Optimum range beef production is achieved only by matching the animal’s genetic potential to the nutritional environment.
“The most critical decision we make is when to change pastures. Too early, we leave valuable forage; too late, we have a detrimental impact on both livestock and rangeland sustainability”.

OPTIMAL RANGE/ANIMAL UTILIZATION
BOVINE BUFFET

• Healthy desert rangelands are diverse eco-systems
• Availability of potential diet species varies depending on time of year, elevation and effective precipitation
• Collectively provides a “nutritional buffet”
• Animals, like people have different selection preferences
Sources of Rangeland Nutrients

- Grasses
- Forbs
- Browse
GENERAL NUTRIENT CLASSIFICATION

- Carbohydrates
- Protein
- Fats and Oils
- Vitamins and Minerals
- Water
Plant factors affecting animal intake:

Availability
Preference
Quality
Anti grazing factors
Animal factors affecting intake:

- breed
- sex
- body size
- ruminal capacity
- body condition
- digestibility
- supplementation
- rate of intake
- grazing time
WHERE DOES THE FEED GO?

- Maintenance: 70% to 80%
- Lactation: 6% to 8%
- Gestation: 18% to 20%
CRITICAL NUTRIENT NEEDS;

Fertility and Reproduction
Growth
Lactation
Compounding Nutritional Issues

- Toxicities
- Deficiencies
- Improper ratios (minerals)
- Synergistic and antagonistic interactions
Range Supplementation

- Energy
- Protein
- Vitamins and Mineral
Rifle vs Shotgun

• Rifle is appropriate for “stationary targets”
• Harvested feeds, composition not rapidly changing, design ration for specific performance
• Shotgun is appropriate for “flying targets”
• Rangeland feed composition may be constantly changing. Precipitation etc
Specific Ammunition

• What mix of pellets “supplements” is best suited to meet the animal’s immediate needs?
• What delivery system works for you?
• Can’t measure it, can’t manage it
• Need to have current, accurate diet data
Energy Supplementation

- Energy must be supplemented on a daily basis
- The amount fed determines whether supplementation or substitution occurs. If 10% or more of the diet is fed, then substitution occurs
- Supplementation will impact grazing activities
Protein Supplementation

• May be supplemented as infrequently as once or twice per week
• Nitrogen (protein) is recycled in the form of urea
• Protein supplementation will improve the digestibility of low quality forage by as much as 10%
Macro Mineral Nutrition in Grazing Ruminants

- Calcium
- Phosphorus
- Sodium
- Chloride
- Magnesium
- Potassium
- Sulfur
Micro Minerals – Their role in the diet of grazing ruminants

- Copper
- Zinc
- Manganese
- Cobalt
- Iodine
- Iron
- Selenium
- Fluorine
- Molybdenum
What biological type is best suited to Southwestern rangelands?

- Low production: No
- High production: Good Years
- Med. production: Most Years
Limited forage availability is more detrimental to animals with high rather than low genetic production potential.
Balancing the size of the herd to the nutritional carrying capacity of the range

Stocking rate must be varied to match the nutrient yield of the range
Thank You