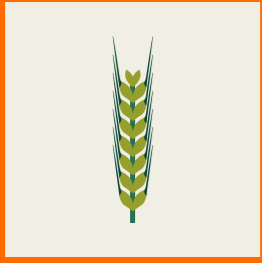


Hybrid Rye For Human Nutrition



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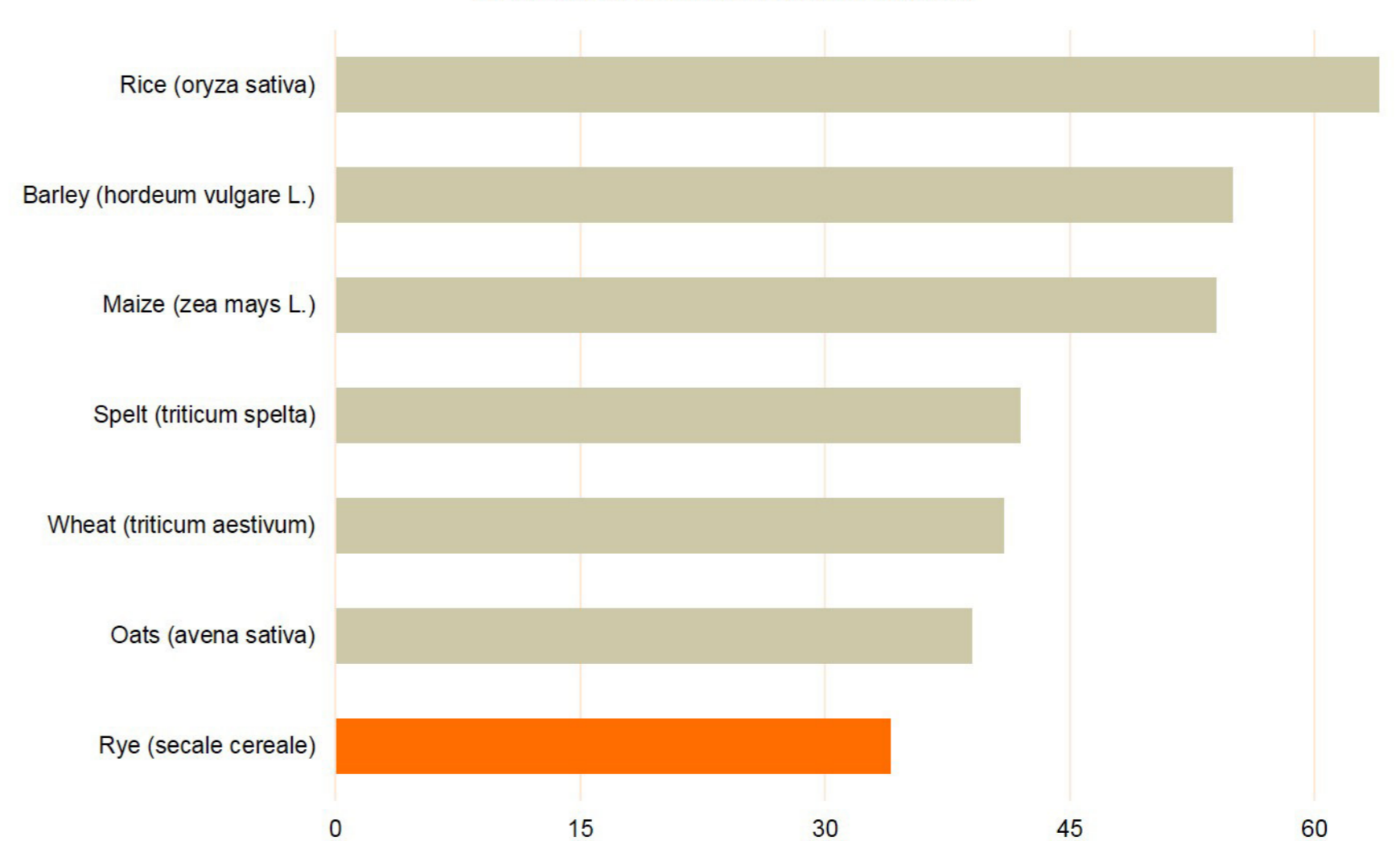
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Hybrid Rye - Key Advantages For Baking And Food Use

- High dietary fibre content
- Stable glucose and insulin balance
- Rye has the lowest Glycemic Index (GI) values of all cereal grains
- Improve bowel function – lower risk of constipation
- Long term cardiovascular health – rye based diets are linked to decreased incidence of myocardial infarction & beneficial effects in lipid metabolism

GI Index of Common Cereal Grains



Rye

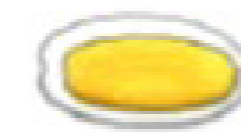


Dark rye flour



DF= 14g/100g
ASH 2,0 %

Medium rye flour



DF= 9g/100g
ASH 0,9 %

Light rye flour



DF= 7g/100g
ASH 0,8 %

Wheat

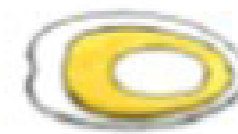


Whole meal wheat flour



DF= 13g/100g
ASH 1,9 %

Dark wheat flour



DF= 4g/100g
ASH 1,5 %

Standard bakery wheat flour



DF= 3g/100g
ASH 0,7 %

DF = Dietary Fiber
ASH = Ash Content

“ Fibre in cereals is located mainly in the outer layers of the kernel, especially in the bran.

Wheat and rye have similar bran content, but rye contains more cell walls within the endosperm, and thus has a higher fibre content.

(Nyman et al. 1984, Åman et al. 1997).



Hybrid Rye - Example End Use Products

Milling Products - Whole grain rye, cut rye (steel), Malted rye kernels, Whole grain flour, Rye bread mix with sourdough, Rye bran, Rye flakes, Breakfast cereals (muesli, others)

Bread Products - Sourdough rye bread, Crispbread, Thin crispbread, Rolls, buns and breads containing wheat/rye-mixture

Other Rye Products - Rye porridge, pastries, Rye pasta, Snack products

Distilling - Whisky production