handbook 2017.
 Doves Farm - <https://www.dovesfarm.co.uk/about/our-grains>
 Bavec, F., & Bavec, M. (2006). Organic production and use of alternative crops. CRC Press.
<https://www.teagasc.ie/media/website/crops/crops/Spelt-Wheat-Food-potential.pdf> <https://www.farmersguide.co.uk/feature/giving-rye-a-try/>
 Quisenberry, K. S., & Taylor, J. W. (1939). Growing buckwheat. Farmers' bulletin (No.1835 ed., pp. 1-17) U.S. Department of Agriculture.
<https://www.britishquinoa.co.uk/all-about-quinoa/growing-quinoa>
 Organic Arable - <http://www.organicarable.co.uk/>

Theme: Agronomic practices

Keywords: Ancient, production, processing, markets **Crop:** Spelt, einkorn, emmer, rye, buckwheat, quinoa and amaranth

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Project partners

The University of Reading (United Kingdom), The University of Florence (Italy), Rete Semi Rurali (Italy), Réseau Semences Paysannes (France), Institut National de la Recherche Agronomique (France), The University of Helsinki (Finland), The Irish Agriculture and Food Development Authority (Ireland), Red Andaluza de Semillas (Spain), Formicablu (Italy), Organic Research Centre (United Kingdom), SEGES P/S (Denmark), Institut Technique de l'Agriculture Biologique (France), The University of Debreceni (Hungary).

Evaluation and sharing of the results

Use the comment section on the CERERE website to share your experiences with other farmers, processors, retailers, advisors and scientists. If you have any questions concerning this Practice Abstract, please contact the author by e-mail.