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Department of Agriculture and Food

GOVERNMENT OF WESTERN AUSTRALIA

FEED TROUGH

Western DAIRY

Dairy Australia

Your Levy at Work

ACCU-SPREAD - ARE YOU SEEING STRIPING IN YOUR PADDOCK?

Peta Richards: Development Officer, Department of Agriculture and Food

More than 60 people attended the Accu-Spread demonstration days hosted by the Department of Agriculture and Food, Western Australia (DAFWA) in February. Participants were positive about the outcomes and the improvements observed in spreader performance.

Fertiliser spreaders were modified to improve the spread pattern uniformity and/or width at five workshops. Some spreaders required minor adjustments that significantly improved the spread pattern.

Participants observed that it is critical to measure how fertiliser spreading machinery is actually operating. This is especially prudent as many growers spend thousands of dollars on fertiliser every year.

Some participants noted striping in their paddocks when applying urea (or other nitrogenous fertilisers), but not when applying superphosphate. This is in line with DAFWA's Whole Farm Nutrient Mapping results, where a large proportion of paddocks sampled already have sufficient phosphorous for target production levels.

The visual striping can occur as a result of poor distribution from the spreading machinery. If the application varies along the width of the spread, through either poor uniformity or incorrect bout width, high and low points can be exaggerated by the overlap between runs.

One modification (Figure 1) involved adjusting vanes on the spinner from their original location, which increased the bout width from 7 metres to 19m.

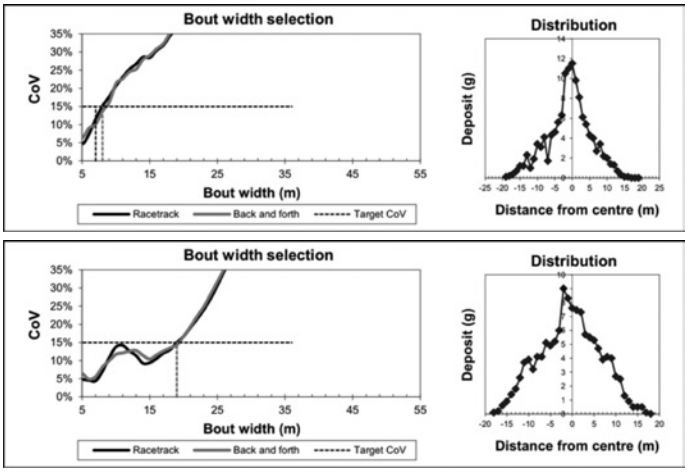

Figure 1: 15% coefficient of variation (CoV) is the critical level indicating how wide a spreader is effectively distributing fertiliser. In this example, blades were replaced on an older machine and a new 'V' fitted to better direct the fertiliser into the middle of the spinners. The spread width for this spreader increased from 7m to 19m.

Understanding where your spreader actually applies fertiliser (or other products) is important. Providing an even pattern of application will improve your production by ensuring nutrients are available throughout the paddock. This will also reduce potential for lost nutrients through runoff.

The Accu-Spread program is run under the Fertcare banner, jointly managed by the Australian Fertiliser Services Association and Fertiliser Australia. The Department of Agriculture and Food's Whole Farm Nutrient Mapping project supports Fertcare's delivery in WA, promoting best practice for all aspects of the fertiliser industry.

Accu-spread specialist Russell Nicols, DAFWA's Tilwin Westrup and farmer Jamie Oates measure the fertiliser captured in a series of trays after a spreader passes.

Grazing Winter & Forage Cereals P4

WA DAIRY FARMER SILAGE AND HAY COMPETITION 2014

Rob La Grange, WA Dairy Industry Specialist

Western Dairy held a silage and hay competition for silage and hay made in the 2013/2014 season. The intention was to find out the range of the quality of the conserved fodder that was made and to look at the practices those followed by the farmers who achieved the top results. Seedforce donated 250 kg Speedyl seed to the winners of both sections, CSBP donated a Nulogic soil test kit to the winner of the silage section and a Nulogic plant test kit to the winner of the hay competition. Dardanup Rural Supplies donated a 12 month feed plan to the winner of both sections.

