

OATS



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Oat Breeding at IGER

Oat breeding at IGER began before WWII and the IGER oat breeding project has yielded the only two oat varieties which have been awarded the cereals cup. The current mission of the IGER oat breeding project is to create new scenarios through exploiting genetic variation in the non-grassland parts of grassland systems for oats and other crops.

A number of changes have occurred in oats since the days of Peniarth, these include:

- Higher yields,
- Stiffer straw,
- Improved harvest index – less straw/grain,
- thinner husks & improved milling quality,
- High oil content - making oats high in metabolisable energy (ME) whilst retaining valuable amino acid composition.

Naked oats – trials at Roslin have established that Naked Oats have a high ME for feeding to poultry. They contain energy dense oil; this has resulted in considerable interest being shown in Naked Oats by Bernard Mathews and other poultry producers. Now Naked Oats account for 10% (and rising!) of the whole oat.

Winter Oats

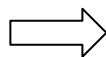
- high yield
- Tolerant of less favourable soil, drainage, rotation positions.
- not susceptible to 'white straw crop' soil diseases Take-All, Eyespot.
- Heavy straw yield

Spring oats

- Less grain yield than winter oats,
- Tolerant of less favourable soil, drainage, rotation positions.
- Straw yield; lodging and harvestability reduced compared to winter oats but improved in newer vars.
- Later harvest than Sp Barley and more competitive as 'cover crop'
- Maybe 'crimped' or as arable silage.

The environmental benefits of oats include

- On farm uses for grain and straw
- Low disease pressure
- High nutrient use efficiency
- Excellent weed suppression



LOW INPUT CROP

Oats in sustainable systems is potentially beneficial to biodiversity – growing 5 ha of cereals per farm for own use instead of more bought-in feed would have a major effect on farmland birds such as the yellowhammer. Bird populations have declined severely (in many cases by more than 50%) since 1970.

