Coram Experimental Forest Logging Study

Nutrient and Biomass Status
Related to Utilization Treatment Options

Intermountain Forest Tree Nutrition Cooperative
University of Idaho

Terry M. Shaw

Coram Experimental Forest Logging Study

Objective:

Treatments were designed to study the effects of different degrees of fiber utilization and burning.

Coram Experimental Forest Logging Study
Stand Characteristics

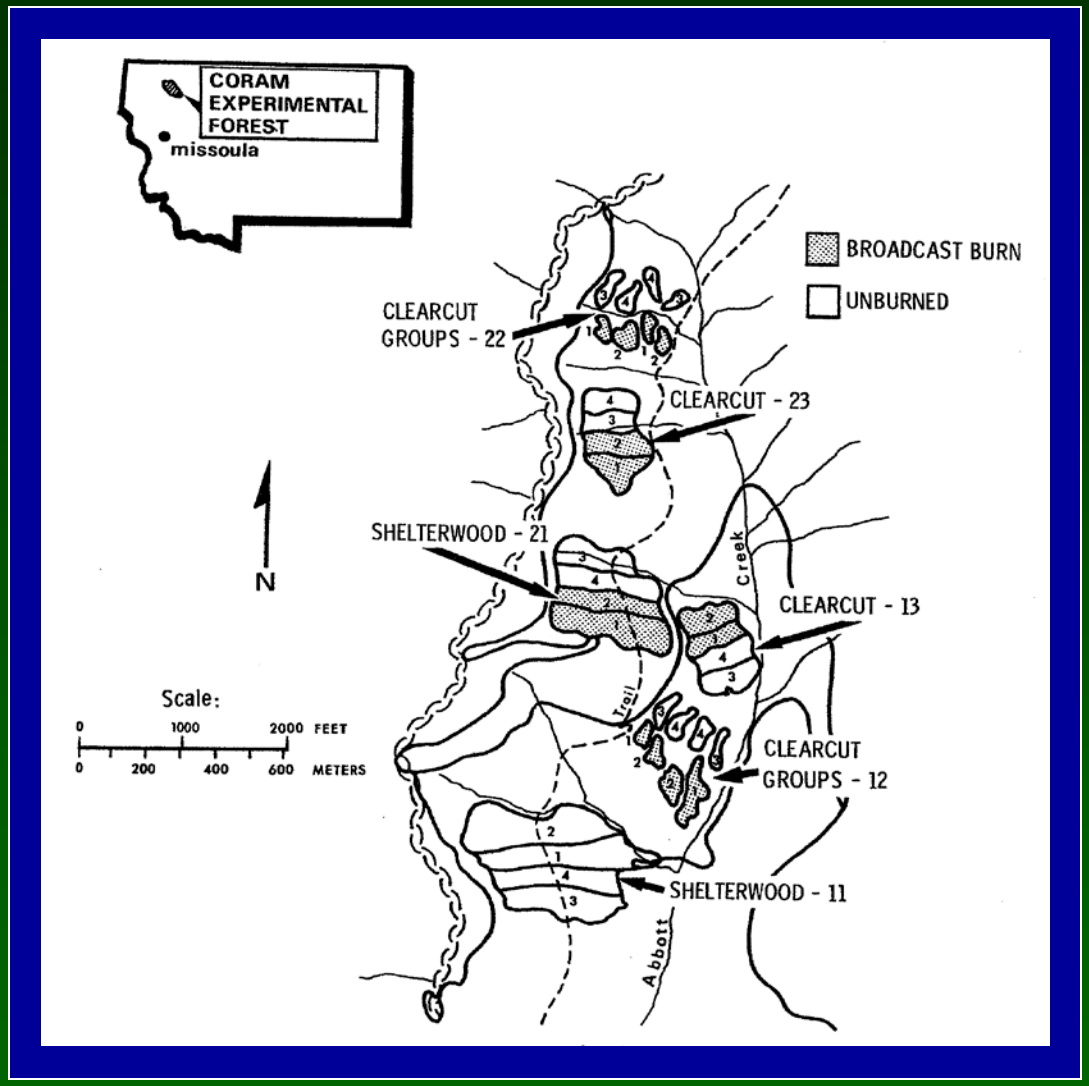
Rock Type	Veg. Series	Harvest Date	Burn Date
Metasediment (Helena Formation)	Grand fir	September 1975	September 1975

