

10 PRACTICAL TIPS FOR BEATING THE HEAT

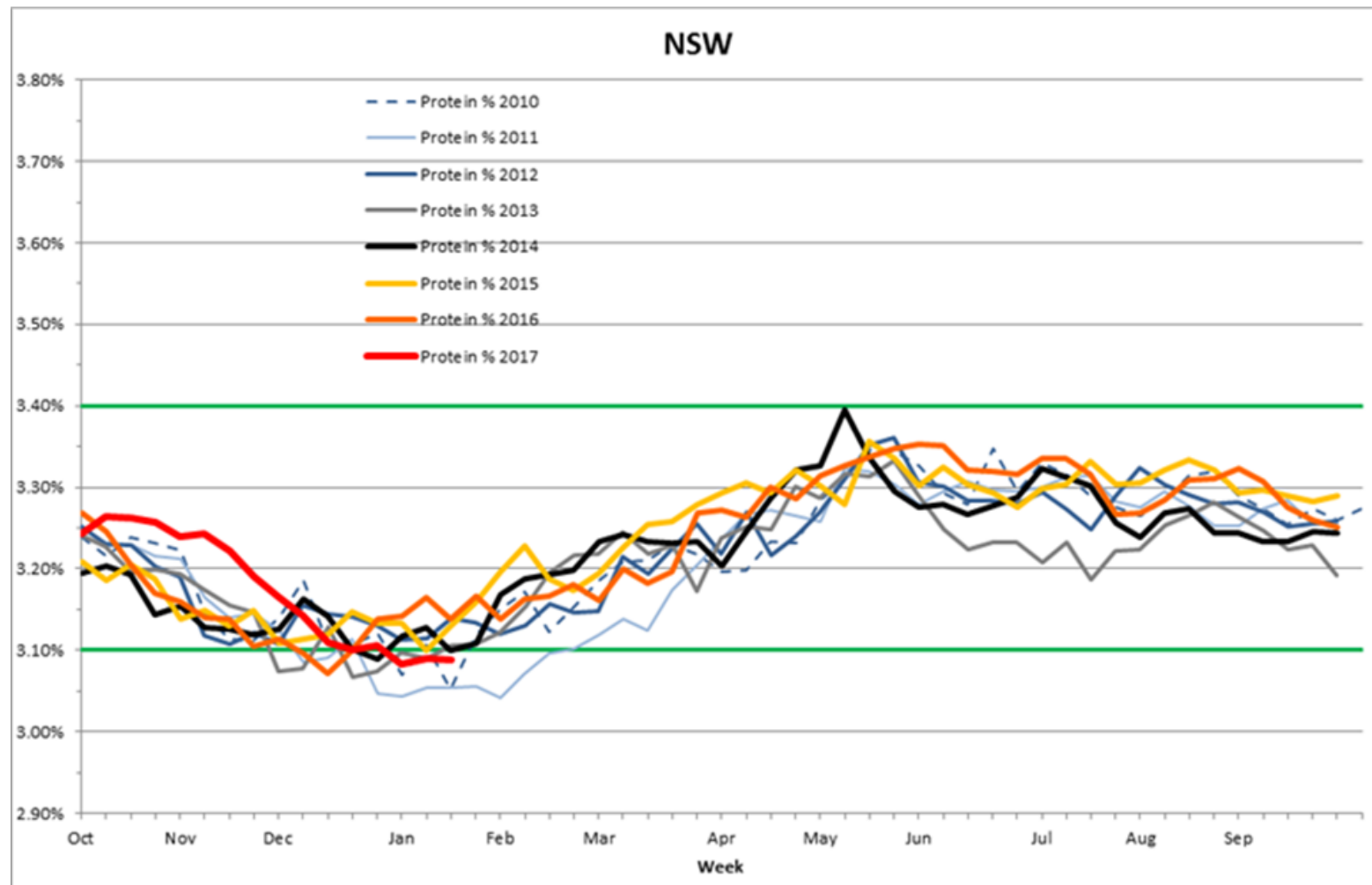
