MANAGEMENT TOOLS AND TECHNIQUES COMMON TO ALL GRAZING STRATEGIES

- Techniques that attract livestock away from the riparian areas;
- Herd management & animal husbandry practices; and
- Techniques that restrict livestock from riparian areas:

TO PROMOTE DISTRIBUTION

Techniques That Attract Livestock Away From Riparian Areas

- Off site stockwater developments
- Alternative forage sources such as seedings
- Fertilization to improve palatability of off-site forage
- Prescribed fire to improve both forage availability and palatability
- Grassbanking
- Feed supplements

"How far will she go
before she drops her load?"

"She just kept walking away! Must be shy!"

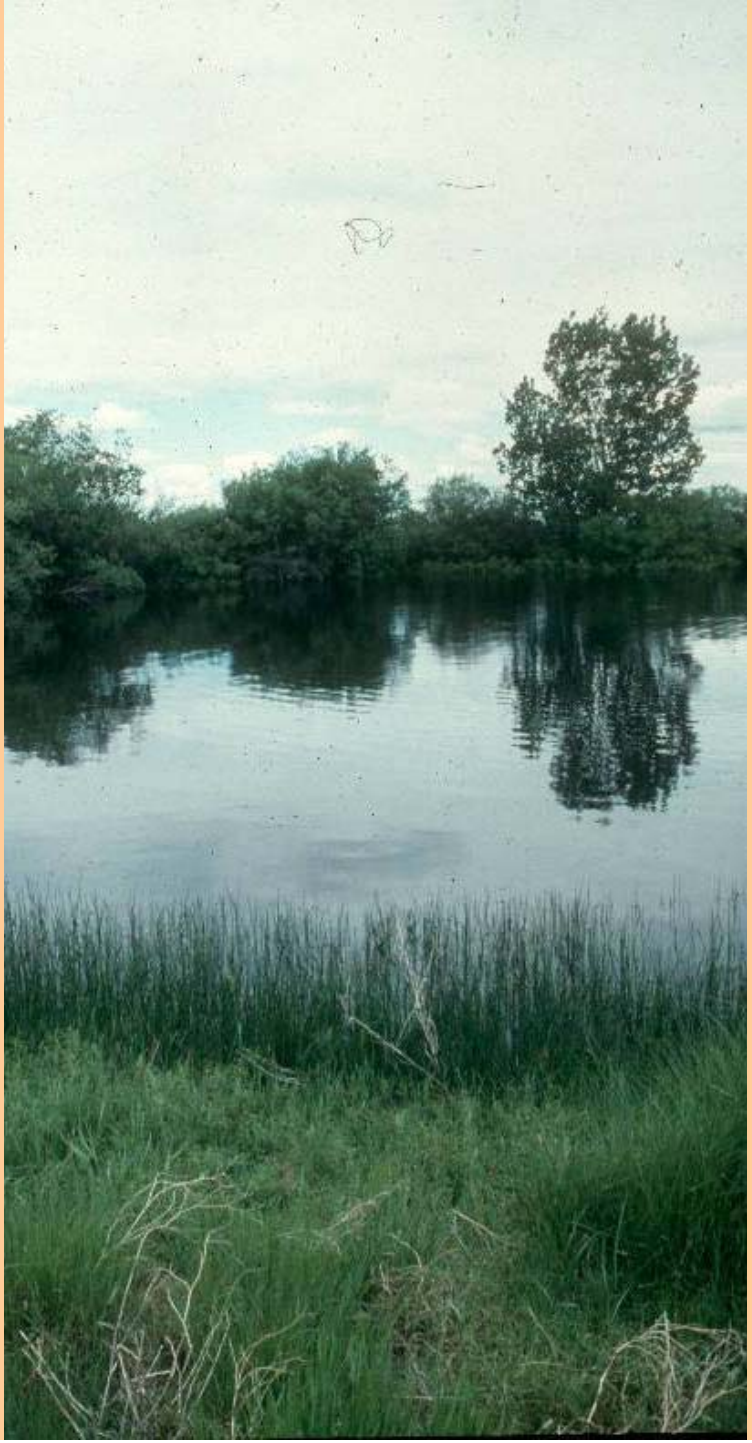
Solar Powered Pump

Mobile Solar Powered Pump

"Pasture Nose Pump"

Pasture Nose Pump with trailer

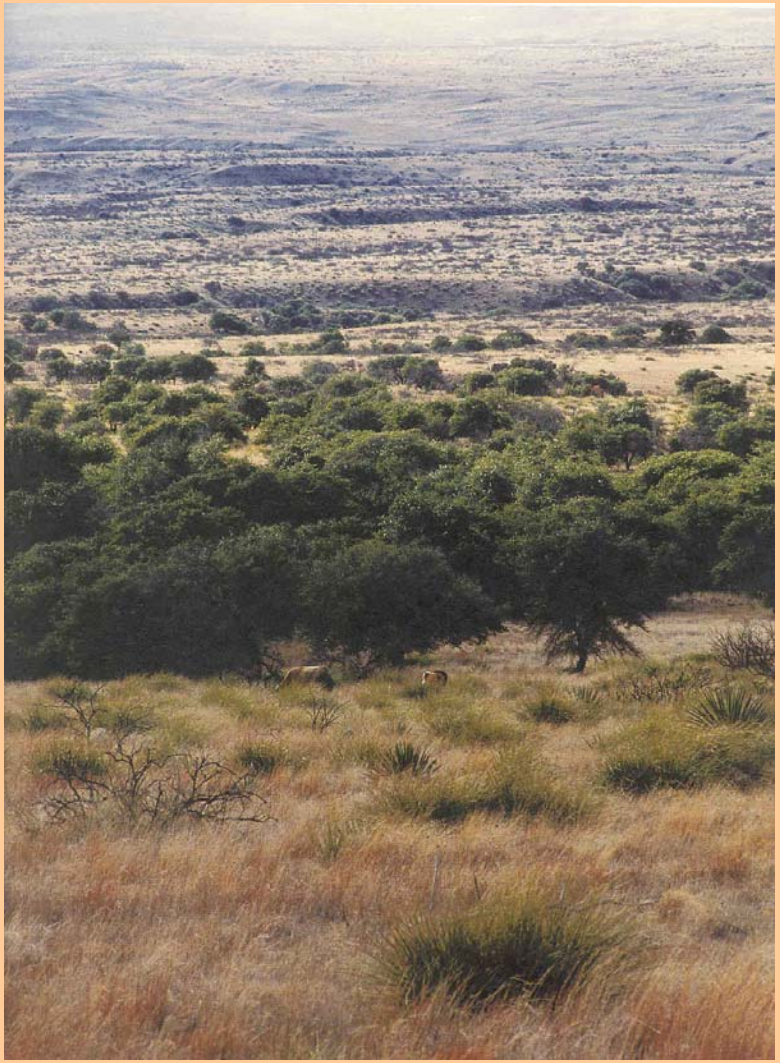
- Decrease livestock impact on wildlife or livestock ponds.
- Cleaner water
- Easy access



Upland Seeding

Prescribed Burning

Post-Burning of Sagebrush Site



Malpai Borderlands Group Grassbanking Program

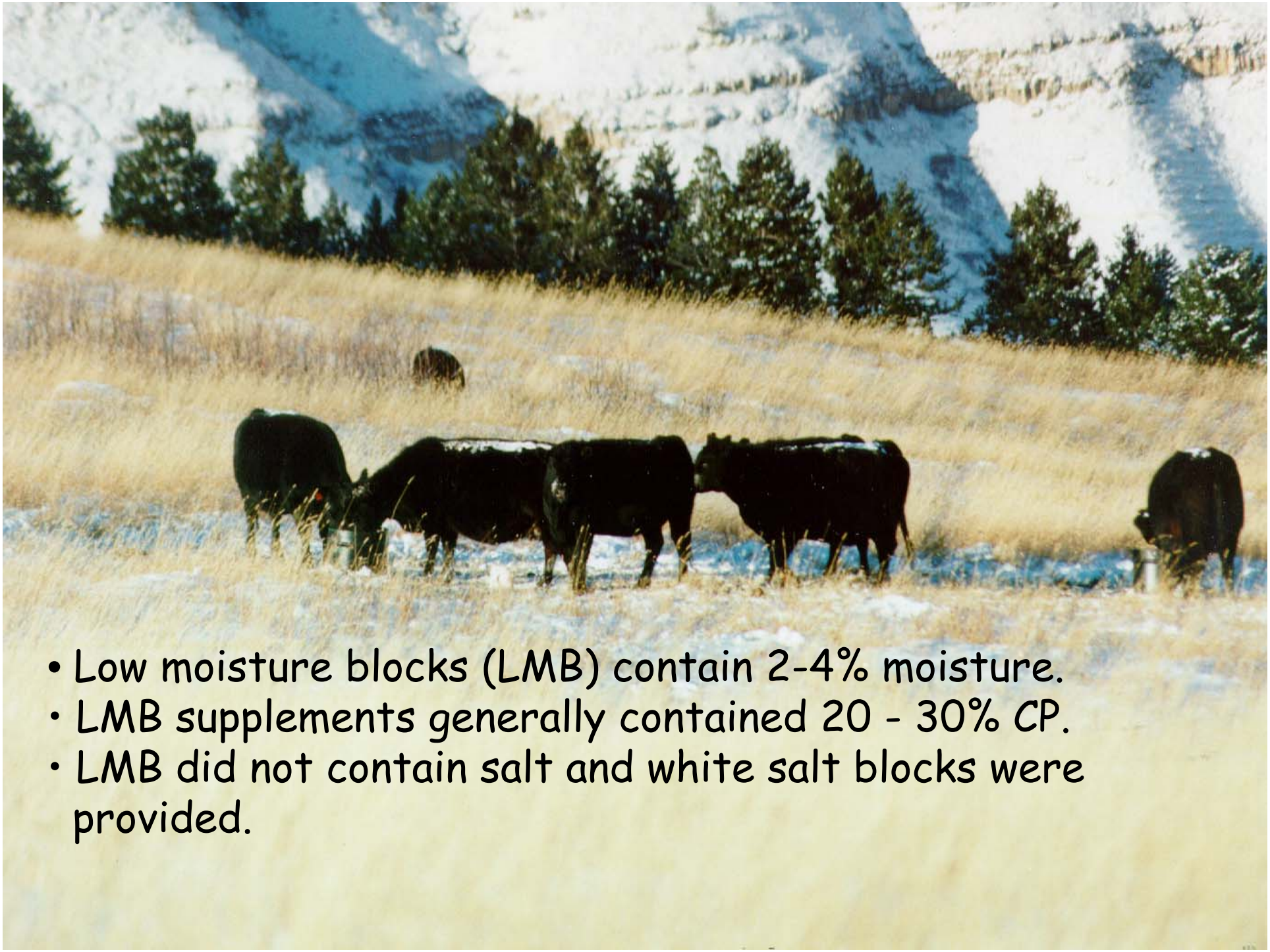
Heart Ranch, Wyoming

Grassbanking

Selection of Feeding and Resting Sites
Management can change where animals graze and possibly where they rest.

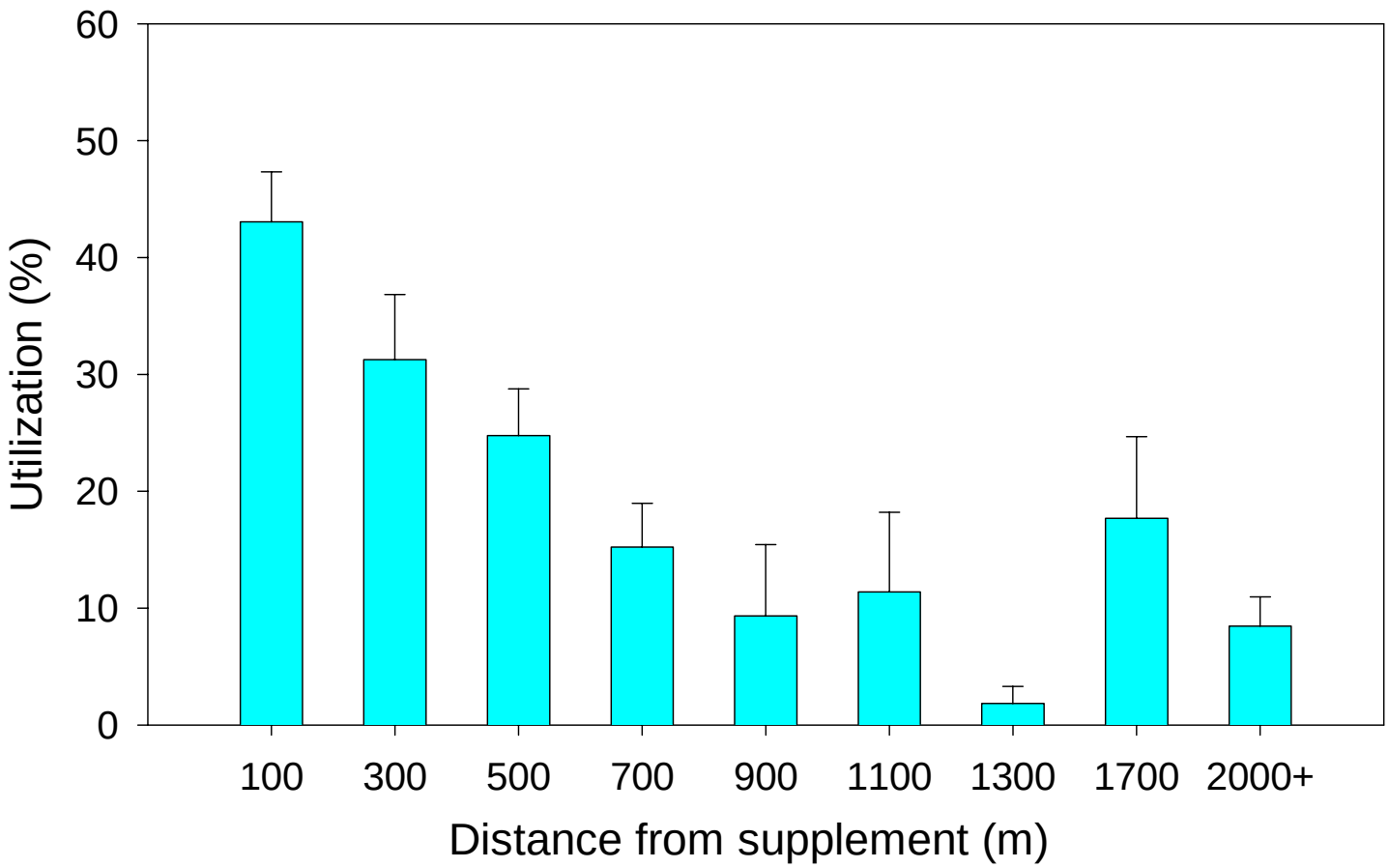
Strategic supplementation

Their approach was to place supplement in some of the steepest areas of their pastures that were accessible to cattle.



