



**UtahState**  
UNIVERSITY  
**extension**



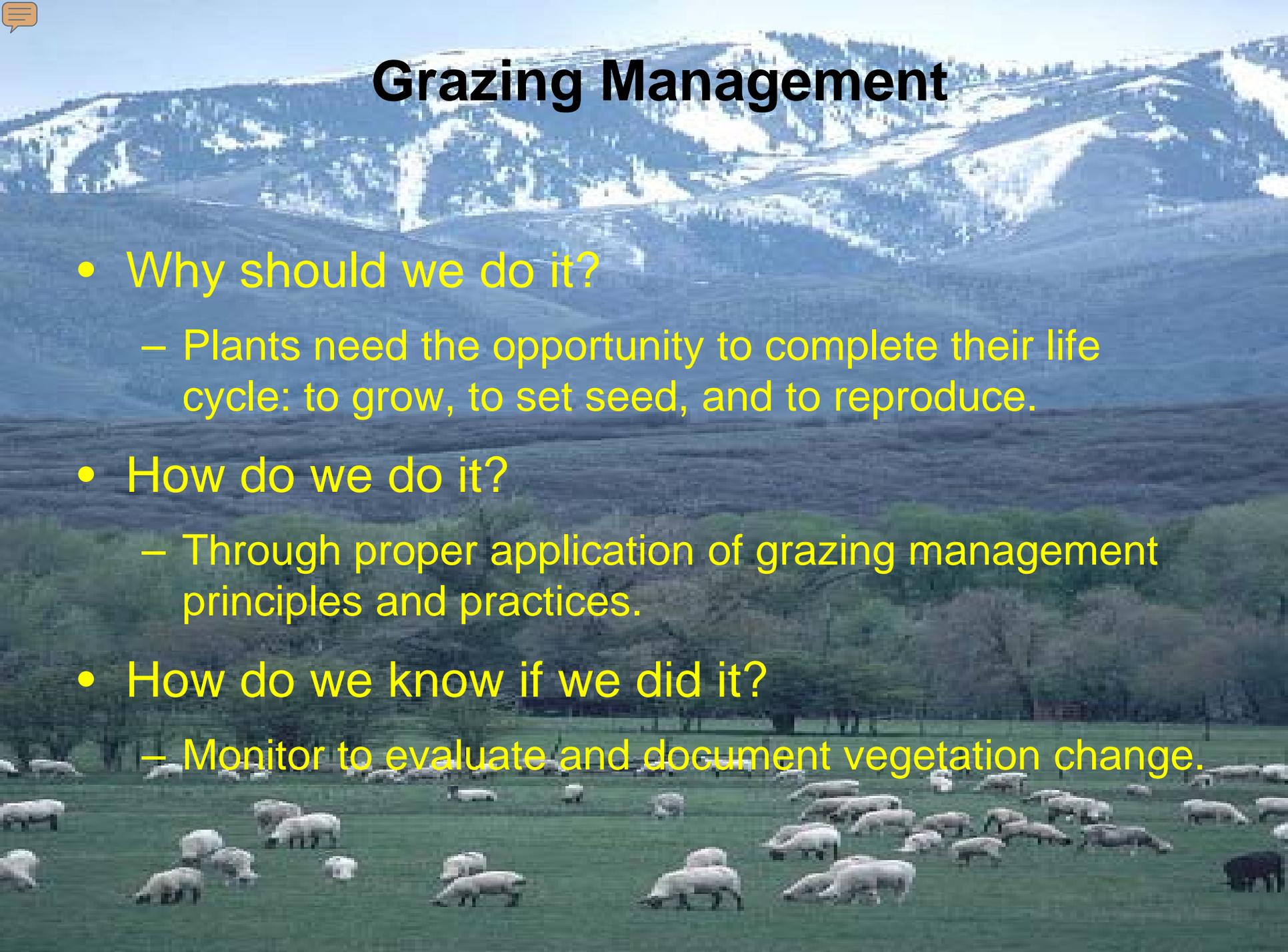
# UGIP Technical Committee

## Key Principles of Grazing Management



# Why Grazing Management?

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



# Grazing Management

- Why should we do it?
  - Plants need the opportunity to complete their life cycle: to grow, to set seed, and to reproduce.
- How do we do it?
  - 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

