

NWSG Haying BMP's

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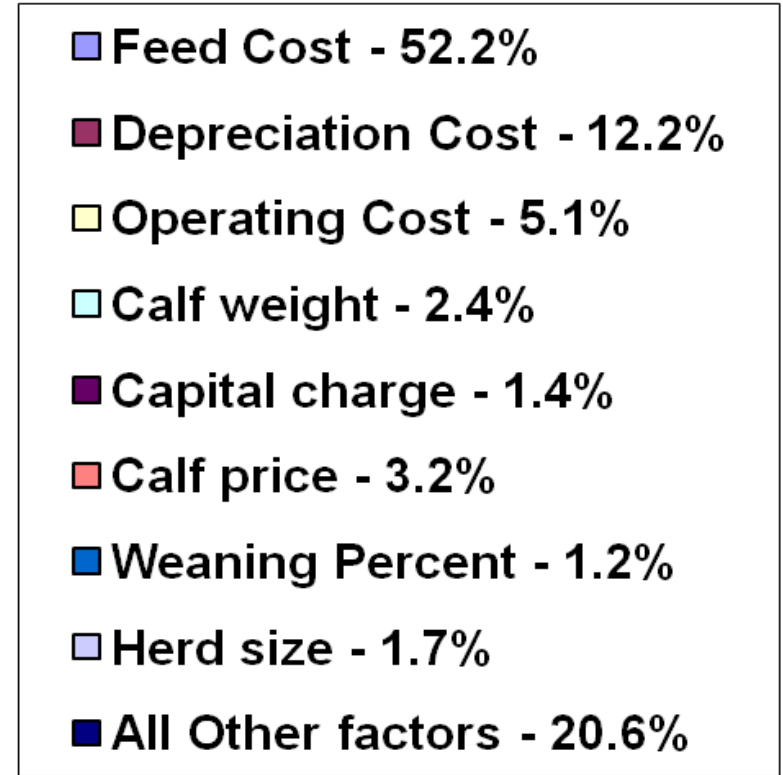
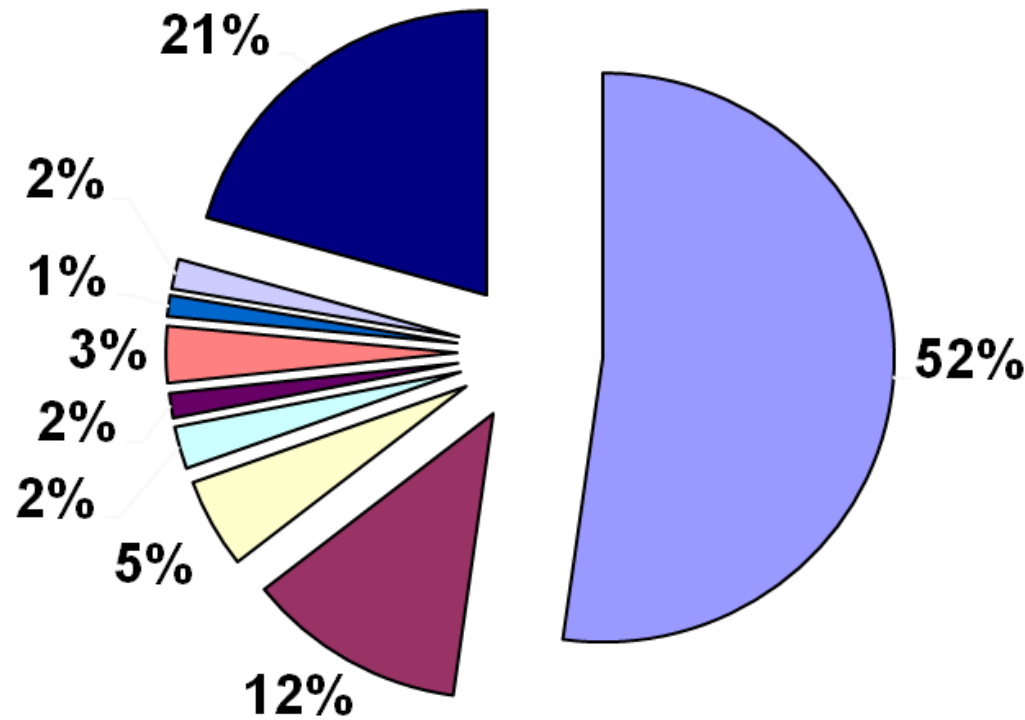


MFA | Your whole farm solution.