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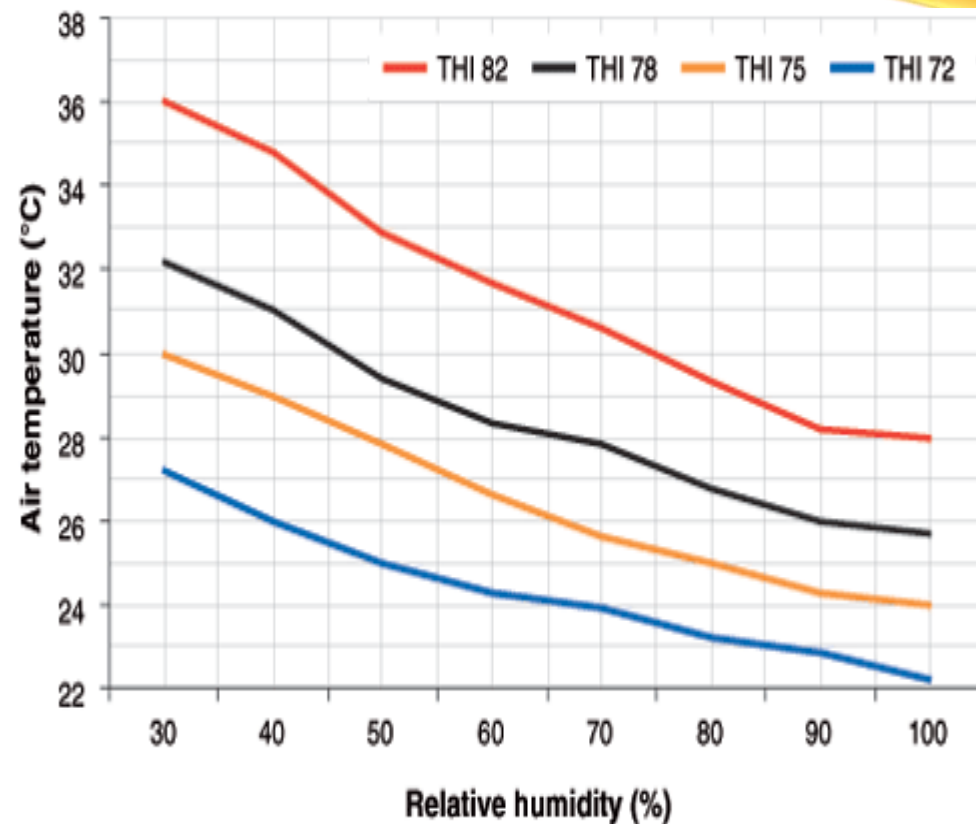
YOU ARE GOING TO DROP!

