Habitat Influence on Mule Deer Population Dynamics

Mule Deer Need

- Quality habitat to support a specialized diet
- Fat reserves to survive winter
- Connectivity between seasonal habitats

Mule Deer Diet

- Need plants that provide concentrated and highly digestible nutrients
- Not as efficient at digesting fibrous material as cattle and elk
- Specific types of bacteria in their rumen are required to aid in digestion
- Difficulty adapting to dietary changes

General Habitat Preference

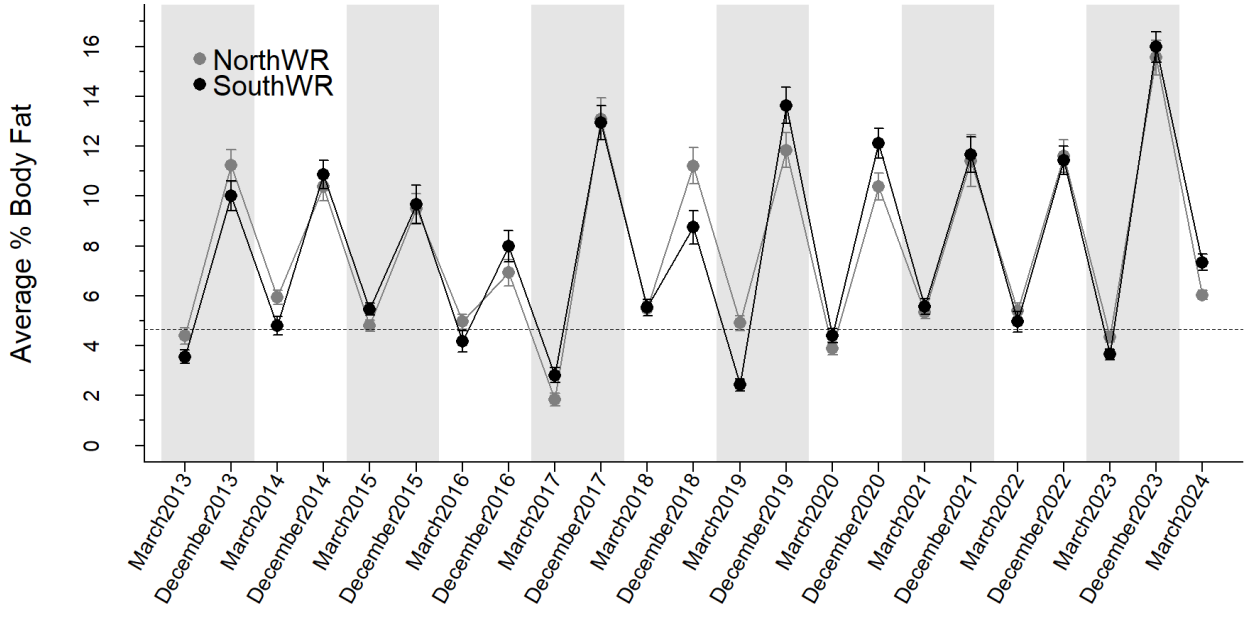
- Shrublands, sagebrush-grasslands, and mixed-mountain shrublands during fall months
- Riparian areas to replenish fat reserves and provide fawning cover
- Aspen stands provide high quality forage and hiding and thermal cover

Body Fat Reserves

- Body fat can provide up to 30% of a deer's winter energy requirements
- Reproductive success is highly dependent upon body condition
- Directly attributed to the health of summer and transitional ranges

