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Total wheat production:
15 million tonnes/pa

Total flour production:
5 million tonnes/pa

% adult intake in the UK

<table>
<thead>
<tr>
<th></th>
<th>Energy</th>
<th>Protein</th>
<th>Fibre</th>
<th>Folate</th>
<th>Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td>All bread</td>
<td>13</td>
<td>12</td>
<td>20</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>White bread</td>
<td>8</td>
<td>8</td>
<td>11</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Wholemeal bread</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Health benefits associated with wholegrain wheat consumption

- **Fibre:** reduce risk of CVD/strokes, type 2 diabetes, colo-rectal and breast cancers. Improved bowel function (reduce transit time)

- **Betaine:** reduce risk of CVD (and important for normal kidney and liver function)

- **Phenolic acids:** improve vascular flow and risk of CVD (cardioprotective)

- **Phytosterols:** reduce serum cholesterol and risk of CVD (structurally similar to cholesterol and lower cholesterol absorption)

- **Vitamins:** tocols (vitamin E), thiamine (B1), riboflavin (B2), niacin (B3), pyriddyoxine (B6), folates (B9)
Capabilities

1. Provide wheat lines with defined differences in grain composition
2. Analysis of bioactive components
3. Dietary interventions (University of Reading)

Aims

1. Develop new types of wheat with higher contents of bioactive components
2. Develop wheat-based foods with enhanced health benefits
3. Current collaborations include white bread.

Total AX fibre in white flour of 150 wheats