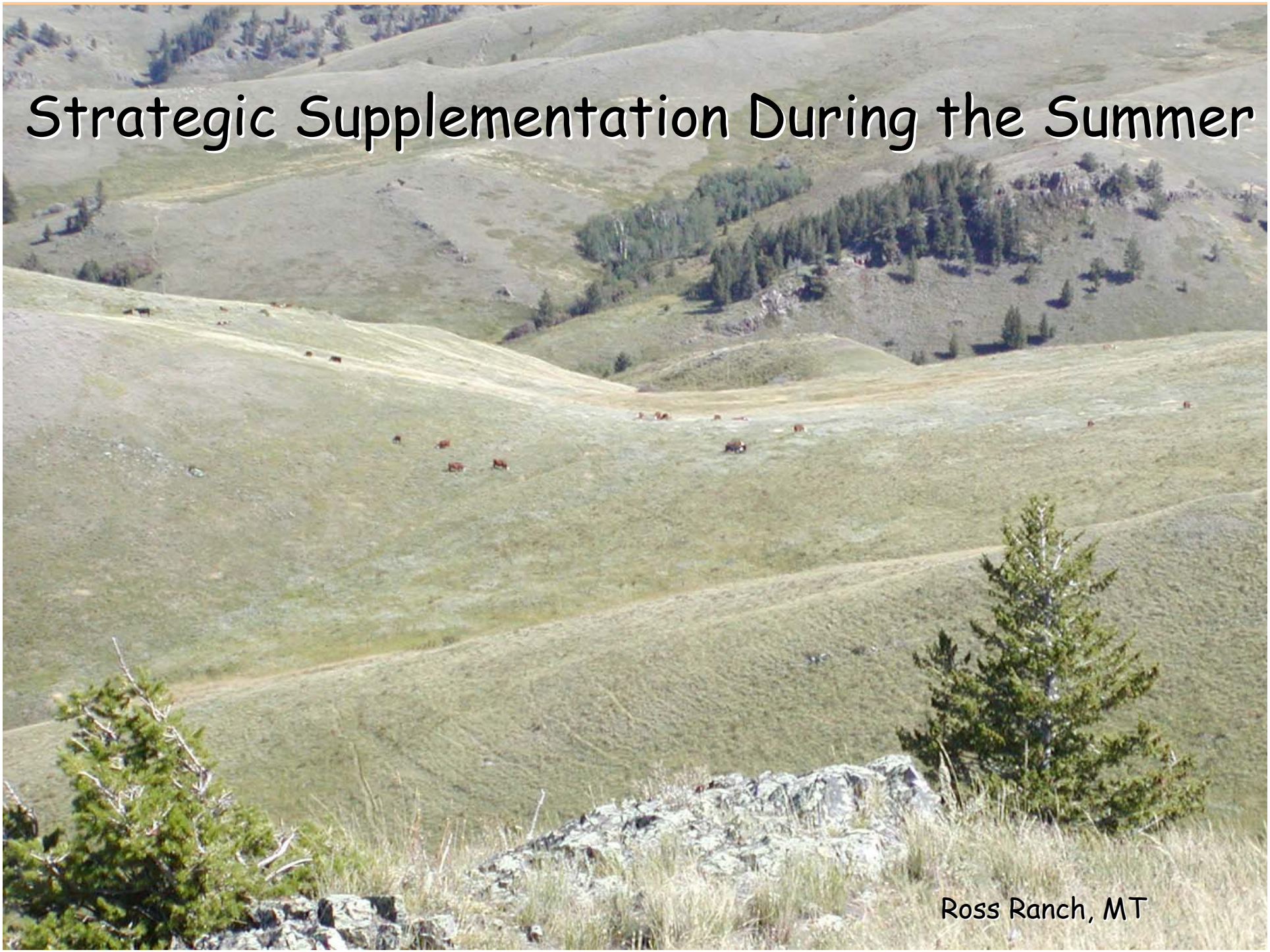
- Low moisture blocks (LMB) contain 2-4% moisture.
- LMB supplements generally contained 20 - 30% CP.
- LMB did not contain salt and white salt blocks were provided.

Forage utilization at varying distances from supplement at the Padlock Ranch



Training is critical for supplement placement to
be an effective tool to manipulate grazing distribution.

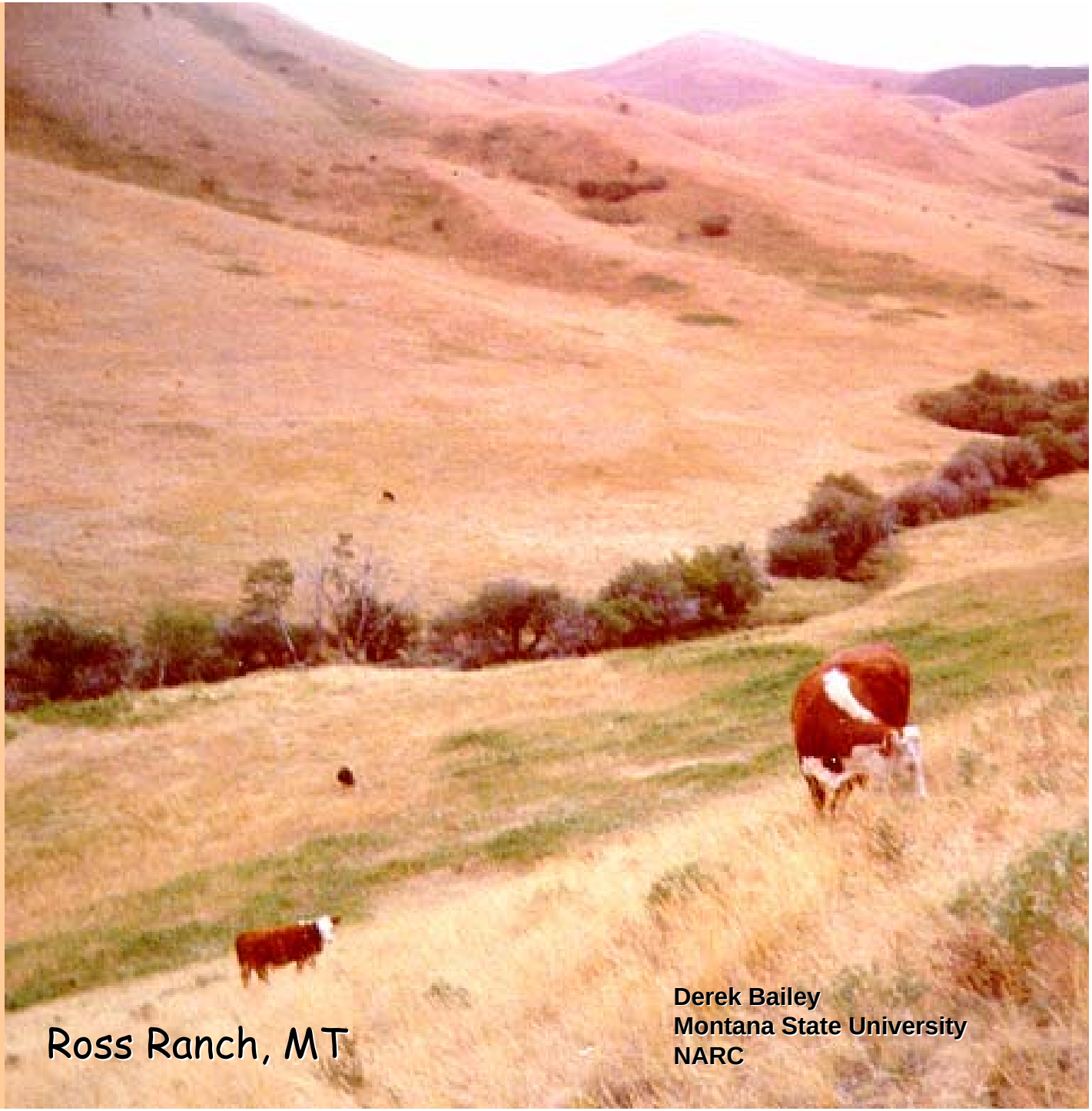
Strategic Supplementation During the Summer



Selection

Some animals use rugged terrain while others use gentle terrain.

Selection can be between and within breeds (individual animal selection).



