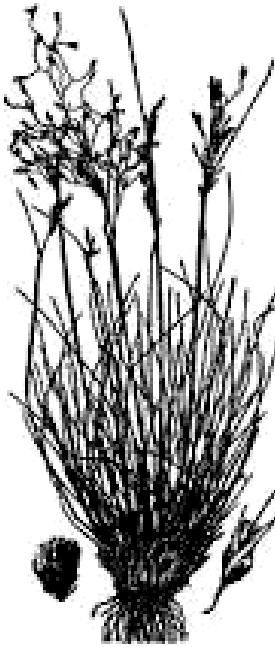
UGIP Technical Committee
Key Principles of Grazing Management



SRM Society for Range Management

GLCI GRAZING LANDS CONSERVATION INITIATIVE

Utah Department of Agriculture and Food

Utah Department of Environmental Quality
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UACD Utah Association of Conservation Districts

UtahState UNIVERSITY extension

USDA

BLM

NRCS Natural Resources Conservation Service

Utah Trust Lands
THE STATE OF UTAH SCHOOL AND INSTITUTIONAL TRUST LANDS ADMINISTRATION

Why Grazing Management?

- Sustain land health and productivity
- Demonstrate good land stewardship
- Ensure a future for livestock grazing

Grazing Management

- How do we do it?
  - Plants need the opportunity to complete their life cycle: to grow, to set seed, and to reproduce.
  - Through proper application of grazing management principles and practices.
- How do we know if we did it?
  - Monitor to evaluate and document vegetation change.

Grazing Management Principles

- Time (duration)
- Timing (season)
- Intensity (amount of forage removed)

Time

- Time is the duration of the grazing period
- How is time managed?
  - Fewer herds, greater stock density, and more pastures allow for time controlled grazing.
  - Shortened grazing periods during the growing season
  - Increased length of rest periods
- Why is time important?
  - To prevent plants being re-grazed. (Grazed plants re-grow enough in 7-10 days to be re-grazed if growing conditions are favorable.)

Timing

- <u>Timing</u> is the season of use.
- How is timing managed?
  - Season of use can be alternated to limit negative impacts of grazing during rapid growth periods.
  - Rest or deferment during the growing season in each pasture allows plants to recover (at least 1 in 3 years)
- Why is timing important?
  - Grazing during rapid growth every year damages plants leading to loss of plant diversity and forage production.
  - Allowing for total rest of some pastures annually builds flexibility.

Intensity

- Intensity is the level of use on individual plants during the grazing period.
- How is intensity managed?
  - Number of livestock
  - Duration of grazing
  - Size of the pasture
- Why is intensity important?
  - Plants need adequate leaf material following grazing to continue photosynthesis and re-grow.
  - If all plants and pasture locations are grazed more uniformly, pressure is reduced on the most desired plants and locations.
  - Adequate soil cover must remain to prevent erosion

