Adaptive Grazing – Module 2

What is Adaptive Grazing?

Module 2 – What is Adaptive Grazing

- Objective: Students will understand the principles behind adaptive grazing, and that working within the context of the farm or ranch is essential for implementation.

Herbivory is a natural and necessary process

"Land is not merely soil; it is a function of energy flowing through a circuit of soils, plants and animals." Aldo Leopold

Historic N.A. Herbivores

Adaptive Grazing

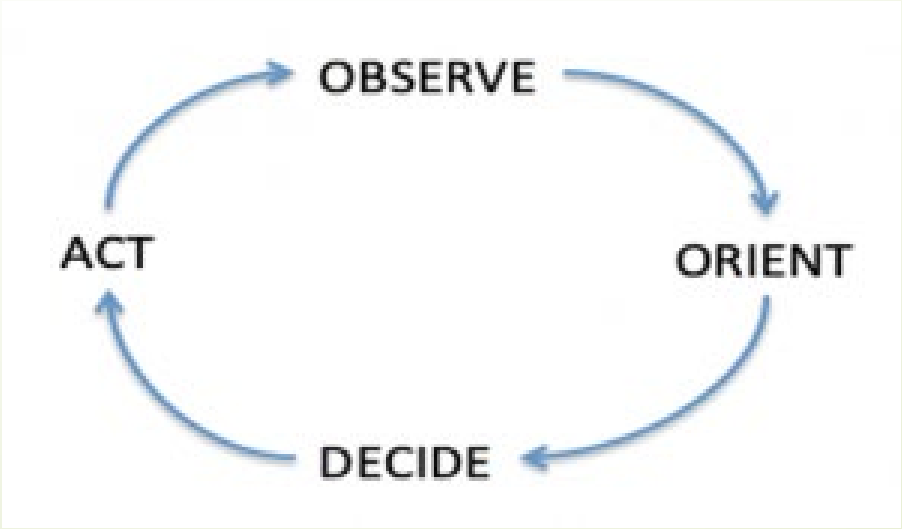
- Also know as regenerative grazing, adaptive high stock density grazing, or adaptive management grazing.
- **Not** a ridged, fixed or routine system (e.g. "rotational grazing")
- There is a plan, but **not** a prescription.
- Adjustments based on manager **observations** to changing conditions
- **Multiple goals** may be addressed at the same time on the same paddock

Context

- Soils
- Topography
- Precipitation patterns/local climate
- Vegetation (Current and historic)
- Field or paddock history
- Class and number of livestock
- Available labor
- Financial capital
- Equipment
- Personal value system
- Other

Adaptive grazing systems are adjustable based on manager's observations of constantly changing conditions.

- O.O.D.A loop
  - Developed by a military strategist
  - Now a popular decision-making framework used in industry, technology and athletics.



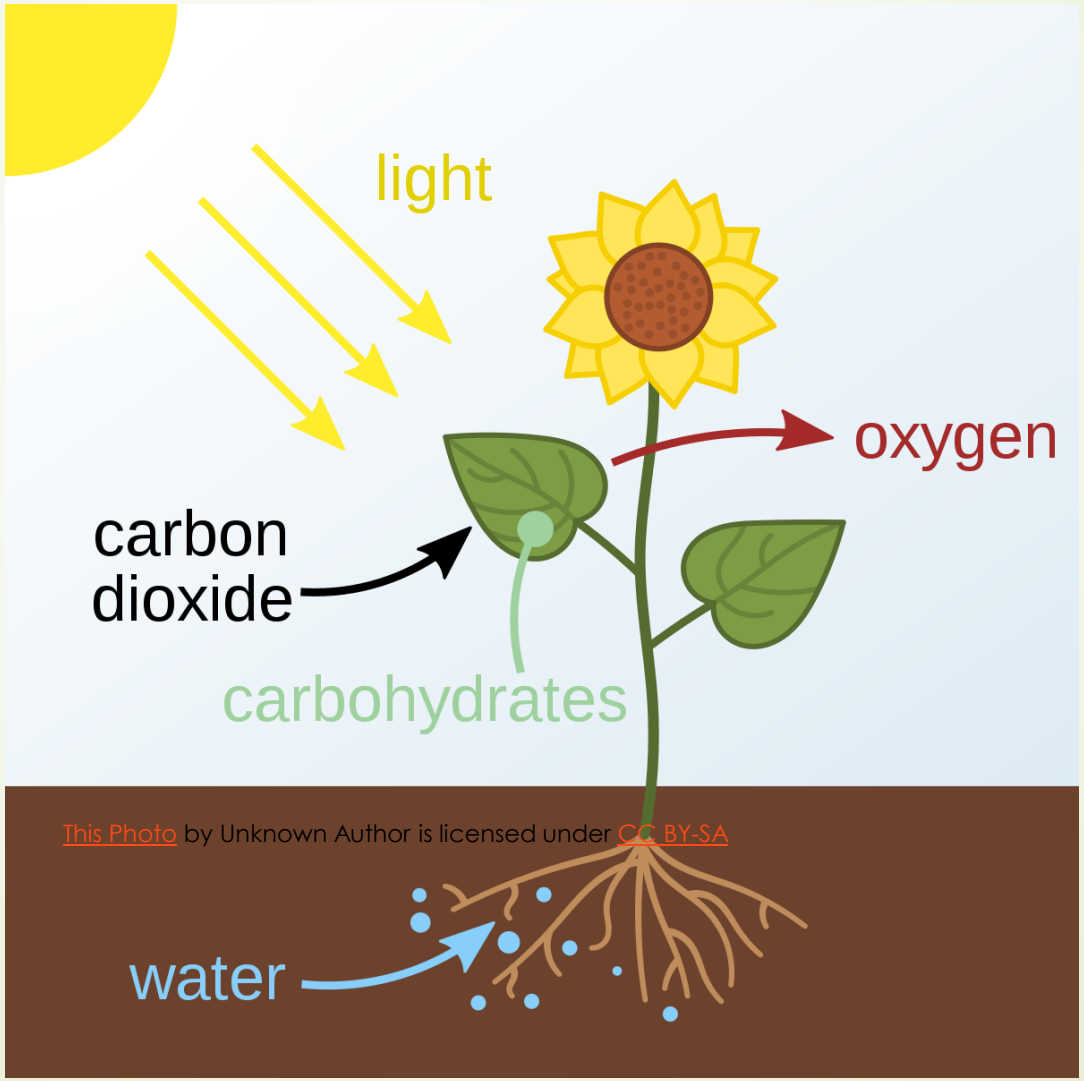
Multiple goals may be addressed within the same paddock