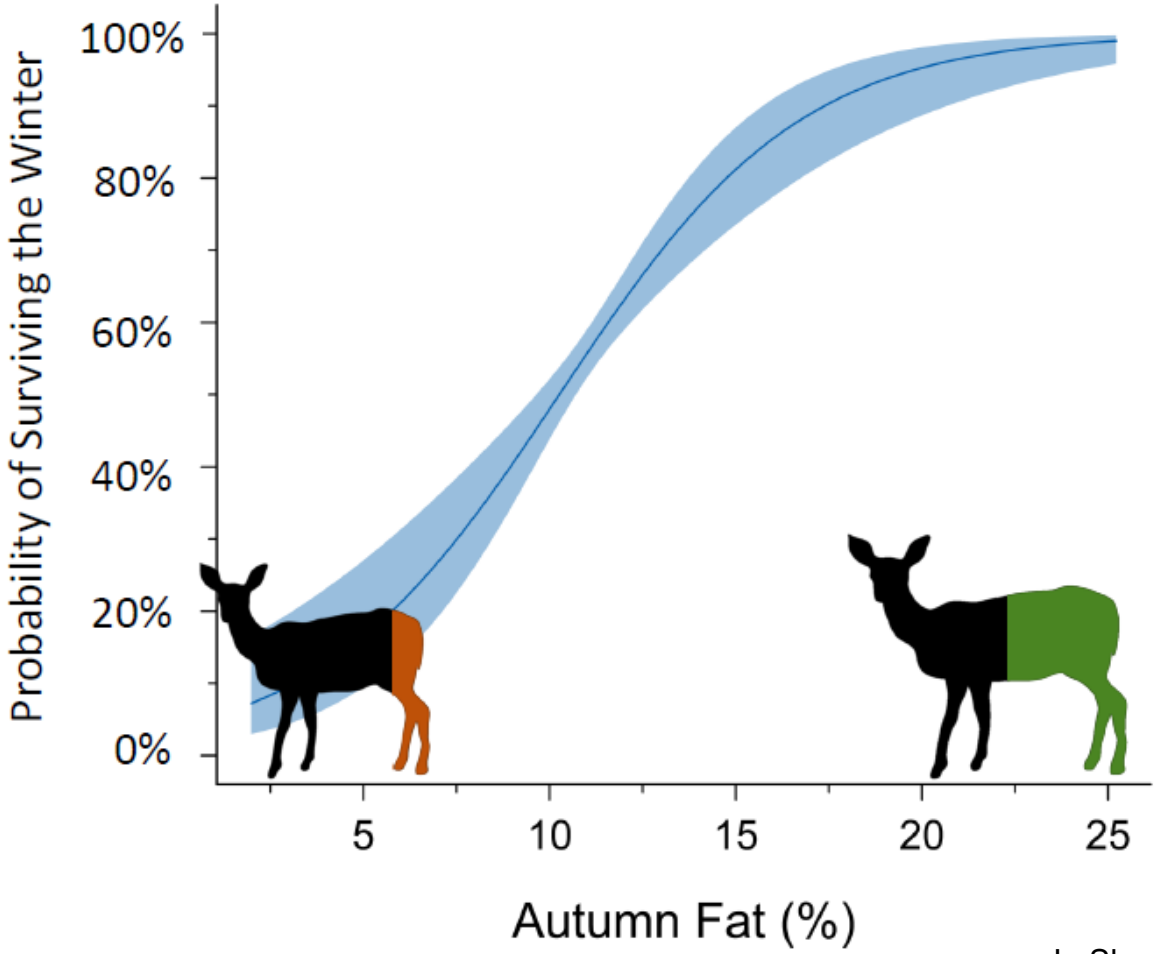
Wyoming Range Body Fat 2013 - 2024

Average % Body Fat



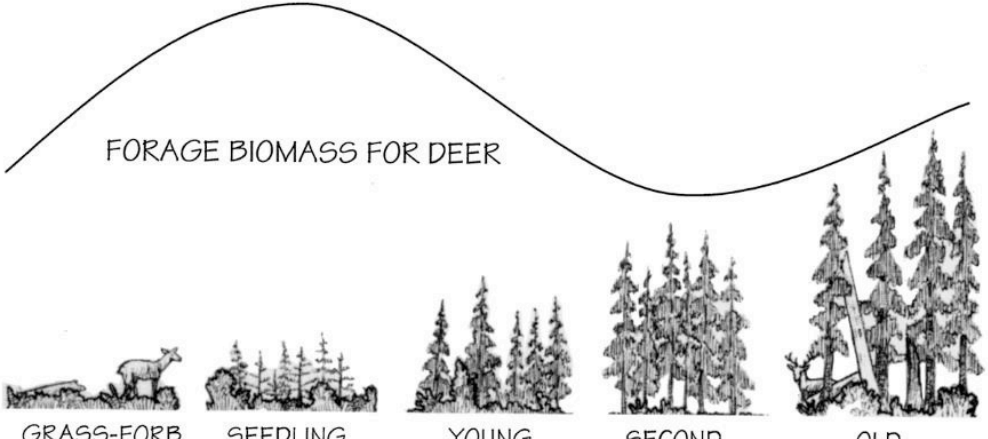
2013 - 2024

Fatter animals are more likely to live.



LaSharr et al. 2023

Mule Deer Forage Changes Over Time



Kie et al. 2003

Seasonal Range Connectivity

- Mule deer in Wyoming have been known to travel up to 150 miles from summer ranges to winter ranges
- Deer migrate to transitional ranges to replenish fat reserves depleted during winter and seek out areas of secure fawning cover
- Some herds don't migrate long distances and move seasonally to access resources

Conclusion

Summary of Mule Deer Needs:

- Connectivity
- Good forage
- Body fat