

Conservation Agriculture and Biodiversity



Centre for Rural Innovation
at Harper Adams University College



PROJECT SUMMARY

Harper Adams University College are part of the SOWAP (SOil and WAtEr Protection) Project; investigating the environmental benefits of Conservation Agriculture in the UK, Northern and Eastern Europe. The SOWAP Project is a collaborative effort by industry, NGOs, academic institutions and farmers. The three year, €4 million project, aims to assess how Conservation Agriculture can reduce soil erosion and water runoff whilst enhancing biodiversity.

Conservation Agriculture (CA) is becoming a widely used method for establishing crops across Europe. CA integrates the three main principals of:

- 1) Conservation Tillage - reducing soil disturbance by using reduced tillage establishment methods.
- 2) Diversified Crop Rotations - to reduce the impact of weeds, pests and diseases to reduce the need for external inputs.
- 3) Provide Soil Cover – protecting the soil by using cover crops or the residue from the stubble of the previous crop.

Conservation Tillage (CT) methods are used widely across Europe, with approximately 15% of crops in the EU-15 countries using these methods and approximately 40% of crops in the UK are established by CT methods.

The SOWAP project has shown there are many benefits, including reductions in soil erosion and nitrogen leaching, water conservation, and carbon sequestration. Other significant benefits are the speed of operation and savings of labour, fuel and time when compared with conventional mouldboard ploughing. The economic savings to farmers at establishment phase of crop production has been the main driver in the increased popularity of these methods. The increasing levels of legislation concerning the protection of soil and water resources, as well as biodiversity, means that CA may have additional benefits for farmers. Previous research carried out by Dr. Heidi Cunningham at Harper Adams University College has shown that winter wheat fields established by Conservation Tillage support a greater abundance of declining seed-eating farmland bird such as birds, such as Grey Partridges and Skylarks. The SOWAP Terrestrial Ecology team at Harper Adams University College are currently investigating the effects of CA on biodiversity. Target organisms include arable weed and their seeds, earthworms and beetles.

Dr. Keith Chaney can be contacted on 01952 815259 or kchaney@harper-adams.ac.uk

Further information on the SOWAP Project can be found at www.sowap.org



KEY FACTS:

Lead Group: Crops

Key theme: Innovation for Sustainable Farming

Contract Value: € 250,000

Project Team: Dr. Keith Chaney, Dr. Heidi Cunningham, Avril Rothwell

Project Duration: Three years

Sponsor/Client: EU Life and Syngenta



Centre for Rural Innovation

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Accessing the research and consultancy work at Harper Adams University College

The main purpose of the Centre is the sharing of knowledge to support innovation in the rural economy by:

- the provision of technical research services and business consultancy
- making our facilities available to support the needs of businesses
- supporting business networking
- the development of new technologies
- providing training programmes and work-based qualifications to businesses and individuals

www.cfri.co.uk

The website is designed to allow you to interpret the range of research and consultancy work undertaken using seven key Themes:

- Rural Entrepreneurship and Social Enterprise
- Innovation for Sustainable Farming
- Food Chain Safety
- Linking Urban and Rural Economies and Communities
- Sustainable Technology and the Rural Economy
- Rural Advisors and Agencies
- Rural Professional Practice

General enquiries

To enquire about research, consultancy and training services at Harper Adams University College please contact Dr Andy Brooks:

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