



CLAYDON OPTI-TILL®  
DEVELOPED BY FARMERS FOR FARMERS



# CLAYDON OPTI-TILL® THE MACHINERY GUIDE



# CLAYDON OPTI-TILL®

Fast, efficient, cost-effective. The optimum machinery mix for optimum crop establishment.

## 1 → Claydon Stubble & Weed Management



Straw Harrow



TerraStar®



TerraBlade

## 2 → Claydon Drills



The leading tine drill



# THE HEART OF THE Opti-Till® SYSTEM

## Leading tine technology

### Ground-breaking tine: standard set-up

The leading tine can be adjusted to a depth of between 0 for low disturbance and 15cm (6 inches) for deep rooting crops like oilseed rape. The second tine can be adjusted via the depth wheels to put the seed in as shallow or deep as necessary.



1. Centrally mounted depth wheels give very accurate seed placement as they run on undisturbed soil between the rows and do not run over or cap the seeded area.
2. Leading tines break through the ground lifting and aerating it whilst creating a drainage tract and space for the roots to grow deep and strong with ease.

3. Robust, sprung seeding tines keep a highly accurate and constant seed depth, flowing through the soil lifted by the leading tines and cultivating it whilst only moving for a large stone.
4. Levelling boards and tines leave a superbly level finish covering the seedlings in a perfect soil plant pot with drainage and space for root development.
  - Fertiliser can be placed below the seed (leading tine) or above the seed (rear tine).

# CLAYDON STRAW HARROWS

Effective stubble management with huge output and low cost.

Claydon Straw Harrows create a micro tilth in the top 30mm of soil and use the retained moisture for a fast, even germination of weeds. They rake out and destroy weeds at the cotyledon and one-leaf stage, removing a food source for slugs. They break up slug nests and desiccate their eggs, exposing them to sunlight. At speeds of up to 25km/h, Claydon Straw Harrows are an effective stubble management tool. Straw is mixed into the soil layer adding insulation, retaining moisture and starting decomposition of the residue. Straw harrows can be used before or after cultivations to level soil and create a fine tilth. The robust Claydon Straw Harrow has been designed for fast action and maximum effect:

- Hydraulically adjustable tine angle creates optimum tilth
- Huge clearance for maximum flow of straw and reduced risk of blockages
- Turn on headlands with tines down in work to avoid trash build-up and straw-dumping
- 150mm square box section allows very high working speeds



- Flexible, robust 'wrap-around' long-life tines:
  - vibrate to create optimum tilth
  - no pressure points to snap
  - withstand high working speeds

Model		3 m	7.5 m	9 m	12.5 m	15 m
Hourly output (at 20 km/h)*:	(ha)	4	10	12	16	20
Minimum power requirement*:	(hp)	60	150	180	250	300
Forward speed*:	(km/h)	15-25	15-25	15-25	15-25	15-25
Fuel usage*:	(l/ha)	2	2	2	2	2
Road transport width:	(m)	3.00	2.24	2.99	2.60	2.75
Road transport height:	(m)	1.18	3.22	3.55	2.73	3.00
Weight:	(kg)	590	1,500	2,100	3,870	4,075
Pairs of 14mm tines (16mm optional):		25	60	75	100	120
Hydraulically adjustable depth wheels:		No	No	No	Yes	Yes
Light boards & protection guards:		Yes	Yes	Yes	Yes	Yes
Tractor linkage:		CAT 2 Mounted	CAT 3 Mounted	CAT 3 Mounted	Trailed	Trailed

\*typical / suggested





# CLAYDON TERRASTAR®



Moving a little more soil than the Claydon Straw Harrow, the TerraStar® plucks only divots from the top layer of soil leaving the structure intact and able to carry machines.

The 80x80mm divots are created by rotating “star” points fitted in a 200mm grid pattern to two knife bars each side of the machine. These star points create a fine tilth, encouraging volunteers and grass weeds to germinate. The tilth can then be moved by the Claydon Straw Harrow, breaking off germinating plants at the one-leaf stage, eliminating the need to spray while ground conditions allow harrowing.