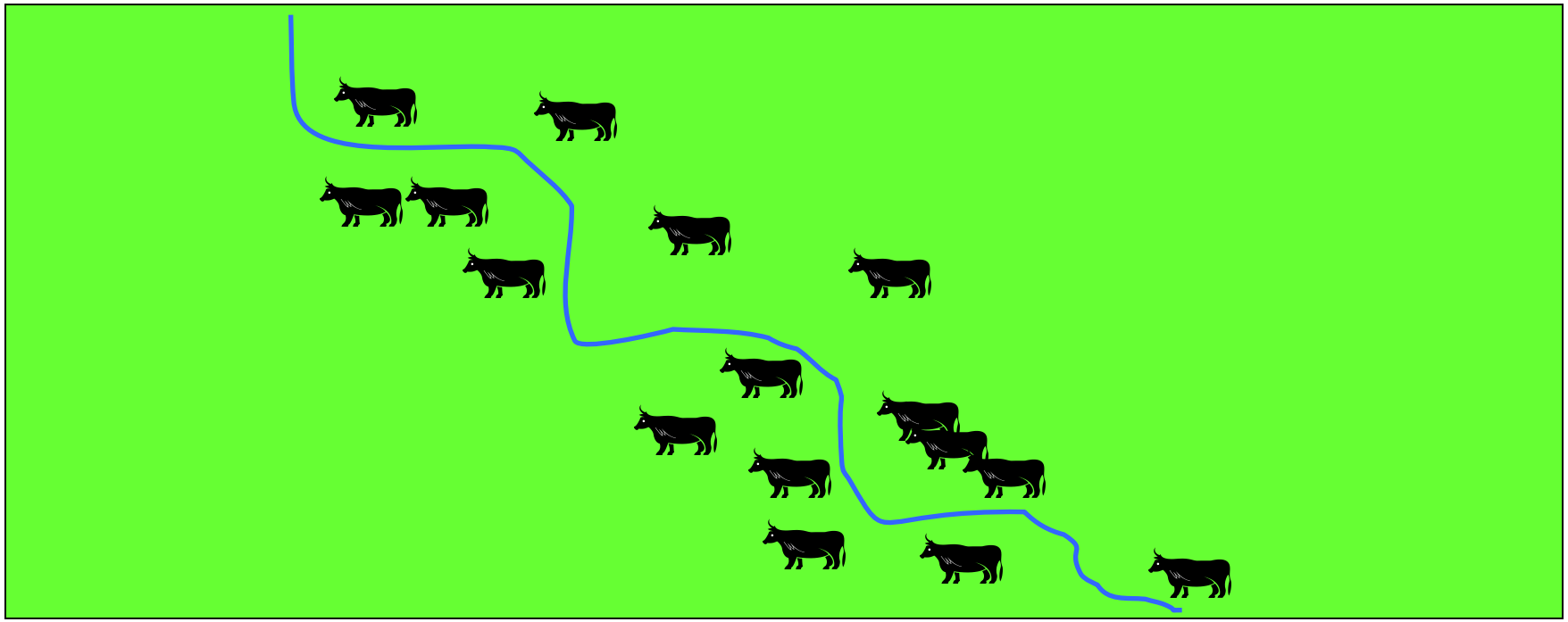
Some benefits of applying Grazing Management Principles are:

- Increased disaster flexibility (drought, fire, flood)
- Sustain plant and animal diversity
- Decrease variability in annual production
- Decrease selective grazing
- Serve as a tool to address objectives with grazing, for example:
  - winter sheep grazing to thin sagebrush
  - spring grazing of cheatgrass dominated range
  - Weed control
  - Firebreak establishment

Monitoring to Evaluate Vegetation Change

- Documenting changes that result from improved grazing management is important!
  - How will you know if it's worth the effort?
  - How will you convince others it's working?
  - How will you make decisions and adjust management (Adaptive Management)?
- Monitor upland and riparian vegetation cover and species changes – for example, photo points, transects.
- Monitor stream channel characteristics
- Remote sensing techniques can make monitoring less expensive and more accurate
- Track livestock use faithfully – what kind, when, how many, how long, and the utilization levels
- Monitor wildlife use –what kind, when, how many, how long.

For Example…….