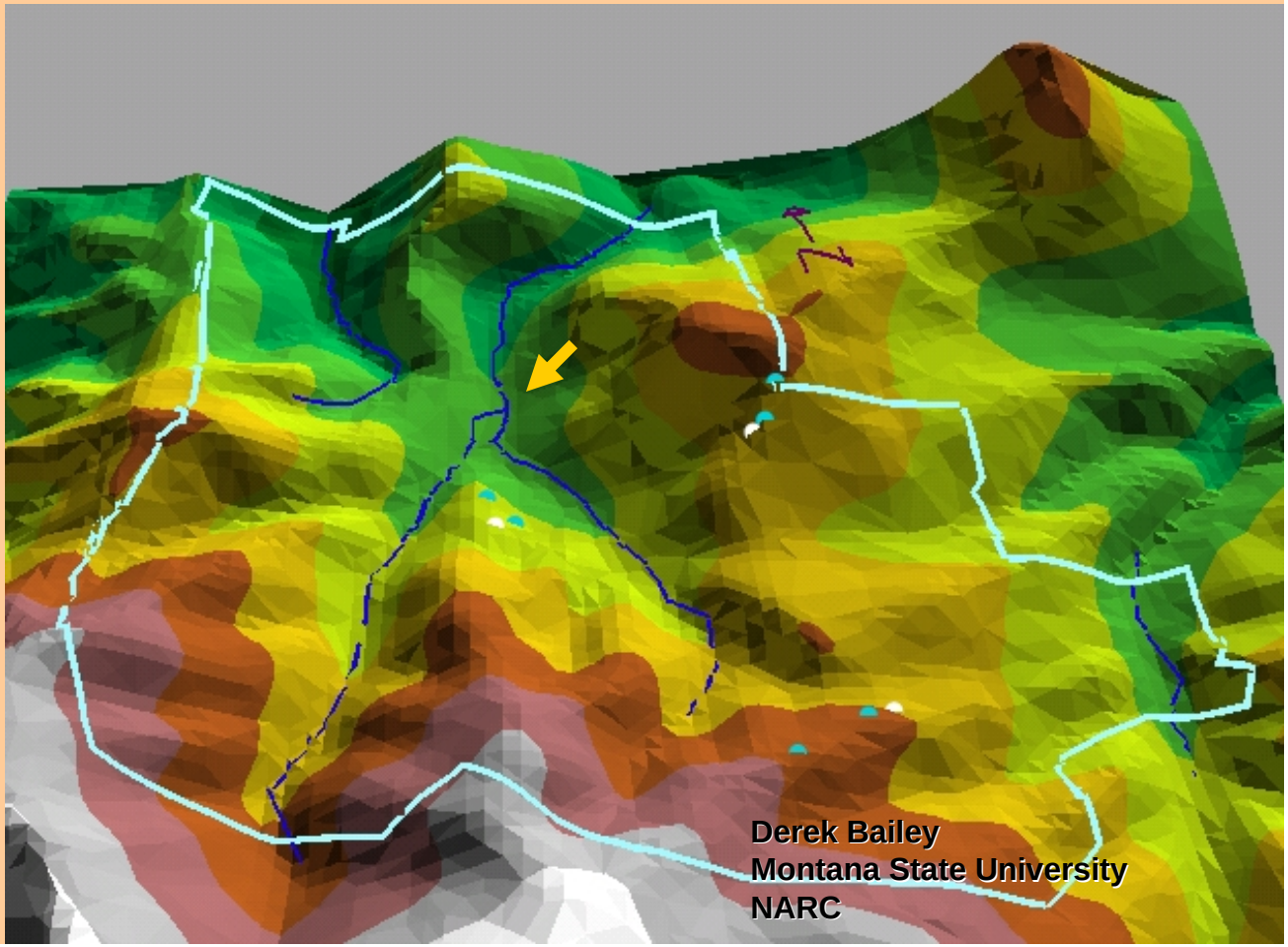
Approach

Ross Ranch, Chinook, MT
Spencer Pasture

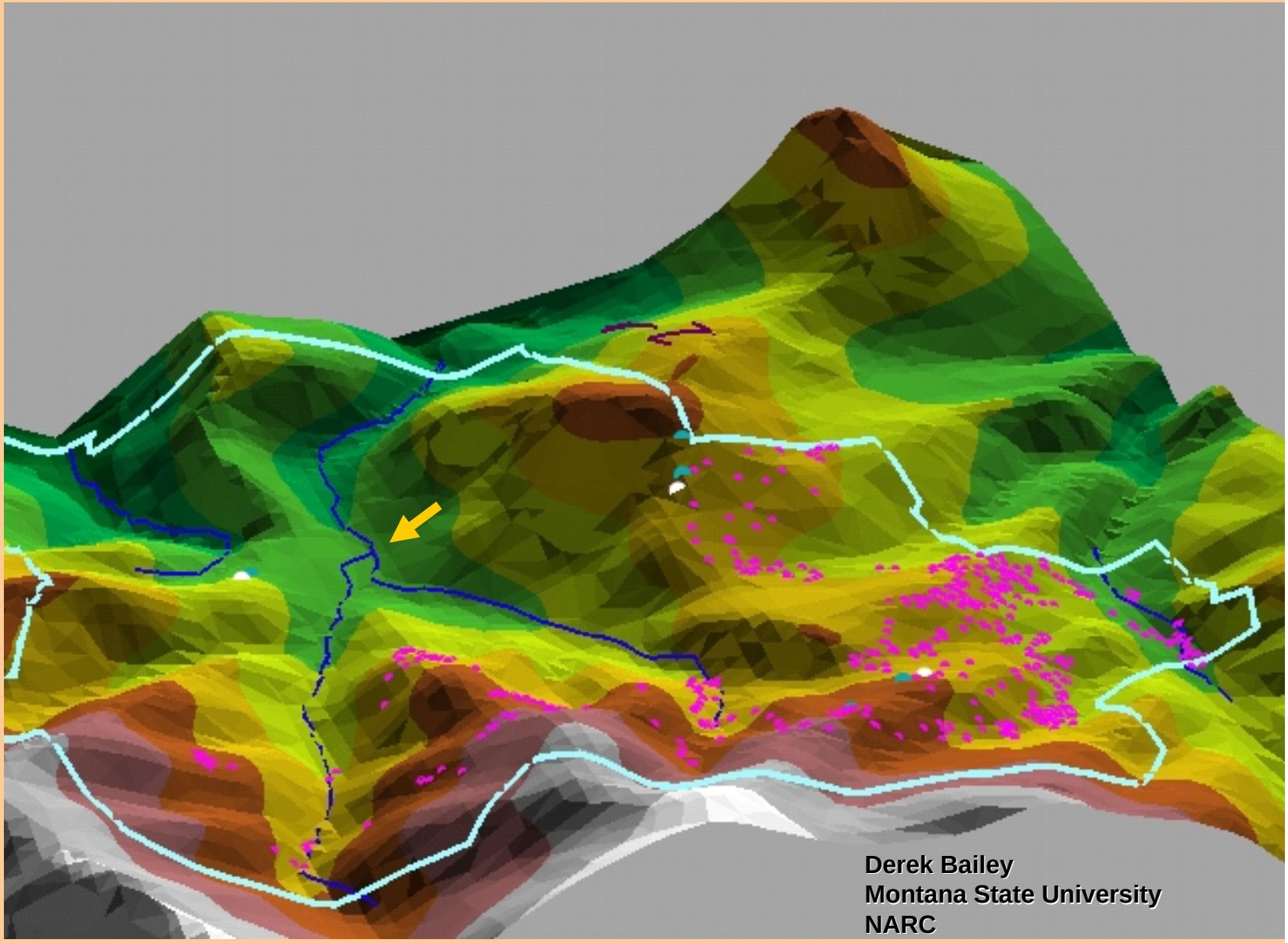
Barrels at high elevations and areas far from water.

Barrels located a few hundred yards from riparian watering and loafing areas.

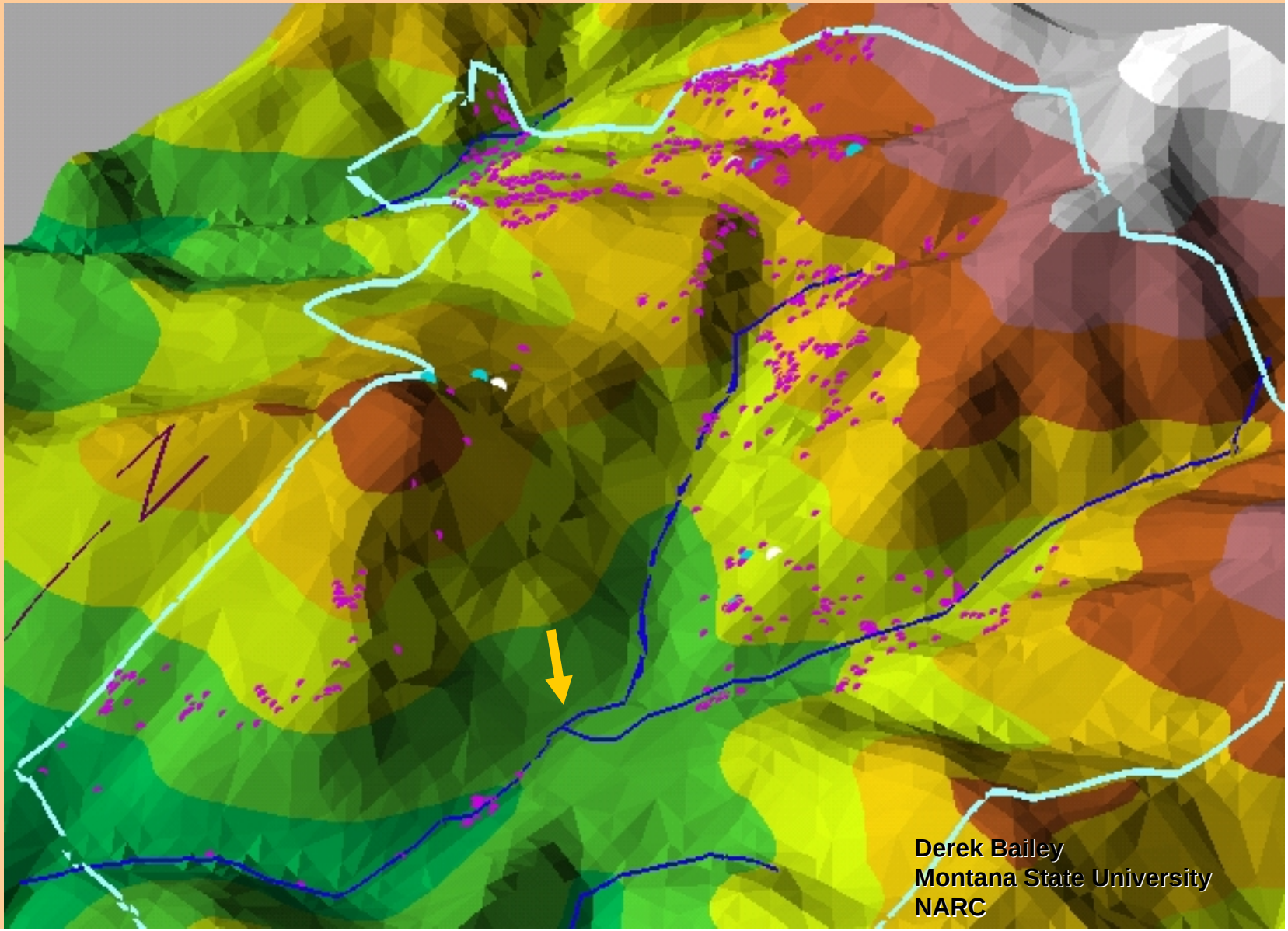
- LMB
- Salt



Ross Ranch, Spencer Pasture
Late August - Early September 2002



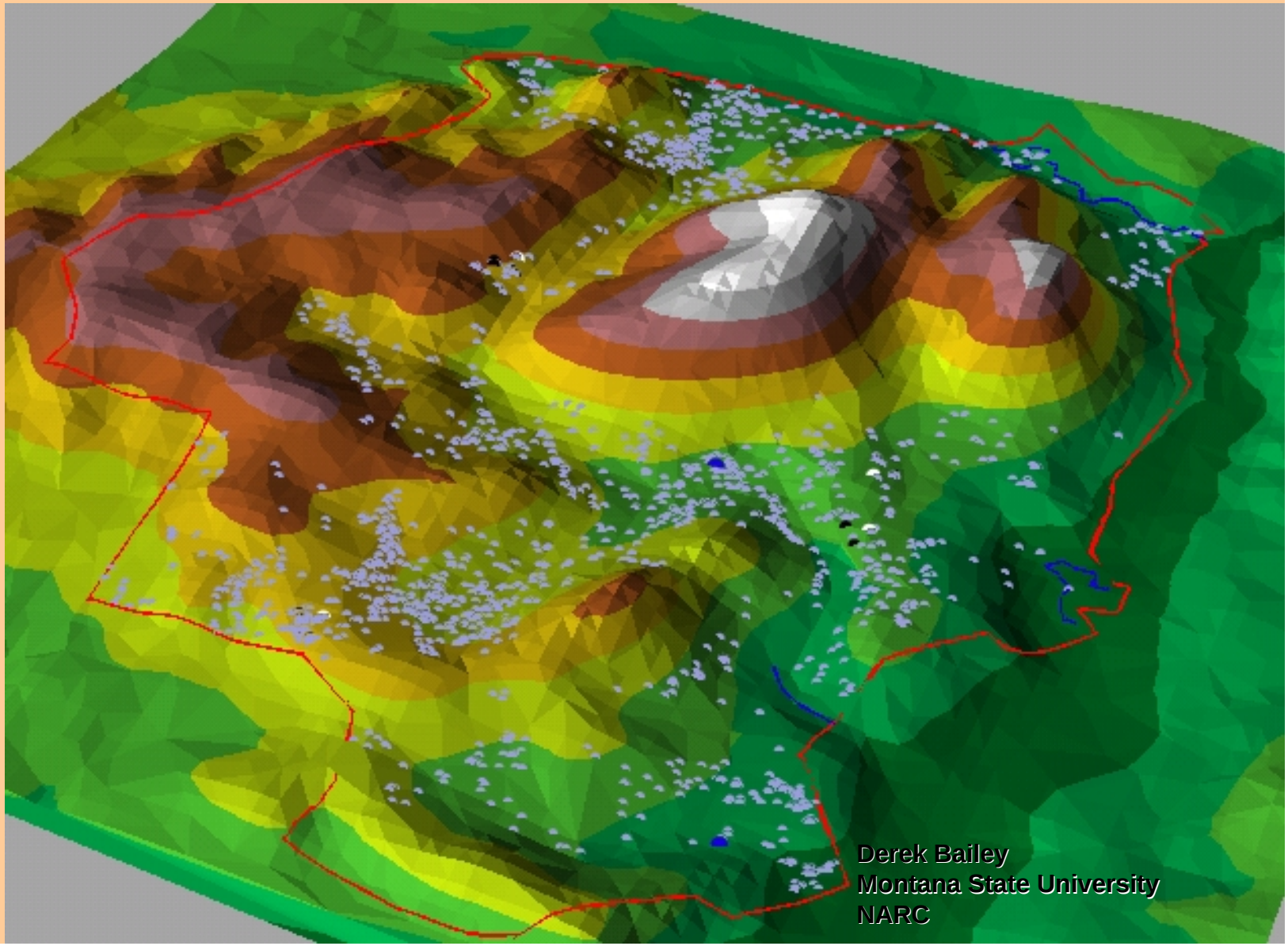
Ross Ranch, Spencer Pasture
Early September 2002



What about during the early summer?

