

Kg DM fed/cow and kg DM eaten/cow

For example: 0.8 tonne wet weight PKE fed in trailers to a herd of 360 cows

Tonne wet weight fed to herd	x	DM %	x	1000	=	kg DM fed/herd
0.8	x	0.90 (90%)	x	1000	=	720

kg DM fed/herd	÷	number of cows	=	kg DM fed/cow
720	÷	360	=	2

kg DM fed/cow	x	utilisation*	=	kg DM eaten/cow
2	x	0.85 (85%)	=	1.7

* Typical utilisation

In paddock in wet conditions	In paddock in dry conditions	Trailers in paddock	Feed pad	In-shed
60%	80%	85%	90%	95%

Cost of supplement c/kg DM fed or c/MJ ME fed

For example: PKE delivered for \$245/tonne, fed in trailers and 11 MJME/kg DM

\$/tonne wet weight	÷	DM %	÷	1000	=	\$/kg DM fed
\$245	÷	0.90 (90%)	÷	1000	=	\$0.27

c/kg DM	+	associated costs*	=	c/kg DM fed	÷	MJ ME/kg DM	=	c/MJ ME fed
27	+	2.7	=	30	÷	11	=	2.7

* Associated feeding costs: Associated feeding costs are approximately 10% of actual feed cost and are included when making tactical decisions on supplement use. They include repairs, maintenance, depreciation and tractor running costs.

Protein supplements in summer

Key messages

- Protein deficiency is unlikely to limit production until dietary protein is less than 12% (e.g. when 50% or more of the diet is a low protein feed).
- Even if protein is limiting production, it is not always economical to use a protein supplement (see example).
- For more detail read the November 2011 Tech Series "Is protein supplementation needed in summer?"

How to calculate dietary protein

Feed	Feed eaten		Protein %	
	(kg DM)	(% of diet)	(feed)	(diet)
Pasture - summer stalky	10	71 (10 ÷ 14)	15	10.7 (15 x 0.71)
Silage - maize	4	29 (4 ÷ 14)	8	2.3 (8 x 0.29)
TOTAL	14	100	13	

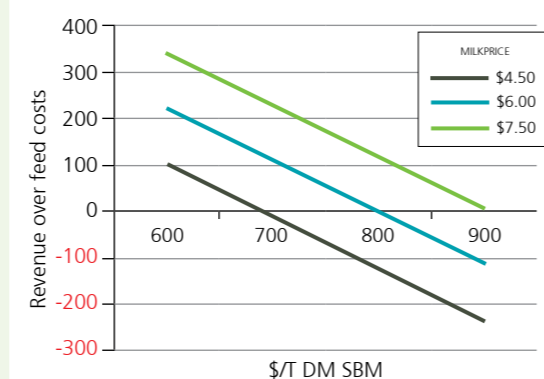
Example:

In a research trial, cows were fed diets of different CP % but the same total energy.

- Dietary CP = 11% (50% pasture and 50% maize silage)
- Dietary CP = 16% (50% pasture, 40% maize silage and 10% soyabean meal: SBM).

Impact of cost of SBM and milk price on the revenue over feed costs in this scenario.

(Feed costs are 'on farm' and include 10% wastage. Maize silage = \$280/tonne DM)



DNZ10-067

Summer feeding check

Supplements – warrant to feed



Ask why before you buy

Consider:

Is the information you are using based on research in pasture-based systems?	YES	UNSURE	See <i>FeedRight</i> booklet and DairyNZ website
Are you focused on profitable and sustainable feed management and not just production?	YES	UNSURE	
Does use of the supplement deliver to your strategic goals?	YES	UNSURE	Be clear on your goals and the pathway to achieve these

Determine the requirement on your farm

Is there a true feed deficit?	YES	NO	
- Is the average pasture cover on target?	YES	NO	
- What are average grazing residuals?	TOO LOW	TARGET	TOO HIGH
- Is cow behaviour and performance on track?	YES	NO	See <i>Grazing management paddock guide</i>
Are supplements needed for another reason? (e.g. minerals)	YES	NO	Are supplements really needed? Check out DairyNZ resources

Find out about the supplement

What is the ME (MJ ME/kg DM)?		See <i>Facts and Figures</i> (pg 19-21)	
What is the cost on a DM basis (c/kg DM)?		Use calculations on back page	
What is the cost on a ME basis (c/MJ ME)?		Use calculations on back page	
What is the likely MS response to the supplement?			
Does it make economic sense to use the supplement?	YES	UNSURE	Use the graphs and tables within or the <i>Supplement Price Calculator</i>
How does this compare with other supplements?	MORE PROFITABLE	LESS PROFITABLE	

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Weekly feed management check

Grazing indicators

	DATE	25th Jan							
Pre-grazing yield / leaf stage – avg. of next 2 days		2700 / 3							
Pre-grazing quality (Very Good, Good, Poor)		G							
Rotation length		35 days							
Average farm cover		2100							
Post-grazing residuals – avg. of last 2 days		1500							