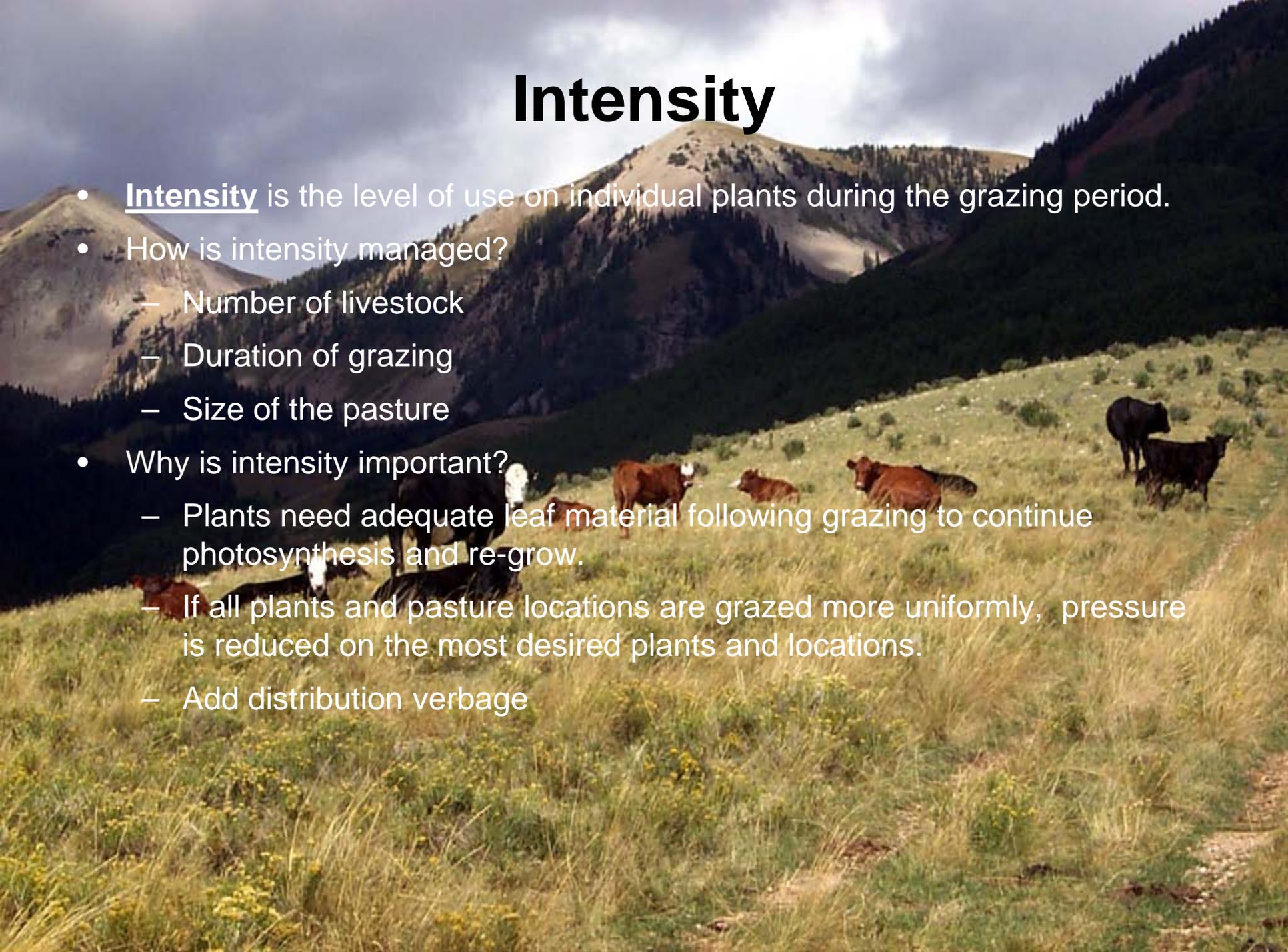
- **Time** is the duration of the grazing period
- How is time managed?
  - Fewer herds, greater stock density, and more pastures allow for time controlled grazing.
  - Shortened grazing periods during the growing season
  - Increased length of rest periods
- Why is time important?
  - To prevent plants being re-grazed. (Grazed plants re-grow enough in 7-10 days to be re-grazed if growing conditions are favorable.)
  - Most rangeland plants should be grazed infrequently because they have a limited opportunity to re-grow (limited moisture).
  - Most pastures (irrigated or meadows) can be grazed more frequently (several times per year).