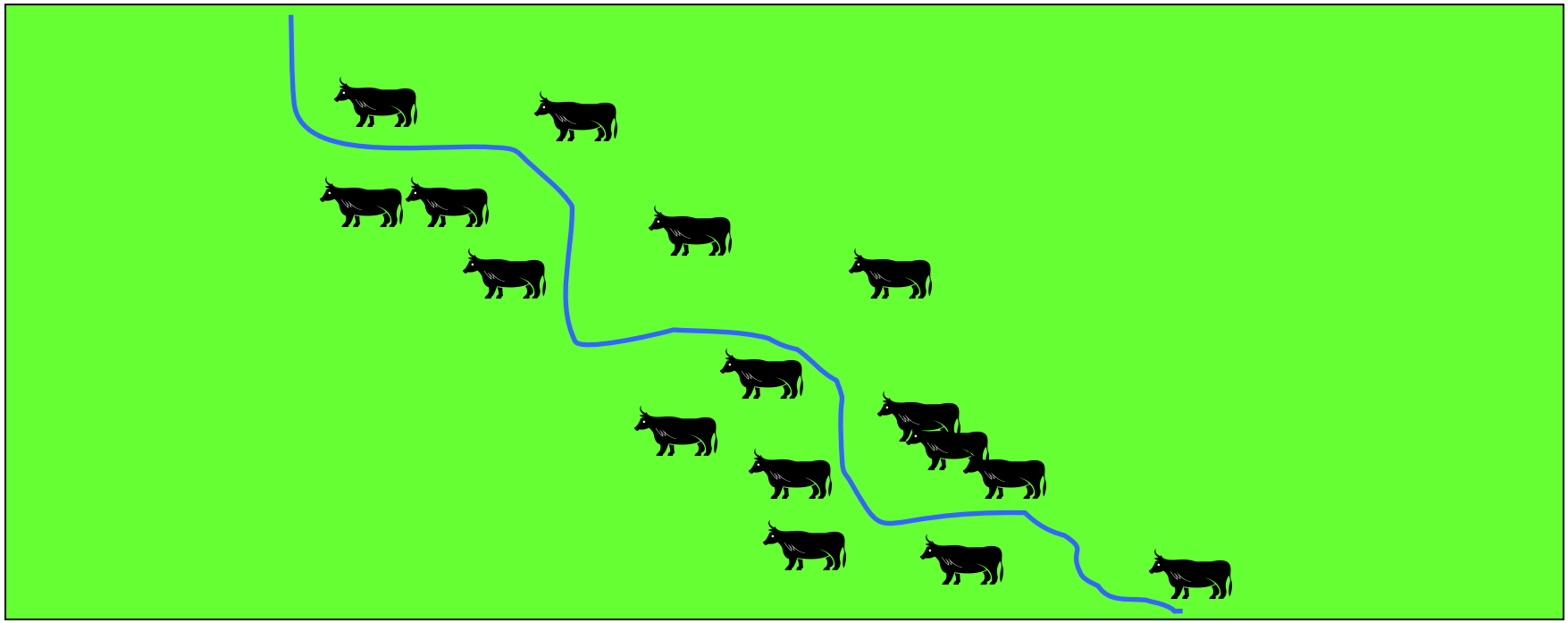


Time – 4 months grazed, each plant is subject to being grazed frequently

Timing – Spring through fall, grazed during growing season every year

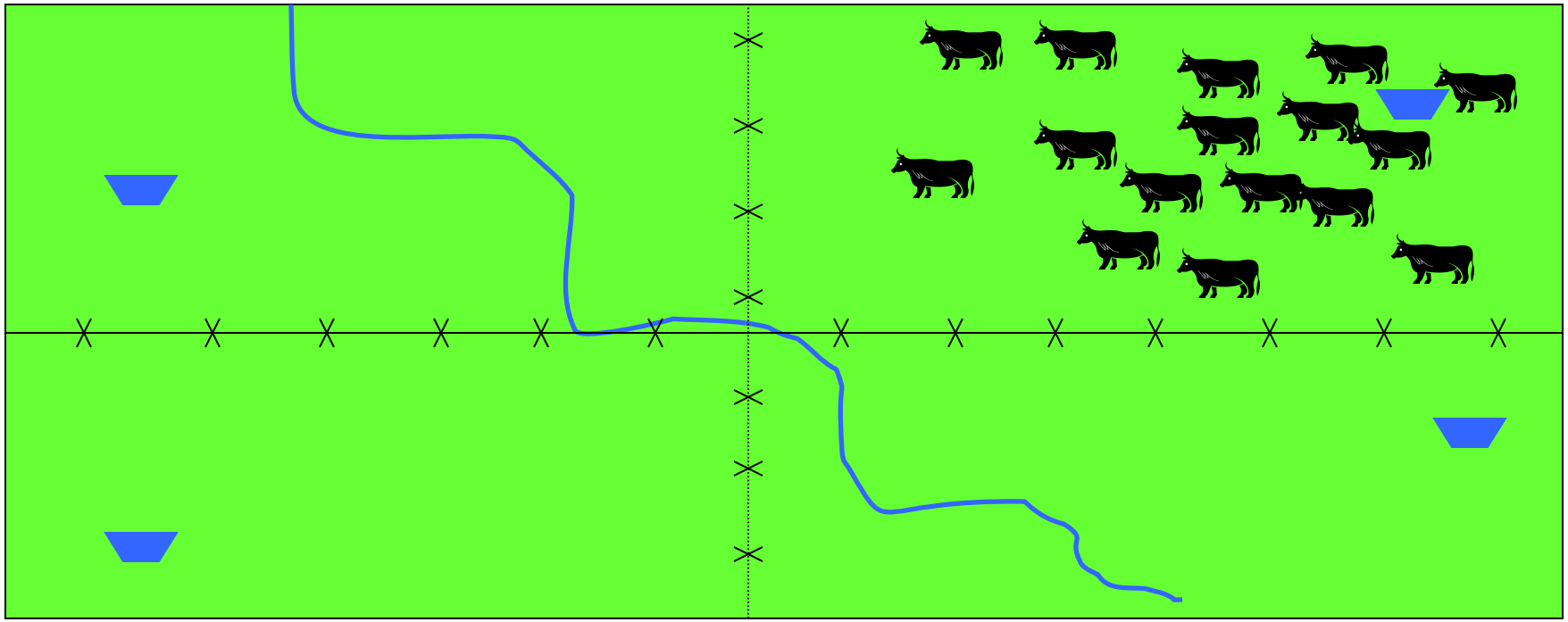
Intensity – Canyon bottoms are heavily used, uplands used more lightly