- Drop in production of 10-30% inevitable- management and facilities will determine how far!
- There is a normal seasonal decline associated with
 - Reduced dry matter intake
 - Heat stress
 - Increased NDF
 - Reduced forage quality- digestibility, ME and CP
 - Energetic losses due to managing heat stress
- Initially buffered by body condition loss
- As season proceeds, reduced BCS reserves, repeated “heat stress events” and increased humidity compound losses

THE SUMMER OF 2016-17- ANY DIFFERENT TO ANY OTHER SUMMER?



2016-17 Daily MS total



- THI >72, heat stress starts, repro impact
- THI > 78, milk production is seriously affected.
- THI > 82, major losses in milk, cows show signs of severe stress and may ultimately die.
- Kicks in 5 C lower in high producing or sick cows

MILK EARLY - MILK LATE GET COWS TO PASTURE EARLY

- Work with staff to get cows milked as early as possible in the morning
- → maximise grazing pre 9 am grazing time
- Adjust afternoon milking depending on facilities and conditions
 - Shade/sprinklers
 - Feed
- Plan to graze close at day time
- Adjust tactics on extreme days
 - Milk later
 - Skip?



FORAGE UNDER THE TREES







SPRINKLERS, SHADE AND FANS



- Pre-water yard
- Large droplet
- Timer –wet for 8-10 mins → on/off 2/5 mins cycle
- Review in high humidity
- Use in morning
 - Warm nights
 - Reduce heat load
 - Cooler for longer

SPRINKLERS, SHADE AND FANS



PLAN AND MANAGE FOR SUMMER PASTURE QUALITY AND PALATABILITY



Components:	Nov legume herb	Nov ryegrass	Feb legume/herb	Feb kikuyu
% NDF	30.7	46.3	30.4	51.4
% Crude Protein	32	24.1	33.1	27.5
% Ash	13.33	11.34	11.35	10.41
Lignin % NDF	12.4	3.9	16.8	5.6
% ADF	23.6	26.3	23.1	26.7
% Lignin	3.8	1.8	5.1	2.9
% NFC	25.2	18.6	27.6	14.4
Relative Feed Value	214	138	217	123
ME (MJ/kg)	11.63	10.8	11.76	10.97
ME CPM (MJ/kg DM)*			10.16	8.58





BEST QUALITY FORAGES IF YOU WANT TO DRIVE INTAKE

SUMMARY

SPECIES	Other	TYPE	Silage
ME (MJ/kg)	8.5	PROTEIN (%)	8.6
% NDF	63.6	STARCH (%)	0.2



QUALITY CERTIFICATE



DETAILED FEED ANALYSIS (DRY MATTER BASIS)

ENERGY & RELATED		PROTEIN & RELATED		FIBRE & RELATED		MINERALS & RELATED	
ME 1X (MJ/kg)	8.50	% Crude Protein	8.60	% Neutral Detergent Fiber	63.60	% Potassium (K)	2.10
Relative Feed Value	81.00	% Available Protein	7.60	% Acid Detergent Fiber	43.00	% Chloride (Cl)	1.20
Net Energy Lactation (MJ/kg)	4.50	% ADICP	1.00	NDFD 24hr % of NDF	59.80	% Calcium (Ca)	0.30
Net Energy Maintenance (MJ/kg)	4.50	% NDICP	1.70	% TDN	56.10	% Magnesium (Mg)	0.10
Net Energy Gain (MJ/kg)	2.20	Soluble Protein % of CP	63.00	% Starch	0.20	% Phosphorus (P)	0.20
% Non Fiber Carbo. (NFC)	17.90	Degradable Protein % of CP	73.40	% WSC (Water Sol. Carbs.)	18.50	% Sulfur (S)	0.10
% Fat	2.50			% Lignin	4.90	% Lactic Acid	1.80
DE (MJ/kg)	10.30			% Moisture	37.20	% Ammonia	0.30
% ESC (Simple Sugars)	14.40			% Ash	9.20		
% DDM	67.20			IVTD 24hr % of DM	74.40		
				% Dry Matter	62.80		
				% aNDFom	58.70		
				% uNDFom30	29.80		
				% uNDFom120	21.40		
				% uNDFom240	18.20		

- Feed test
- Quality focus
 - Pastures
 - Hays/silage
- NDF
- CP/ME
- NDF digestibility
- Palatability
 - Texture
 - Cleanness
- Beware of legume hays bearing false promises!

WATER, WATER EVERYWHERE!



- Every paddock
- Every exit
- Everywhere cows feed or seek shelter
- Adequate functional reserve
- Ability to refill as cows drink
- 200-250L per cow/day peak supply
- Cool, clean water
- Keep troughs clean
- Design to minimise spillage
- Check daily



FEED BICARB (AND OTHER BITS AND PIECES!)

- Bicarb is cows natural buffering mechanism
- Increased losses in sweat and through salivation/drooling and panting
- Reduced cud-chewing decreases endogenous production
- 200-250g/head/day
 - BUFFERING FUNCTION
 - REPLACE LOSSES
 - POSITIVE DCAD INCREASES DMI
- *ROLES for sodium bicarbonate and potassium bicarbonate in maize silage and cereal forage diets*



FEED BICARB (AND OTHER BITS AND PIECES!)

- Rumen modifiers and antimicrobials to reduce acidosis and ketosis risk and improve FCE
- Yeasts may stabilise rumen function and improve FCE
- Betaine and Niacin- mixed data but variable anecdotal responses reported
- Mycotoxin binders?



