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

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

## Further Information

Doves Farm - [https://www.dovesfarm.co.uk/about/our-grains](https://www.dovesfarm.co.uk/about/our-grains)
[https://www.teagasc.ie/media/website/crops/crops/Spelt-Wheat-Food-potential.pdf](https://www.teagasc.ie/media/website/crops/crops/Spelt-Wheat-Food-potential.pdf)
[https://www.britishquinoa.co.uk/all-about-quinoa/growing-quinoa](https://www.britishquinoa.co.uk/all-about-quinoa/growing-quinoa)

### 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.