Coram Experimental Forest Logging Study

- Silvicultural Treatments
- Shelterwood
- Clearcut
- Group Selection

- Utilization Treatments
- Low/Burn – Remove sawtimber to 7”dbh, 8’ length, one-third sound
- Medium/Burn – Remove all material to 3” diameter, 8’ length, and one-third sound.
- Medium/No Burn – Remove all materials to 3” diameter, 8’ length and one-third sound
- High/No Burn – Remove all timber to 1” diameter

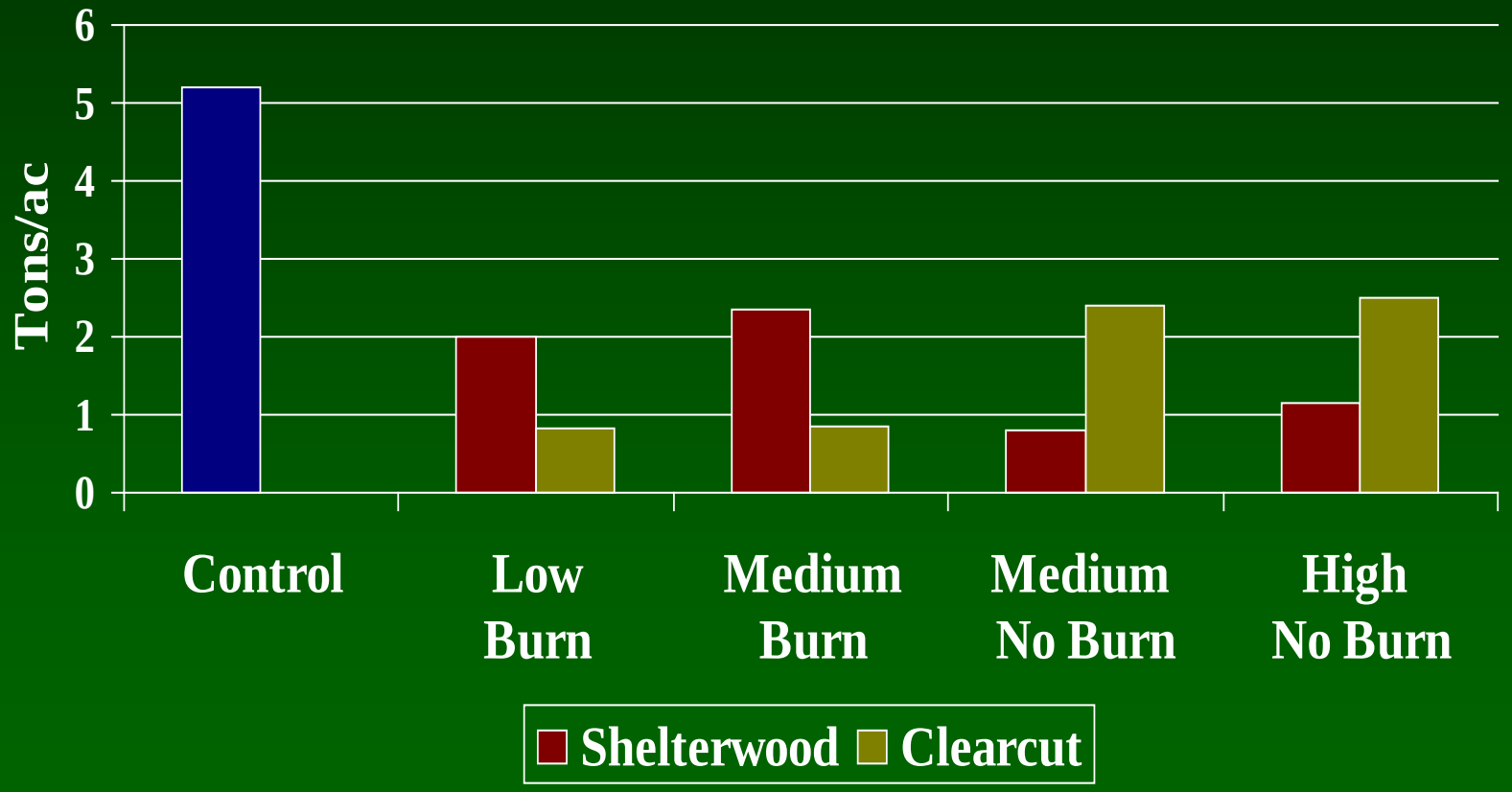
Coram Experimental Forest Logging Study