# Timing

- **Timing** 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

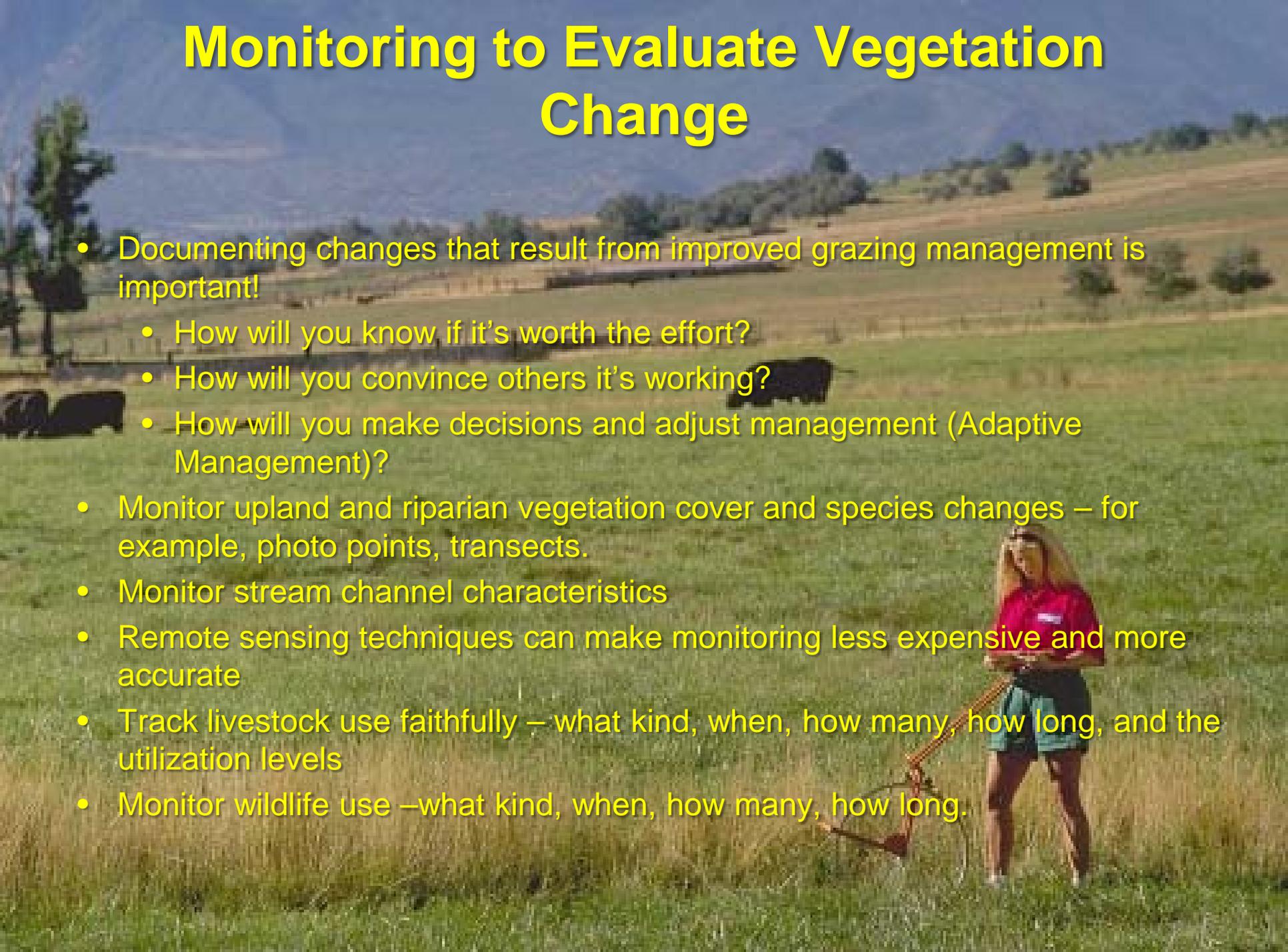
- Intensity is the level of use on individual plants during the grazing period.
- How is intensity managed?
  - Number of livestock
  - Duration of grazing
  - Size of the pasture
- Why is intensity important?
  - Plants need adequate leaf material following grazing to continue photosynthesis and re-grow.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



