Adaptive Grazing – Module 1

Why Adaptive Grazing?

Module 1 - Why adaptive grazing?

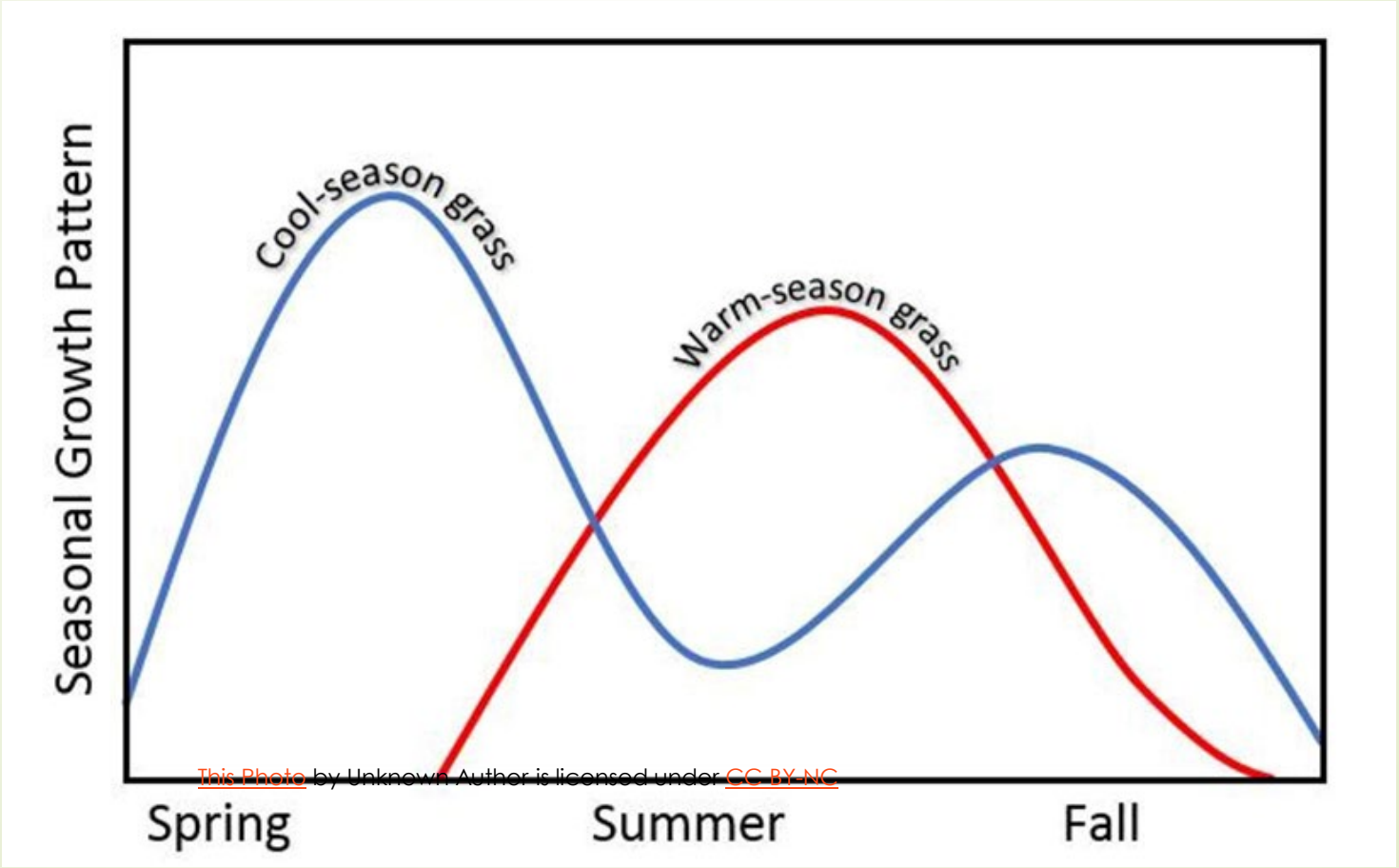
- Objective: Students will understand that adaptive grazing provides a means of profitably utilizing forage resources with ability to adjust to constantly changing conditions while protecting the environment and supporting the community.

Nature is not static.