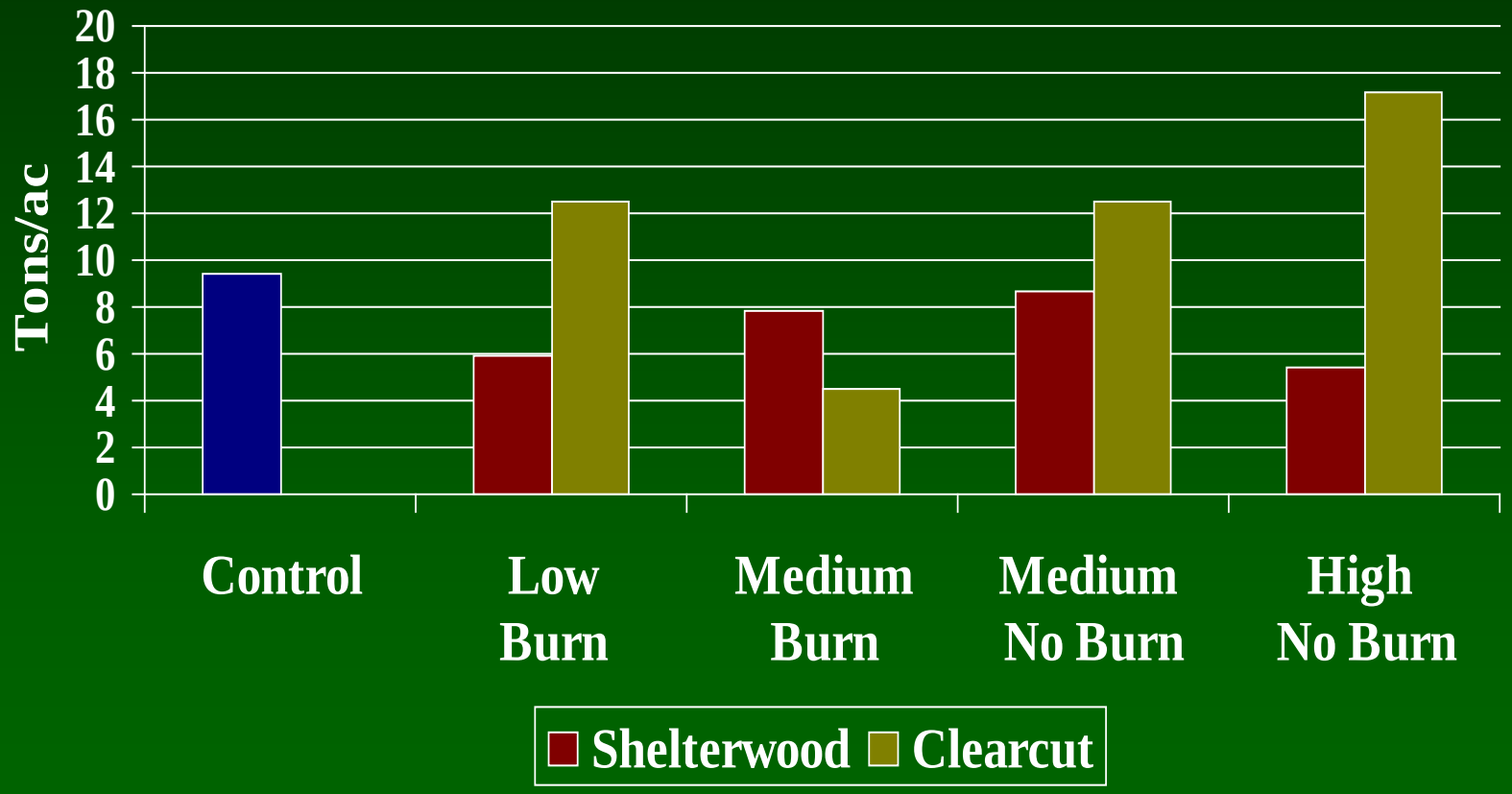
Coram Experimental Forest Logging Study

Nutrient and Biomass Status

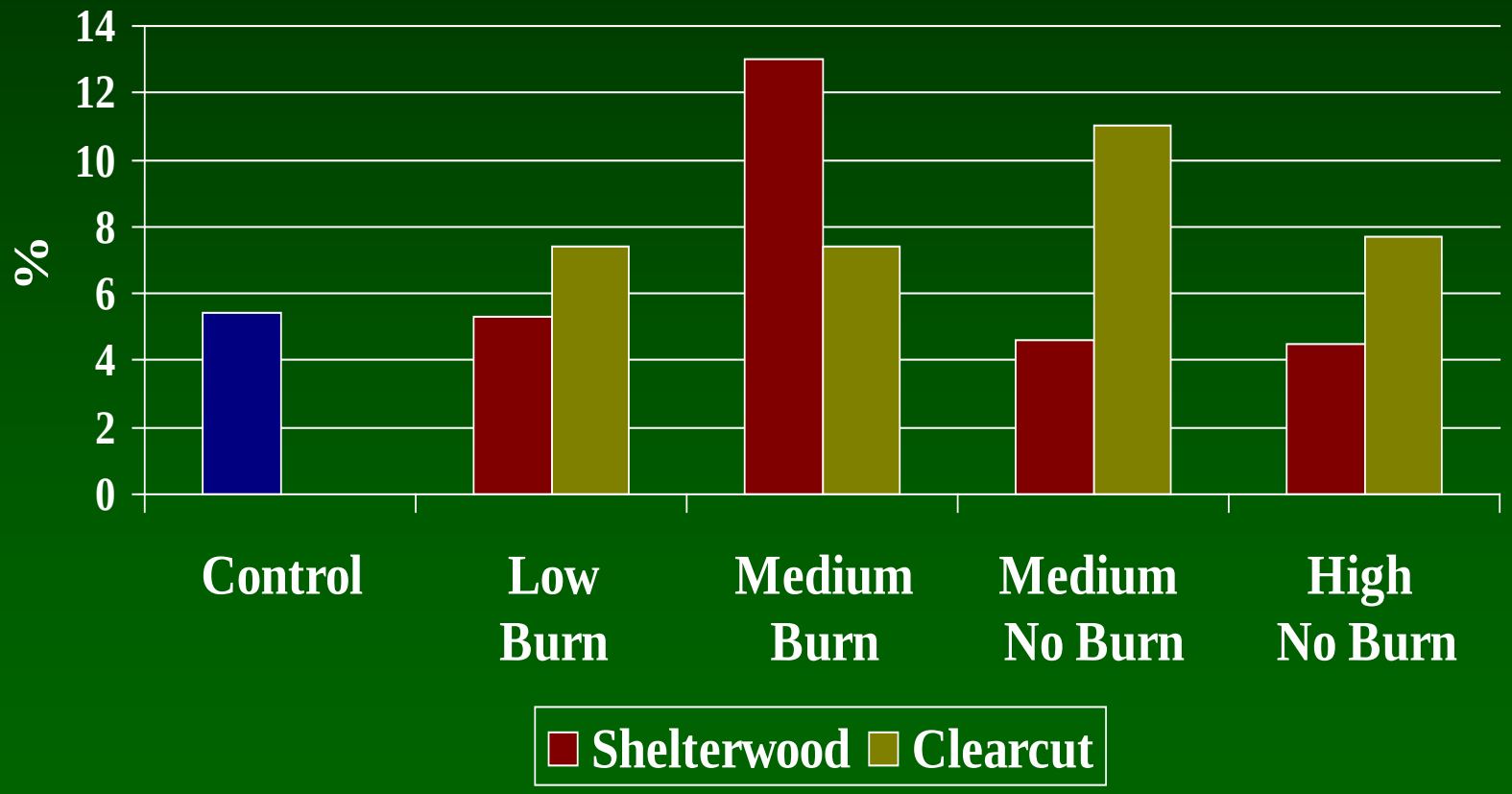
Coarse Woody Debris (CWD)
by Silvicultural Treatment and Utilization