What is the biggest expense for a cattle producer?



Variation in Returns to Labor & Management Explained by Economic Variables (1996 - 1999)



Source: 2001 Beef Research Report – Iowa State University



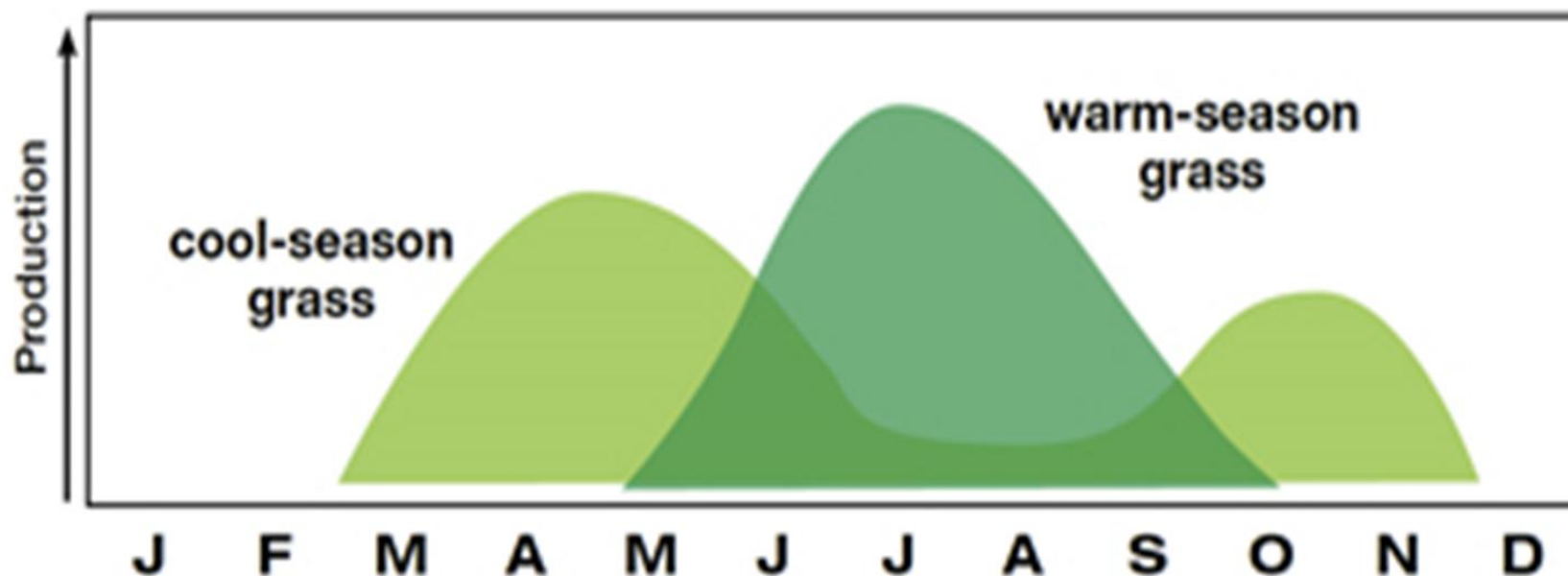
How do we reduce feed costs?

- Buy/make less
- Make feed cheaper to produce
 - More efficient
 - Higher quality=feed less



Buy/Make Less

- Graze longer



More Efficient-NWSG Yields

Species	Annual Yield Tons/acre		Fertility	Harvests
	Range	Average	lbs of N/ac	#/year
Big Bluestem	2.6-6.0	3.9	60	1-2
Indian Grass	2.5-5.9	4.6	60	1-2
Eastern Gamma	3.1-9.6	4.9	60	1-2
Switchgrass (Alamo)	2.0-11.6	5.3	60	1-2
KY31	2.1-4.8	3.1	180	4



Gene Olson et al. 2009. University of Kentucky Extension



Forage Quality

- What is Forage Quality?