# Some benefits of applying Grazing Management Principles are:

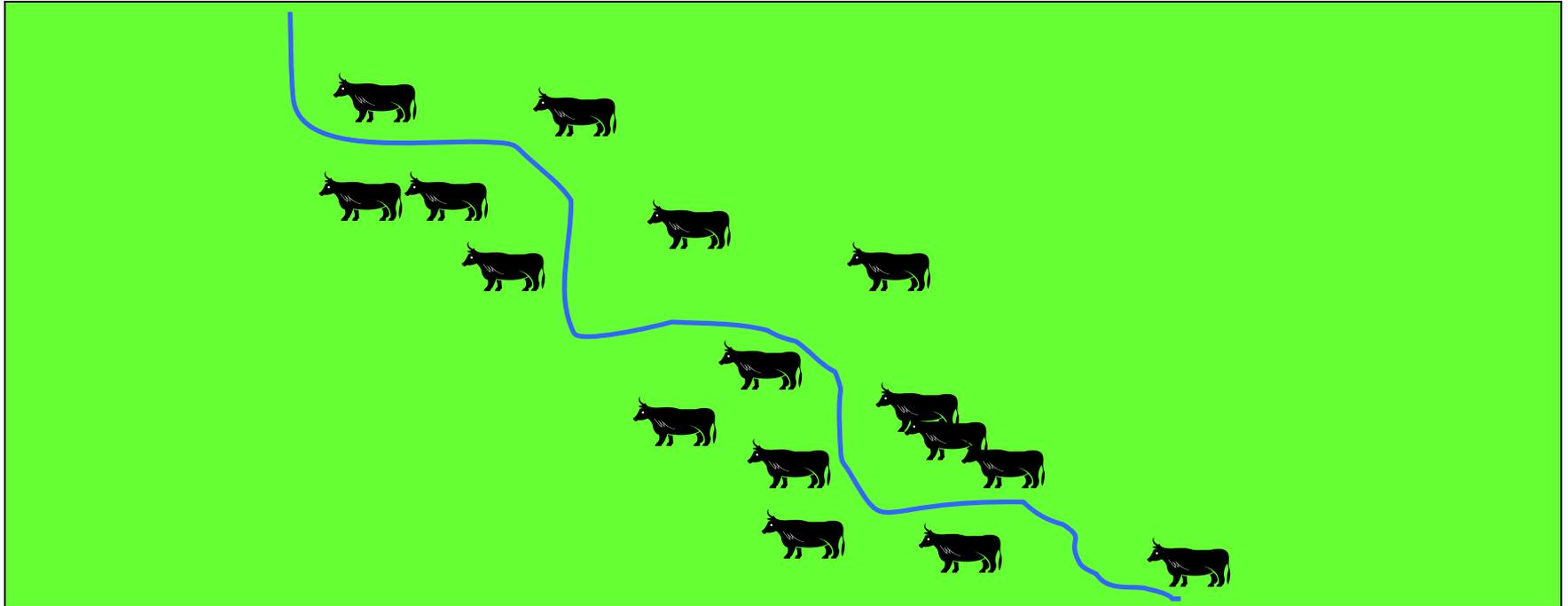
- Increase disaster flexibility (drought, fire, flood)
- Sustain plant and animal diversity
- Decrease variability in annual production
- Decrease selective grazing
- Serve as a tool to address objectives with grazing, for example:
  - winter sheep grazing to thin sagebrush
  - spring grazing of cheatgrass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