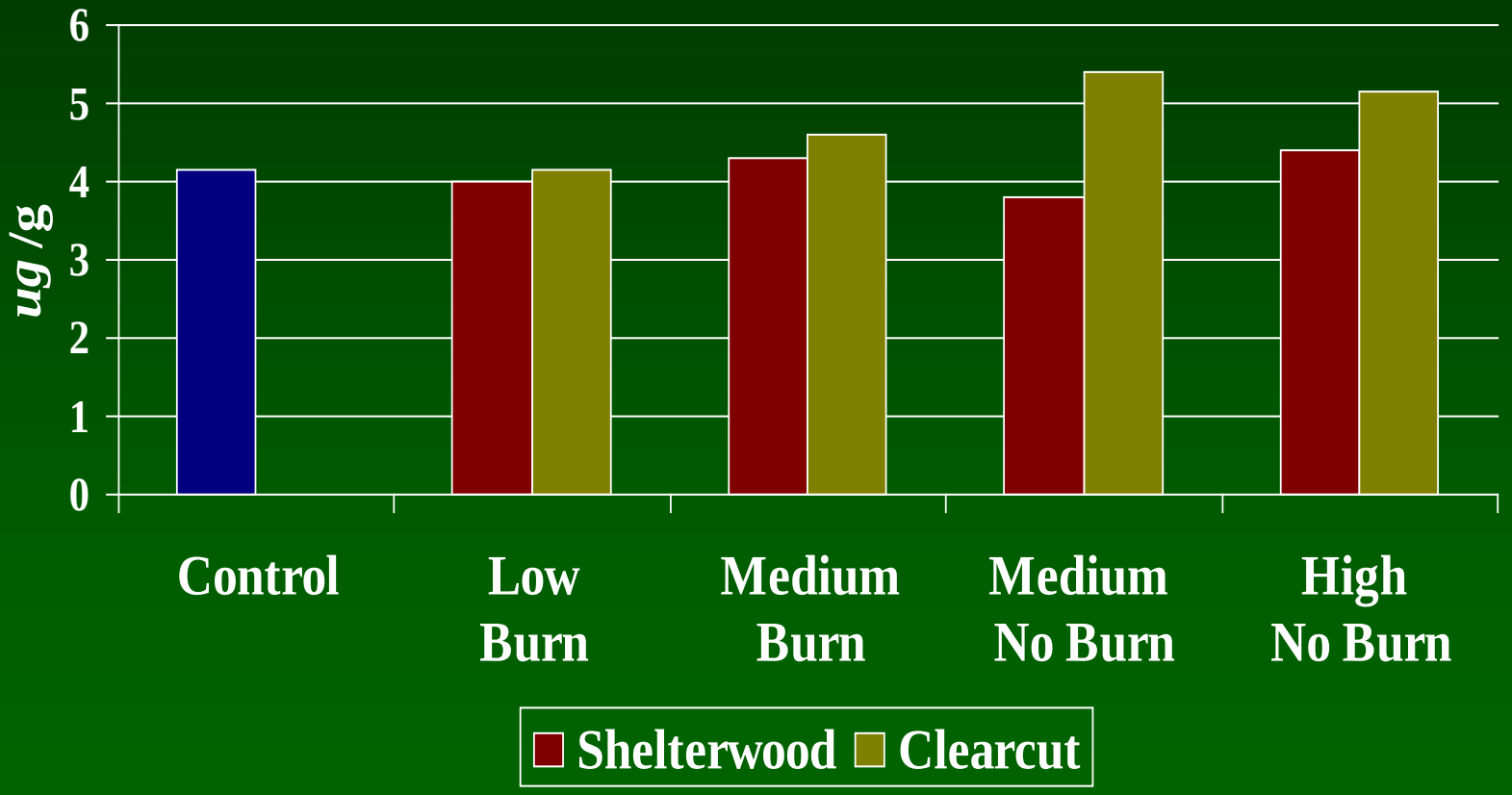
Forest Floor
by Silvicultural Treatment and Utilization