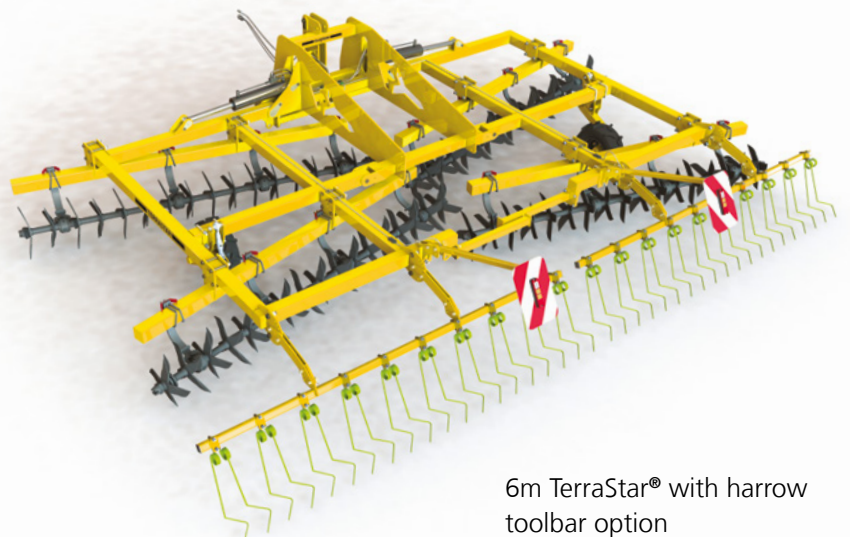
The TerraStar® helps the surface layer of soil to drain, and depth wheels ensure precise depth control for multiple passes. This versatile tool can be used as a mechanical weeder, reducing the need for glyphosate. It makes stubble management much easier and reduces slug populations.

The TerraStar® is ideal for mulching and incorporating crop or other residues. It can be used to produce more uniform seed beds, not only in unmoved soil, but behind any other cultivation equipment.

The TerraStar® is fast and effective and, like all the Claydon range, it incorporates a minimum of wearing parts, making for extremely low-cost operation.

		TerraStar®	w/toolbar
Hourly output*:	(ha/h)	7	7
Minimum power requirement*:	(hp)	150	150
Forward speed*:	(km/h)	15	15
Road transport width:	(m)	2.89	2.89
Road transport height:	(m)	3.32	3.32
Weight:	(kg)	1,750	1,970
Width:	(m)	6.40	6.40
Height:	(m)	1.33	1.33
Depth:	(m)	3.28	3.58
Star points:		136	136

\*typical / suggested



6m TerraStar® with harrow toolbar option

# CLAYDON TERRABLADE



The TerraBlade inter-row hoe is a low-cost, mechanical method of controlling weeds in combinable, band-sown crops. It is an additional weapon in the agricultural industry's weed control armoury at a time when the efficacy of some herbicides is decreasing whilst the cost of control is increasing.

Band sowing at 30cm leaves a 14-15cm-wide unseeded strip between the rows which can be hoed reliably and safely by the TerraBlade. By keeping the unseeded rows clear of weeds during the early stages of crop growth, competition for nutrients, light, air and water is reduced and the young plants can grow away strong and healthy.

The TerraBlade has the potential to improve crop yields, drastically lower the potential for carry-over of weed seeds and reduce the risk of more resistant types developing. Designed for use on any tractor with a Cat II front linkage, the TerraBlade has a working speed of approximately 6 km/h and up to 30mm deep. It is manually steered and can be used whenever soil conditions allow, covering up to 30ha a day with a 6m unit.

On farms that drill early, crops may be sufficiently well developed in the autumn to start hoeing with the TerraBlade, and in the spring the operation can continue up to the stage where the crop might be compromised by further passes.

Although designed for the Claydon System, the TerraBlade can be used behind any band sowing system and comes with a standard 150mm blade or a choice of 125, 175 or 200mm blades.



## "98.5% blackgrass control" – Agrii

In an Agrii blackgrass trial, in an area where grassweeds had become problematic after years of conventional crop establishment, the Claydon stubble management programme, in combination with a spray programme, has achieved a very high level of grassweed control.

In the control area with no stubble management or herbicide programme, Agrii counted over 900 blackgrass seed heads/m.

Surrounding the control area, with a combination of herbicide spray treatments, Claydon Straw Harrow and Claydon TerraBlade passes, blackgrass was reduced to circa 13 heads/m, a massive 98.5% control in the field.

TerraBlade		3m	4m	4.8m	6m	8m
Hourly output*:	(ha/h)	1.5	2	2.4	3	4
Working depth:	(mm)	30	30	30	30	30
Minimum power requirement*:	(hp)	30	40	48	60	80
Forward speed*:	(km/h)	6	6	6	6	6
Road transport width:	(m)	2.62	2.65	2.62	2.35	2.78
Road transport height:	(m)	1.76	2.05	2.47	2.60	3.60
Weight:	(kg)	450	475	500	663	720
Width:	(m)	3.64	4.16	4.99	6.37	8.15
Height:	(m)	1.09	1.09	1.09	1.10	1.10
Depth:	(m)	1.33	1.33	1.33	1.33	1.15
Blades:		10	14	16	20	26