BUMP UP THE CONCENTRATE BUT MANAGE ACIDOSIS RISK

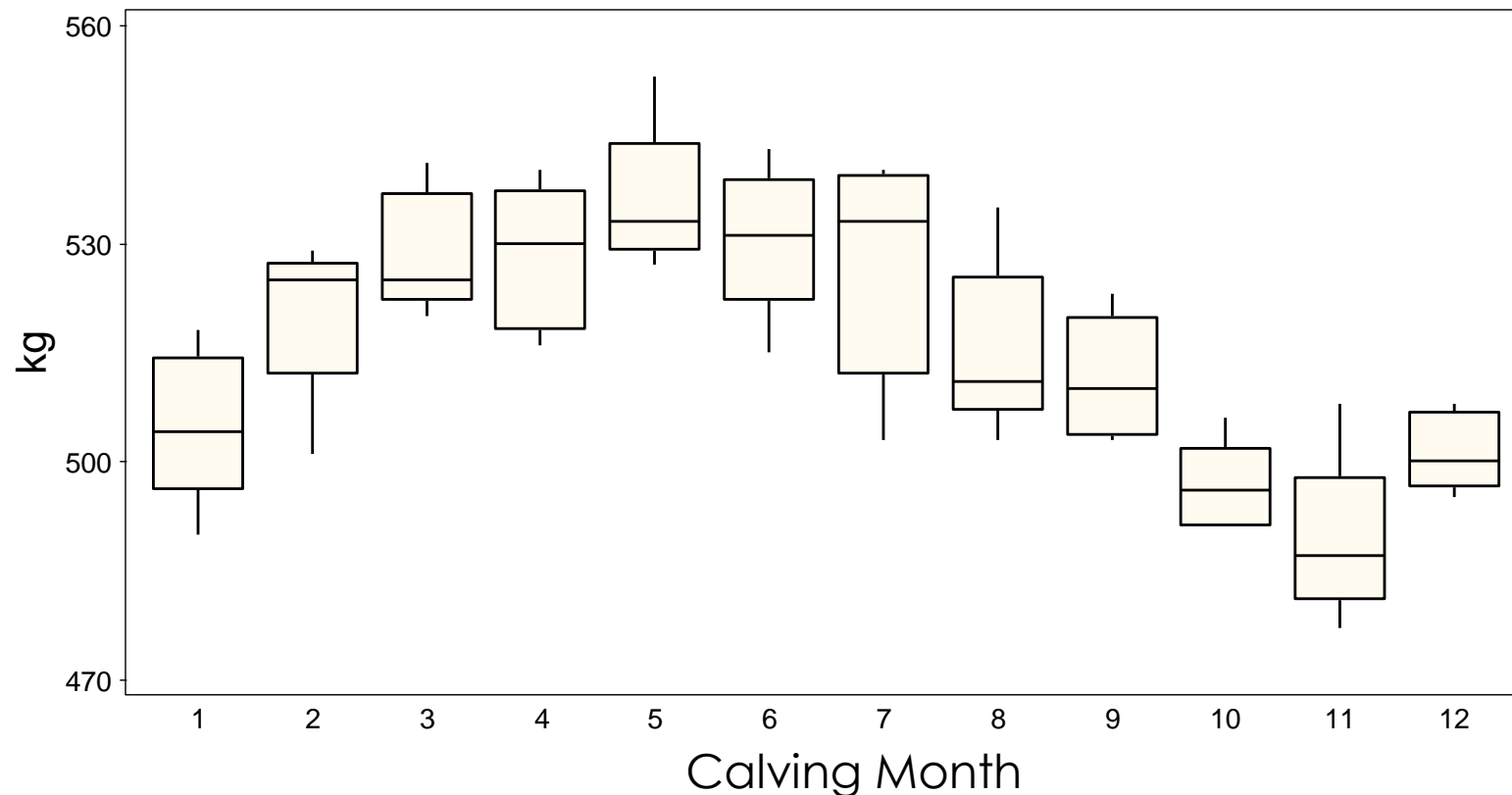


- Lifting concentrate can be most efficient means to increase intake
- Fermentation of concentrate produces less heat per unit of energy than forages
- Critical to manage acidosis risk
 - Rapid access to high quality forage
 - Mix fermentation profiles
 - Non fermentative energy sources (bypass fats)
 - Rumen modifiers/buffers
- Understand protein needs of diets
 - Feed test and balance
 - Increased demand for bypass protein
 - Need of non-bypass protein if forage quality is compromised