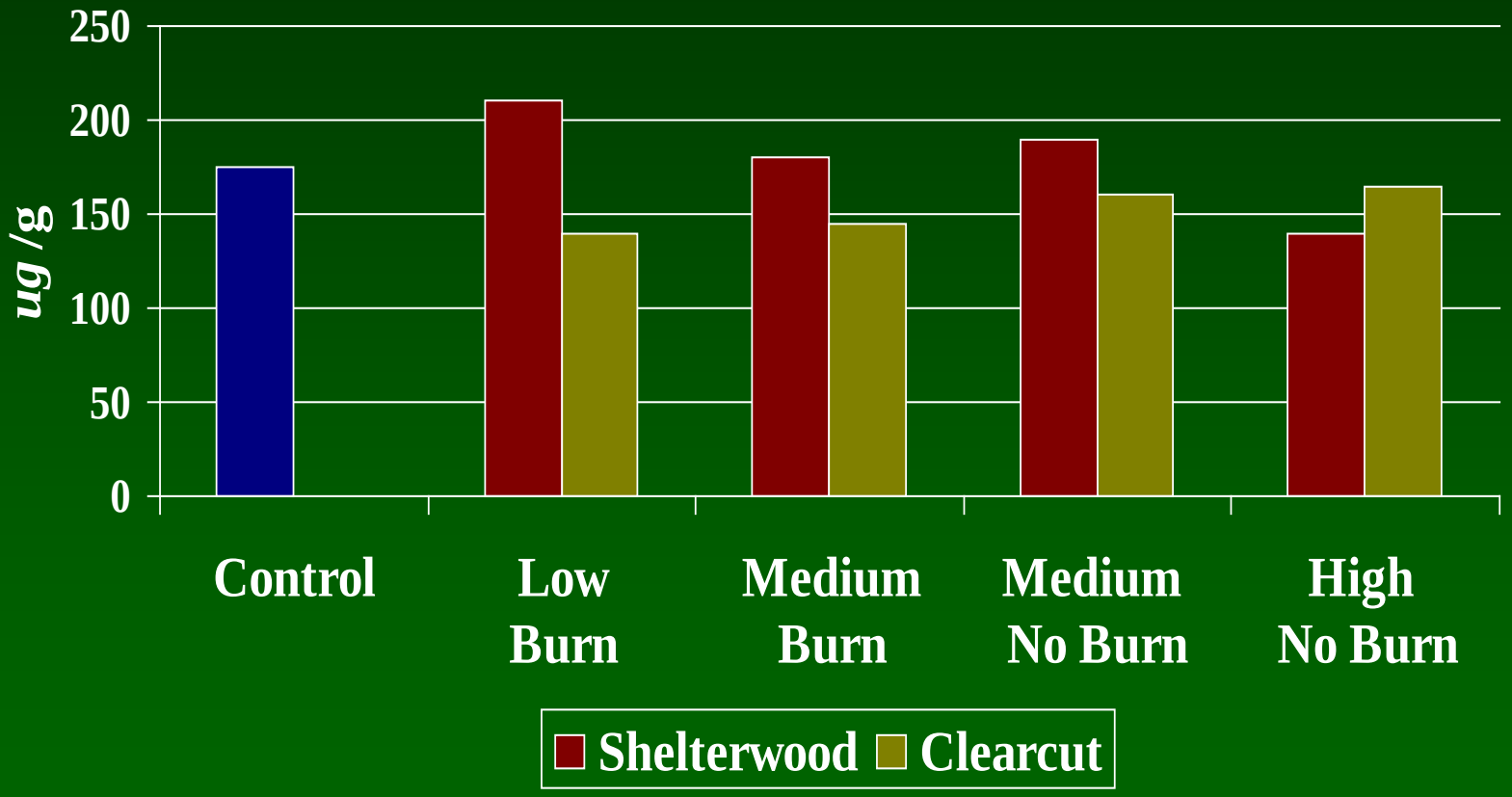
Surface Soil % Organic Matter
by Silvicultural Treatment and Utilization