\*typical / suggested

# CLAYDON LEADING TINE TECH SIMPLY SO MANY BENEFITS



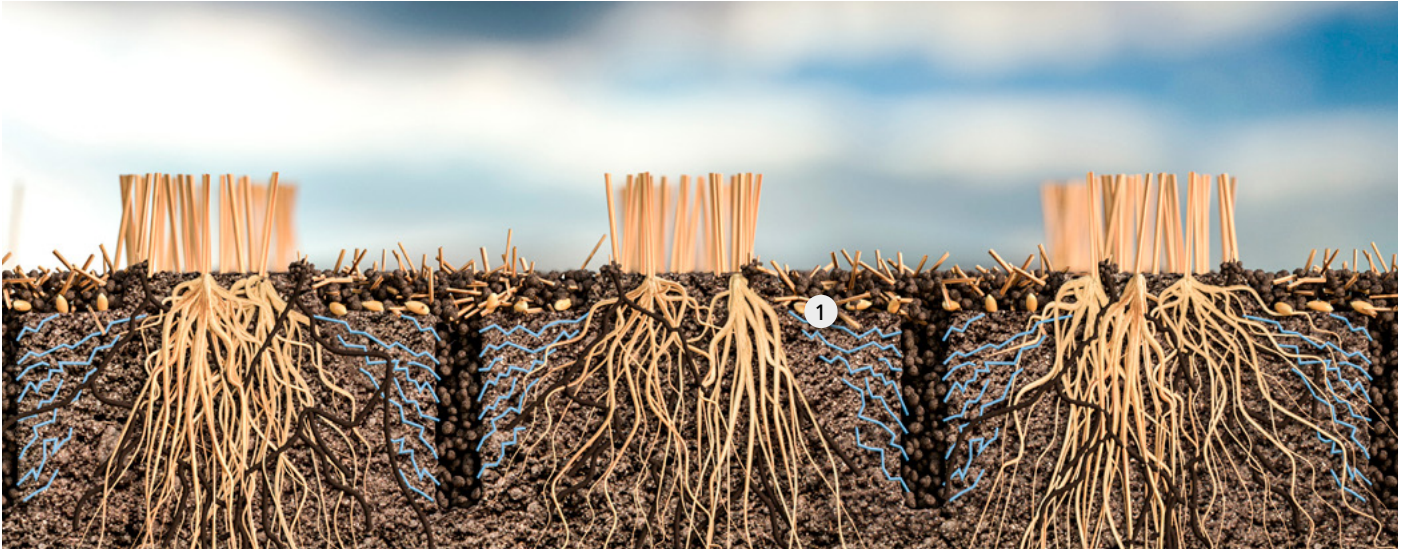
## Zonal Cultivations

1. The leading tine cultivates zonally alleviating local compaction, aerating the soil and improving drainage.
2. The majority of worm burrows are left undisturbed safeguarding their numbers, aiding drainage.
3. Plant roots are left largely undisturbed adding to the soil biota improving soil structure.





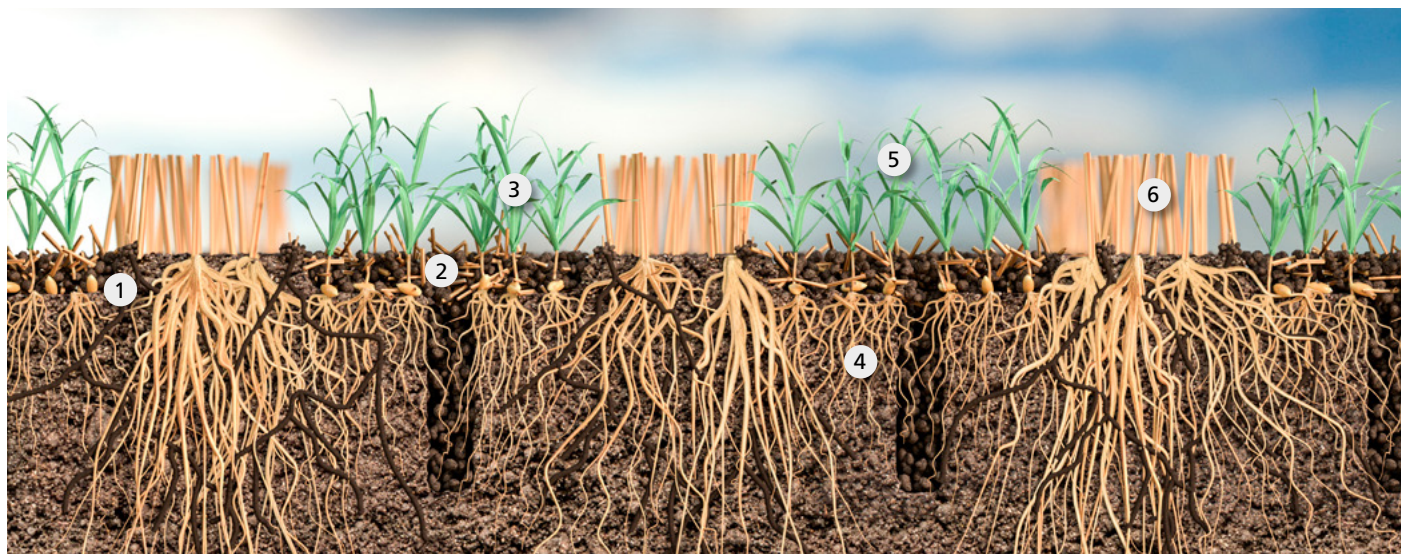
# NOLOGY –



1. The leading tine creates fissures in the soil (shown in blue) creating the ideal environment for strong rooting.
2. Root development before the winter slow-down is key to yield optimisation on any given hectare.
3. Organic matter depletion is minimised due to nominal soil disturbance. Soil nitrogen is also preserved.