Variability found in:

- Weather/seasons
  - Rainfall
  - Temperature/frost/freeze/heat units
- Across the farm
  - Topography (Slope/aspect)
  - Soils
  - Forages/vegetation/cropping history
  - Infrastructure
- Throughout the year
  - Labor
  - Quality of life
  - Emergencies/health issues
  - Fire, flood, drought

Major grass type seasonal growth curves.



Common cool season grasses

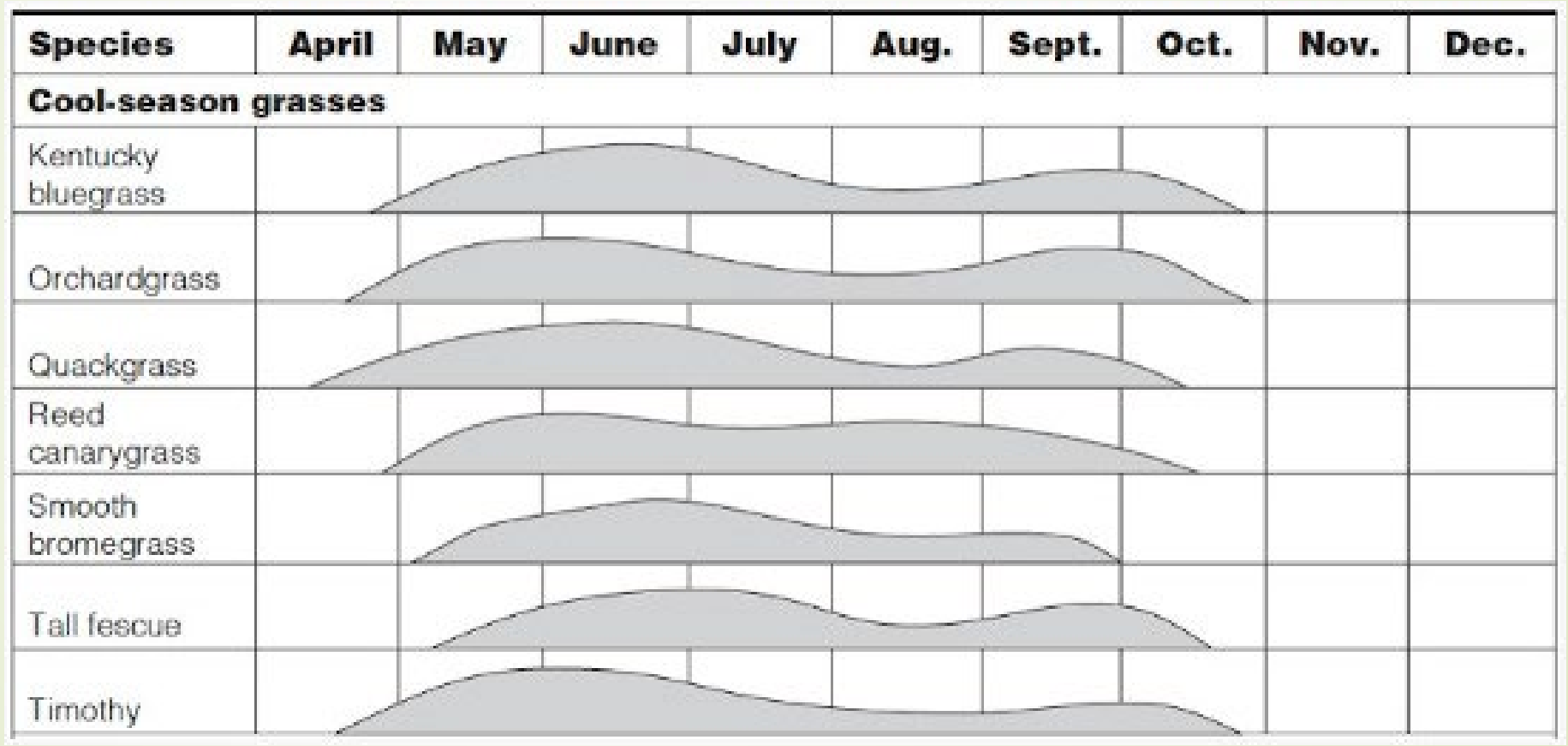
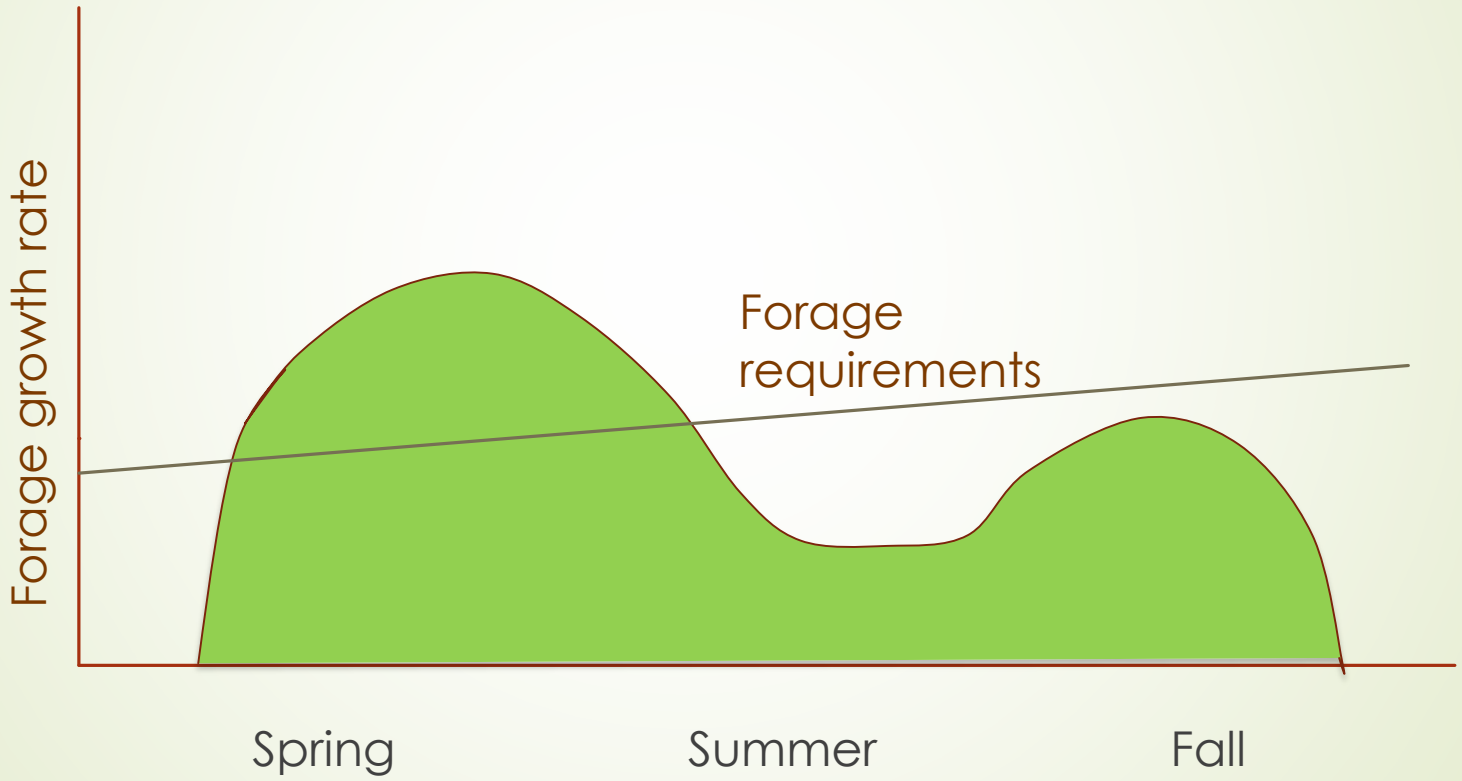