Continuous, Season-Long Grazing



- Production of high quality forage species is suppressed
- Weeds encroach on highly disturbed areas
- Potential loss of habitat values and water quality problems

Grazing Management

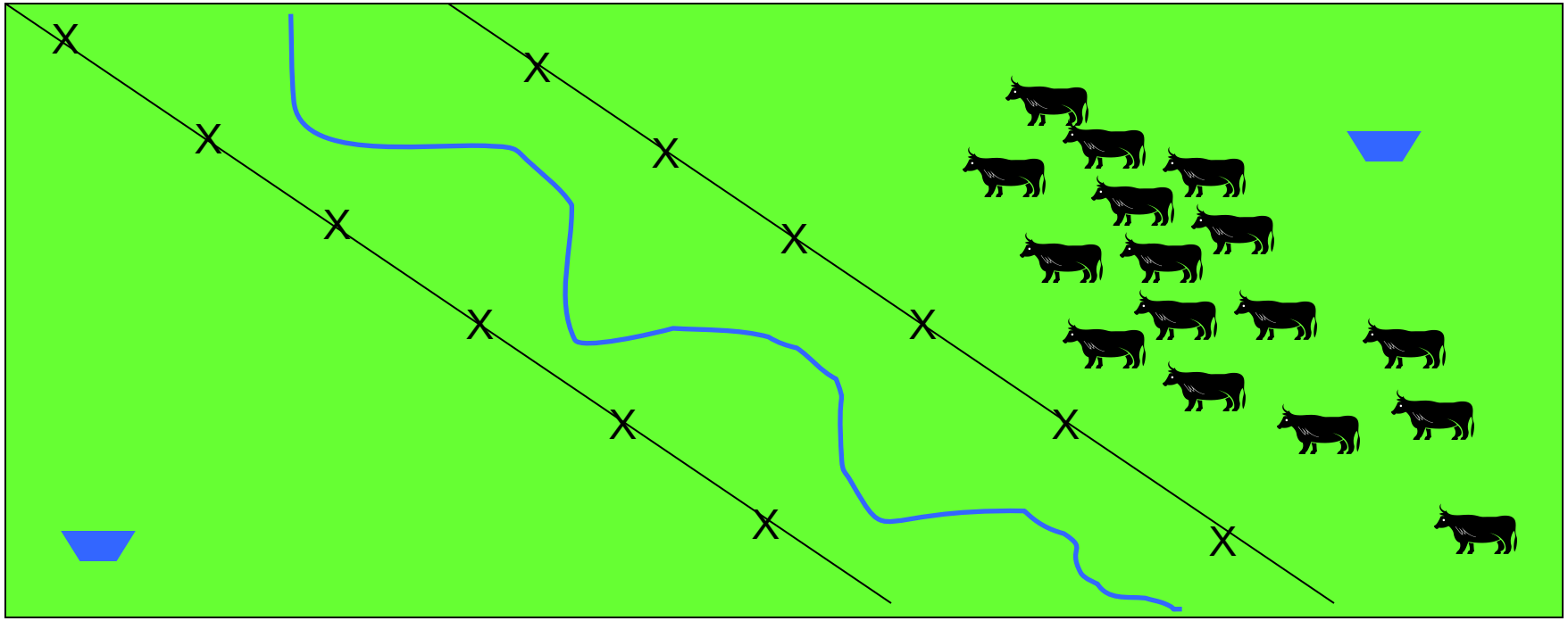


Time – Each pasture is grazed 1 months, rest time increases, each plant is subject to being grazed less frequently

