





# Adaptive Grazing – Module 7

Phenotype





# Module 7 – Phenotype



Objective: Students will understand the value of phenotype over breed in selecting livestock for an adaptive grazing system, and have a basic list of trait to select for.

# Phenotype

Oxford Dictionary:

Phenotype - the set of observable characteristics of an individual resulting from the interaction of its genotype with the environment.





# Characteristics

- ▶ Sound udder with good attachment
  - ▶ Without a sound udder the animal will not be able to support many calves
- ▶ Good feet and legs
  - ▶ She will need to walk for a living. Her feet and legs need to get her around.
- ▶ Rumen capacity
  - ▶ Widest point of the animal should be the mid-rib area
- ▶ Clear, bright eyes
- ▶ Moderate size
  - ▶ Most cattle have been bred for large size. Large cattle take more feed to grow and maintain.
- ▶ Give live birth annually without assistance
  - ▶ Her job is to bring you young every year. Otherwise she is costing the operation money.
- ▶ Breeds back
- ▶ Maintains body condition on pasture without supplement

# Characteristics

- Sheds winter hair coat quickly in spring
- Sleek, oily appearance to summer hair coat
- Dark top-line along spring
- Low fly populations on the animal in summer



# Characteristics

- Good disposition
  - Bad attitude is a liability.
- Good mothering abilities
  - Her job is to take care of the calf. The manager provides them what they need in a pasture based system.





# Resources

- ▶ Steve Campbell <https://www.youtube.com/watch?v=KT7VM6eR8eM>
- ▶ Allen Williams [https://www.youtube.com/watch?v=7K-Ay-c3\\_Bo&list=PLsOsNBWRTjStFfd3FoP0fK8OgGsVW2emD&index=32](https://www.youtube.com/watch?v=7K-Ay-c3_Bo&list=PLsOsNBWRTjStFfd3FoP0fK8OgGsVW2emD&index=32)
- ▶ Greg Judy <https://www.youtube.com/watch?v=QP57M7Hj89E>



# 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](mailto:sevenpinesandfence@gmail.com).