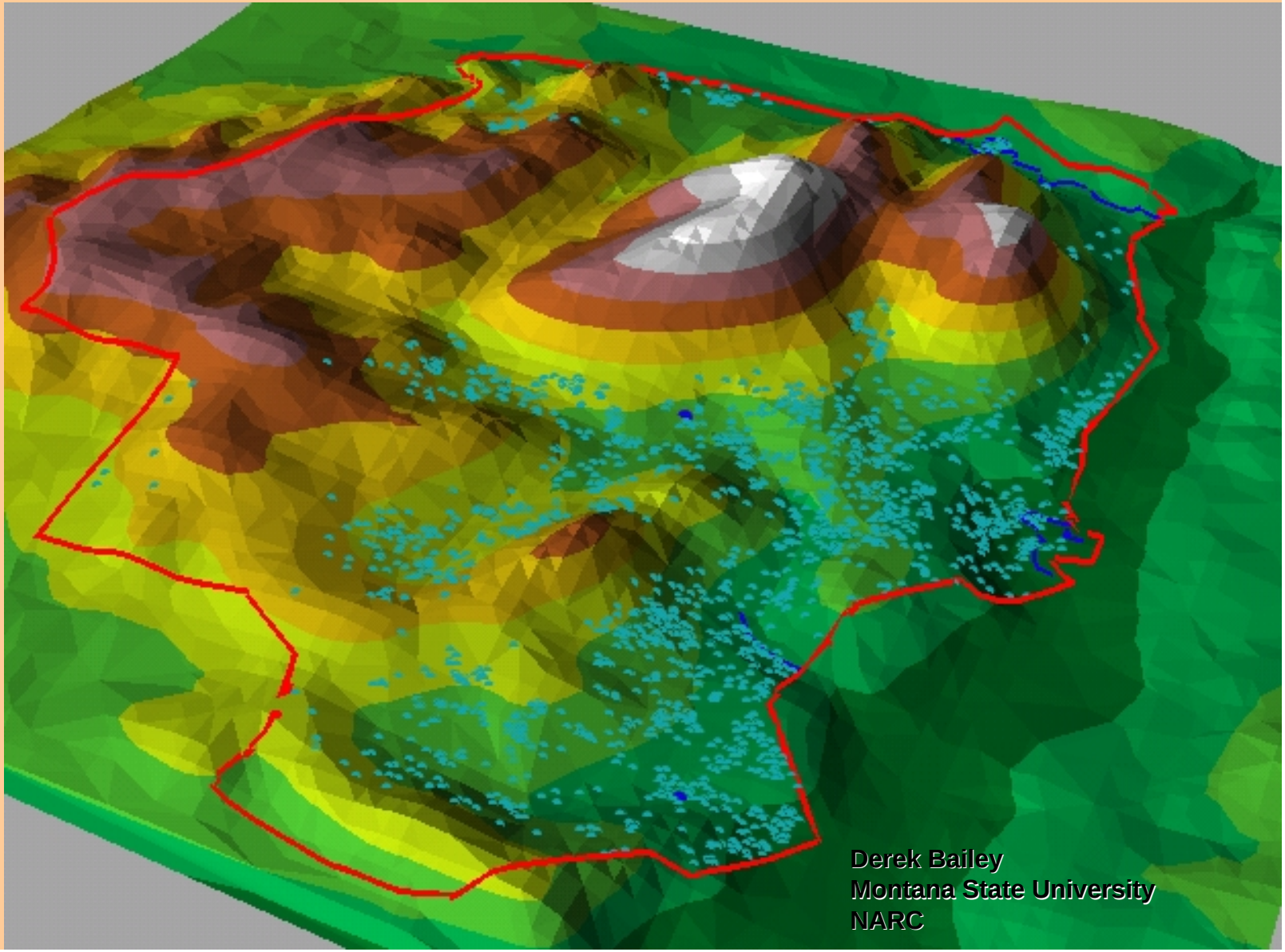
Supplement

Ross Ranch, Big Field
June 2003



No Supplement

Ross Ranch, Big Field
June 2002



Preliminary Observations: Strategic supplement can help manipulate grazing distribution patterns during the early summer if cattle consume the product.

Herd Management & Animal Husbandry Practices

- Culling practices
- Class of livestock
- Kind of livestock
- Breed of livestock
- Low stress handling

"BOTTOM HUGGERS"

Alternative Livestock Species

Cattle Breeds

Used at Northern Ag Research Center
Montana State University, Havre

Tarentaise - Developed in the French Alps

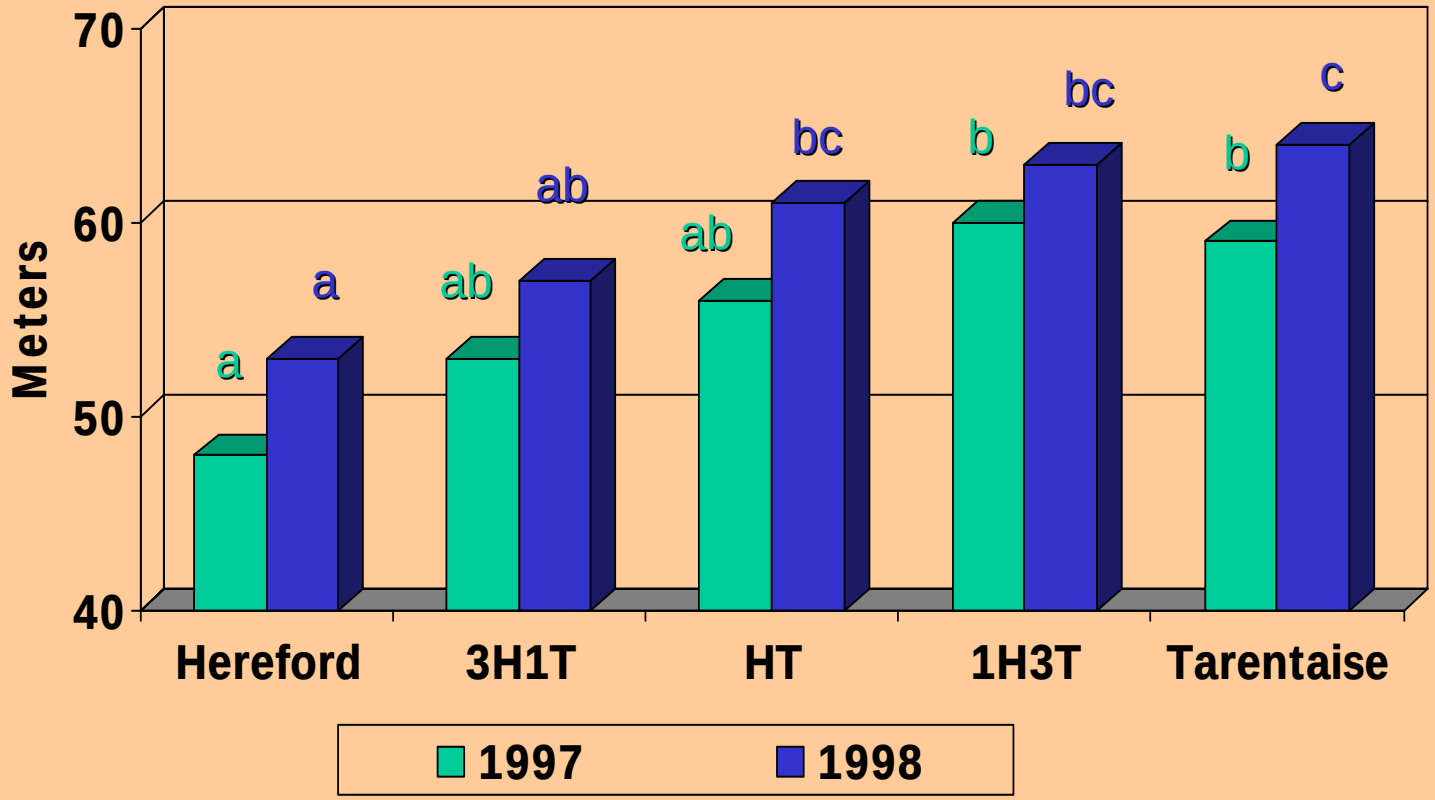
Hereford - Developed in England

1/4 Hereford - 3/4 Tarentaise cow (1H3T)

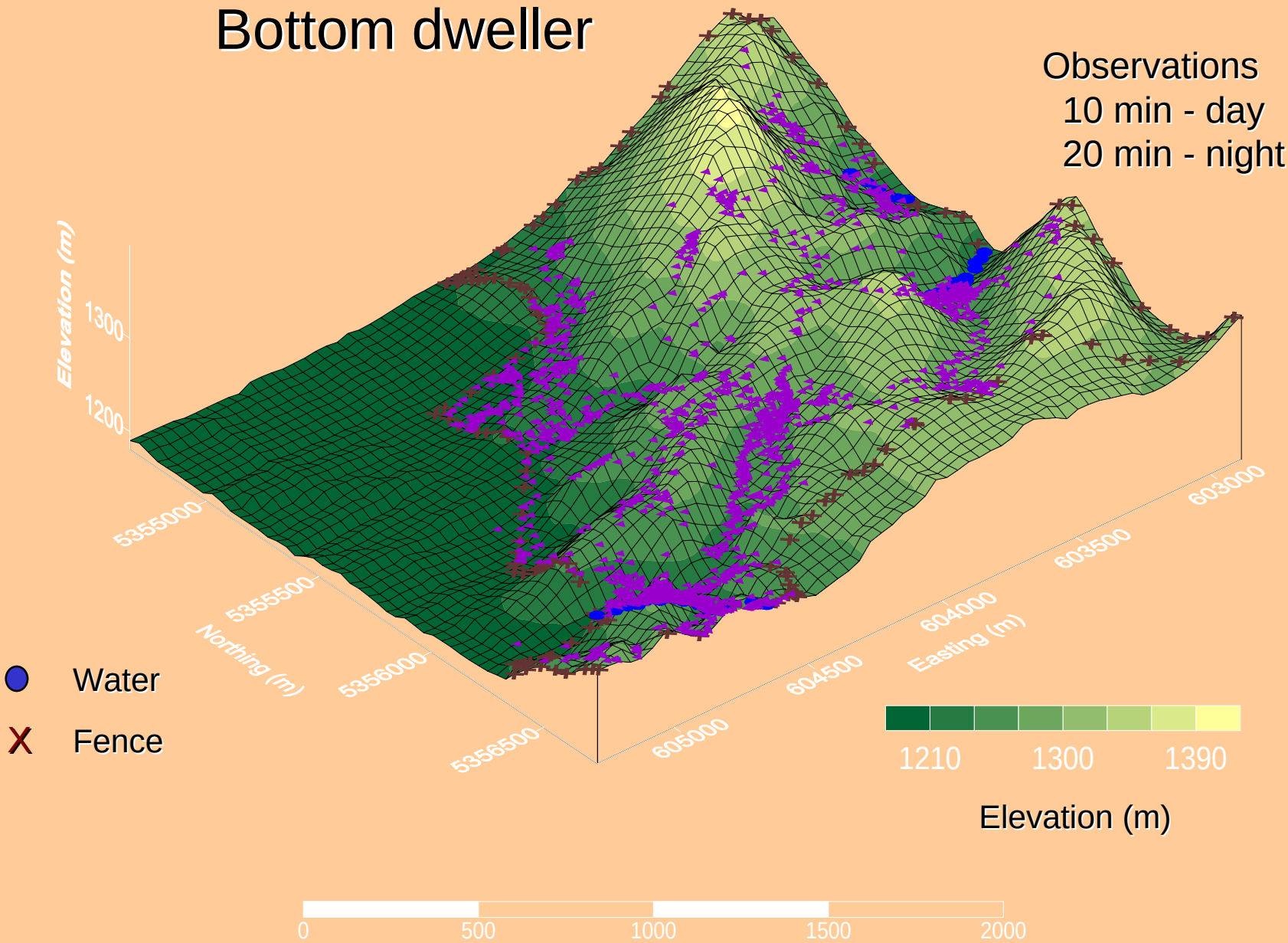
Cattle were observed at Havre using a combination of horseback observers and GPS collars. Observers recorded locations of all cattle during early mornings, and the collars recorded locations of randomly-selected cattle 24 hours per day.

