Prof. Martin Wolfe, a pioneer in UK agroforestry

Professor of Plant Pathology, Martin worked for 28 years at the Plant Breeding Institute (PBI) in Cambridge, followed by nine years in Switzerland. Since 1998 and ’retirement’ worked for the ORC and latterly Coventry University. Since 1998 and ’retirement’ worked for the ORC and latterly Coventry University. Since 1997 he, his late wife Ann, and his family have been partners in and run Wakelyns Agroforestry, a highly innovative, integrated and organic agroforestry farm in Suffolk, east of England. Based on his experiences in plant pathology, Martin firmly believed that the future of sustainable agriculture was rooted in Darwinian evolutionary processes, where adaptation to the agricultural abiotic and biotic environment leads to increases in overall productivity and resilience. By moving away from the industrialised monoculture approach towards polycultures with major increases both within and among crops, trees and livestock, Martin’s work produced evidence, and practical experience, of the overall productivity, biodiversity and environmental gains when modern knowledge and techniques in ecology and genetics are applied at all levels.

Wakelyns Agroforestry, diversity in action

Martin and Anne established Wakelyns Agroforestry as an organic silvoarable system in 1994 on a 22.5ha site in the arable heartland of eastern England. Consisting of four agroforestry systems, hazel short rotation coppice (SRC), willow SRC, a fruit and nut tree system and a mixed hardwood and fruit tree system planted in north-south rows or production hedges, there is an organic crop rotation grown within the 10-12 m wide alleys. This has been the site of many years of research trials and demonstrations, working closely with the Organic Research Centre and other partners to build up the evidence on the production of a wide range of products, including bioenergy from the willow and hazel coppice, timber, fruit, vegetables, cereals, nuts, cider and craft materials, and the delivery of a number of important ecosystem services such as maintaining soil fertility and health, biodiversity enhancement, modification of the microenvironment, pest and disease regulation and carbon storage.

**Diversity for resilient crop production**

- **Composite Cross Population Cereals**
- **Crop Mixtures**
- **Diverse green manures**

**Decentralised energy production**

- **Short rotation coppice**
- **Hedgerows**

**Functional Biodiversity**

Higher abundances of bumblebees, solitary bees and hoverflies in the willow alley system at Wakelyns compared with a control arable field.

Higher incidence of apple scab in the mixed timber and apple tree system at Wakelyns (WAF) compared with an organic orchard control (CLO).

Hedgerow production hedges slow the spread of potato blight with blighted rows in the western alleys but no crops damaged in the eastern alleys.

**Inspiration**

- **Composite Cross Population Cereals**
- **Crop Mixtures**
- **Diverse green manures**

**References**