

The issue of scale, making CTF work no matter what size

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Introduction

Achieving economies of scale are touted as prerequisites of a successful business. Grain farming is no exception. Everybody has heard the mantra, "Get big or get out" We all know people in the process of doing both. But what scale is right?

The reality is that there are peak profit nodes all the way along the scale spectrum. (Simon Fitsch, pers comm.) The challenge is to maintain the benefits of CTF during the transition from one node to the next.

This paper will review the attributes of a successful CTF system and the costs involved if that system is compromised. It will examine systems which can scale easily if the opportunity arises to increase land area. Other techniques to manage scale, beside capital expenditure, will be canvassed.

A successful CTF system

The basics are simple;

- a designed farm layout incorporating drainage, access, optimal paddock usage and management.

- a suite of machinery with matching widths and wheel spacings

- RTK guidance

- a comprehensive farm management philosophy incorporating timeliness, good nutrition, high crop frequency, ZT, grain drying, crop and herbicide rotations, a high number of planting windows and wide variety of crop types, (pulse, broadleaf, C₃ and C₄ grasses), record keeping and experimentation.

Compromised system

Mismatched wheels and widths cause losses through missed cropping opportunities, lower yields, less water infiltration, less efficient tractive performance, more soil loss through wind and water, more waterlogging, more costs.

Layout failures characterised by non-draining wheeltracks can also result in missed opportunities, increased costs and crop losses.

The Issue of Scale

The base width is set by the harvester. Currently 9, 12 or 15m predominantly. Operating width is set by the planting and spraying windows. Planter type, labour capacity, crop choice and area all interact to determine the size of the window. Operating widths can be any multiple of the harvester. i.e. 9m header, 18m seeder, 27m sprayer or 12m header, 24m seeder, 36m sprayer. Remember, regardless of the size of the seeder, wheeltracks are left for the harvester across the paddock and are used for spraying and spreading operations as well as harvest.

Opportunities

Additional area can be managed with capacity planning. Growers can increase capacity via efficiency gains, increased labour, contractors or use different crop choices to give a wider sowing window without large additional capital investment.