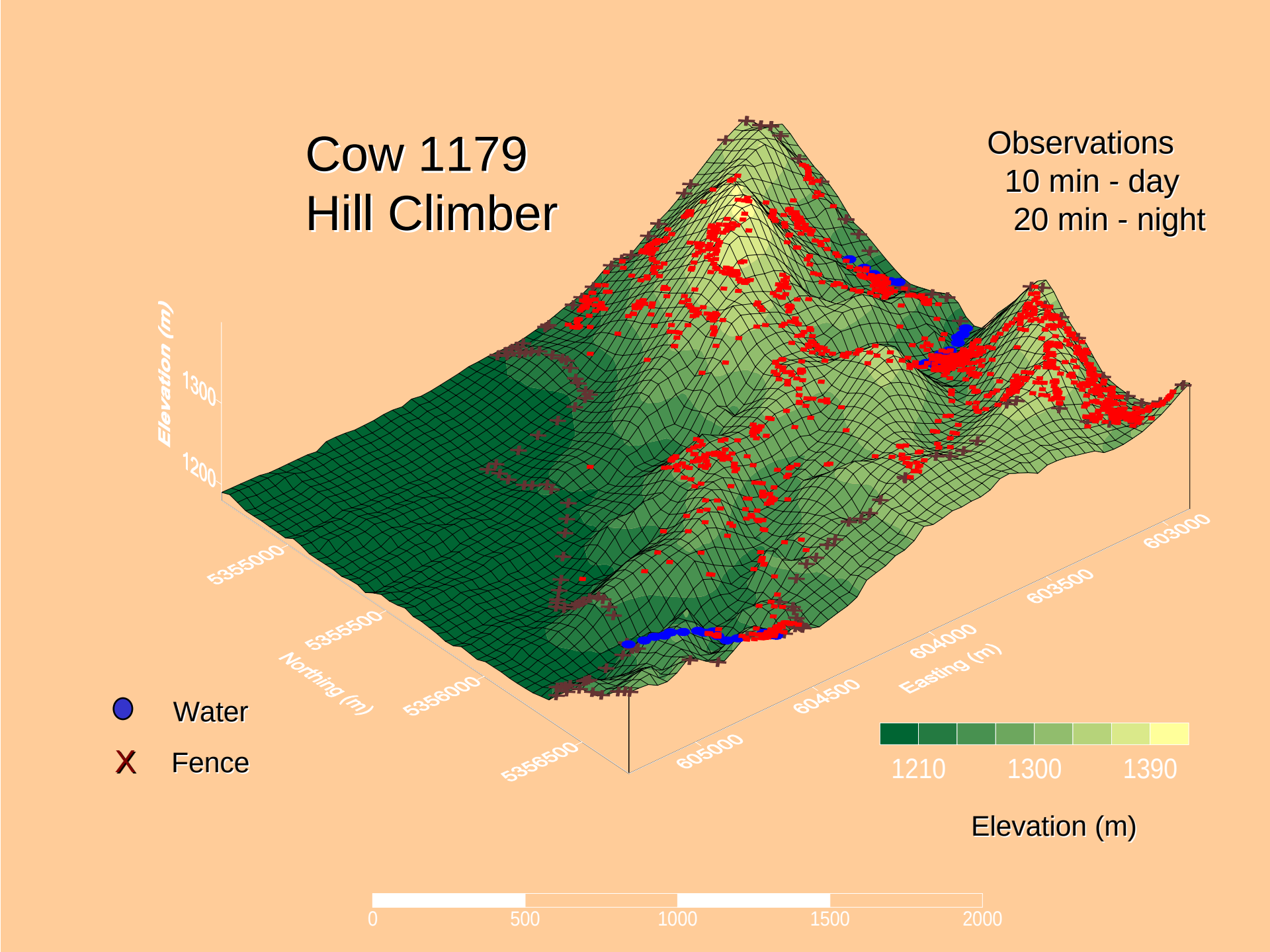
Vertical Distance from Water

Montana (NARC) - Back Pasture during 1997 and 1998



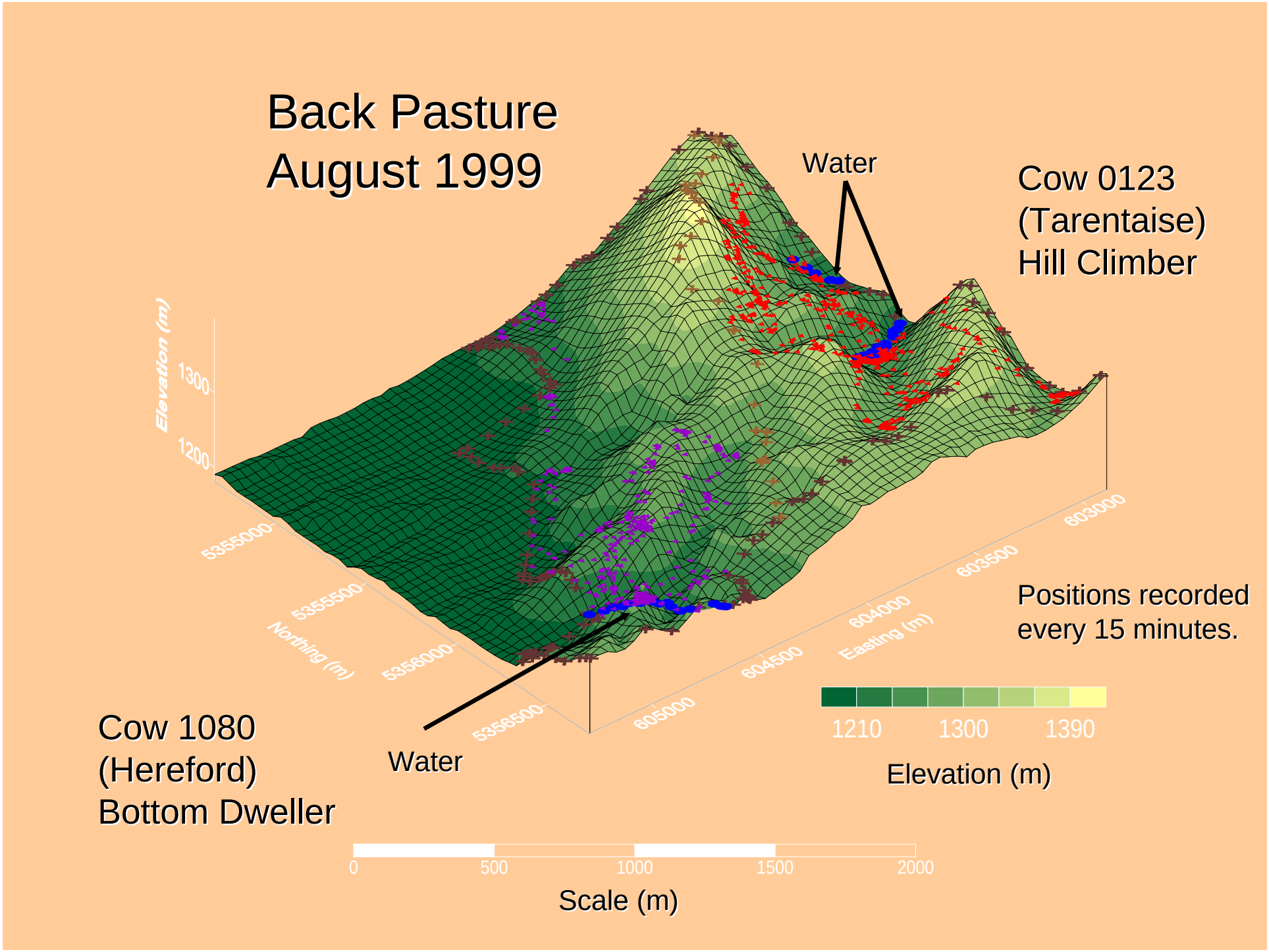
Cow 1080
Bottom dweller




Cow 1179
Hill Climber
Observations
10 min - day
20 min - night
Elevation (m)
1300
1200
5355000
5355500
5356000
5356500
Northing (m)
605000
604500
604000
603500
603000
Easting (m)
Water
Fence
1210
1300
1390
Elevation (m)
0
500
1000
1500
2000

Can Selection for Grazing Distribution Be Effective?

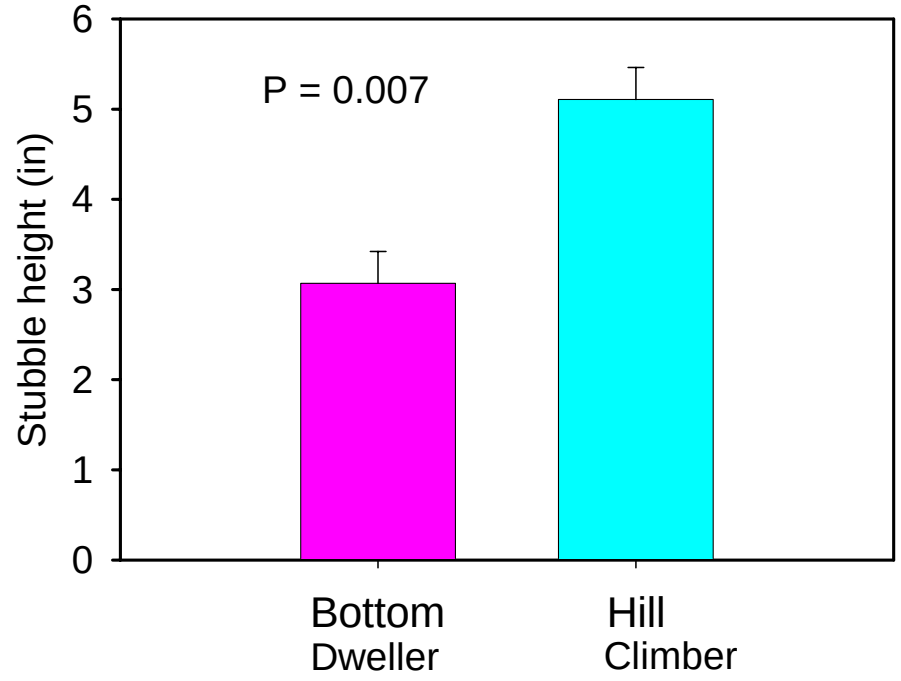
Research in Montana

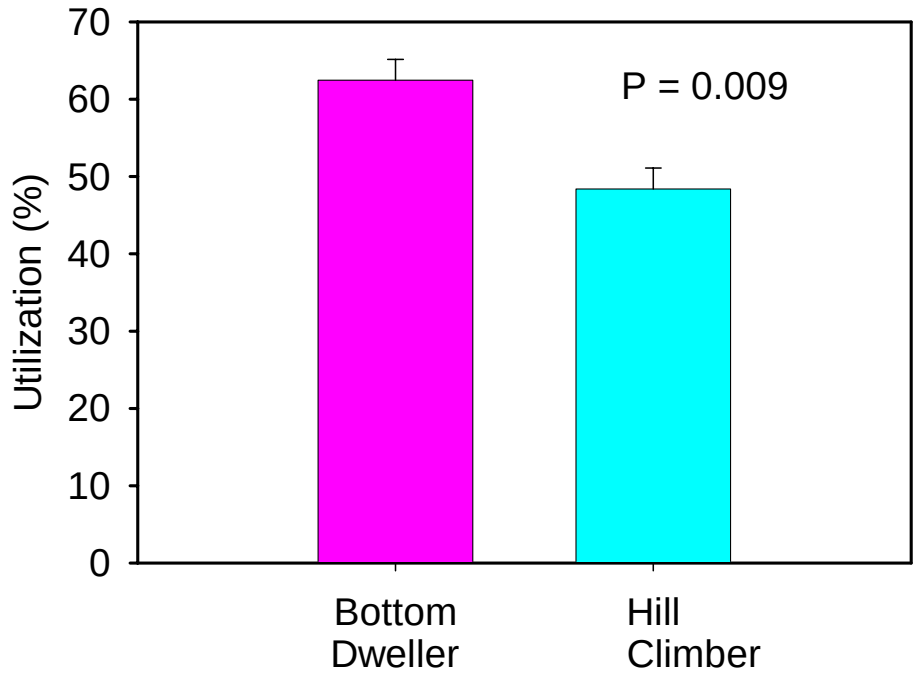

Back Pasture
August 1999
Water
Cow 0123
(Tarentaise)
Hill Climber
Elevation (m)
1300
1200
5355000
5355500
5356000
5356500
Northing (m)
605000
604500
604000
603500
603000
Easting (m)
Positions recorded
every 15 minutes.
1210
1300
1390
Elevation (m)
Cow 1080
(Hereford)
Bottom Dweller
Water
0
500
1000
1500
2000
Scale (m)

