Case study 5
Keith Challen, Farmeco, Bingham, Nottinghamshire, UK
Member of CTF Europe for four years who is converting to a CTF system in 2009

Farm details
- 1300 ha amongst four landowners, managed as a joint venture
- Soils: 80% are clays plus some medium to light land. Also some organic clay over gypsum – extremely heavy with high moisture retention. Predominant soils are classified as clayey river alluvium and stagnogleyic argillic brown earths.
- Crops: Mainly oilseed rape and wheat
- Maximum tractor size 550 hp (410 kW)

Current cropping systems
- Crop establishment:
  - Wheat. Minimum tillage with 7.5 m cultivator with two rows of shallow tines and two rows of deep tines towing an 8 m press followed by a 6 m cultivator drill and rolls.
  - Oilseed rape. Minimum tillage as for wheat but with the seed metered in front of the 8 m press and followed by rolls.
  - Deep loosening as and when required with 4 m adjustable subsoiler.
- Harvesting
  - Tracked combine harvester with 9 m cutting table, straw chopped and spread
  - Grain trailers haul direct from harvester which unloads on the move
- Auto-steer
  - Satellite based correction providing ± 10 cm pass to pass accuracy within 15 minutes

Proposed cropping system with CTF
- Crop establishment
  - Wheat and oilseed rape. Direct sowing with 8 m tine drill
  - Remedial work with subsoiler on 20% of land, but little further use anticipated after that except on headlands
- Harvesting
  - Tracked combine harvester with 9 m cutting table used at 8 m, straw chopped and spread.
  - Grain trailers haul direct from harvester which unloads on the move
- Auto-steer
  - RTK correction from local tractor dealer providing ± 2 cm pass to pass accuracy and positioning with no time constraint
Background and basis of CTF system

- Change to CTF coincided with 5 year machinery replacement policy
  - decision on new tractors based on fuel use efficiency and residual value
- All equipment will be on standard wheel track settings and good quality but narrower tyres
  - tractors 1.93 m (76”) on 650 tyres
  - combines 2.84 m (112”) on tracks, slight alteration in length of unloading auger
  - trailers 2 m (78") also on RTK - commercial industrial type tyres
- Trailers take two fills from harvester and will turn across to next tramline if required
  - would consider a cross headland
- Not much sloping land - will go up and down where there is

Reasons for considering CTF

- Rising costs
  - anticipates up to 50% reduction in fuel use as a result of changing to CTF and no-till
- Considers no-till will not work without CTF
- Getting better crops
- Better weed control potential
  - inter-row cultivation
- Recognition of soil damage with existing systems
- Anticipated legislation
  - Water Framework Directive
- Environmental
  - likes environmental deliverables with CTF

Reality of CTF

- Maximum tractor size now 350 instead of 550 hp (260 compared with 410 kW)
- Has sold a lot of the machinery but has also bought new
  - three, more fuel-efficient tractors, all with auto-steer
  - all machines on standard track widths
- Only 1 m in 8 m will be tracked
- CTF not an expensive decision - a dramatic cut in fixed costs
- More risk with no-till than CTF
  - choice of drill the most difficult decision
- Reduction in overlaps
- Nice straight lines!
- Students take to it quickly and easily
- CTF a “no brainer” but not a religion!

See illustration below

Keith “I’m expecting all my OSR roots to look like this under CTF%!"
Case Study 5
Farmeco conversion of 1300 ha to an OutTrac CTF system in 2009

- Sown tracks
- Tramlines

- Cereal harvesting
- 8 m drill
- 24 m chemical application

- 25% rather than 125% tracked area