Forage Quality

- What is “**Forage Quality**”?
- Estimate of the Nutritional Value of a Forage



Forage Quality

- What factors influence the **Nutritional Value** of forage?



Forage Quality

- What factors influence the **Nutritional Value** of forage?
- Plant Species
- Stage of plant at harvest (Plant maturity)
- Harvest (Dry vs Wet) (Grazing)
- Storage
- Processing
- Anti-Quality factors (Nitrates, Mold, Heat damage)
- Class of Animal
- Supplementation

Forage Quality

- How important is Forage Quality / Forage Production (Quantity) to the success of a Livestock Operation?



Forage Quality

- How important is Forage Quality / Forage Production (Quantity) to the success of a Livestock Operation?
- Extremely Important





Forage Quality

- How important is Forage Quality / Forage Production (Quantity) to the success of a Livestock Operation?
- Extremely Important
- Problems that arise from poor quality forage
 - Poor Reproduction
 - Poor ADG
 - Bad feet, lameness
 - Low milk production
 - Low fat test
 - Digestive issues (acidosis)

Different Maturity Stages Affect Quality

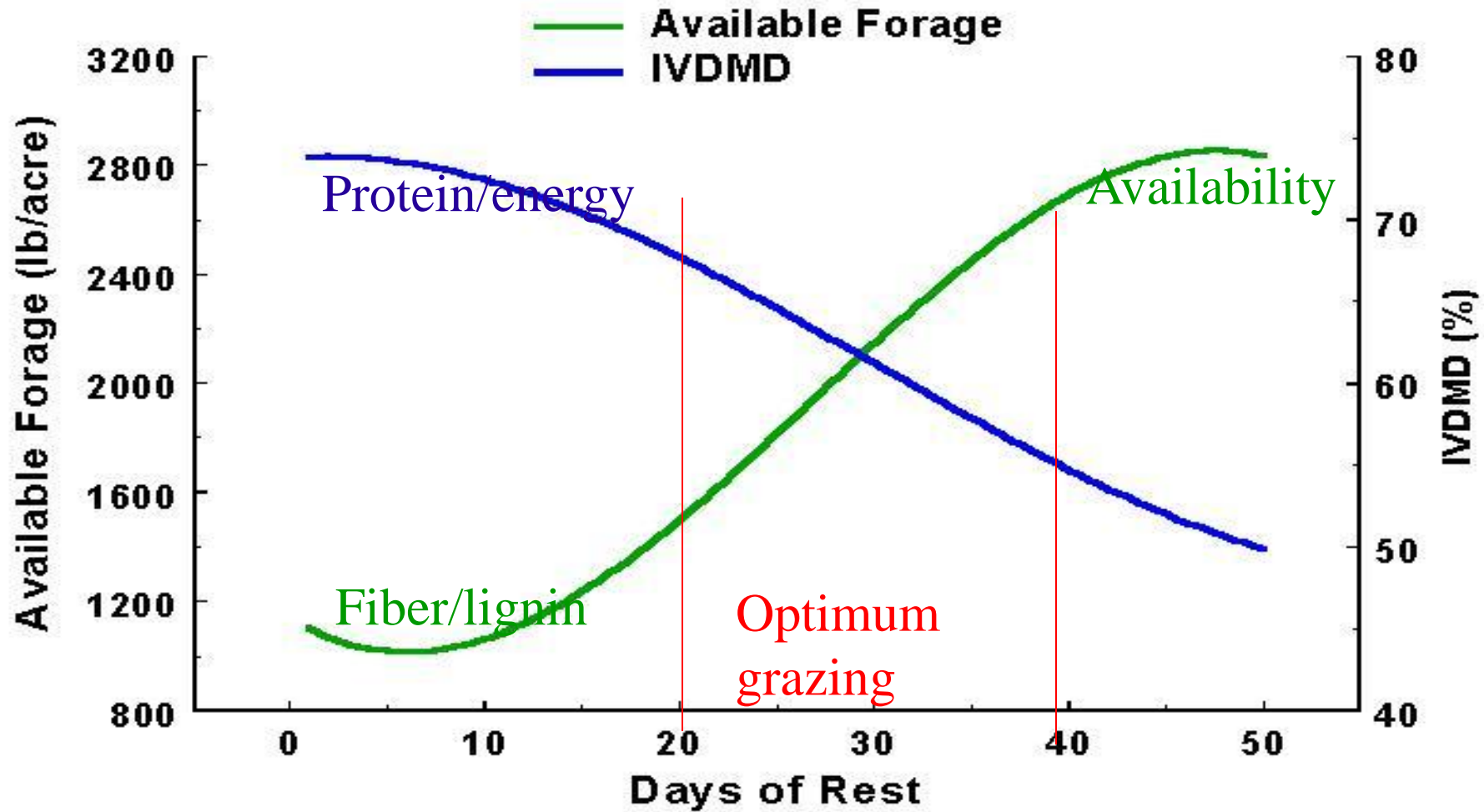


Reproductive Stage
Lower Quality



Vegetative Stage
Higher Quality

The Yield/Quality Compromise



11/23/21-76

MIXED GRASS

LANDRY JONES /

ALDRICH MO /

	WET	DRY
Moist / Dry Matter %	10.97868	89.02132
Protein %	8.792559	9.876913
Adj Cr Protein %	0	0
Avail Protein %	0	0
A.D.F. - N %	0	0
Urea %	0	0
A D Fiber %	37.37115	41.98
N D Fiber(a) %	0	0
Crude Fiber %	0	0
Lignin %	0	0
T D N %	47.46733	53.32131
NE Lactation MCAL/LB	.4691352	.526992
NE Gain MCAL/LB	.2132469	.2395458
NE Maint ... MCAL/LB	.4374025	.4913458
Digst Energy MCAL/LB	.9491313	1.066184
Crude Fat (EE) %	0	0
pH	0	
Ash %	0	0
Salt %	0	0
Nitrogen %	1.406809	1.580306
RFV/Quality Standrd	0	
Nitrate (NO3)	Negative	
Aflatoxin		
NFC (dry)		

Monty Dade



Dry Matter

DM = The % of feed that is not water.