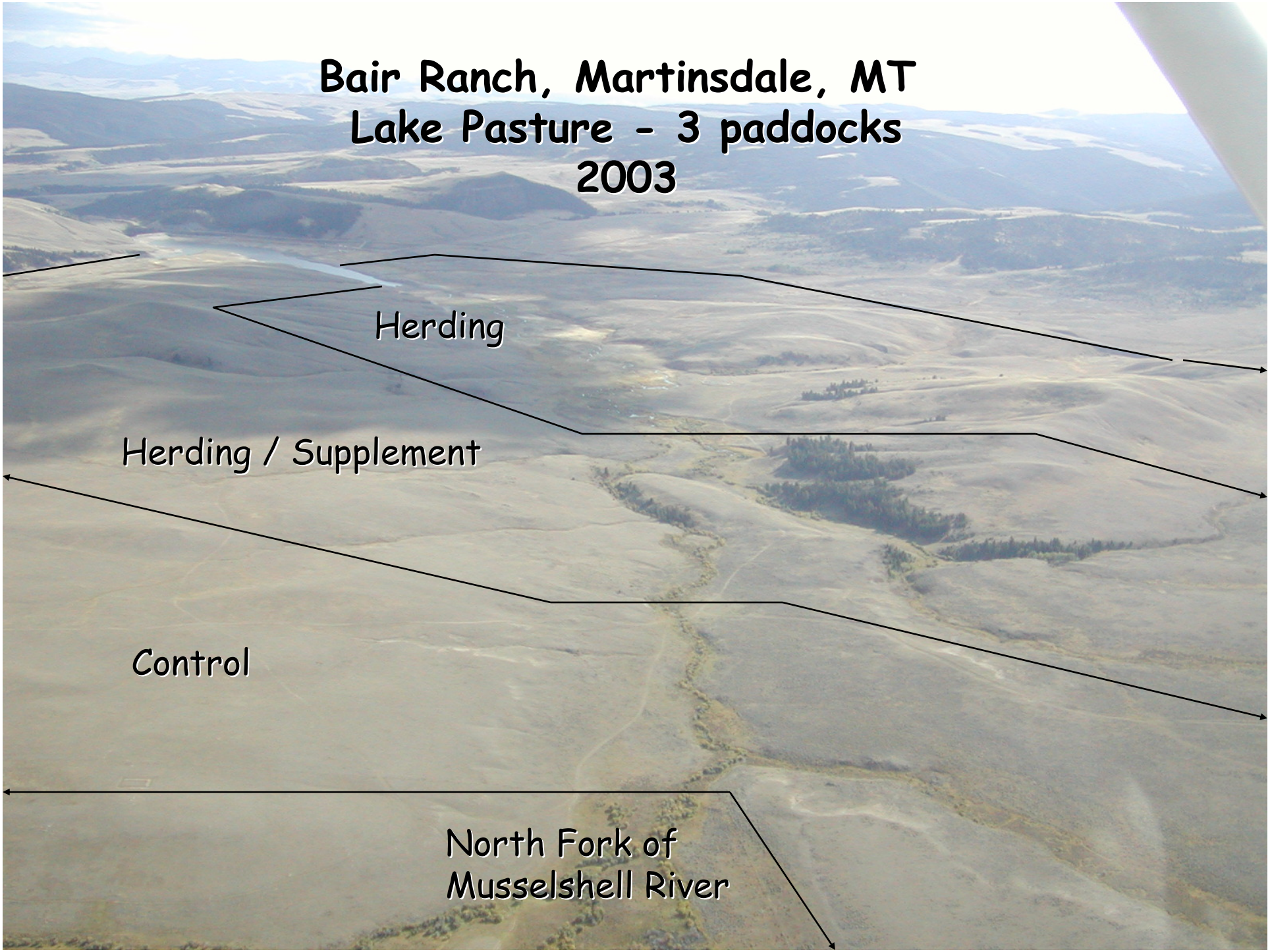
Forage use in critical areas (riparian areas and bottoms)

Stubble height for hill climber treatment met 5 inch height goal often required by BLM and USFS for riparian areas.

Forage utilization did not exceed the 50% (take half -leave half) goal in hill climber pastures.

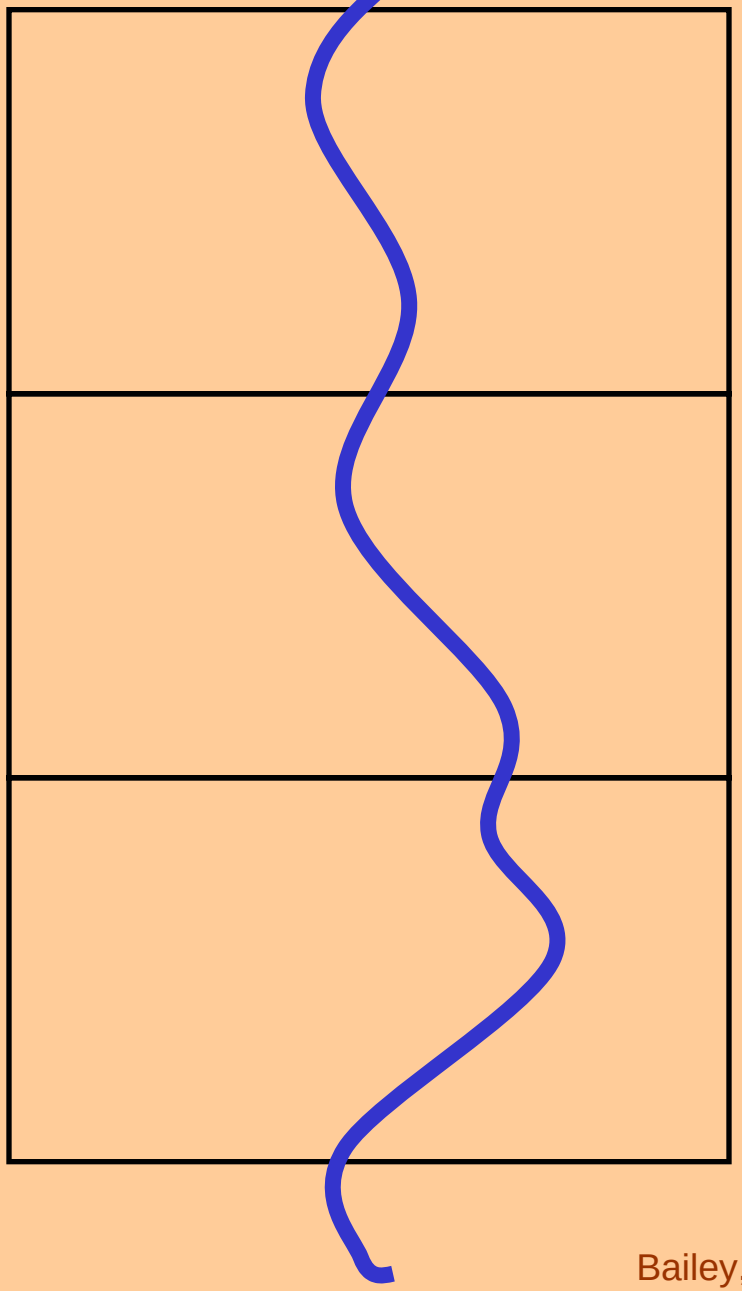





Bair Ranch, Martinsdale, MT
Lake Pasture - 3 paddocks
2003
Herding
Herding / Supplement
Control
North Fork of
Musselshell River

USDA-IFAFS Late-Day Herd / LMB supplement study in MT

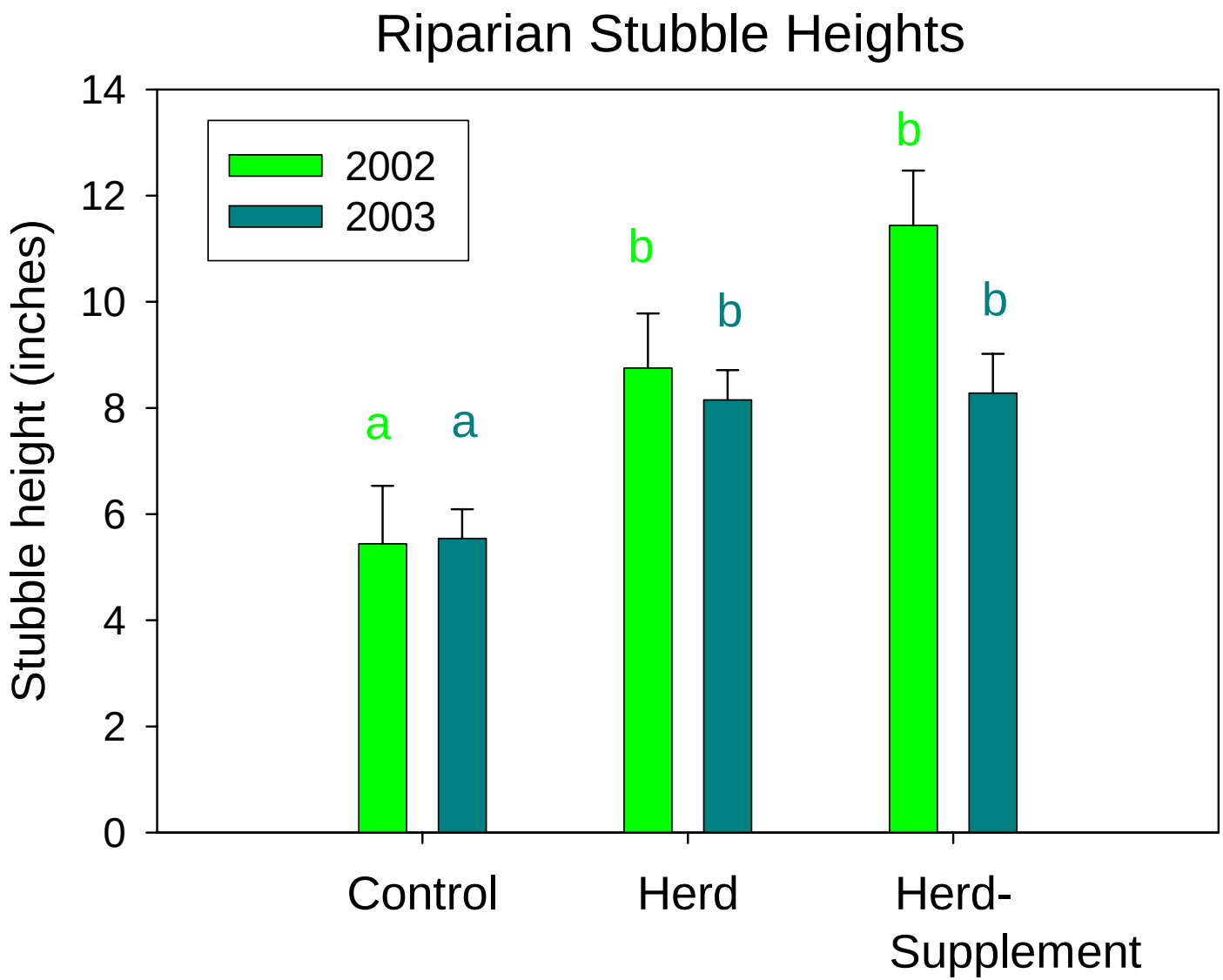
2002	2003	2004
Control	Herding	Herd/Supp LMB
Herding	Herd/Supp LMB	Control
Herd/Supp LMB	Control	Herding



Bailey, 2003

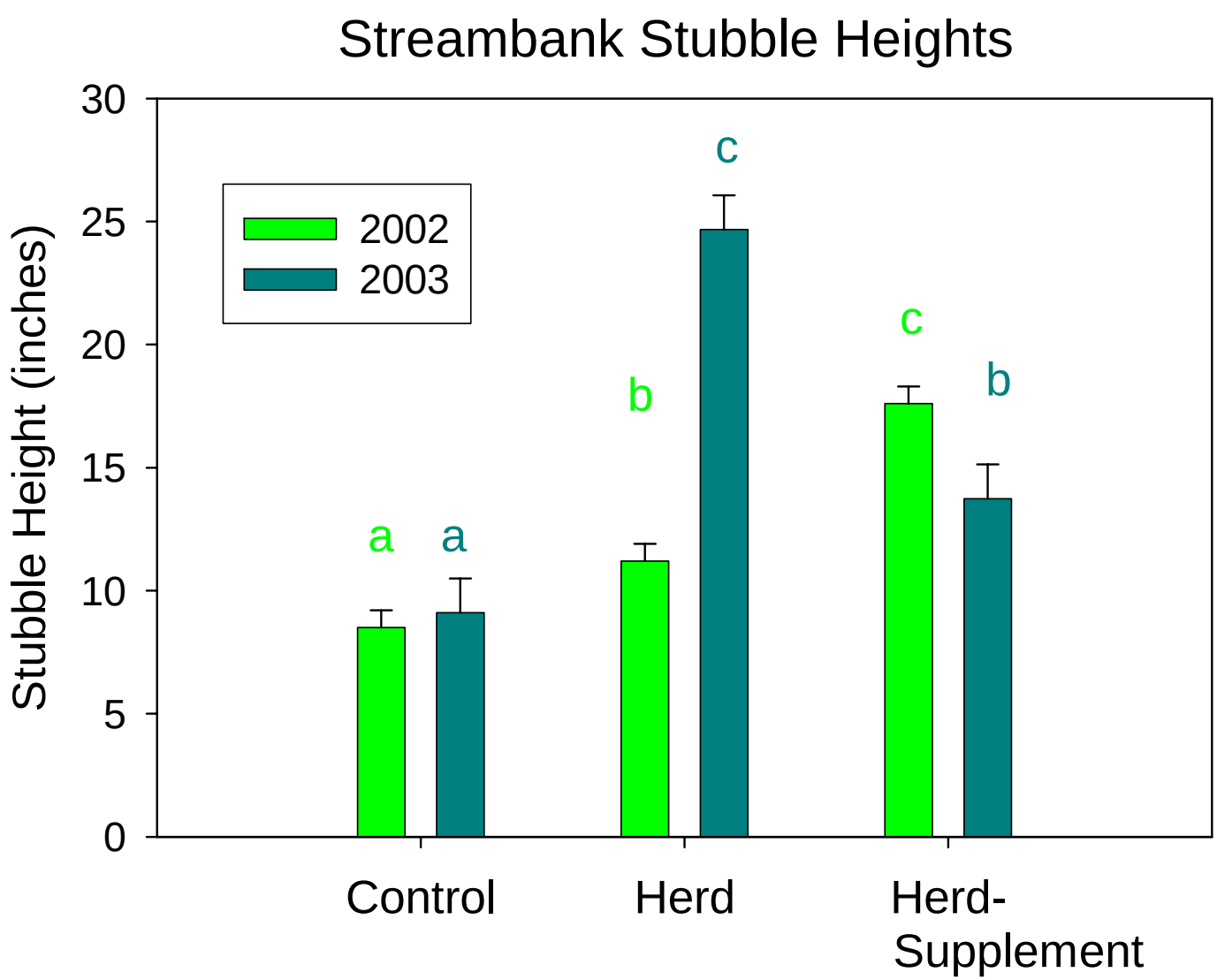
Bair Ranch – Herding Study Preliminary Results

For two consecutive years, more forage remained in riparian areas where cows were herded.