Timing – ½ of the pastures receive rest during the growing season each year

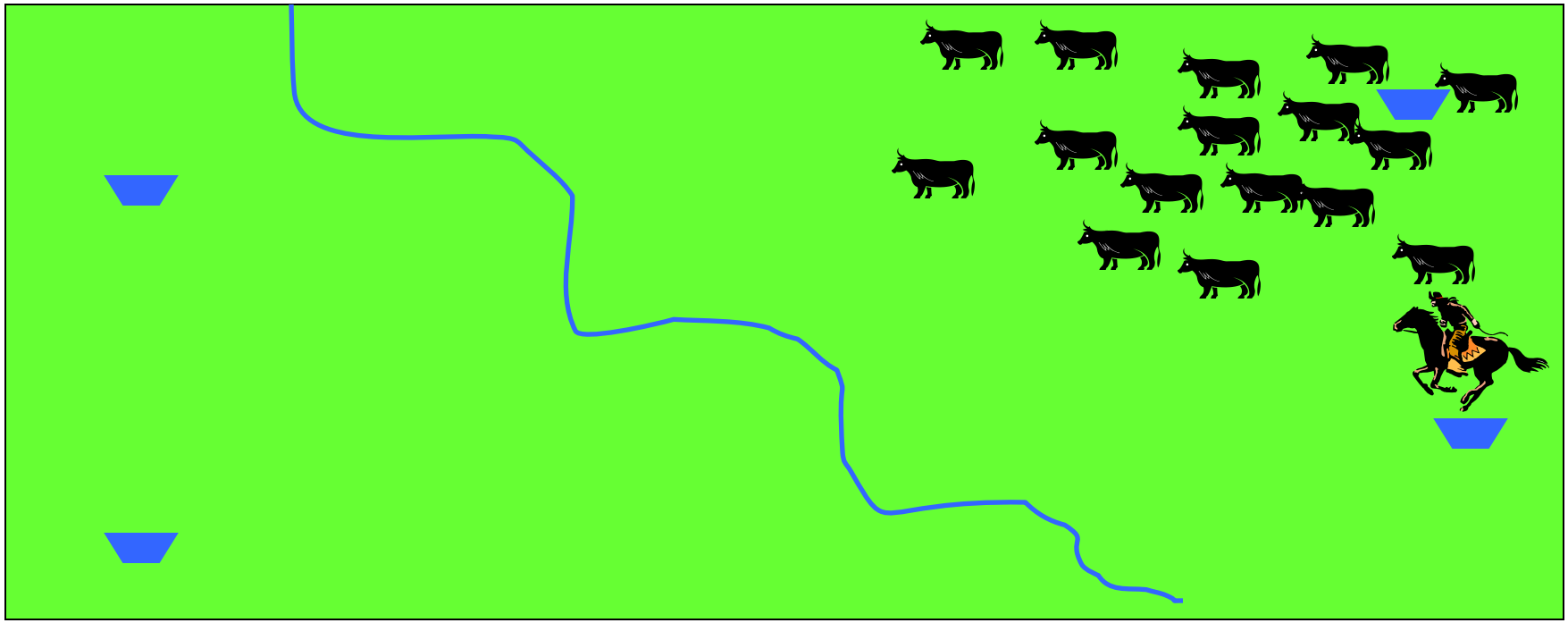
Intensity –Fences and water developments result in more even pasture use

Riparian Pasture Example



Time, Timing and Intensity are precisely managed in the riparian pasture

Grazing Management



- High quality forage species can thrive when allowed to rest and recover from grazing
- Reduced weed encroachment on fewer/smaller highly disturbed areas
- Habitat and water quality improvement
- Herding is an alternative to fencing to accomplish the same things

Range Management – Stoddard, Smith & Box

- “proper *(grazing management)* schemes offer the range manager one of the most important tools in obtaining sustained productivity from rangelands. They must be properly designed and artfully applied to obtain the desired results.”…”Moreover, and possibly more importantly, the rancher who adopts a grazing system is a more alert and observing manager”

Grazing Management

Example Goal:

Where were your livestock grazing during rapid forage growth last year?

Let that pasture set seed before grazing this year.