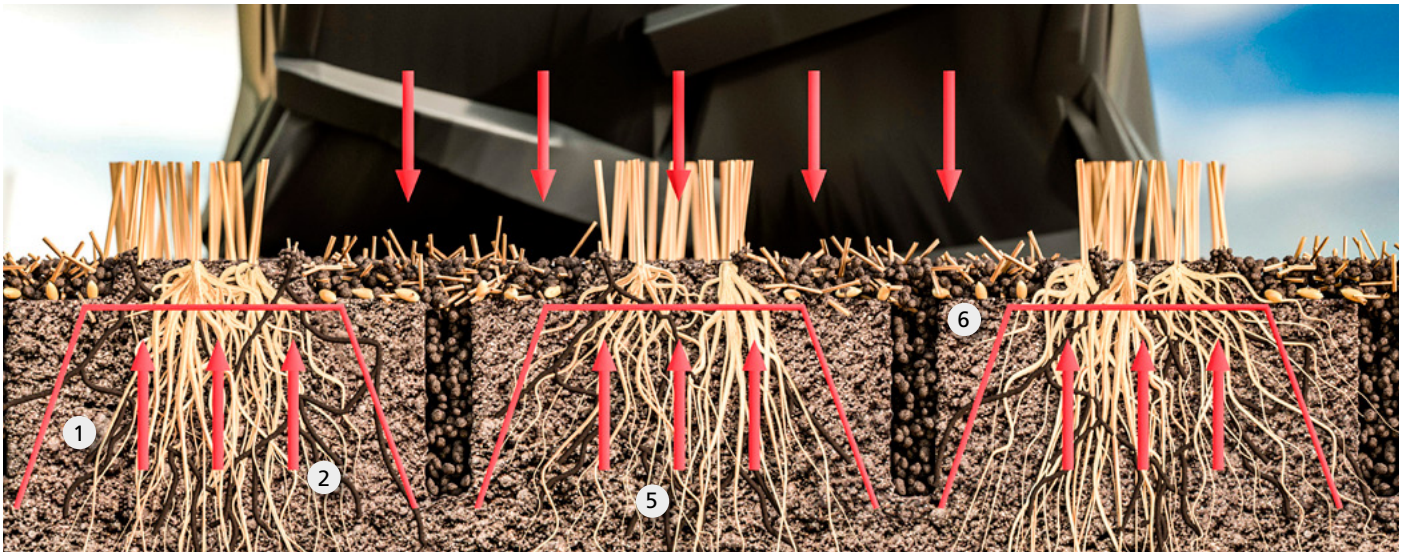
# CLAYDON LEADING TINE TECH SIMPLY SO MANY BENEFITS



1. Friable tilth allows fast, strong rooting. Roots can quickly harvest nutrients and moisture.
2. Emergence is unhindered due to excellent soil structure. The soil can absorb heavy rainfall without capping.
3. Early vigour is ensured providing strong establishment.
4. The seed is sown in bands so crops utilise more of the growing area, maximising their moisture and nutrient take-up.
5. The seed is spread across the working area of the seeding share, allowing more air and light into the crop improving photosynthesis as the plant grows.
6. Stubble helps keep snow in place and settled on the seeded area. This helps insulate the crop. As temperature rises snow melts and drains easily through the soil profile. This area warms quicker due to the darker colour of the soil.



# NOLOGY –



- 1. Targeted cultivation ensures soil density is retained over at least 50% of the field. This supports following field traffic.
- 2. Roots and worm burrows are left undisturbed providing drainage and aeration.
- 3. Tramline depths are kept to a minimum.
- 4. Fields are left level due to the design of the Claydon drill.
- 5. Soil density is consistent over large areas of the soil.
- 6. Capillaries are left intact facilitating water movement through the soil throughout the growing season.
- 7. Within a short time, soil health improves resulting in resistance to erosion, better drainage and increased water retention.



# CLAYDON EVOLUTION MOUNTED

Evolution is the latest range of mounted drills from Claydon comprising nine machines from 3m to 6m working widths. It combines operational functionality with many of the tried and tested features that have made the Claydon Opti Till® system of crop establishment the first choice for growers who want to reduce costs, increase productivity and improve soil health. Designed for drilling direct, Evolution can also be used after consolidation in ploughing and min till scenarios. The Evolution's strong, rugged build keeps running costs to a minimum and, with an extensive range of quick fit options for different drilling applications and low disturbance levels, it is one of the most versatile and flexible drills on the market today.

