

OXFORDSHIRE WEED HOEDOWN

Five years ago, a successful switch to minimum tillage practices at Kingham Hill Farm, Oxfordshire was undertaken by partners Alan Smith, his wife Anne and their son Richard. Mike Whiting found out more.

A crop of wheat that has been hoed with the Claydon TerraBlade inter-row-hoe.

In truth it was Richard who had researched the Claydon system and thought it would suit the varied soil types on their farm. After spending a very informative day with Jeff and Spencer Claydon and seeing how well their crops looked, the Smith family were keen to apply the targeted cultivation practices. They invested in not only a second hand 6m mounted hybrid but also an ex-demo Claydon stubble rake and a Terrastar.

PROGRESSIVE CHANGES

The past 12 months have resulted in the mounted Claydon drill being swapped for the T6C trailed with hydraulic depth control and a split hopper.

The T6C drill also has a shouldered leading disc



Wheat into OSR stubble - Autumn 2019

which helps to cut through any trash in front of the leading tine.

Kingham Hill Farm, which is approximately 285 hectares, is predominately heavy loam with some Cotswold brash on the higher ground. In addition, a further 890 hectares is share farmed and the soil types vary from the local brash to sand and heavy clay.

The typical arable rotation includes; winter wheat, winter beans, spring barley and for the first time this year, linseed. A two-year grass ley is used as a break crop as well as lucerne.

ORGANIC MANURE BONUS

In addition to the arable activities, a bed and breakfast facility is provided for 450 cattle over the winter months. The cattle are loose housed which requires approximately 120 hectares of baled straw annually that converts into a useful 2000t of solid manure. This is then applied into the arable rotation and maintains organic matter content.

Running the Terrastar on top of mucked ground is adequate in creating a suitable tilth to a depth of approximately two inches. Where necessary a light pass with the stubble rake prior to drilling can provide further stimulus for the soil whilst retaining moisture.

BREAK CROPS

The grass is cut mid-May for clamp silage for the livestock housing enterprise. A second cut is made into small bale seed hay which is sold to Lambourn for liveries and third cut is made into haylage for cattle or horses. The lucerne is baled and wrapped and sold through a dealer to zoos. Lucerne is a deep rooted crop which helps to create natural drainage paths through the soil profile. The inclusion of grass and lucerne in the rotation creates a longer break between cereals and the additional fibrous roots contribute to a good soil structure.



Deep rooting Lucerne is grown, baled, wrapped and then sold through a dealer to zoos.

SPRING NUTRITION

Granular fertiliser is applied via an Amazone ZA-M Profis hydro which Alan and Richard consider to be a very successful investment. The hydraulic control of the discs, interacting with the hopper's weigh cells deliver accurate spreading on banks and on headland bouts.



DRILL TECH

If you are considering buying an inter-row hoe you need to match the working width of the hoe to the drill. The Claydon T6C coupled up to a Fendt 939 VarioGrip has a drilling width of 6m through nineteen coulters which allows for a clear corridor of 165mm between the rows which are approximately 180mm wide. The twenty blades on the Claydon Terrablade inter-row hoe will enter between the rows neatly.

Regarding sowing accuracy, the Fendt 939 VarioGrip is configured with RTK software and an additional TOPCON screen. As all the drilling is done by this tractor it is the only unit within the fleet configured with AGCO's FUSE higher accuracy GPS software. Headland

drilling relies on the driver's eye tracking the line from the bout marker tine.

Whilst just shy of 400hp on a 6m drill may seem like overkill to some, the banks at Kingham Hill Farm can soak up power. Keeping a constant forward speed with a good output and low fuel consumption, the Fendt 939 VarioGrip manages to tick all the boxes.



TRACTOR SET-UP FOR HOE SUCCESS

Once the inter-row hoe is attached to the front linkage on one of the farm's Fendt 724s, the first priority is to ensure that there is plenty of tread on the tyres allowing the crop to recover. Worn rubber will increase the contact area with the plants causing irreparable damage.

Taking the folded front-mounted hoe on the road doesn't present any issues and in work the depth wheels sit in the row negating any need for automated steering. Richard prefers

the upfront location of the hoe as it's very easy to control.

Some care is required on headland turns although certainly no cause for concern after assessing the established crop post hoeing.

Claydon's Commercial Director, Spencer Claydon, reports the band sowing specification of the Claydon T6C drill compliments the Terrablade inter-row hoe configuration. This allows some leeway in operation hence minimising crop tiller damage.



Kingham Hill Farms Fendt 724 on the Terrablade



Late Weeded Wheat in May 2019

TIMING IS CRUCIAL

Regarding timings the aim is to mechanically weed at the end of March or early April. The weather needs to be dry with a friable textured topsoil. As with other users, the catalyst for trialling the Terrablade inter-row hoe in 2019 was Kingham Hill Farms' agronomist, Kieran Walsh of Velcourt.

Putting some numbers to the hoe's impact, Alan reported that a portion of a large field was heavily affected by blackgrass. Taking the sprayer and clearing the four hectares of all green matter was considered, although two runs in opposing directions with the hoe was trialled. The resulting crop yielded 8.25t/ha in the weeded zone compared to 10t/ha for the healthy

areas. A good result compared to the alternative of financial loss due to crop eradication and the associated chemical costs. As with any other passes through the crop, variable costs such as fuel, labour and wearing parts need to be factored in. A set of points is expected to cover approximately 200 hectares depending on the soil's abrasiveness.

No doubt 2020 will bring many more opportunities to put the Claydon Terrablade inter-row hoe to use, particularly with autumn spraying programs being affected by wet weather. Its position with the farm's cropping management is intended to compliment herbicide programmes with the added bonus of a reduction in input costs. The beauty of the hoe is that it is not selective; it will kill all weeds in one pass.



A crop of wheat that has been hoed with the Claydon TerraBlade inter-row hoe.



Weeds are sliced off by the TerraBlade and left on the surface, where they die.



Claydon Terrablade inter-row hoe. Image courtesy of Claydon.

SUMMARY

Alan and Richard have an excellent relationship with the Claydon team. Everyone is very helpful, and they were particularly appreciative of Jeff's support last autumn when the drilling conditions

were about as bad as they could get. No doubt they will keep the Claydon family updated on the progress of the Terrablade's inter-row hoe performance.

FARM FACTS:
KINGHAM HILL FARM,
OXFORDSHIRE



285 Ha AREA:
PLUS ADDITIONAL 850Ha
CONTRACT FARMED LAND



MACHINERY:

TRACTORS:

FENDT 939 VARIOGRIP WITH TOPCON RECEIVER
FENDT 828
FENDT 724 X 3

MATERIALS HANDLERS:

JCB 541/70 X 2
JCB 531/70

OTHER MACHINERY:

CLAYDON T6C DRILL
CLAYDON TERRASTAR
CLAYDON 6M STRAW HARROW
CLAYDON 6M TERRABLADE INTER-ROW HOE
HOUSEHAM AIR RIDE 3000 SPRAYER
AMAZONE ZA-M PROFIS HYDRO FERTILISER
SPREADER

HARVESTING EQUIPMENT

2 X NEW HOLLAND 9080 COMBINES - 9.1M HEADER



LABOUR:

ALAN & RICHARD
PLUS 2 FULL TIME EMPLOYEES
2 HARVEST STUDENTS



CROPPING:

WINTER WHEAT, WINTER BEANS,
SPRING BARLEY, LINSEED,
2 YEAR GRASS LEYS AND LUCERNE



SOIL TYPES:

COTSWOLD BRASH, SAND,
HEAVY LOAM TO CLAY.