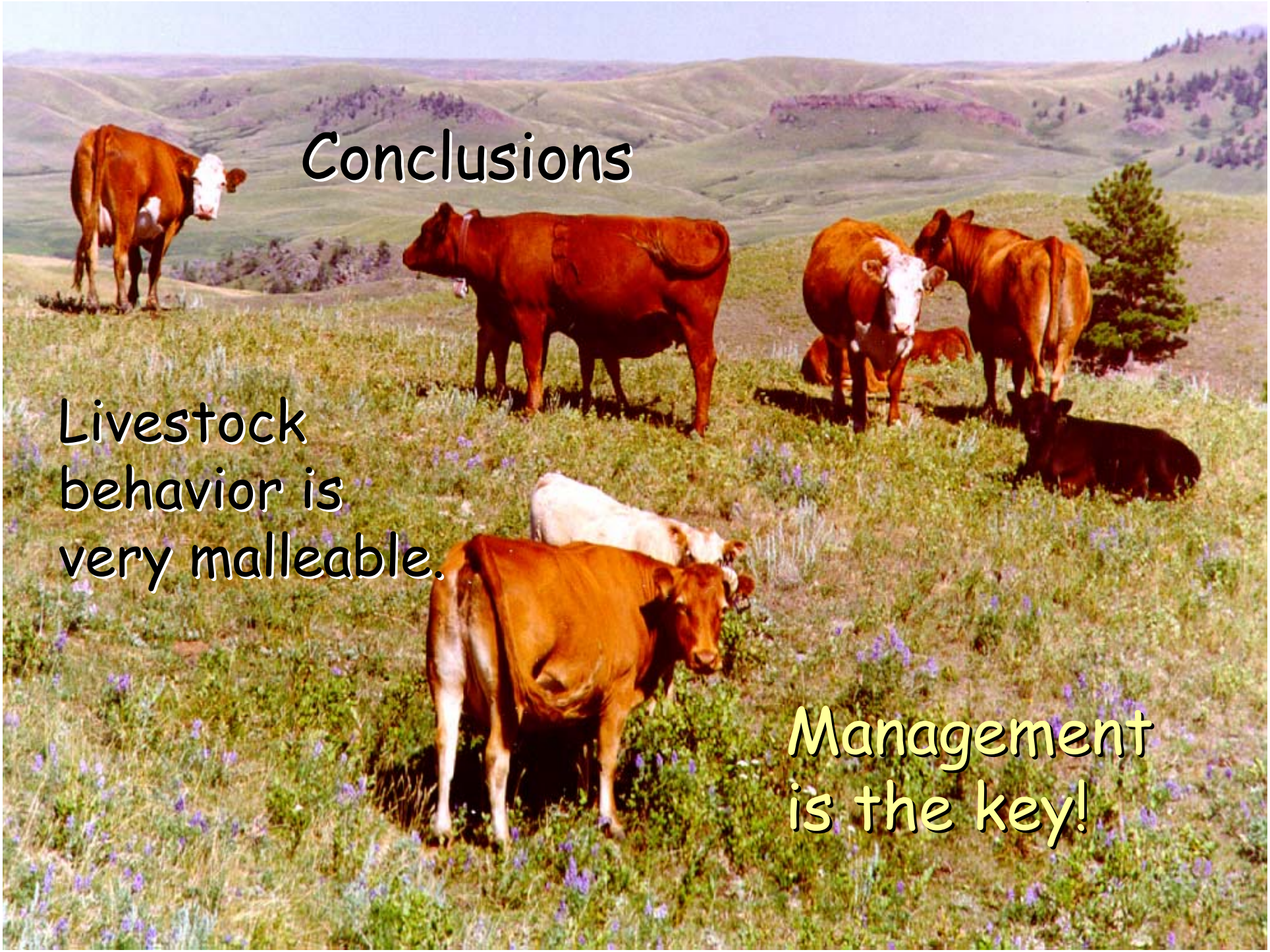
Bair Ranch – Herding Study Preliminary Results

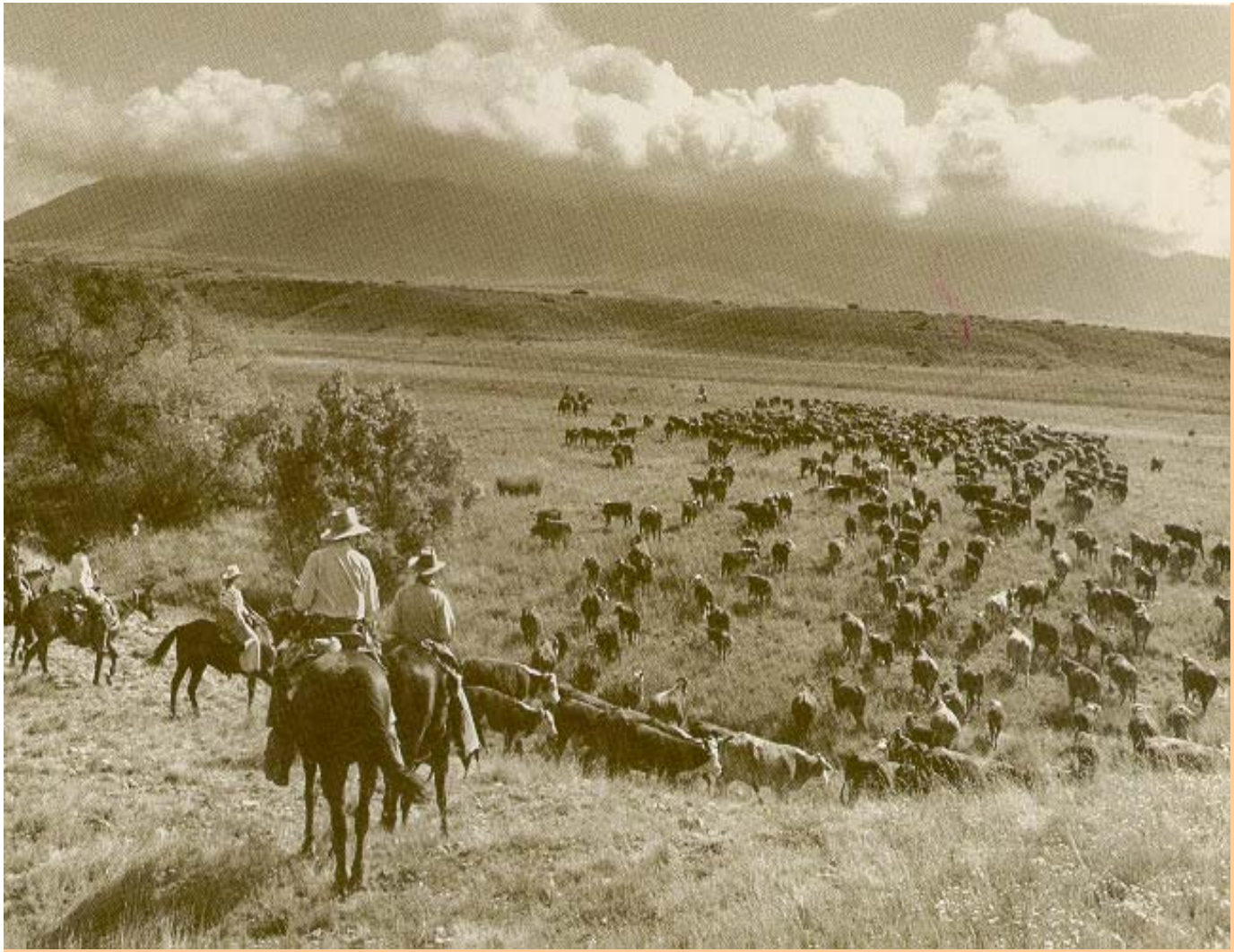
For two consecutive years, more forage remained on streambanks where cows were herded.



Does the integration of herding and strategic supplement placement help increase uniformity of grazing?

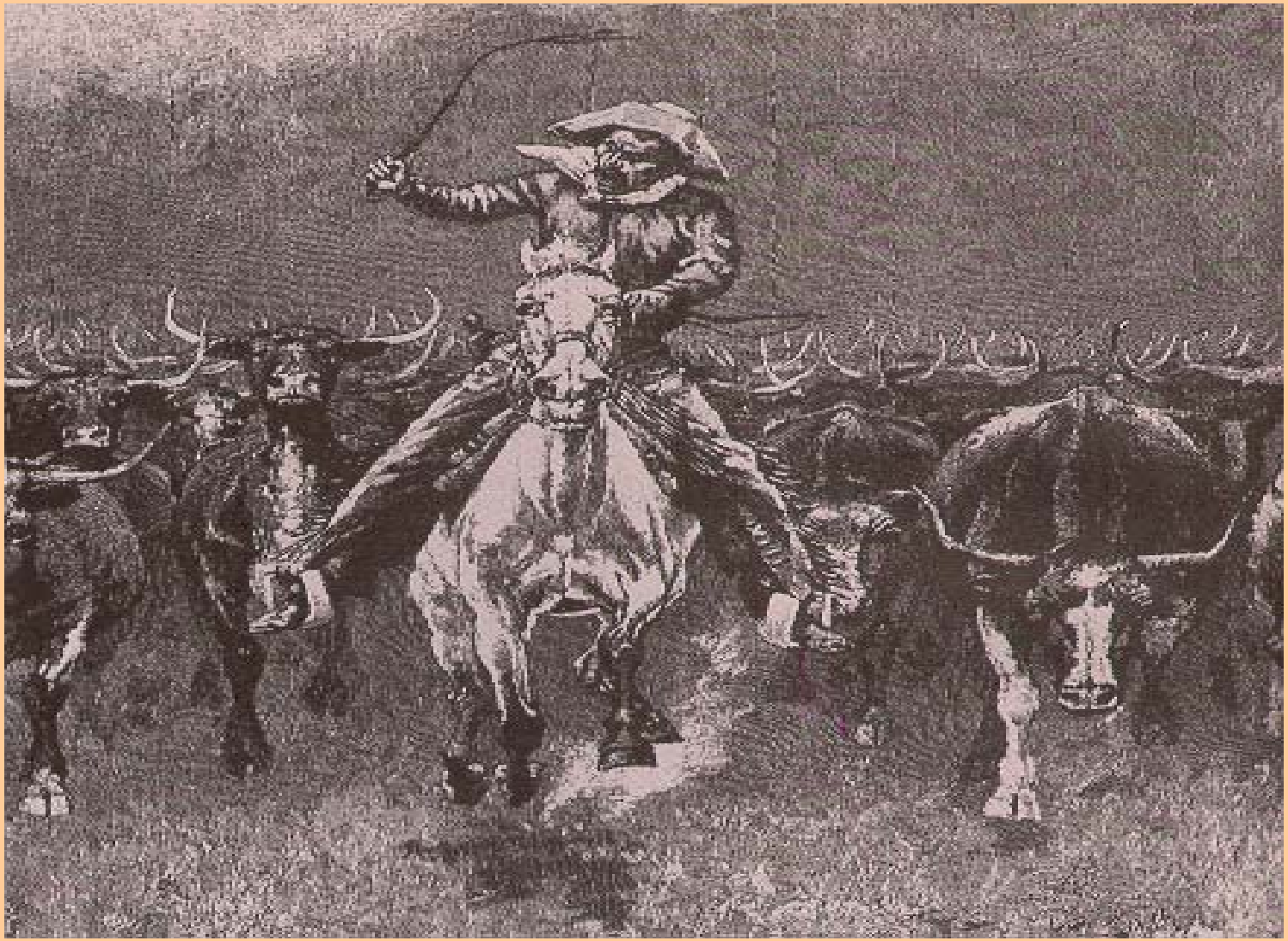
The study will be continued for one more year, but preliminary results and anecdotal observations suggest that the practices complement each other. Placement of low-moisture blocks appears to increase use of uplands after herding.


Conclusions
Livestock behavior is very malleable.
Management is the key!