- Simple, solid design, highly manoeuvrable
- Minimal, quick-fitting wearing parts
- Low horsepower requirement and fuel use
- Long-life tungsten carbide protected leading tine
- Easy access calibration, intuitive controls
- Exact seed placement (wheels run on undisturbed ground)
- Self levelling chassis grades soil and follows contours
- Hydraulically controlled front disc toolbar option for high residue situations
- Hydraulic/shim seed depth adjustment
- Larger hoppers to reduce downtime and increase output
- Second/third 90 l hopper option for multiple seed varieties and sizes with venturi, toolbar or inter row distribution
- Quick-fit interchangeable seeding kits ranging from standard leading tine / A Share to low disturbance twin tine / disc
- Multiple seed tool options catering for a broad range of crops across varied soil types and situations
- Easy access toolbox incorporated into step frame
- Rear toolbar dampening reduces component fatigue and improves transport comfort

EVOLUTION MODEL		3M	3MF	4MR	4MRF	4M	4.5M	4.8M	5M	6M
Daily output*:	(ha)	20	20	30	30	30	34	36	38	40
Minimum power requirement*:	(hp)	150	150	200	200	200	225	240	250	300
Road transport width:	(m)	3	3	3.92	3.92	2.73	2.96	2.80	2.88	2.77
Weight:	(kg)	2,065	2,260	2,300	2,400	2,830	2,930	2,980	3,020	3,355
Height:	(m)	2.66	2.63	2.66	2.63	2.66	2.66	2.66	2.66	2.95
Depth:	(m)	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05
Hopper capacity:	(l)	1,910	2,500	1,910	2,500	1,910	1,910	1,910	1,910	1,910
Seeding tines:		9	9	13	13	13	13	15	15	19
Seed:fertiliser split:		n/a	50:50	n/a	50:50	n/a	n/a	n/a	n/a	n/a
Linkage:		CAT3/ CAT4N	CAT3/ CAT4N	CAT3/ CAT4N	CAT3/ CAT4N	CAT3/ CAT4N	CAT3/ CAT4N	CAT3/ CAT4N	CAT3/ CAT4N	CAT3/ CAT4N

## Standard fit:

- Leading tine and 180mm A shares
- Double rear toolbar (metal levelling boards and harrows)
- Hydraulic fan
- Artemis metering control
- Tramlining
- Road lights

## Options:

- GPS variable seed rate
- Pre-emergence markers
- Marker arms
- Hydraulically controlled front disc toolbar
- Stone protection
- Low disturbance kit
- Blockage sensors (seed and fertiliser)
- Vision kit (work lights and camera)
- Micro granular applicator (see page 21)
- ISOBUS compatible
- Wheel scrapers
- Fertiliser placement above seed or below (3MF & 4MRF only)

\*typical / suggested

# DRILLS



3MF



4.8M



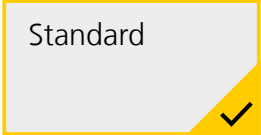
4.8M



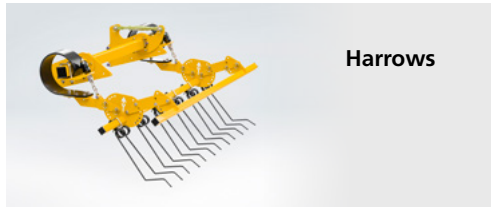
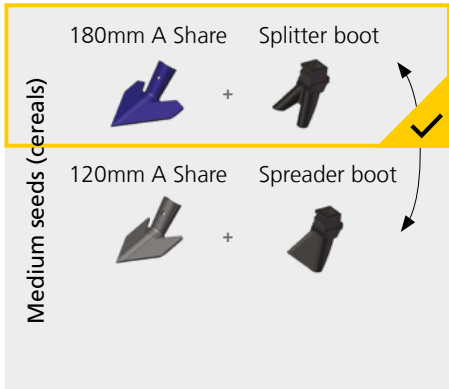
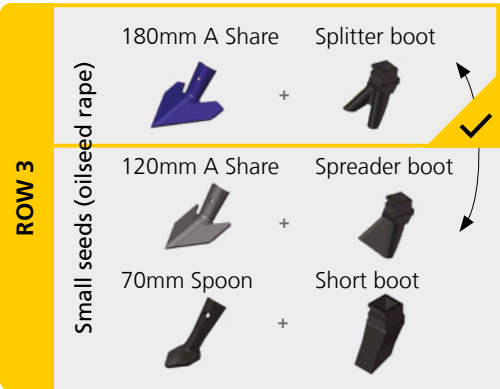
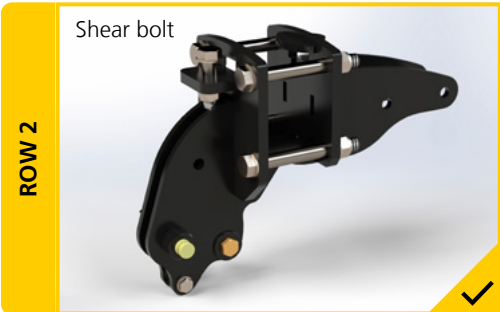
6M

# EVOLUTION CONFIGURATION

Key:



## ROW 1





ROW 2

ROW 3

ROW 4

ROW 2/3 - SEED/FERT

M01

Standard leading tine with standard seeding tine (seed only drill) ✓

M02

Standard leading tine with seeding tine fertiliser placement (seed & fert drill) ✓

M03

Leading tine fertiliser placement with standard seeding tine

M04

Split leading tine with seeding tine fertiliser placement

M05

Single plain disc with standard seeding tine

M06

Single plain disc with seeding tine fertiliser placement

M07

Single Spiradisk with standard seeding tine

M08

Single Spiradisk with seeding tine fertiliser placement

M09

Standard leading tine with twin tine

M10

Leading tine fertiliser placement with twin tine

M11

Twin plain disc with twin tine

M12

Twin Spiradisk with twin tine

ROW 4 REAR

Harrows ✓

Press wheels

Cage wheels

# CLAYDON HYBRID T – TRAILED

Using the same leading tine technology as the mounted drills, trailed Claydon Drills have all the same benefits, while catering for the requirements of larger-scale farmers:

- Simple, solid design
- Highly manoeuvrable
- Minimal wearing parts
- Low horsepower requirement and fuel use
- Quick wearing metal replacement
- Long-life tungsten carbide leading tine
- High grip (up to 50% weight transfer to tractor)
- Hydraulically adjustable depth control
- Easy calibration and intuitive controls
- Huge horizontal/vertical trash clearance
- Exact seed placement (wheels run on undisturbed ground)
- Constant seed depth from robust sprung seeding tines
- Grades soils and follows contours with self-levelling chassis
- Follows contours with centrally mounted depth wheels
- Light and smooth on headlands (lifts on depth wheels)
- Floating seeding chassis independent of hopper

DRILL TYPE		Evolution T3	Hybrid T4	Hybrid T4.8	Hybrid T6c	Hybrid T6	Hybrid T8**
Daily output*:	(ha)	The T3 is configured by adding a trailing kit to the mounted 3m Evolution (specification page 12)	30	35	40	45	60
Minimum power requirement*:	(hp)		200	250	300	300	400
Road transport width:	(m)		2.90	2.90	2.90	2.90	2.90
Weight:	(kg)		6,000	6,200	7,957	9,185	11,185
Height:	(m)		3.20	3.30	3.33	3.80	4.35
Depth:	(m)		8.16	8.16	8.16	9.51	9.51
Hopper capacity:	(l)		3,500 seed only (60:40 seed:fert)	3,500 seed only (60:40 seed:fert)	3,500 seed only (60:40 seed:fert)	5,500 seed only (60:40 seed:fert)	5,500 seed only (60:40 seed:fert)
Seeding tines:			13	15	19	19	25

## Standard fit:

- Front cutting disc toolbar
- Leading tine and 180mm A shares
- Double rear toolbar (metal levelling boards and harrows)
- Hydraulic fan
- Artemis metering control
- Tramlining
- Road lights

## Options:

- GPS variable seed rate
- Pre-emergence markers
- Marker arms (not available on T8)
- Vision kit (work lights and cameras)
- Stone protection
- Fertiliser placement above seed or below
- Low disturbance kit
- Blockage sensors (seed and fertiliser)
- Brakes (air or hydraulic)
- ISOBUS compatible
- NutriSeeder (venturi, spreader plates, inter-row sowing – see page 21)

NB: brakes are not available on T3.  
T3 has optional front toolbar cutting discs.

\*typical / suggested

\*\*can also be shipped broken down, with dimensions as for T6 plus separate crate: length 4.14m x width 1.87m x height 1.86m



# DRILLS



The T3 is configured by adding a trailing kit to the mounted 3m Evolution



Hybrid T4



Hybrid T4.8



Hybrid T6c



Hybrid T6



Hybrid T8

# HYBRID TRAILED DRILLS CONF



Key:

Standard



ROW 1

ROW 2

ROW 3

**ROW 1**

Front cutting discs

Front press wheels

**ROW 2**

Shear bolt

Stone protection

**ROW 3**

180mm A Share	+	Splitter boot	↗
120mm A Share	+	Spreader boot	↘
70mm Spoon	+	Short boot	