Chart: Univ. of Wis.

Cool season pasture forage production



Nature is self-healing

- Rest is key.

Why adaptive grazing?

- **Restore soil function (Environment)**
  - Improved water cycle
    - Reduced ponding
    - Reduced runoff
    - Storage and ground water recharge
  - Improved nutrient cycling
    - C, N, P, micro-nutrients
    - Forage and food nutrient density
  - Enhanced grassland wildlife and aquatic habitats

Photo: Understanding Ag., L.L.C.

“Livestock are the missing link in soil health.”

Fara Brummer, NDSU Extension Specialist

Why adaptive grazing?

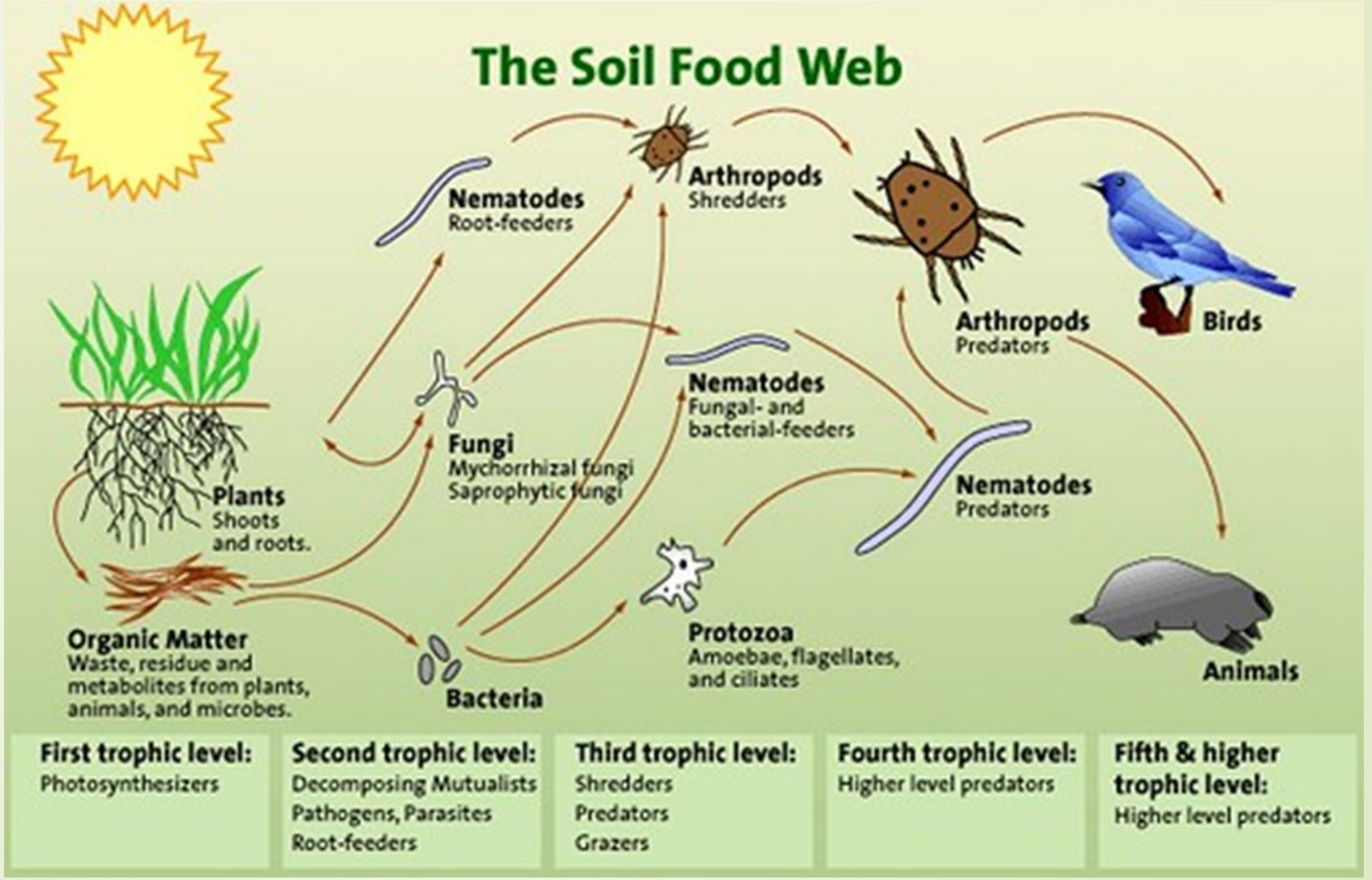
- **Enhanced farm financial health (Economic)**
  - **(Vs. feed lot, "rotationally" or continuous grazed pasture)**
  - Reduced input costs ("Props" = hay, wormers, silage, tillage, herbicides)
  - Get more from the land you have (20-400% pasture forage production increase)
  - Increase forage nutrient density (Brix)
  - Improved animal health (Low culling rate, veterinarian bills)
  - Low labor (e.g. feed and spread manure at same time)
  - Profitable use of less profitable cropland

Why adaptive grazing?

