

MENTERRA NAKED OATS TRIALS

Oats have been cultivated since around 6000-7000BC, being especially important as agriculture spread into the wetter and cooler areas of Europe. In Wales, Ireland and north and western Scotland oats were widely used for flat breads, and of course, porridge. Until the advent of farm mechanisation, all farms would grow a crop of oats to feed the horses. The decline in the use of horses as draught animals resulted in a decline in the area of oats grown in Europe, as did the omission of oats from the CAP's intervention price support scheme.

This decline has recently been partially reversed as a result in renewed interest in the crop, and particularly in the production of naked oats. These differ from conventional hulled oats in that they have thin papery husks that are easily removed by threshing. Naked oats contain around 30% more protein and 40-50% more oil than the hulled varieties.

Whilst naked oats yield perhaps 20-25% less than conventional varieties, their superior nutritional qualities realise premium prices through supplying high-energy food to non-ruminant animals, especially the poultry sector. This market has developed substantially in the last decade or so, following the introduction of varieties with superior agronomic characteristics and grain quality, developed by IGER in Aberystwyth. Previously, naked oat varieties were merely a curiosity, beset by low yields, seed shedding before harvest and high percentages of hulled grains.

A developing market also exists for human food markets, where their beta-glucan content is of interest as a source of soluble fibre, and for fractionating naked oats for the production of cosmetics. Oat straw can also obtain premium prices from sales into the high-value equestrian market as good quality bedding/feed. Oats are an undemanding, low-input crop and therefore fit well into a culture of sustainable agriculture that the Welsh Assembly Government is keen to develop.

THE MENTERRA TRIALS

The Menterra naked oat trials have included plot trials of winter and spring varieties, also investigating nitrogen and seed rates. Trial crops have been grown on Gwynedd farms both conventionally and organically. Grain from these trials has been used to produce test batches of snack products and oat 'coffee'.

The key findings were:

- Winter varieties produced higher yields (6.5-8t/ha vs. 3.5-5t/ha) than spring varieties, and the earlier ripening gives a better chance of harvesting dry, good quality grain.
- Although spring cereals are traditionally favoured in Gwynedd, the advantages of winter naked oats should be considered.
- Naked oat grains can be used in a variety of products, and the flavour enhanced by roasting or malting. Naked oat flour can be used in bread.
- The emerging functional food market with local branding probably offers the best option for Gwynedd farmers, rather than the more developed poultry feed sector, as growers in the arable areas of the UK are already well established.