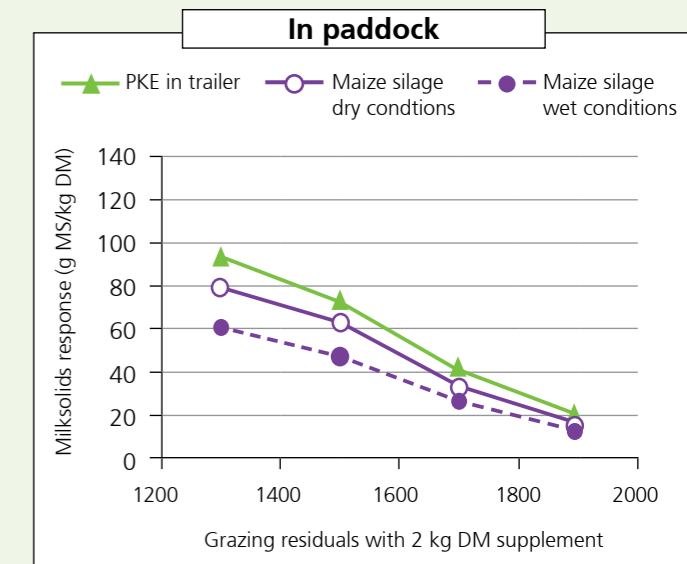
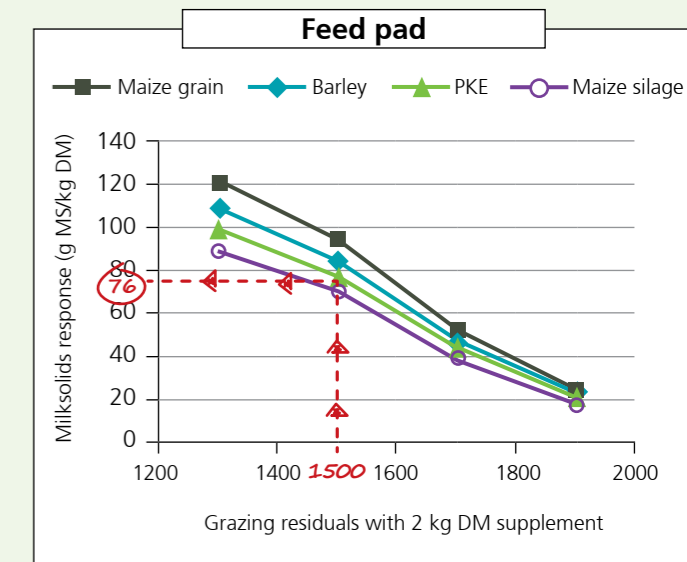
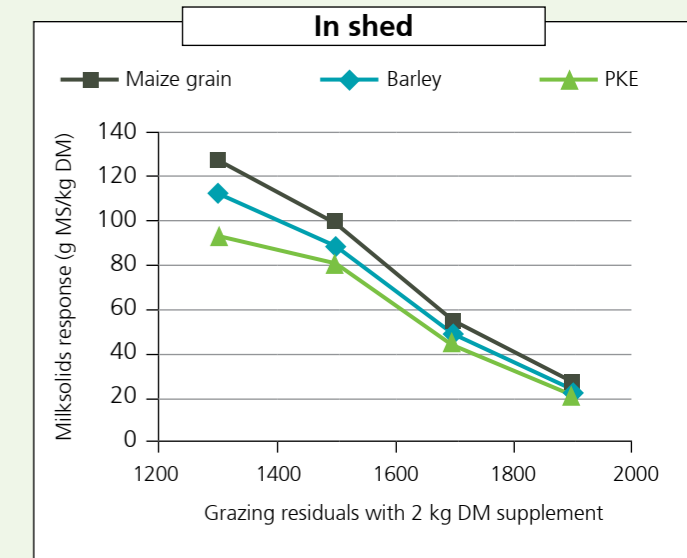
Are you feeding supplements?

Main reason for feeding supplements		Feed pinch							
What supplements are being fed and how? <i>If different supplements, use different columns</i>		PKE/feed pad							
How much are you feeding daily?	tonne wet weight fed/herd	0.8							
	A kg DM fed/herd (wet weight x 1000 x DM%)	720							
	B kg DM fed/cow (A ÷ no. cows)	2							
Likely MS response – use graphs <i>For more information see back page</i>	C	g MS/kg DM	76 g						
Likely weekly increase in milk revenue (A x C) ÷ 1000 x 4.60 (milk price) x 7 days	D	(\$/week)	\$1762						
Cost of supplement fed <i>For calculations see back page</i>	E	c/kg DM	30						
Weekly cost of supplement fed (A x E ÷ 100 x 7 days)	F	(\$/week)	\$1,512						
Margin over feed and feeding costs? (D – F)		(\$/week)	\$250						

Person/action

	Complete farm walk								
	Check feed budget								
	Monitor residuals								

Total milk solids response in summer



For more information on different supplements, feeding rates and protein and fat response use the Supplement Price Calculator – dairynz.co.nz/feed/feed-management-tools/supplement-price-calculator.