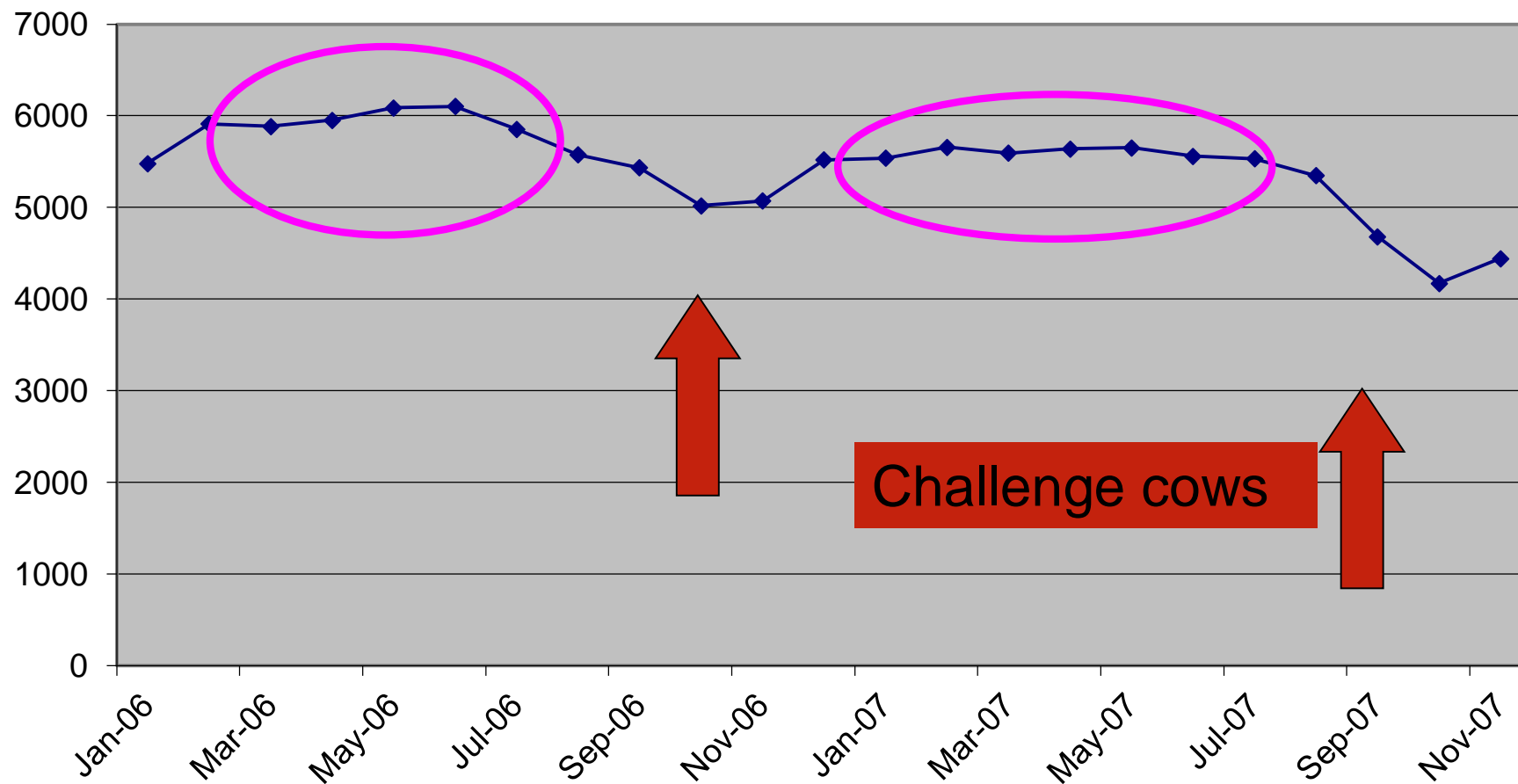
PLAN YOUR CALVING PATTERN TO MINIMISE THE IMPACT

- Don't expose peak cows to the heat
- Is it worth chasing summer milk?

305 day Milk solids production by calving month



Norco farms calving month by milk 305



DON'T FORGET THE SPRINGERS AND DRY COWS

- Increased knowledge of impact of heat stress during transition on whole lactation performance
- Predisposes lameness and mastitis
- Impact of flies and heat stress combined
- Calves and Young stock get heat stress too!





<http://www.coolcows.com.au/>