

An overview of Controlled Traffic Farming (CTF) systems in Northern Europe

Tim Chamen

CTF Europe



Tim has conducted research on tillage and compaction effects on soils and crops for 25 years. Since 1996 he has worked for industry and others on soil/machine interactions. In 2007 he set up CTF Europe as a facilitator of CTF systems and recently received a doctorate covering field traffic, soils and crops.

ABSTRACT: Although the first instance of a controlled traffic system occurred in the 1850s, a 20th Century approach based around rubber tyre and track technology only came about from the 1970s onwards. Initially this was in the form of a gantry tractor system, as it had been in the 1850s, but moved towards research on tractor systems in the 1980s and to commercial uptake on farms from 2005 onwards.

Unlike combinable crop systems in Australia where a common track gauge of 3 m tends to be the preferred option, this is largely seen as impractical on the narrower roads and the greater traffic intensity of northern Europe. An exception is seasonal controlled traffic systems (sCTF) employed largely on vegetable farms on mainland Europe and particularly those in organic production who use a gauge of 3.2m or more. Similar seasonal systems are employed on a narrower gauge for forage grass and chiefly in Denmark where traffic loads and intensity associated with slurry application are high. Greatest European adoption has been in grain and oilseed rotations on heavier soils and is often accompanied by a change to no-till.

With narrower track gauge systems that do not match the combine harvester (header), novel approaches have had to be found that minimise tracked areas. These generally use two track gauges and sometimes two implement widths but all address the simple principle of confining all traffic to the least possible area of permanent traffic lanes. Machinery operating widths vary from 6 -12m, but only up to 10m are grain unloading augers presently of sufficient length to reach the adjacent traffic lane; chaser adaptations are not a preferred alternative.

A few farmers are pioneering adoption in vegetable and root crop production systems but are hampered by the incompatibility of harvest machinery. Although these can be engineered to deliver to CTF systems, the present limited demand means that machinery manufacturers do not yet perceive a need. In contrast, there are signs that manufacturers of machinery for combinable crops are recognising the requirements of controlled traffic farmers and are introducing small but significant changes to their designs.

After 8 years of CTF promotion in Europe most farmers have now heard of it and an increasing number are familiar with its principles. The reduction in environmental impacts of CTF systems is now becoming recognised at government level and some promotional funding has been forthcoming as might some farm level incentives for its adoption. Presently we know of around 28,000 ha in production using sCTF, 1,600 ha in CTF and another 44,000 ha in planning or transition.