



John Letts with bread made from hardy, high yielding and genetically diverse wheat

the local LOAF

Bread may be a staple, eaten by most of us daily but, thanks to 20th century industrialisation, in many cases it's now pappy and bland and often laced with additives. Many artisan bakers are providing a healthier, more appetising alternative to mass-produced bread. But a Community Supported Agriculture Project in Oxford has gone one step further. They have opted for a baking style that uses time and care instead of industrial methods, but also recognised that, to produce real bread that hasn't clocked up food miles, the flour is the key. Oxford Bread Group supplies its members with delicious artisan-style loaves of bread baked from grain milled from ancient varieties of wheat grown in organic and 'low input' conditions within a 30 mile radius of Oxford. These older varieties of grain are harder than modern ones and can adapt to local growing conditions. The straw from these 'heritage' varieties of grain is also used for thatching cottages and is ideally suited to being grown using traditional agricultural methods that makes it particularly suitable for small farms or smallholdings.

The project grew from a research project

A bread group is producing delicious loaves from old varieties of grain – and there are spin-offs for smallholders.
Andrea Mynard reports

undertaken by archaeobotanist John Letts. Having grown up in a farming community in Canada, John settled in the UK and combined his interest in ecology with agricultural experience. He began researching ancient grains by collecting thousands of specimens of 600 year old wheat that had been perfectly preserved within the thatch of medieval cottages. From this, John was able to reconstruct how medieval cereals were grown and used for thatching and to make breads, beer and gruel.

For most medieval farmers, obtaining a very high yield was less important than securing enough grain to feed their families for the year. But, as John says, industrialisation saw us "obsessed with yield, then by higher gluten content in wheat. Great for fluffy white bread, but not so good for digestion or flavour".

Older varieties of wheat were tall, producing tough straw that was excellent for thatching and swamped competing weeds, and also had deep root systems that obtained nutrients from poor soils to guarantee a lower, but more reliable, yield. Every medieval field contained a genetically mixed 'land race', crops of grain that had evolved to suit local growing conditions. Plants varied in height, ripening time, yield (due to genetic variability as well as uneven growing conditions) and their diversity allowed them to survive frost, drought, high rainfall and disease. The 'pure' varieties developed by agriculturalists in the early 19th century in order to increase yields, could succeed only when growing conditions could be controlled by using chemicals and mechanisation.

John said: "In the late 1800s, scientists could find 100 or more different types of wheat in one field, all >



John Letts, right, with Oxford Bread Group members

tall stemmed and with deep root systems that were well suited to organic conditions and could suck nutrients out of poor soil well."

In the UK, we've now moved to a system of monoculture on large farms, where high yielding modern varieties are grown in soil which has high levels of nitrogen added in the form of fertilisers. High nitrogen leads to wheat with high gluten content. This suits modern industrial baking where we have abandoned a long fermenting process in favour of a 40 – 50 minute 'Chorleywood' method. As warmer climates lead to higher gluten, we also import vast amounts of flour and, in our obsession with a quick baking process, have developed hybrid varieties with a high level of gluten content that allow bread to rise quickly, but are not so good for digestion.

John decided to try something different and has gradually bulked up the grain from his initial research with more than 250 ancient varieties (including emmer wheat and 'rivet' wheat) grown on organic farms in Oxfordshire and Buckinghamshire to create a hardy, high yielding and genetically diverse crop that produces good quality bread grain



Working with a reaper binder

as well as thatching straw. He found small-scale farmers receptive to the idea of growing the heritage grain.

Charles Bennett started growing three or four acres of grain for John four years ago on Sandy Lane Farm in Oxfordshire, a small organic holding with pigs, sheep and vegetables. "Old varieties of grain are not very demanding crops from a nutrient point of view; they'd rather not have too much residual nitrogen so it suits organic where bagged fertiliser isn't used," he said. "They're good in times of drought, too, as they're deep-rooted. They're tall and

another weeds, but if you have residual nutrients from a previous clover crop, it grows too tall and is weaker." Currently growing a crop of rye for John, Charles says: "These heritage grains are lovely things to grow, they are right for an organic farm and produce a local, lovely product."

As John explains, the grain is very relevant to smallholders: "Half an acre will produce 500 kilos of grain and 600 grams are needed for one large loaf of bread, so that's 1000 loaves." He's developed a scythe with a finger cradle to make it efficient for small-scale harvesting of wheat, and has discovered that, until the late 1800s, scythes with cradles were used to cut cereals in Wales. And John has tested its efficiency thoroughly, becoming West Country 'best quality' Scythe Champion!

Somehow, John has also found time to help to set up Oxford Bread Group, a co-operative now consisting of 120 members who all relish truly local flour and bread. Flour from the locally grown,



Creating stooks at a farm in Buckinghamshire

organic heritage grains is baked into artisan loaves by a family-run bakery in Wheatley. The lower gluten content in the flour is actually a benefit to the sourdough loaves baked for this Community Supported Agriculture project – sourdough uses wild yeasts from a 'culture' and works better with lower protein flour.

Oxford Bread Group members help out with weeding, crop maintenance, harvesting and stooking and come together for a Lammas day festival on a local farm in mid July following the medieval date of the start of the cereal harvest. With food including some particularly tasty loaves of course.

John is also talking to groups in other areas of the UK about setting up similar projects. One, already going ahead, is in conjunction with the Botanic Gardens of Wales, growing straw organically from heritage grain which is taller, tougher and likely to last longer than modern varieties, while providing a huge saving in 'grain miles' from the imported water reed increasingly used for thatching. Hopefully, other projects will have similar success, helping to support local organic farmers and drastically reducing the carbon footprint of people's diets as well as roofs!

MORE: www.oxfordbreadgroup.co.uk

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The project



The ancient grains project has recently been awarded two grants. One, from the Princes Countryside Fund, will help finance educational projects on farms in Buckinghamshire and Oxfordshire where children can learn about growing ancient wheat and make their own pizzas from the flour. Another grant, from the Leader project, is enabling John to invest in agricultural equipment which will suit small farms and be mobile. John can take it to smallholders and farmers growing his grain who are unable to afford the cost of buying or hiring combines and other expensive equipment. John is very enthusiastic about the agricultural kit, which will include small scale threshing equipment, a de-hulling machine to take the husk off spelt, a mill and sieving system, a comber for producing thatching straw and a grain polisher that will 'pearl' wheat so that it can be used to make 'frumenty' – a medieval form of rice-pudding that used to be made from wheat.