# **X-Terra Wheat:** a year in the field, from establishment to harvest

The X-Terra was planted at the GWCT Allerton Project, in Leicestershire, as part of our long-running ‘Regenerative Agriculture’ trial, now in its ninth year. The soil type is silty-clay-loam.

## Crop Drilling - 1st October 2025



**Plough-based**
Plough, power harrow, drill
300seed/$m^2$



**Light Till (LT)**

Low disturbance, direct drilled
330seed/$m^2$



**Light Till (LT+) Including 25t/ha FYM + Variable rate N**
Low disturbance, direct drilled
330seed/$m^2$

## Crop Development - 4th March 2026



Plough-based



Light Till



Light Till+

## System comparison at a glance

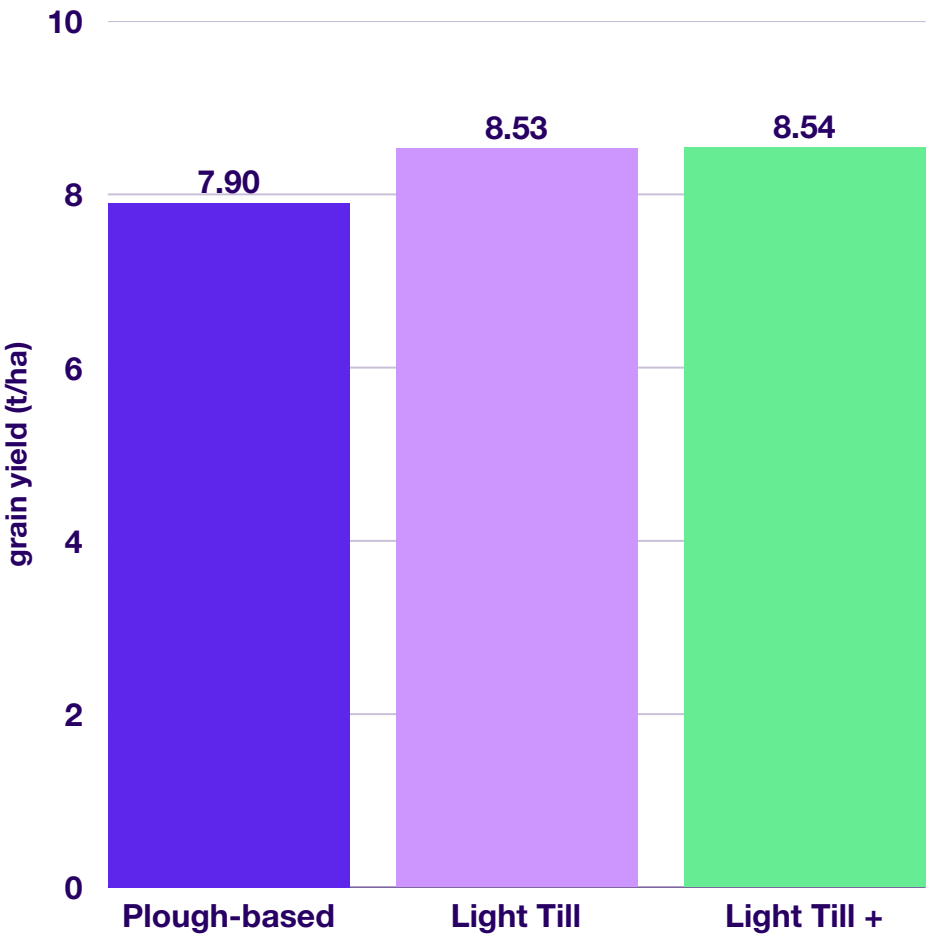
| | Plough-based | Light Till | Light Till + |
|---|---|---|---|
| **Establishment** | **72%** | 66% | 63% |
| **Ear count (ears/m2)** | 411 | 523 | **537** |
| **Tillers per plant** | 1.9 | 2.4 | **2.6** |
| **Grain yield (t/ha)** | 7.90 | 8.53 | **8.54** |
| **Grain protein** | **13.2** | 12.5 | 12.8 |
| **Straw mass (t/ha)** | 3.9 | 6.0 | **7.1** |
| **Earthworms (total no.)** | 283 | 408 | **958** |
| **SOM (Dumas, %)** | 4.1 | 4.7 | **5.1** |
| ***Apparent N recovery (%)** | 98 | **119** | 106 |

*N accounted for ((grain, straw+ SMN change)/available N input) x 100

Data Source:
Syngenta trial at GWCT Allerton Project, Harvest 2026

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### Final harvest results: yield held while ear numbers increased






Plough-based Light Till Light Till+



Plough-based Light Till Light Till+

### Yield held steady as the system became more biologically active

| LT+ grain yield | LT+ grain count | LT+ earthworms |
|---|---|---|
| 8.54t/ha | 536.8 ears/m2 | 958 |

### Key findings:

- Overall yield was higher in LT and LT+ than in the plough-based system in the 2025-26 season.
- The lower-disturbance systems carried more ears and tillers, showing how crop structure can compensate for lower establishment.
- LT+ added 25 t/ha FYM and optimised inputs as part of the wider regenerative agriculture system.
- LT+ had the strongest earthworm response: 958 compared with 283 under plough.
- LT+ recorded the highest Dumas SOM result at 5.1%, compared with 4.1% under plough.
- Apparent N recovery was calculated at 105.8% for LT+, compared with 98.0% for plough; this is an indicator, not a complete nutrient balance.

### End use results:

- In private bake tests, the X-Terra grain from each agricultural system produced good quality loaves of bread.
- The loaves all had good volumes and fine texture.

Data Sources:
Syngenta trial at GWCT Allerton Project, Harvest 2026, Private bake tests, 2026