Feeds are compared on a dry matter basis, ruminant nutritionist bias

$100.0\% - \% \text{ moisture} = \% \text{ DM}$



Crude Protein

Crude Protein is the N from protein and non-protein nitrogen compounds

Amino acids, about 16% by weight as nitrogen

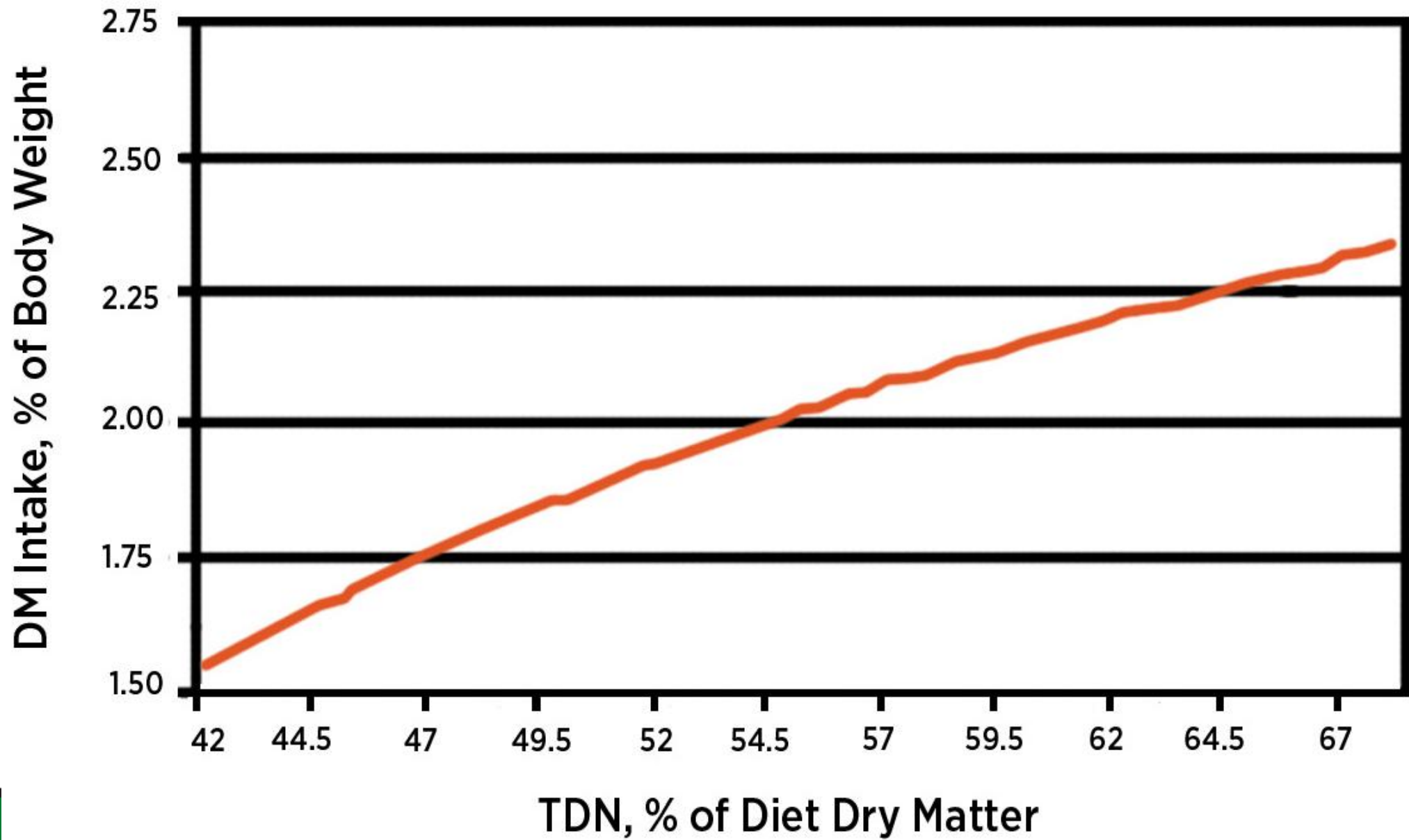
CP = Determined by measuring total nitrogen in a sample and multiplying by 6.25



