Pros and cons of grazing crops east of the Newell

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Key words

Grazing crops, dual purpose, ground cover, risk, weeds, disease, profit

Introduction

The grazing of cropping paddocks be it in a 'dual purpose' scenario or in an attempt to capture value from a failing grain crop raises a number of questions and options for potential costs and benefits - many of which are difficult to quantify.

Many benefits are direct and tangible in the current time, realised in the form of prime animals and healthy trading margins, while many of the potential costs, can impact the business for some years – particularly if practices are not well executed. The aim here is to begin to discuss both the costs and benefits to a cropping enterprise of allowing stock to graze crops. The points raised below are certainly not an exhaustive list of what needs to be considered.

Table 1. Pros and cons of grazing crops and stubbles

Pro's	Con's
Cash flow generated from the paddock is positive prior to grain harvest. (See Table 3. 2019 Myall paddock case study)	In dry years with no crop emergence - what can you do to provide an alternate feed source for stock!
Multiple income streams can be generated such as stock, grain, agistment, profit share, stock trading etc	Negative effect on fallow efficiency resulting from reduced groundcover
Can generate returns even in a bad year (see Table 3)	Increased soil compaction from animal traffic– severity varies by soil type
Takes early season and post-harvest stocking pressure off pasture country	Need to actively manage grazing intensity to maintain minimum biomass and remove stock at recommended crop growth stages to prevent potential grain yield penalties.
Control weed blowouts – spray out then graze out	Greater opportunity for weeds to emerge in-crop once pre-emergent herbicides control declines and may result in additional in crop management requirements
Flexibility in rotations (i.e. not locked in at any stage of the season. If the season turns sour options are there for hay cut or graze out. Even if the crop is initially locked up for grain you can change your mind)	Can complicate rotation planning and encourage bad habits (i.e. temptation towards more cereals, less break crops)
Options to dry sow dual purpose crops increases the opportunity for germinating rain events – big in 2019.	Removal of crop canopy in mid-winter with grazing can give weeds a second chance to establish.

The case study information presented in Tables 2 and 3 are provided to demonstrate the financial benefits that dual crops can provide to mixed cropping enterprises.

Table 2. 2019 Myall paddock case study - 36ha. EGA Wedgetail (ⓘ) wheat.

Stocking for the crop
16/5-20/5 (4 days) - 111 steers (av 290 kg on) = 444 steer days
20/5-19/6 (30 days) - 129 steers (av 290 kg on) = 3870 steer days
27/6-24/7 (27 days) - 56 steers (400 kg on) = 1512 steer days
5/9-27/10 (52 days) - 44 cows and calves (C&C) = 1.22 C&C/ha for 52 days
Income (without considering appreciation between buy and sell price)
1 - Steer grazing - 162 steer days per hectare @ 1.6 kg/hd/day ADG (actual) and $3.30/kg (actual) = $855.36/ha from steer grazing
(Note that's straight out $/kg for the kg put on, not including the appreciation of buying at $2.80 and selling at $3.30.)
2 - Cow & calf grazing - 1.22 units/ha x 52 = 63.44 C&C days/ha @ $2/day = $127/ha
Total = $982.24/ha gross income
Income (considering appreciation between buy and sell price)
1) 80 steers purchased at $2.80/kg and 285 kg empty = $800. Sold at $3.30/kg and 392kg empty = $1293.6 after 70 days for a margin of $493/hd. The paddock ran in effect 2.22 steers per hectare for the 70 days x $493/hd trades per hectare = $1094/ha trade margin or gross income per hectare
(The paddock ran in effect 2.22 steers per hectare for the 70 days, and as such facilitated 2.22 trades per hectare x $493/hd trades per hectare equals $1094 trade margin or gross income per hectare)
2 – Cow & calf grazing - 1.22units/ha x 52 = 63.44 C&C days/ha @ $2/day = $127/ha
Total = $1221/ha gross income
Notes
Crop was dry sown on 22nd March in front of rain While it was intended for dual purpose, due to the dry season it ended up grazed out
Was locked up 24th August, before being opened back up to stock early September
Sown at 55 kg/ha seed with MAP fertiliser at 80 kg/ha
Broadleaf spray of 1L/ha 420 g/L MCPA and 26 g/L picloram, 25g/ha Paradigm® and 500mL/100L Uptake® on the early May.
Rotationally grazed and stock given access to Causmag® and salt mix ad-lib in troughs
Minimal in-crop rainfall - one good 24mm fall on 4th May was practically it.

Table 3. Winter wheat vs main season wheat gross margin

WINTER WHEAT			MAIN SEASON WHEAT		
COSTS			**COSTS**		
Timing	Activity	Cost $/ha	Timing	Activity	Cost $/ha
1st Dec	Fallow spray one	$20.00	1st Dec	Fallow spray one	$20.00
1st Feb	Fallow spray two	$20.00	1st Feb	Fallow spray two	$20.00
1st Apr	Knockdown spray	$19.00	1st Apr	Fallow spray three	$20.00
	Sowing	$40.00	1st Jun	Knockdown spray	$19.00
	Seed cost @50kg/ha	$21.50		Sowing	$40.00
	Starter fertiliser cost	$56.00		Seed cost @50kg/ha	$21.50
2nd Apr	Logran® spray	$10.00		Starter fertiliser cost	$56.00
1st Jun	Top dress urea @ 150kg/ha	$90.00	2nd Jun	Logran spray	$10.00
15th Jun	In crop broadleaf spray	$35.50	1st Aug	In crop broadleaf spray	$35.50
1st Sep	Foliar fungicide	$12.25	15th Aug	Top dress urea @ 125kg/ha	$77.00
15th Dec	Harvest @ $17/t	$40.80	15th Dec	Harvest @ $17/t	$68.00
Total Costs		**$365.05**	**Total Costs**		**$387.00**
INCOME			**INCOME**		
15 May-15 Jun	1st graze	$290.63		grain (4t @ $300/t)	$1200.00
15 Jul-15 Aug	2nd graze	$290.63			
	grain (2.4t @ $300/t)	$720.00			
Total income		**$1301.25**	**Total income**		**$1200.00**
Position day before harvest		**$257.00**	**Position day before harvest**		**-$319.00**
Gross margin (income - costs)		**$936.20**	**Gross margin (income - costs)**		**$813.00**

ASSUMPTIONS
Grower retained seed - $60/t grading cost, Hombre® Ultra treated, $300/t grain value on farm
Croplift® 15 as starter applied @ 80kg/ha @ $700/t
Urea is worth $550/t
Contract spraying ($8/ha) sowing ($40/ha) and harvesting ($17/ha), urea spreading $8/ha
Fallow sprays all 1.25L glyphosate (540 gai/L) ($7.50/L) and tank-mix partner ($9/L), at 8-week intervals
Post sow/Pre-em Logran ($2), In crop broadleaf spray 1.5L, Precept® ($27.50)
Livestock gain 1.25kg/hd/day, cattle worth $3/kg into feedlot
Stocking rate of 2.5 steers per hectare for 60 days of the 90 days of winter
Grazed 15/5 for a month, spelled 15/6 for a month, grazed 15/7 for a month, locked up 15/8
Grain (H2) is worth $300/t on farm

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