





ention "woad" and most people think of ancient Britons painting their bodies blue before charging into battle. So it's a surprise to discover it growing on a farm in Norfolk, in the very region once ruled by Boadicea, the warrior queen.

The plant itself looks unremarkable, like a cross between spinach and sugar beet, with a yellow flower (it belongs to the mustard family) but the dye, indigo, extracted from it was for centuries highly prized. The blue threads in the Bayeux tapestry were dyed with woad, and this is the only colour not to have faded over 900 years. The Saxon green garb of Robin Hood and his merry men was achieved by dyeing first with a yellow dye called wild mignonette and then with woad.

When the boys in blue – the airforce and police – switched to using synthetic dyes for their uniform in the early 1930s, the last woad mill, in Lincolnshire, closed. But a new market may be emerging for this ancient crop. Textile artists and fashion designers are increasingly interested in natural dyes, and the plant's health benefits are causing a stir among alternative practitioners. "Contrary to legend, Boadicea's army probably used woad to fight infection rather than frighten the enemy," says farmer Ian Howard, Britain's only commercial grower of woad.

Six years ago Ian was growing potatoes, wheat and sugar beet, and had a suckler



herd of South Devons, near Dereham in Norfolk, but he became disillusioned with farming and decided to sell a large part of his land and invest in woad cultivation on the remaining 37 hectares. He had been trialling it as part of a MAFF (now Defra) project to find a printing ink with no harmful chemicals for use in food labelling, and was excited by the crop's potential.

"I am fascinated by the alchemy of the dyeing process," Ian says. "When cloth is dipped into a vat of woad dye, it first turns yellow, then within minutes changes to green, turquoise and finally deep blue." The transformation occurs on contact with the air (oxidisation), but to visiting school children it's magic, and adults attending his workshops are equally amazed.

Woad is a native European herb, *Isatis tinctoria*, and produces the same pigment

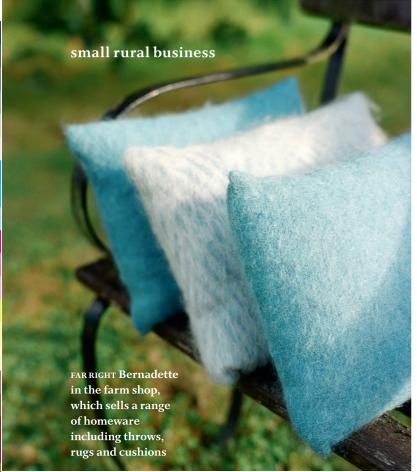
as its former rival, *Indigofera tinctoria*, an Asian import that was deemed such a threat to the woad industry in the 16th century that an international group called the Woadites tried to block its use, calling it "devil food", but since it was cheaper, it gradually became the dye of choice.

Three neighbouring farmers grow woad for Ian, harvesting from July until October, but all the processing is done on Ian's land, where the leaves are first steeped in vats of hot water, which is recycled, and the waste foliage is composted. When lime is added and air pumped in, a thick paste sinks to the bottom and the vat is drained. This paste is then baked at a low temperature in an oven until it becomes rock hard, when it is ground to a powder; Ian harvests 23 tonnes of leaves per hectare over the season, and each tonne of leaves produces two kilos of pigment.

Ian's wife Bernadette, formerly a PA in a large department store, uses her organisational and financial skills to help with the production and marketing of the woad items sold by mail order and in their on-site shop. This is housed in the former stables, part of a U-shaped brick, flint and beamed building that has been recently renovated and is now their home. One of their two daughters, Suzanne, helps out in the shop and makes the range of handmade indigo cards for sale.

After researching the opportunities, Ian and Bernadette decided to focus ▷

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on homeware and now sell a collection of towels, rugs, throws, toiletries and fashion accessories including knitwear, with yarn from, appropriately, Blueface Leicester sheep. The dyed yarn is wound on to spools or "cheeses" and sold direct to the customer or made up into garments by outworkers locally. Other items are made with cotton, silk, linen, alpaca – and bamboo. When mixed 70/30 with cotton, this gives the perfect texture, strength and absorbency for towelling.

At first Ian dyed everything himself but this became impractical as the business grew. However, smaller items are still made and dyed on the farm. As word spreads, more and more people are approaching him for advice. The Isle of Mull weavers at Ardalanish (CL November 2007) have asked him to experiment with woad on their organic yarn. He would like to supply natural dye for designer jeans and also pursue his interest in pharmaceuticals, as scientists investigate use of the plant in a cancer-fighting drug.

As a keen Norwich City football fan, Ian



has designed a silk scarf in the club colours, trialling another heritage crop, weld, to produce yellow and overdyeing with woad for the green. He is also a vintage car collector, and his pride and joy is a 1933 Austin 7 that he bought 25 years ago. "I would never part with it," he says. "I stripped every nut and bolt and worked on it until it was in perfect working order." Its colour just happens to be indigo blue.

## Ancient & modern

• THE RETURN OF HEMP The names Hampshire, Southampton and Hampton Court all have their origins in the hemp trade, introduced to the British Isles by the Celts and Picts. Hemp, or cannabis - though the commercial variety has no narcotic content - was grown on monastic estates in the 1300s, and many great naval battles were won with hemp sails and ropes. It provides fibre for clothing, paper, bedlinen and insulation, seeds for nutritional supplements and oil for margarines and cosmetics. Hemp requires no fertiliser, helps to improve soil structure, suppresses weeds and also attracts a diversity of farmland birds. • THE FACTS ABOUT FLAX In 18thcentury Ireland, the growing and processing of flax - scutching, spinning, bleaching, beetling and weaving provided work for thousands of people in mill towns, and linen became a major industry, 80% of it made in Ulster. Until the 1940s the blue-flowered-crop was harvested by hand and tied into sheaves or "beets". But farmers wearied of such a labour-intensive crop, and today it is grown not for fibre but for linseed, used

in ink, oils, paints, varnishes and linoleum.

alpha-linolenic acid, which appears to be

beneficial for preventing heart disease, inflammatory bowel disease and arthritis.

It is valued as a nutritional supplement, containing omega-3 fatty acids, especially

## **MEET THE EXHIBITORS**



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