- E.g.,
  - Feed the flock or herd
  - Suppress encroaching brush
  - Stimulate forage plant diversity

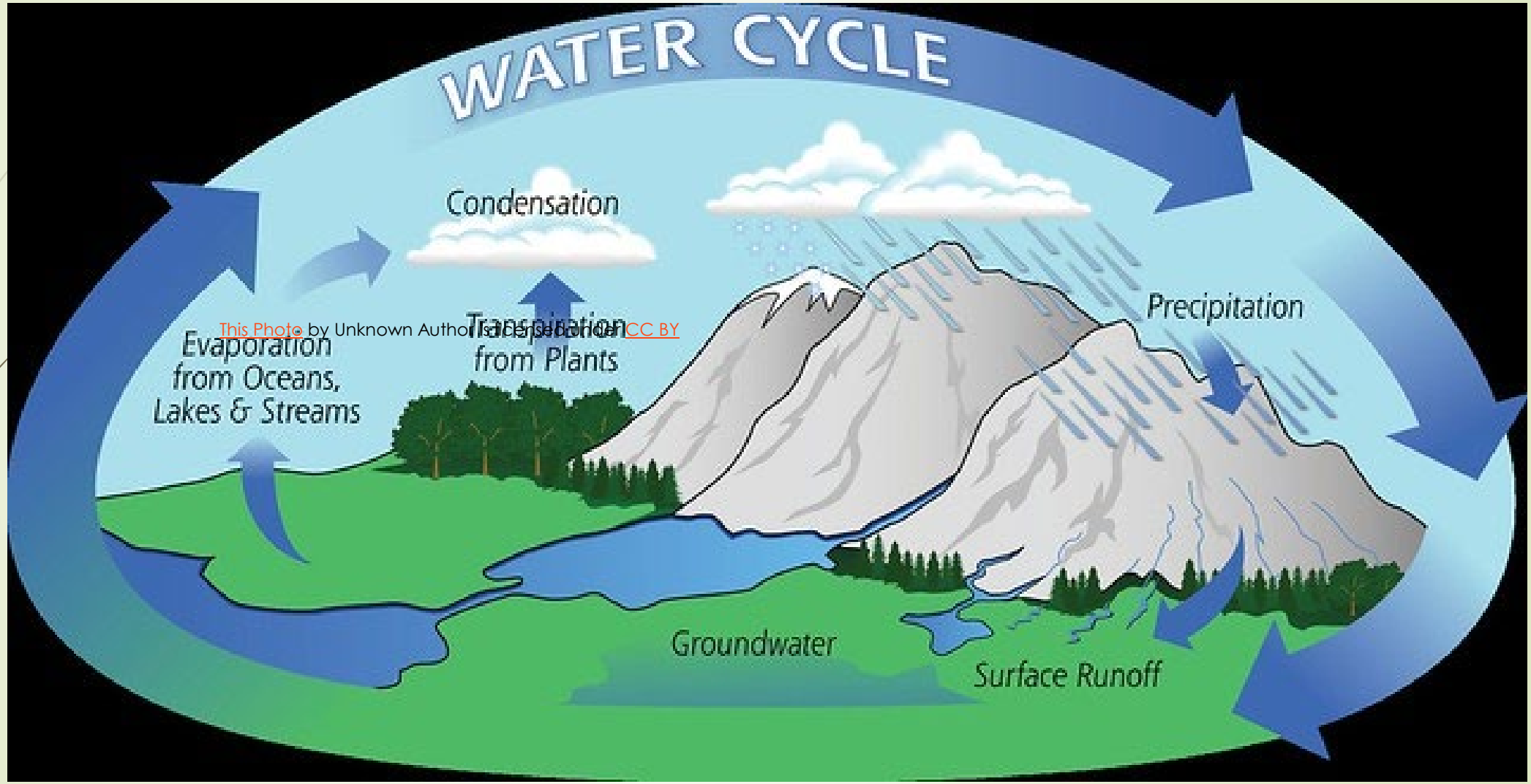
Ecosystem processes

- Photosynthesis
- Water cycle
- Nutrient cycle
- Diversity

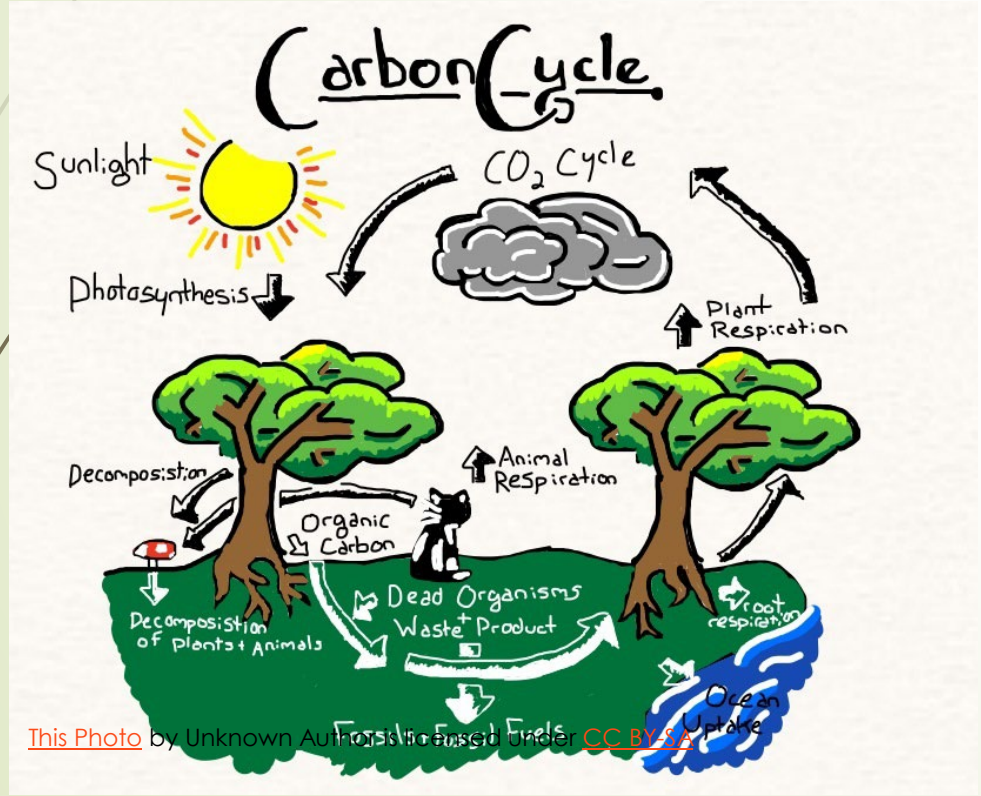
Photosynthesis

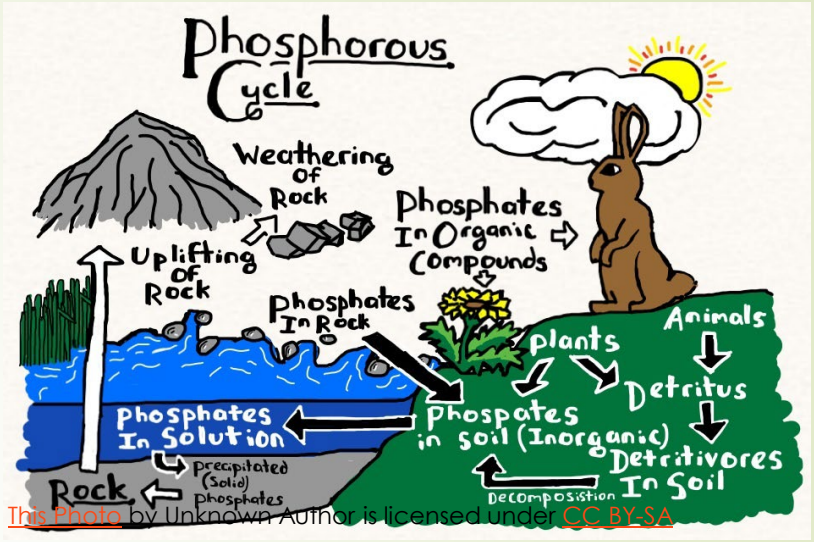


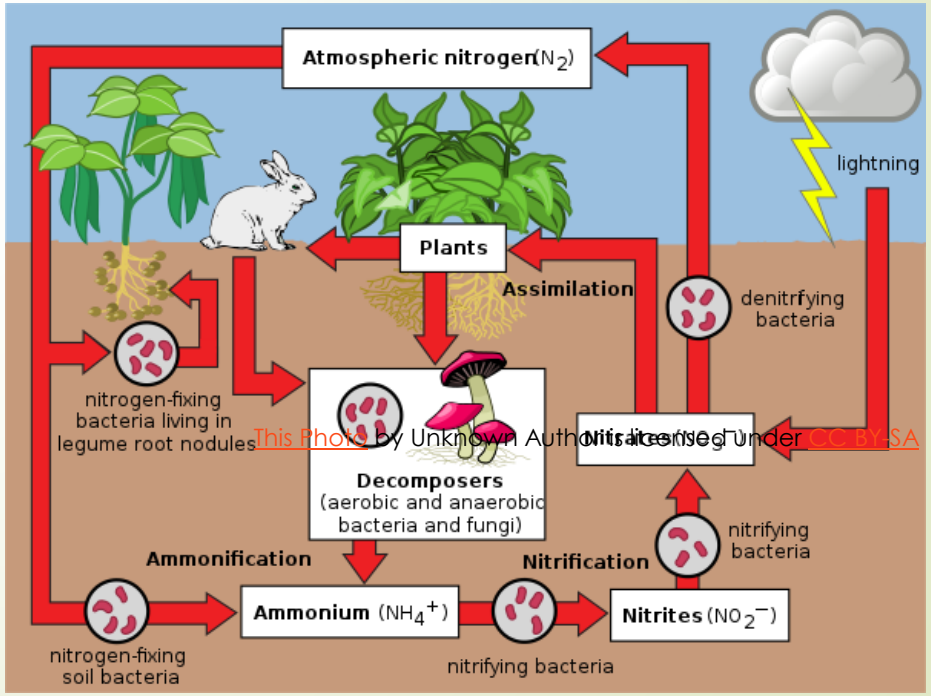
Liquid carbon: Roots leaking exudates!



Nutrient cycles







Diversity

Livestock diversity

Principles of Adaptive Stewardship

Adapted from Allen Williams, Ph.D., Understanding Ag., L.L.C.

- Compounding
- Diversity
- Disruption

Compounding

- **All** actions have either positive or negative compounding affects.
- Our decisions and actions are not singular events.
  - E.g., Our grazing management has an impact on down slope water quantity and quality.

Diversity

- Transfer of genetic material *between* organisms that help build adaptability to a particular context.