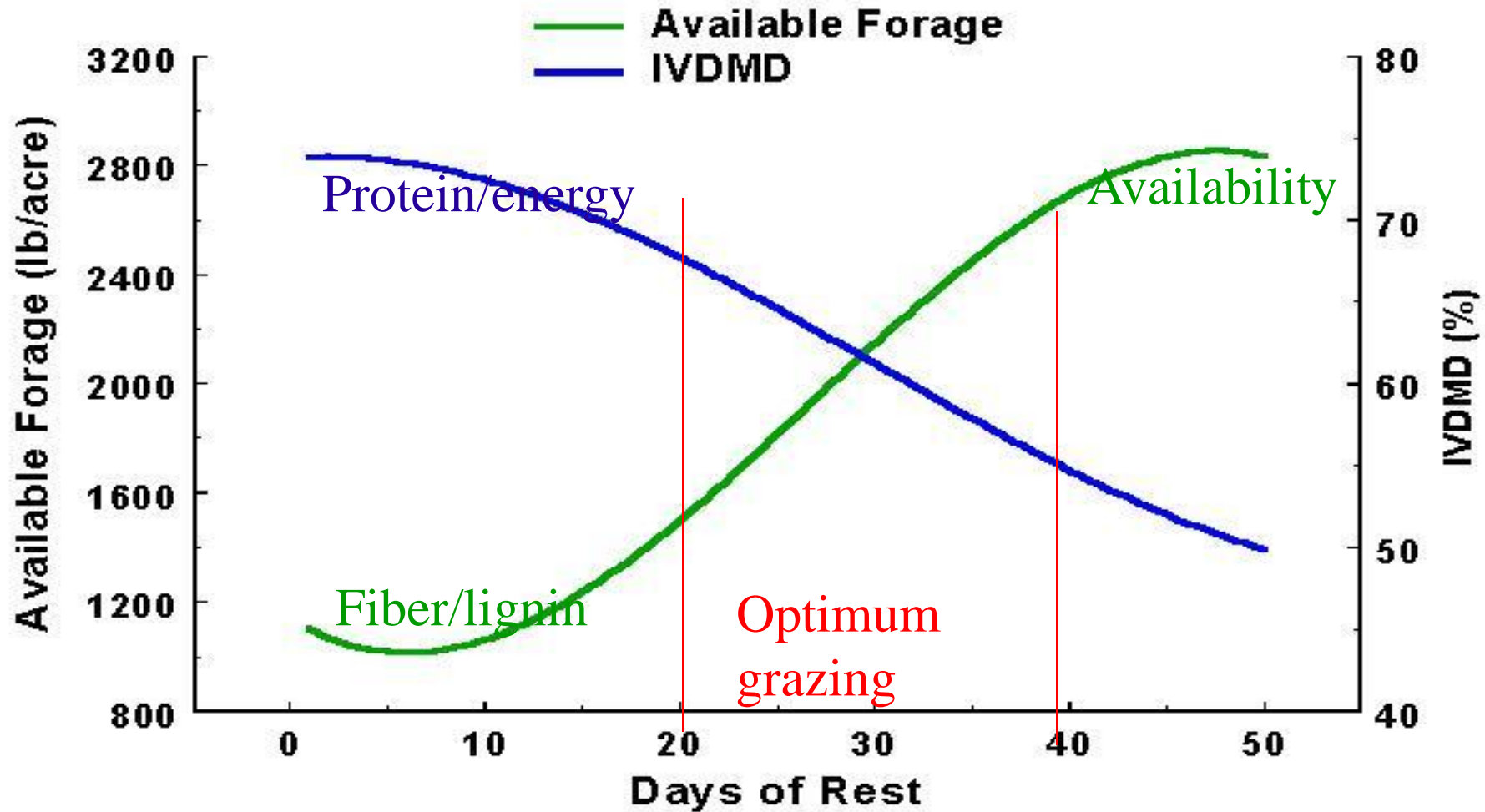
Total Digestible Nutrient/TDN

- Measured Energy
- Percent the animal is able extract/absorb from feed
- Animals eat on an energy basis





The Yield/Quality Compromise



Most all forages have a seasonal peak to their nutritional quality

- When does fescue reach this peak quality?
- When does NWSG reach this peak quality?



Great Drought Insurance

- Growing conditions favor Missouri summer
- Make hay during hay making weather



Haying Management

- NWSG will respond to fertilizer to increase yields, just doesn't take as much
- Production Ag for a reason
- Start with a firm foundation
- Put back what you take off
- Nutrient Removal per ton
 - 35N-10P-35K



Haying Management

- First cutting June 15-July 15 (c/s after July 15)
 - Early for improved quality
 - Later for increased quantity
 - Later to increase wildlife population
 - Raise mower height
- Last cutting before September 1-15*
 - 30-45 days prior to frost



Cutting height

- Maintain 8' cutting height
 - Protects growing points
 - Requires less energy for regrowth
 - Reduces weed pressure
 - Improved future yields
- Very little feed value in bottom 8"



NWSG Feed Value

- 3-6 tn/ac
 - 6-10" residual height
 - Doesn't pay to cut lower
- 8-12% protein
- 53-60 TDN



NWSG Haying Benefits

- -Converted Spring 2016 (BB,Indian,LB-10lb/ac)
- -Picture taken August 3, 2018 after first cutting 2nd week of June 2018
- -Hay tested 8% protein/52%TDN



NWSG vs CSG Hay

- Both fields cut for first time 2nd week of June
- Fescue <1 ton per/ac 1st cutting
- No second cutting
- WSG 1st cutting 2.9 ton/ac
- 2nd cutting 1.9 ton/ac (Aug 6)

NWSG Haying Benefits

- Field cut July 25th
- Picture taken Aug 3
- No rain

- July appx 1" rain
- Few days below 90



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