Human and community health (Social)

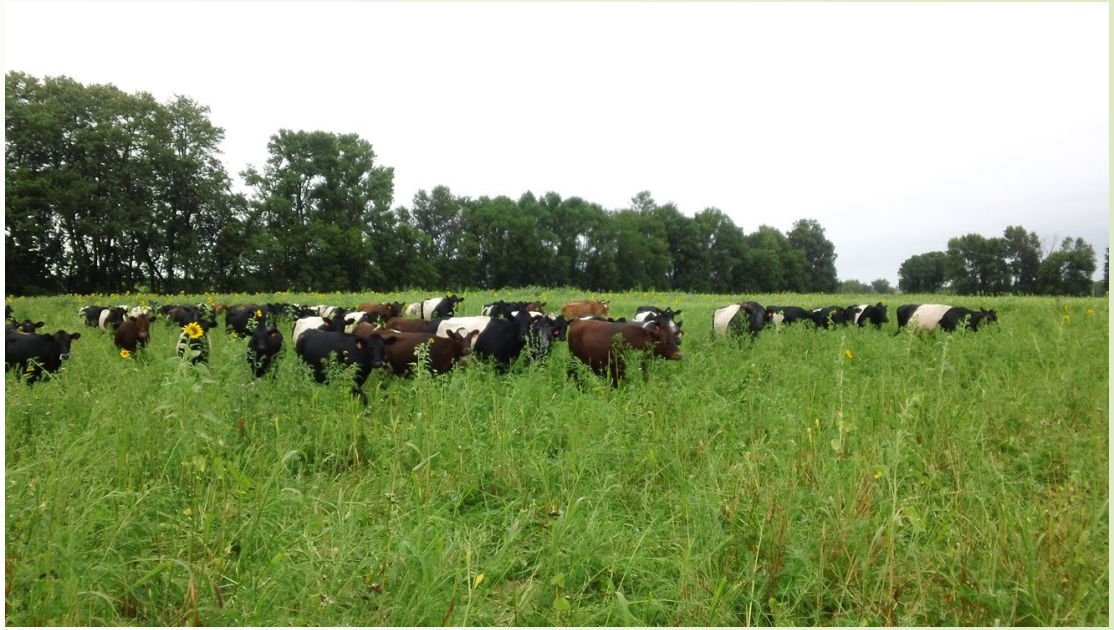
- Previously listed environmental and economic benefits
- Diversify operation for financial resiliency
- Opportunity for next generation
- Nutrient dense food = better human health
- Aesthetics = pastoral systems
- Ethical/moral = care for others/stewardship

Restoring the Soil Food Web



Principles of regenerative agriculture

- Keep the soil armored
- Keep a living root in the soil
- Minimize soil disturbance
- Increase diversity
- **Integrate livestock**
- Context



- **Implementing ALL is the quickest way to restore soil function.**

Amplify Soil Regeneration

Farm	Management	% OM	Soil Water Infiltration (In/hr)
Farm 1	HT, HD, Organic	1.7	0.5
Farm 2	NT, LD	1.7	0.7
Farm 3	NT, MD, HS	1.5	0.45
Farm 4	NT, HD, NS, CC, L	**6.9**	**20+**

Courtesy: Understanding Ag, LLC

Amplify Soil Regeneration

Management	N (lbs/ac)	P (lbs/ac)	K (lbs/ac)	WEOC (PPM)
Organic, CT	7	156	95	233
NT, LD	27	244	136	239
NT, MD, HS	37	217	199	262
NT, HD, NS, Lvst	281	1006	1749	1095

CT = Conventional Tillage, NT – No-Till, LD = Low Diversity, MD = Moderate Diversity, HS = High Synthetics, NS = No Synthetics, Lvst = Livestock.

Courtesy: Understanding Ag, L.L.C.

Summary

- Adaptive grazing utilizes a holistic approach to pasture management within the context of not only a particular farm or ranch, but also individual paddocks within that pasture that benefit the environment, the human community and the economic health of the operation.

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.