- This builds resiliency in our pastures, livestock and farming or ranching operation.

Disruption

- Many natural events are disruptive.
  - Fire, flood, volcano, landslides, etc.
- Herbivory is a natural disruptive event.
  - Historic herbivory played a major role in maintaining grassland and prairie ecosystems.
- Complex biological systems function at their peak if moderately stressed in different ways.
  - E.g., Elite athlete (also complex biological systems) mix their training up to prevent plateauing in performance.
- Nature can heal, ***if*** we provide the opportunity.

#1 Mistake

Rest duration depends upon:

- Weather
- Intensity of grazing event
- Health and size of plant root system
- Time of year
- Plant composition in pasture

- ***Avoid determining rest periods based on the calendar or a set schedule - focus on plant recovery.***

Adaptive Grazing

- Getting the **animals**
  - in the right **place**,
    - at the right **time**,
      - for the right **reasons**.

Pasture farrowing

Feeder pigs and butcher hogs

Small ruminants, broilers.

Layers

Other:

- Turkeys
- Geese

Questions?

About the author

- This curriculum was developed by Kent Solberg. Kent has been involved in managed and adaptive grazing since 1986. He has owned and managed his own grazing operation for 23 years and has been a consultant for the past 13 years. His consulting work has taken him to Michigan, Ohio, North Dakota, Iowa, Wisconsin and across Minnesota working with a variety of crop and livestock farms. He has also taught courses in community and technical college on grazing management and soil health. Kent and his wife live on their farm in north central Minnesota. He can be reached with questions about this curriculum at sevenpinesandfence@gmail.com.