# 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

# 1 pasture system



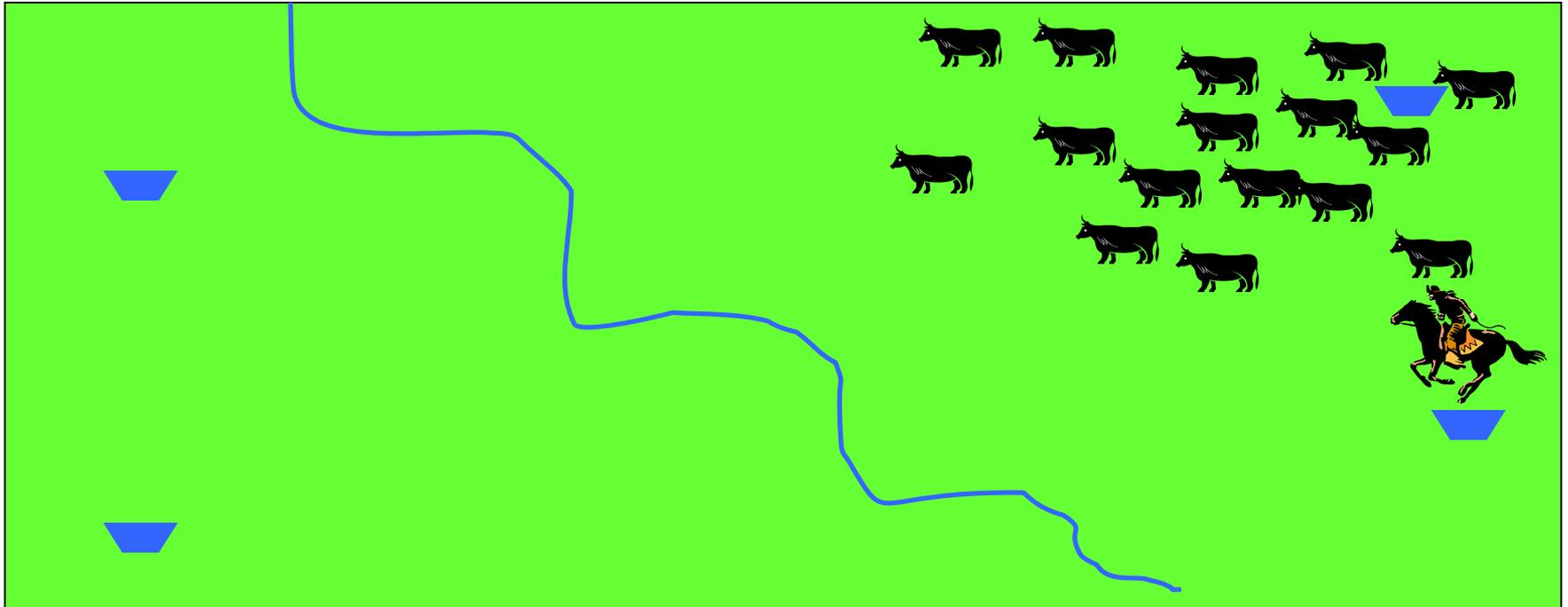


Riparian Management (Riparian Pasture) Off stream water  
Duration of grazing in Riparian Pastures  
Specific Riparian management

# 3 pasture system



# 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

An aerial photograph showing a 20-pasture system. The landscape is divided into numerous small, irregular pastures by natural or man-made boundaries. A prominent feature is a large, irregularly shaped water body in the center, surrounded by a dense ring of vegetation. The surrounding pastures are covered with a mix of green grass and various shrubs, some of which appear to be silvery-green. The overall terrain is hilly and rugged, with a mix of green and brownish-red soil colors. The text "20 pasture system" is overlaid in the upper left quadrant of the image.

**20 pasture system**

# 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”

# 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***