Ideal Grazing Management should be designed to optimize multiple goals

Plant Requirements

- Provide adequate rest to plants for recovery from grazing
- Reduce re-biting of individual plants
- Minimize the effects of grazing forage plants during their most vulnerable growth stage
- Increase opportunities for seed production
- Decrease selective grazing

Environmental Considerations

- Maintain the hydrologic cycle
- Consider riparian areas
- Maintain or increase plant diversity
- Accommodate and enhance wildlife habitat requirements

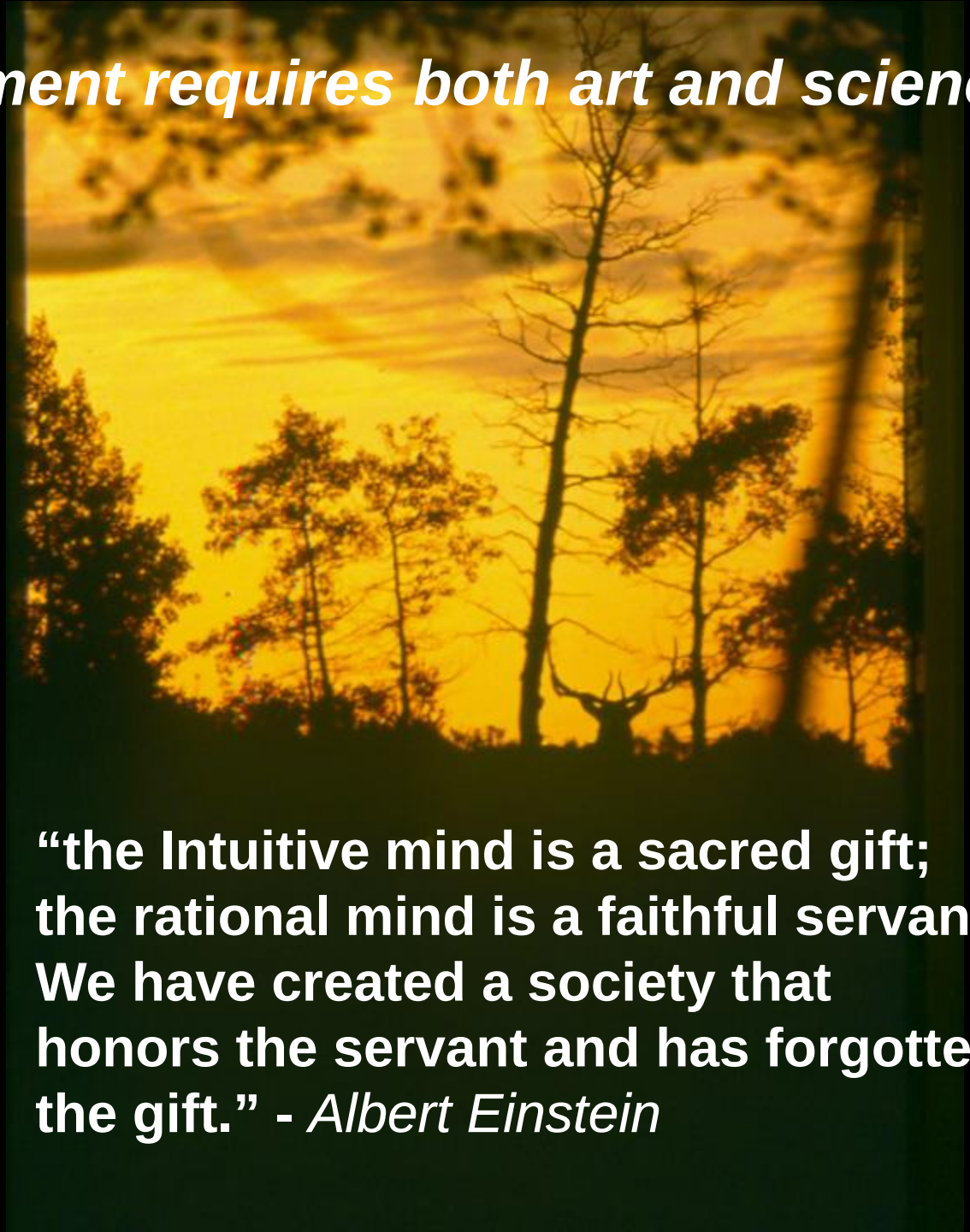
Human Considerations

- Accommodate animal husbandry practices and the logistics of ranching
- Be economically viable
- Be socially acceptable

Range Management

- The art and science of managing rangelands.
- More experience = better “art”
- Increased field work = better monitoring and science.
- Range management is as much about people management as resource management. Trust is an important principle.

Management requires both art and science…



“the Intuitive mind is a sacred gift; the rational mind is a faithful servant. We have created a society that honors the servant and has forgotten the gift.” - *Albert Einstein*