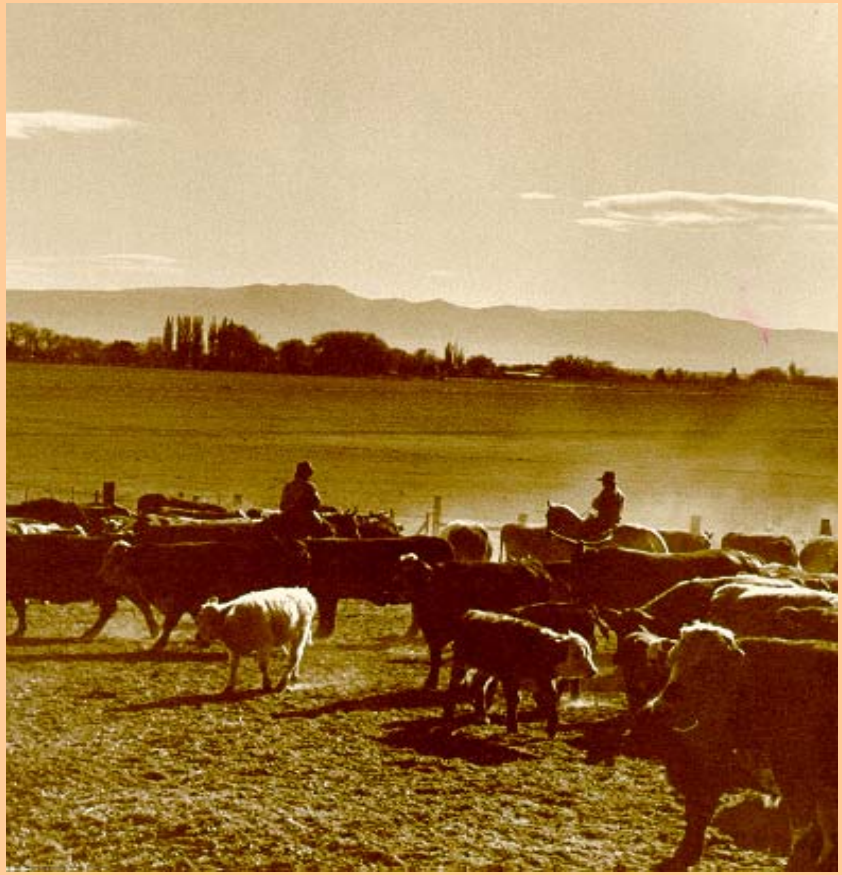
Low Stress Livestock Handling

YEE-E-E-E-E HAW-W-W-W



Positive Aspects on the RANGE

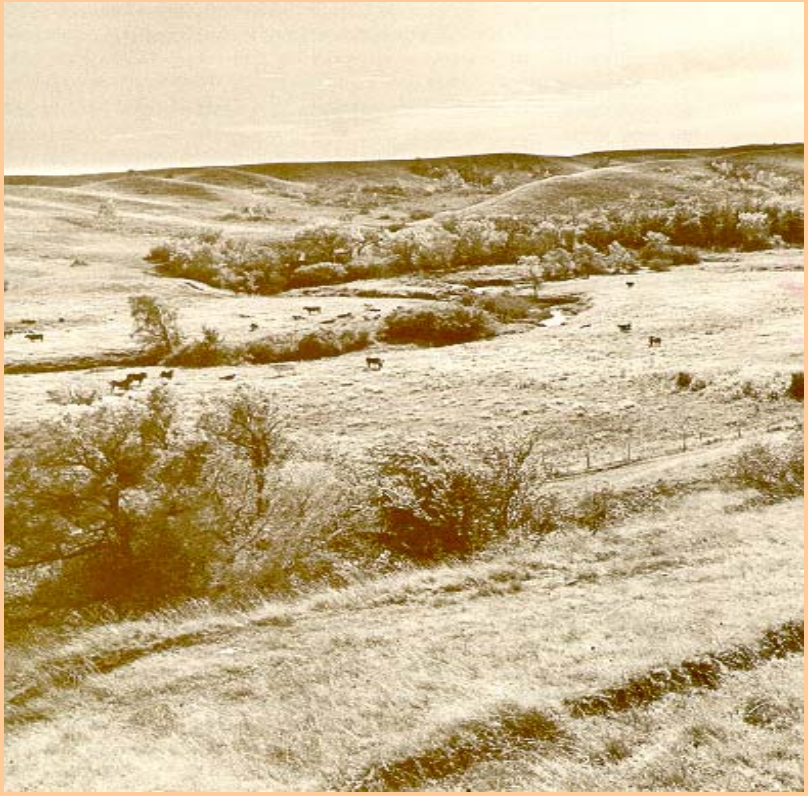
- Control over livestock distribution
- Greater flexibility in pasture management
- Lower "up front" costs
- Healthier Riparian areas
- Less need for fences and intensive range developments



Benefits to the Producer

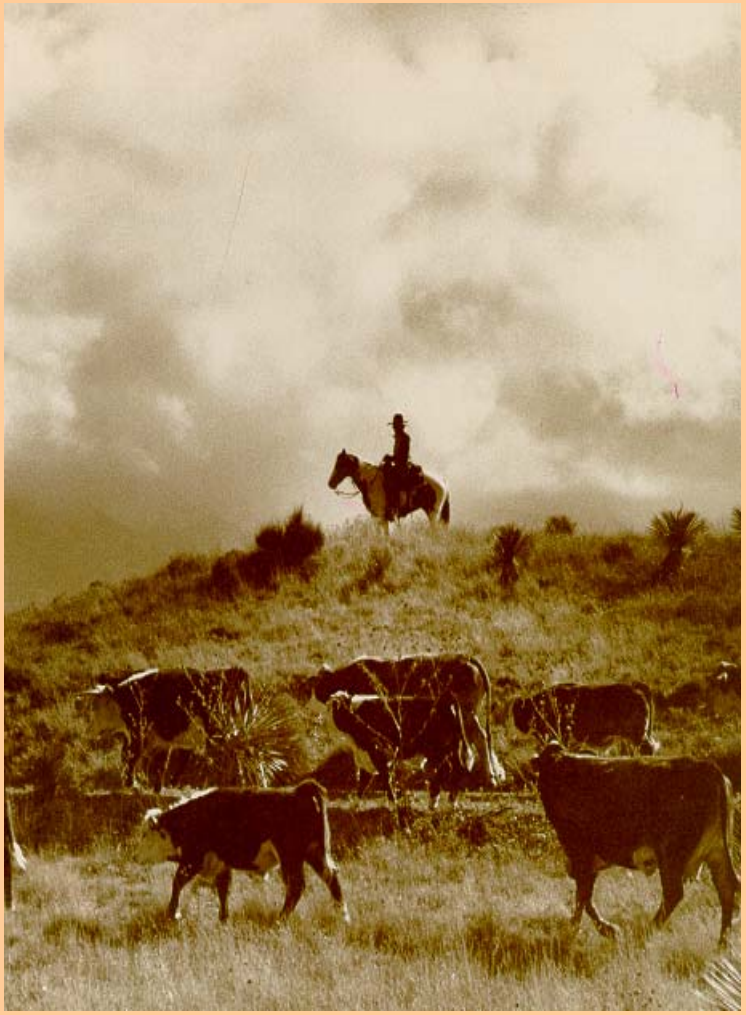
- Increased conception
- Decreased disease
- Eliminate fly problems
- Time savings in the long term
- Enjoy a full grazing season

- Sorting and shipping is a SNAP!

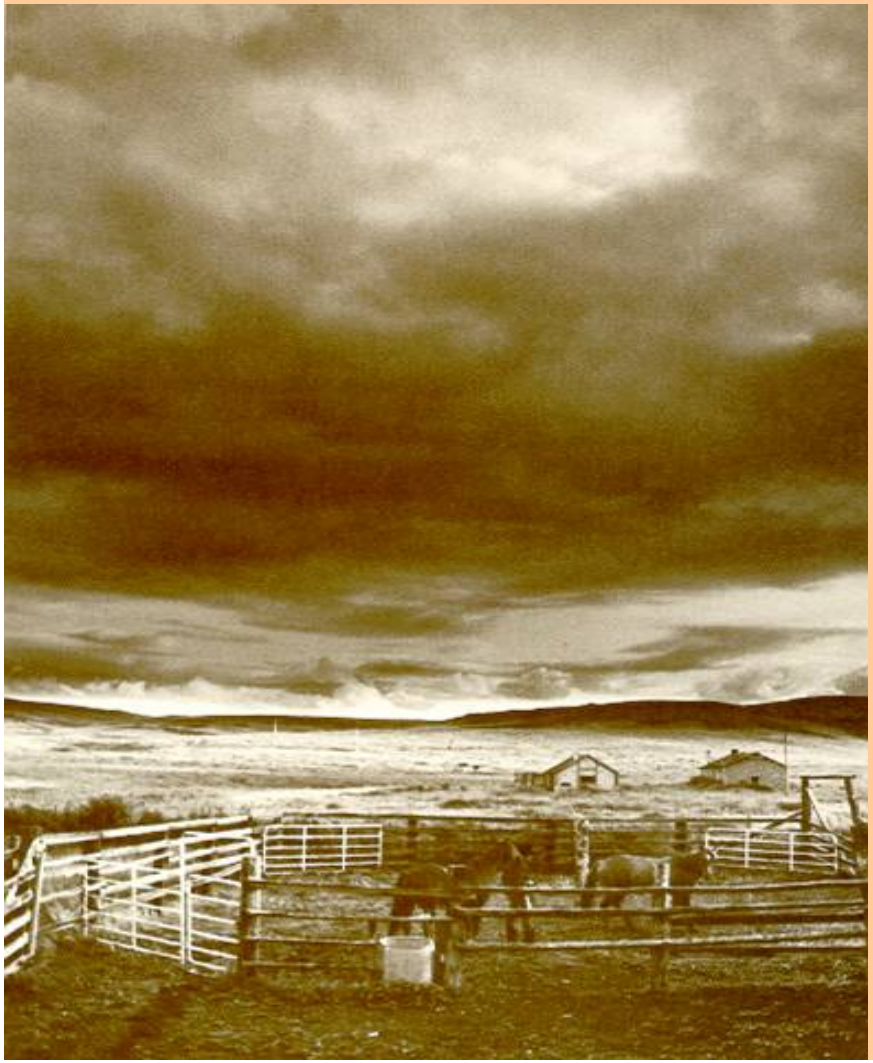


Benefits to the Producer

- Improve livestock behavior
- High strung, low condition stock gain better and are healthier
- Increased gains on weaned calves
- Get along better with (wife, husband, boss, help)



Dark Skies: What's the down side?



- Learning curve and dedication
- When all the cows are in one place, wrecks are BIG!
- Attendant personnel required
- Existing water developments lack capacity.
- Key fences still needed

- Your friends and neighbors think your NUTS!

Riparian Benefits

- Easier to avoid sensitive areas
- Decreased time of exposure to grazing
- Enhanced monitoring by permittees
- Problems responded to much more quickly
- Aesthetically more pleasing to recreationists

You Need A Plan!

- Herding is not the plan – it's only a tool
- Herding is not a quick FIX
- Is this addressing the WEAK LINK?
- Are we addressing a cause or a symptom?

Techniques That Restrict Livestock From Riparian Areas

- Fencing - sometimes exclusion is the most practical approach, especially in the short term
- Barriers - e.g., brush windrows, down trees, and natural barriers such as rock formations
- Hardened crossings or water access points (livestock will often avoid steep banks in preference of gentle slopes and sure footings)
- Herding

Livestock seek shelter to avoid extremes of heat and cold and maintain thermoneutrality

Streambank Damage by Livestock

Armored Livestock Access Area

Livestock Water Access

Lacks Ability for Debris to Move Downstream and Allows Animal Access to Stream Channel

Livestock Access Point Allows Debris Flow and Limits Livestock Access to Stream Channel

Kansas Livestock Water Access
with Concrete Trough

Sand Bottom Increases Stream Channel Sedimentation

Mahogany Creek

~~~~~~

Season Long Grazing
~~~~~~

Mahogany Creek

~~~~~~~

Post-exclusion
~~~~~~~

"The Happy Fencer???"

Avoid Fence Placement Along
Top of Streambank

Self Cleaning Headgate for Narrow Waterways

Livestock Trailing Due to Fence Placement May Cause Gully Erosion

Temporary Fence

MANAGEMENT CONSIDERATIONS

- Cost of installing improvements & practices
- Cost of loss of grazing area
- Cost of extra hay, grazing land, leases, etc.
- Cost of decrease in stocking rate

MANAGEMENT CONSIDERATIONS

- Change in management (initial time and cost for setup)
- Animal behavior
- Vegetation type changes

GRAZING STRATEGIES

- Design for riparian area
- Design for ranch
- Design for rancher

SUCCESS IS DEPENDANT ON:

- Commitment of the operator/manager to achieve riparian objectives
- Specific needs of each unique riparian area relative to potential and capability
- Compatibility with the entire ranch operation.

"COLLABORATION"

"There are no cook book or "one size fits all" prescriptions for livestock grazing in riparian areas."

- Wayne Elmore

"The single common denominator among all riparian areas inventoried … as functioning properly or at least being on an improving trend, was continual involvement on the part of the operator or manager."

- Bob Ehrhart