Western Dairy would like to congratulate Ross Woodhouse for winning the silage competition and Stuart Maughan for topping the hay competition.

The best silage and hay was determined using the Rumen8 software ration formulation program developed by DAFWA. We believe that the metabolisable energy content is not the only measure of quality. The crude protein content is important as is the neutral detergent fibre (NDF) fraction. The NDF content will have an effect on how much of the fodder can be eaten. With silage and hay being major feeds for rain-fed summer milk, the protein level in the fodder is important and what the cost of this protein might be. The Rumen8 program was set up to feed a set level of wheat and lupins and the different silages and hays added to complete the diet. Shortfalls in energy and protein were then produced by the program as well as any limitations of fibre. The winning silage and hay gave the best responses when fed through the program diet.

The wet chemistry analyses focussed on digestibility and feed value. More in-depth testing can evaluate the fermentation process itself using other parameters and such tests are useful indicators of the ensiling process. However the feed value of the silages and hays are a good indication of feed quality and we felt sufficed for the competition.

The table 1 highlights the results of the silage competition with the bottom two results as the acceptable benchmarks of poor and good silage.

Tables 1 and 2 show that there was a wide range of quality of silage and hay in the samples submitted. Top silages would have made for excellent fodder sources for milk production and underscores the value of getting the quality right. The season was a challenging one with a wet September followed by a dry October and many farmers reported having less yields and compromised quality as a result of the season. Farmers achieving good quality were asked about their practices. Ross Woodhouse has always made quality an important goal when making silage. Some of Ross' tips are:

- meet with the contractors pre-season to discuss the importance of quality
- cut at the right stage. Ross closed up the paddocks on the 20th September and cut six weeks later at the beginning of seed head emergences. Ross applied 200 kg of a 3:2 super potash blend in spring on shutting up
- the paddocks had a good clover content (30%) in a tetraploid ryegrass sward. Ross is keen to protect the clover and sprays against scorch and wilt. Red legged earth mite were also controlled
- a mower conditioner was used to cut followed by tedding and raking 24 hours later.
- with the wet season, Ross used an inoculant and covered the stack with 'cling wrap' overlay and UV plastic
- compaction was through a heavy wide-wheeled loader that was used to spread the dumped material into thinner layers for compaction

Stuart Maughan whose silage was second ranked and who won the hay section highlighted the following practices:

- paddocks cut for silage and hay were self-sown with Speedyl and sub-clover direct drilled at 30-35 kg seed rate
- the hay was mown with a flail conditioner 6 weeks after shut up on the 16th November.
- cut hay was tedded twice in two days followed by baling on the third day.
- the season resulted in late grazing of the paddocks that had got away and so Stuart cut hay and silage on the same day
- the silage paddocks had their last graze in the first week of September and received nitrogen following grazing under wet conditions
- silage paddocks were cut 8 weeks later and tedded once on the same day. A second tedding followed on the next day with raking and baling on the same day
- compaction of the cut material was through a belt baler and Stuart ensures that the belts are in good order to achieve a high compaction rate

Table 1: Silage test results

Sample	DM (%)	DMD (%)	Crude Protein (%)	ME (MJ/kg DM)	NDF (%)
1st Ross Woodhouse	30.8	70	17.9	10.7	43.7
2nd Stuart Maughan	66.3	74	18.2	10.8	57.8
3rd Warwick Tyrrell	60.2	74	16.3	11.2	54.9
4th Place	57.6	67	10.9	10.0	56.6
5th	61.0	72	14.6	10.7	54.7
6th	45.7	76	13.0	11.2	54.8
7th	43.7	67	11.2	10.0	58.5
8th	34.6	66	14.0	10.3	55.3
9th	38.7	66	10.7	10.3	62.3
10th	42.5	66	10.3	10.1	61.0
11th	62.8	58	10.4	8.8	59.4
12th	44.2	63	9.4	9.7	60.4
13th	41.4	66	11.7	10.1	53.0
14th	32.1	66	12.2	10.2	56.6
15th	55.3	72	15.4	10.8	56.6
16th	84.6	68	12.5	9.8	55.3
17th	66.1	65	9.3	9.7	64.1
18th	53.1	68	11.9	9.7	57.8
19th	51.1	66	9.9	10.0	60.8
20th	48.8	69	13.9	10.2	59.4
Industry Good Silage	**35-50**	**>75**	**>16**	**>11**	**35-50**
Industry Poor Silage	**<30 & >55**	**<60**	**<12**	**<9**	**>60**