**ROW 3**

180mm A Share	+	Splitter boot	↗
120mm A Share	+	Spreader boot	↘

**ROW 3**

Carbide or chrome point	+	Bean chute
70mm Spoon	+	Short boot

**ROW 4 FRONT**

Levelling boards

Harrows

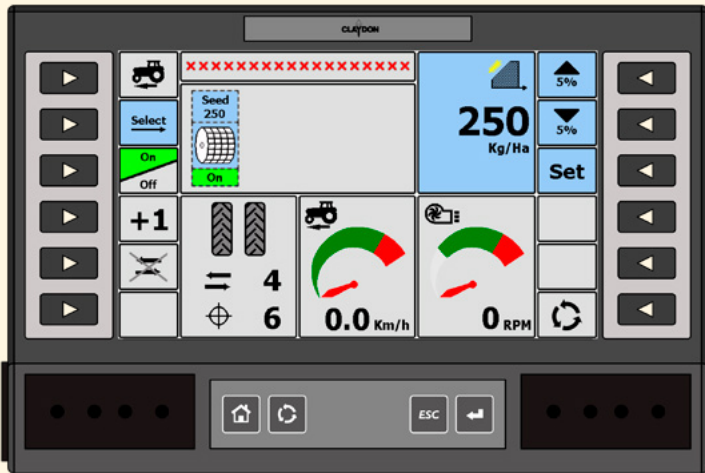
12mm harrows

# GURATION



	<p>M01 Standard leading tine with standard seeding tine (seed only drill) ✓</p>	<p>M02 Standard leading tine with seeding tine fertiliser placement (seed &amp; fert drill) ✓</p>	<p>M03 Leading tine fertiliser placement with standard seeding tine</p>	<p>M04 Split leading tine with seeding tine fertiliser placement</p>
ROW 2/3 - SEED/FERT	<p>M05 Single plain disc with standard seeding tine</p>	<p>M06 Single plain disc with seeding tine fertiliser placement</p>	<p>M07 Single Spiradisk with standard seeding tine</p>	<p>M08 Single Spiradisk with seeding tine fertiliser placement</p>
	<p>M09 Standard leading tine with twin tine</p>	<p>M10 Leading tine fertiliser placement with twin tine</p>	<p>M11 Twin plain disc with twin tine</p>	<p>M12 Twin Spiradisk with twin tine</p>
ROW 4 REAR	<p>Harrows ✓</p>	<p>Press wheels</p>	<p>Cage wheels</p>	

# CONTROL BOX FOR DRILLS



Claydon drills are fitted with an easy-to-use, intuitive control box with an ISOCAN / ISOBUS terminal fitted as standard.

## Topcon Artemis control box

- up to 4 channels (controlling electrically driven metering units)
- colour touch screen display
- easy product calibration
- ISOBUS compatible
- + / - seed rates on the move
- 2 x external camera inputs
- integrated blockage sensors (available)

# CLAYDON TARGETED FERTILISER

## Integrated fertiliser options

Claydon fertiliser technology is offered as a complete unit in the 3m and 4m rigid mounted and 3-8m trailed machines.



3m F3 Evolution mounted seed and fertiliser drill



Trailed Hybrid drill split seed/fert hopper

## Placement options for integrated fertiliser



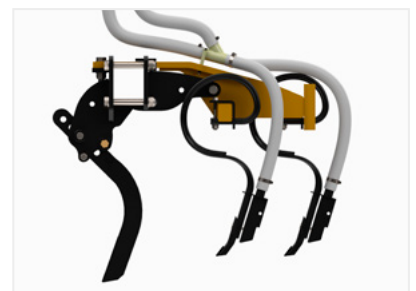
Rear fertiliser boot (placement above seed)



Front fertiliser boot (placement below seed)



Split fertiliser boots (placement above and below seed)



Twin tine kit fertiliser boots (placement above seed)

# MICRO GRANULAR APPLICATORS

Claydon applicators deliver small seeds and microgranules to a choice of three different outlets on drills.

## Venturi

Delivery into the seed venturi. The advantage of this is if a cover crop mix or companion crops are being seeded with variable seed size an even seed distribution is achieved in the field.

## Toolbar

Spreading the product across the width of the drill on the rear toolbar. This allows slug pellets, for example, to be applied at the point of seeding vulnerable crops.

## Inter-row

Placing seed beside the sown crop in between the banded rows of seed providing an improved placement of seed for companion crops or if full coverage of the field is required.

## Mounted drills



Toolbar application



The mounted hopper has a 90 litre capacity. It is electronically driven and can be programmed for variable application rate. It is controlled via ISOCAN/ ISOBUS drill terminal.

## Trailed drills



Inter-row application



Model XL-L07

The moulded plastic hopper of the NutriSeeder has a 200-litre capacity. It is fully integrated into the hydraulics of the drill providing drive to the fan. The unit uses the Artemis electronic drill controller allowing calibration and full GPS variable rate control for all products. The hopper is fully sealed and pressurised providing accurate distribution for all products.

Calibration is easy using the same procedure as the main drill and can be independently controlled from the drill controller in the tractor cab.

# 6 REASONS TO BUY CLAYDON

## 1. Reduce costs

Claydon Opti-Till® minimises the number of passes you need to establish crops, dramatically reducing your costs and saving you time. Wearing and moving parts are minimal so costs can be kept low.

## 2. Maximise yields

The Claydon leading tine stimulates soil only where required, in the seeding and rooting zone. It creates a fine tilth and encourages roots to grow deep and strong. Plants take up moisture which is conserved in the unmoved soil. Crops are healthy and thrive on increased soil organic matter and improved soil structure.

