Between The Rows

Opico launch a range of new tools helping growers to reduce their dependency on herbicides.

Increased interest in mechanical weed control outside of the organic market has driven developments in inter-row cultivators from manufacturers and distributors. Recognising this, Opico, which has imported the Hatzenbichler range of comb harrows since 1994, will introduce a full range of inter-row hoes from the Austrian firm at Lamma.

Growing resistance to chemicals, increased consumer focus on what goes into the food we eat and greater regulatory control over widely used chemical options means that contractors and farmers are having to look at hybrid systems to ensure yields. According to Opico, a combination of mechanical and chemical controls, with a good knowledge of when to chit and destroy weeds – as well as flexibility in regards to row widths to facilitate the use of inter-row hoes – could be the answer.

Inter-row hoes suitable for cereals, root crops, maize and other specialist crops will be available, specified for either the front or rear tractor linkage. Principally, all versions share the same design, with tines mounted on parallelograms with individual depth wheels running between the crop rows. With a choice of tines and shares, the machines cultivate the soil between the crop, slicing through weed roots and leaving unwanted plants to die on the surface.

Working widths when operating in combinable crops are from 2.5m up to 18m, split into 1, 3 or 5 sections. The single Vibro-tines are equipped with duck foot shares (or the optional L-blades) are mounted individually or in threes on the parallelograms, with spacing set at either 12.5cm or 30cm.

In combinable crops, thought will have to be given to row widths to make the operation viable. While wider spacing may imply a loss in yield, Opico states that the added efficiency in weed management, in addition to the reduction in chemical costs, will outweigh this.

For sugarbeet, and other root crops, 3m to 12m working widths are available with three tines mounted in a triangular pattern on each parallelogram. Spacings are 35cm or 50cm and plant protection discs, to stop soil being thrown onto the crop, can be equipped if required.

The changeover of shares can be done quickly and easily using pneumatic tools.

Finally, models specified for maize also come in working widths from 3m up to 12m. Instead of the Vibro-tine, maize models are equipped with S-tines, fitted with A shares, for deeper cultivation spaced at either 50cm or 75cm. The options list includes plant protection discs, ground driven Kress finger weeders to flick out weeds from the crop row and a seeding unit.

The seeding unit can be used for the accurate placement of fertilisers or granular herbicides such as Avadex. In crops such as maize it can also be used to undersow a companion grass crop, providing green cover and reducing the risk of erosion.

There's also a choice of technologies available for all models. Operators can specify GPS section control to lift each parallelogram unit at the end of a run to avoid crop damage on the headlands or in awkward shaped fields. This is operated through a Muller ISOBUS controller.

In addition to this, up to eight cameras can be equipped along the width of the machine which work in combination with a hydraulically adjusting headstock for up to 250mm of shideshift to accurately work between crop rows. A specially developed headstock is fitted, with three versions available to suit the working width. All three include flange wheels to anchor the headstock and stop lateral movement affecting the tractor.

Bedfordshire company Tillet and Hague has developed the camera technology, providing UK based back-up for the system. It can take a feed from two or more cameras, ensuring a high level of accuracy at speeds up to 12kph, and is also able to derive a speed measurement from the video feed.

Up to eight cameras can be fitted, along with a steerage headstock for automatic sideshift.

With a wide range of specifications, prices are variable depending on the amount of rows and the working width. A 6m, 24 row machine for combinable crops starts at £20,251, increasing to £34,375 for a 36 row. A 6m, eight row machine for maize crops starts from £21,458. When working through the options lists, the seeding unit costs an additional £8678 and the Muller GPS section control will set you back £10,756. Customers looking to specify the steerage headstock, with a quickhitch, will be spending an additional £28,405.

Das Original

Hatzenbichler has a long history developing machinery for mechanical weeding. The Das Original comb harrow was first produced by the company in 1952 and has been continually developed to meet changing needs.

Today it's available in working widths of 3m to 24m, designed for complete surface chitting and weeding on stale seedbeds and during early crop growth. It can be specified with 6mm, 7mm or 8mm tines with ten angle settings, or the option of hydraulic tine adjustment, to suit conditions.

The harrow bed has six pivot points on each side, allowing it to flex and follow ground contours. In addition to chitting and then destroying weeds over several passes, the comb harrow has the additional advantage of breaking the crust for better water infiltration and air interchange for the roots.

As with everything, timing is key when considering the comb harrow. As it works across the full surface of the field, it can only be used up to the point where the crop head starts to develop. In this regard, Opico states that it works well in combination with the new inter-row cultivator range. It can be further optioned with a seeding unit for undersowing grass seeds or applying micro fertilisers or granules.

A 12m mounted comb harrow retails from £10,642; this can be further specified with an Air 16 seeder and platform for an additional £10,322. At the top of the range, a 24m machine can cost upwards of £40,512. ■

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