by Edoardo Seregni

10 YEARS OF DIRECT DRILLING

THIS YEAR MARKS THE 10TH ANNIVERSARY OF THE DEVELOPMENT OF THE CLAYDON DIRECT DRILL, DURING WHICH TIME THE COMPANY HAS LED THE WAY IN THE DEVELOPMENT OF UK STRIP TILLAGE, WHICH HAS RESULTED IN A CONSIDERABLE SAVING IN TIME AND ESTABLISHMENT COST.

The **Claydon** direct drill was developed 10 years ago by farmer and inventor Jeff Claydon as a means of reducing cultivation and drilling costs, whilst improving timeliness and crop performance from his heavy clay soils in the east of England. The Claydon drill now forms a central part of a complete Strip Drilling System that has been developed by the company and is attracting considerable interest from farmers throughout the UK and increasingly in Europe. This system has helped increase yields by up to 26% while at the same time reduces establishment costs. The aim of the Claydon Strip Drilling System is to only cultivate the soil immediately around the seeding and rooting zones by injecting the seed underneath the soil that is fresh and clean. The undisturbed soil between the seeded rows retains its structure whilst conserving moisture to give a fast germination and unhindered root development for strong plant growth. The key to the Claydon drill range is the unique patented 2-tine Strip Tilling System, which is designed to provide the optimum growing environment for seeds by eliminating compaction below the seed, both for soil drainage and to provide a free structure for root development.

Claydon versus Conventional

Conventional direct drills tend to use a disc to create a compressed slit into which the seed is placed; however the drawback to this is that because the bottom of the slit is compacted by the leading edge of the disc; this does not allow water to drain, with the increased risk that the seed can rot in wet weather, while hindering root development. To avoid this, the first element in the Claydon 2-tine system is staggered tungsten breaker tines, which can be set to work at up to 18cm deep. Following directly in line with each breaker tine is a winged 'A' blade that is designed to lift the soil and create a 'Y' shaped 18cm wide cultivated band into which the seeding boot, which is situated directly behind the blade, injects a band of seed. Finally a series of levelling 'Ski' boards gently covers and presses the seed band. Depending on conditions, typically a 17cm blade is used for most seed types, but 12cm and 7.5cm wide 'A' blades are also available for smaller seeds and wetter conditions, or a special knife can be used for drilling beans. The winged blades are held in place by a Bourgault Speed-Loc fitting system that allows them to be easily changed. The drill typically works at 30cm row spacing and the 12cm area between each band is left uncultivated to retain moisture and nutrients, but also allow air and light to reach each plant. An additional benefit is that these uncultivated ridges help support machinery when spraying or fertiliser spreading and so helping to avoid compaction. Also by only cultivating the area immediately surrounding the seed, power requirement is reduced. The Claydon drill range comprises of three models, the best selling Hybrid which is suitable for use over a wide range of soils and conditions, the SR which is designed specifically for stony soils and features Stone Release tines, and the new V Rape Speed drill which is designed specifically for drilling oilseed rape. ■

A greater yield response

In the 10 years since he developed his drill, Jeff Claydon has seen establishment costs plummet and yields increase. Trials conducted by Saaten Union over the past five years have consistently shown a greater yield response from crops drilled using the Claydon drill compared to those established using a conventional plough based cultivations system. This year's wheat trial, which was across 31 trial plots, showed an overall yield average of 9.23t/ha, an increase of 1.94t/ha (26.6%) over the conventional plots. Similarly in oilseed rape there was a 15% increase in yield to 6.05t/ha. When reducing cultivations with any system, effective weed control is essential. To create a stale seedbed in order to encourage weed seed germination ahead of spraying off, Jeff Claydon has also developed the 7.50m wide Claydon Straw Harrow which consists of five banks of hard wearing tines, which can be hydraulically angled for a more aggressive action. This is designed to just stir the top 1.0-2.5cm in order to encourage chitting for more effective herbicide control, and can be used at forward speeds of up to 25KPH so allowing outputs of around 12ha/hour. As part of their expansion into Europe and to provide a higher level of service and technical support to our customers, Claydon are looking to appoint a number of distributers across Europe and would welcome enquiries from any potential partners.