Table 2: hay test results

Sample	DM (%)	DMD (%)	Crude Protein (%)	ME (MJ/kg DM)	NDF (%)
1st Stuart Maughan	93.5	70.5	11.9	9.9	56.6
2nd Philip Depiazzi	88.5	69.6	11.5	9.8	59.4
3rd Pieter Mostert	92.0	68.0	9.9	9.5	55.9
4th place	87.8	60.0	7.5	8.4	67.2
5th	89.1	68.1	10.7	9.6	63.4
6th	90.9	66.4	8.7	9.4	61.0

Feedbase management drives farm profitability

John Lucey, DAFWA Dairy Team Leader

Despite the fact that every dairy farm is different and virtually its own dairy system, there is one common factor behind profitable dairy systems/farms – and that is effective feedbase management.

This was confirmed in the latest analysis of business performance on WA Dairy farms using the Red Sky farm business analysis program. The most profitable dairy farms ran systems that achieved 10% higher pasture consumption as part of overall cow consumption (60.1% versus 54.8% - see table).

Home- grown feed is the cheapest feed available to dairy farmers, particularly when pastures and any crops grown are managed to ensure high feed quality. The more your herd's feed requirements are met from home-grown feed, the less your business is exposed to the risk of high supplementary feed costs.

2012/13 Red Sky Analyses

KEY PERFORMANCE INDICATORS	2012/13 WA Average	2012/13 WA Top 15%
Pasture as % of Total Consumed	54.80%	60.10%
Estimated Dryland Pasture Harvest (t DM/Ha)	6.80	7.90
Estimated Irrigated Pasture Harvest (t DM/Ha)	12.90	15.10
Operating Profit per Hectare	$1,664.00	$2,465.00
Cows per Milking Hectare	2.24	2.49
Litres per Milking Hectare	15866	17563
Milksolids per Milking Hectare	1125	1240
Operating Profit per Cow	$744.00	$988.00
Operating Profit Margin	19.70%	25.60%
Cows per Full Time Staff Equivalent	102	121
Return on Capital (ROC) at 4-Yr Av Values	5.60%	7.70%

Red Sky provides a mix of both financial and physical measurement which is the key to analysing your business performance and designing business plans. Along with producing ratios that determine return on assets and equity, there are ratios that determine debt level and equity growth, cash movement and degree of risk. On the physical side there are ratios that describe animal performance as well as calculations of pasture harvested per hectare and feed costs split between pasture, forages and concentrates. There are also a number of staff ratios that indicate level of performance in this area.

If you are interested in reviewing your 2013/14 business performance using the Red Sky program please contact John Lucey on 0429 889 083 or john.lucey@agric.wa.gov.au as we have negotiated a discount rate with Red Sky

Autumn 2014 Grain Prices to Dairy Farmers

Alan Peggs, Alan Peggs Rural, Nedlands, WA

Since harvest prices for feed grains have risen as a result of both international and domestic factors impacting on demand.

Domestically the lack of summer rain has meant farmers with livestock have become increasingly reluctant to sell feed grain stored on farm. This is particularly so with lupins which are difficult to source at the moment. Hence prices are now $40/t above where they were at harvest.

The demand internationally for feed barley has seen the grain marketing company Bunge raise its feed barley price delivered Bunbury from $250/t at harvest to $267/t currently. However at harvest Bunge could not receive grain because construction of its silos at Bunbury was not completed. Hence farmers could only obtain this price if they were able to store their barley. The cash price at harvest on offer from other grain marketers was $230/t. Hence the price delivered at harvest to dairy farmers was also $230/t. Now, given the demand from Bunge, the price for stored barley delivered to dairy farmers is $265/t – a rise of $35/t!

Triticale supplies are low and its price essentially follows feed barley with a small premium for its slightly higher ME (0.5 MJ/lg DM) and its marginally lower NDF (17% c.f. 19% for barley).

