

Controlled Traffic Lucerne Hay Production

Joe Reddy¹, Tim Neale²
¹Farmer, Wowan; ²CTF Solutions, Dalby
(07)49 371 351; (0428) 157 208

INTRODUCTION

Separate cutting, raking and baling operations in lucerne hay typically involve 3-5 tractor based operations in each cut. A large proportion of the cropped area (approximately 50-70%) is wheeled each harvest, if traffic is random. Research has demonstrated direct (plant growth/water use) and indirect (soil/disease) damage by wheels in lucerne production.

Controlled Traffic (CTF) lucerne has been shown to improve lucerne yields by up to 25%, and double stand life (from four to eight years). However to date, there have only been a handful of lucerne hay producers who have adopted a CTF system.

This paper shows how CTF lucerne is actually being achieved on a farm in Central Queensland's key lucerne growing area – the Callide Valley near Wowan.

A CTF SYSTEM FOR LUCERNE

The system is set up on a 2m wheel track system, but is not bedded. A 12' flail mower conditioner, which has the capacity to swing and cut both sides of the tractor, has been purchased to allow 36' to be cut on each set of wheel tracks (3 swaths).

A series of combined rakes that turn the lucerne each day to assist with drying, are still being developed. A final raking brings the 3 swaths together immediately prior to baling. Baling involves a tow-behind, large round baler with wheels that match the tractor.

A 3 bale JD accumulator was purchased to minimise the distance travelled during hay removal operations. The hay retrieval will be assisted with the CTF system, as the driver can drive up and reverse down each wheel track in the paddock to remove the hay to the headlands on awaiting trucks.

EXPECTED CHANGES

Using this system, the area trafficked by heavy machinery tires will be reduced from near 100% to around 10%. Stand life is expected to increase significantly, thereby reducing establishment costs. Yields are conservatively expected to increase by 10%.

On a spreadsheet analysis, an extra 50% on the gross margin is expected, assuming yield and stand life changes occur.