## 3. Improve soil structure

The Claydon leading tine moves soil only in the seeding and rooting area to drain water away from the seed and loosen compacted ground. The soil in unseeded rows is left intact, making it strong and able to support machinery throughout the year.

## 4. Increase soil fertility

Residue from previous crops decomposes into nutrient-rich organic matter. Worms break down the organic matter and produce casts which are also rich in nutrients.

## 5. Benefit the environment

Carbon is kept in the soil, increasing soil organic matter. Soil erosion, water run-off and chemical leaching reduces. Worm and bird populations thrive. Opti-Till® is used by organic farmers as a mechanical method of controlling weeds.

## 6. It's the most versatile crop establishment option on the market

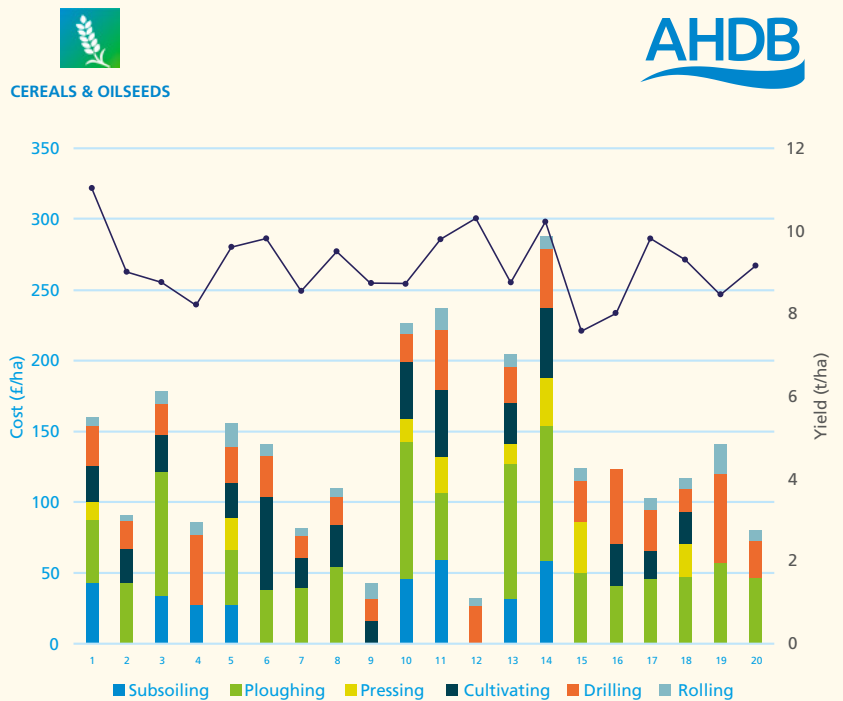
No matter what the soil type, no matter where the farm, Claydon is now achieving fantastic results for farmers in over 30 countries across the world.



## Significant cost savings are achieved by using Opti-Till®:

- Reduced field passes saving time
- Lower tractor hours resulting in huge fuel savings
- Lower running costs

The graph below is an excerpt from “Autumn Cultivations and Winter Crop Establishment” webinar by AHDB (Agriculture and Horticulture Development Board) 06/09/21. It shows the 2016 cost of establishing winter wheat on 20 AHDB Monitor Farms and the yields achieved by various approaches. Farm 12 is a long-standing Claydon customer. Costs will have increased considerably since this data was produced but the proportional costs remain valid.



# BY FARMERS FOR FARMERS



*“Our focus is to produce high-yielding crops at the lowest establishment cost – and we do this with a system that promotes healthy soil and benefits the environment.”*

Jeff Claydon, Farmer and CEO

In 2002, when grain prices fell to levels which made production uneconomic, Suffolk farmer Jeff Claydon was forced to challenge long-established ways of producing crops. Unable to buy the machine he needed, Jeff developed the Claydon Drill. This leading tine drill makes it much more cost-effective, faster and reliable to establish crops directly into stubble, min-tilled or fully-cultivated soils.

Each year the Claydon family establish 400ha of combinable crops on their own heavy-land farm.

They use a 6m Claydon drill pulled by a 300hp tractor which clocks just 100 hours to cover the area. With everything in the ground in good time, the spare capacity allows them to drill another 1,250ha on contract.

Since inception, Claydon have added stubble and weed management machines to the product range to provide the optimum crop establishment system – called Opti-Till®. Opti-Till® creates the optimum amount of tillage for optimum soil and crop health. It has the added benefit of dramatically reducing input costs and the time taken to establish crops.



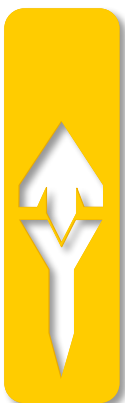
What makes Claydon products unique is the fact that they are developed on a working farm, by a working farmer. Proven on farms in over 30 countries worldwide, working on all types of soil and in all conditions, Claydon Opti-Till® is sustainable farming for the future.

Visit our website for more details on products and customer testimonials:

[www → claydondrill.com](http://www.claydondrill.com)



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