Some more astute dairy farmers are now buying low lignin oats (Mitika and Kojonup) at $225/t delivered. These oats typically test out at 12.5-13.0 MJ/kg DM and are an excellent alternative energy source. Most oats produced in WA are high lignin and as such have much lower energy values. If you decide to use oats in your ration make sure they are either Mitika or Kojonup.

Table 1 : Feed Grain Prices to Dairy Farmers in the South West Autumn 2014

Grain	Price Landed SW Harvest	Carry Fee
	$/t	$/t/m 1 from Jan 2014
Wheat Soft <5% screenings	285	2.50
Wheat GP1 <10% screenings	285	2.50
Triticale	270	2.50
Feed Barley	265	2.00
Low Lignin Oats	225	2.00
Lupins	380	3.00

4 April 2014

For further grain supply information please contact Alan Peggs on Mob : 0428-932-717

Rumen8 Workshops

Rumen8 is a user friendly tool that can assist farmers to make better feeding decisions for dairy cows. Through the month of August Western Dairy and DAFWA are running workshops to train farmers and service providers on how to use the Rumen8 dairy nutrition program.

For expressions of interest and further information please contact Rob La Grange, Dairy Industry Development Specialist rob@westerndairy.com.au or 0448 939 344

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Grazing Winter & Forage Cereals

As many dairy farmers in WA are growing cereals for silage and also grazing them during the season, it is important to follow some grazing guidelines;

- All cereals can be grazed at any time from early to late tillering (Growth Stage (GS) 22 – GS28) (Figure 1)
- Grazing can start if plants pass the pinch test (twist & pull) & secondary roots have grown (~3 leaf stage)
- DO NOT graze cereals while soil is very wet
- Be wary of high nitrate levels. Do not graze with very hungry stock
- Graze down to 5 – 10 cm. Grazing lower is likely to reduce silage yields
- Yields (utilisable) are about 1600 – 2300 kg DM/ha in normal growing seasons at mid to late tillering
- Sowing after early May can reduce grazing yields by ~15 – 30% less compared to Mar/April sowing
- Nutritive value can be equal to that of ryegrass (>11 ME, >20% CP, ~35 to 40% NDF)
- Grazing once at/after stem elongation (GS30 - 32) will reduce silage yields by up to 50% (Figure 2)
- To boost silage yield apply 50 – 70 kg nitrogen/ha after grazing, check requirements with plant analysis
- The longer that grazing is delayed, the higher the dry matter yield however;
  - o Thicker the stems of older tillers and less palatable
  - o Greater the reduction in utilisation due to trampling during grazing
  - o AND later the crop maturity (~+10 – 14 days if grazed during late tillering)
- Mowing and wilting before grazing to ensure an even crop after grazing is not necessary, unless too long
- Graze cereal/ryegrass mixes at about mid-tillering (GS24 – 26) to avoid severe ryegrass shading
- If cereal is at or past stem elongation (GS30 – GS32), mow/graze well above the top node

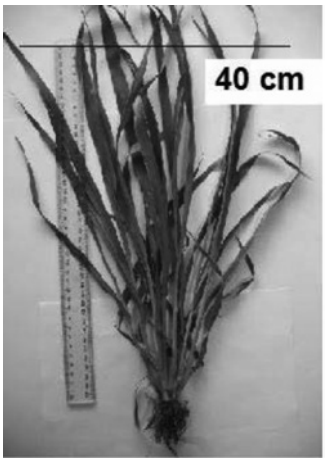

Figure 1 Forage Oat GS26, 1 main stem + 6 tillers, good height for grazing

Figure 2 Forage Oat GS30, Stem elongation, single tiller shown, too late for effective grazing

For further information:
1: DPI Agnotes, Grazing Guidelines Fact Sheet
2 www.project3030.com.au www.dairyaustralia.com.au

Save the Date!

Thursday September 18, 2014

Western Dairy Spring Field Day and AGM
Vasse Research Station

The Feedtrough is published by Western Dairy and edited by Western Dairy's Regional Feedbase Development Group coordinator Tammy Negus.

Previous issues of the Feedtrough are available at www.westerndairy.com.au
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