

Spindigo - A new way of producing indigo

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Spindigo, Sustainable Production of Plant-derived Indigo (www.spindigo.net) is a 3.4 million euro Research & Development Project supported by the European Community. It aims to give European farmers a way to make a high quality indigo product to satisfy present and future demands from industry. Spindigo started in 2001 and runs until 2004. There are nine partners representing all links in the production chain: growing the crops, harvesting them, ensuring seed supplies, improving yields, providing machinery to extract the indigo on farm, purifying the product, and testing it for dye quality. The indigo comes from crops of woad (*Isatis tinctoria*), Chinese woad (*Isatis indigotica*), and polygonum (*Polygonum tinctorium*). Woad can be grown all over Europe, and was cultivated widely in the past. Polygonum comes from Asia, and is a new crop for Europe.

What is the reason for Spindigo ? When synthetic indigo was introduced in 1897, the dyers abandoned the natural indigo that came then from the tropics. The new synthetic indigo was consistent, bluer, and cheaper. After a century why should anyone change ?

The answer is simply that the market is changing. Customers are demanding natural products, naturally sourced. If a fashion company introduces a new line of clothes produced with a natural fibre, then a naturally sourced dye is needed to complete the green label. Indigo is formed from indoxyl precursors when the harvested leaves of woad and polygonum are extracted. We use an extraction technique that selectively brings the indigo precursors out of the leaves, but we still see some other plant compounds being released. The Spindigo Project is working to increase the purity of the indigo to 90% and to identify and reduce these impurities. The concept of sustainability has economic, environmental and social dimensions. In the Spindigo Project we are carrying out an Environmental Impact Assessment of the whole process of natural indigo production, that will enable us to inform customers just how sustainable is our total system of production.

Every year since the Project started, clothes dyed with our indigo have been shown by leading fashion houses at major shows: Boudicca at London Fashion Week in autumn 2001, Karada at Pitti , Florence in 2002, and Mely's Maglieria in Milan and Pitti Florence in early 2003. The market demand for our product exists. Our Project is working to provide European farmers with the technology and know-how that will enable them to supply that market. In the presentation, we discuss progress made in the first two years of the Spindigo Project.

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