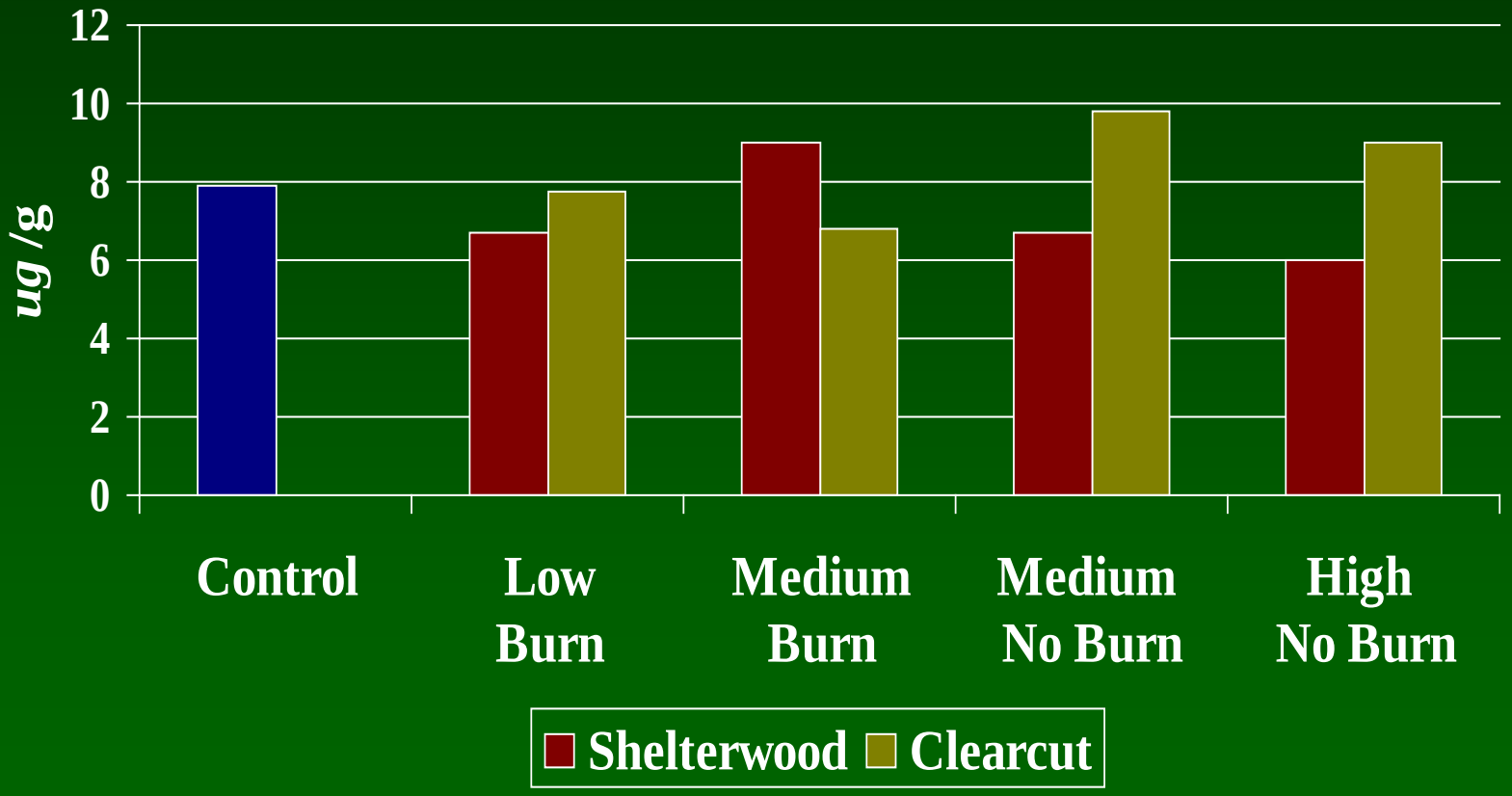
Surface Soil NH_4-N
by Silvicultural Treatment and Utilization



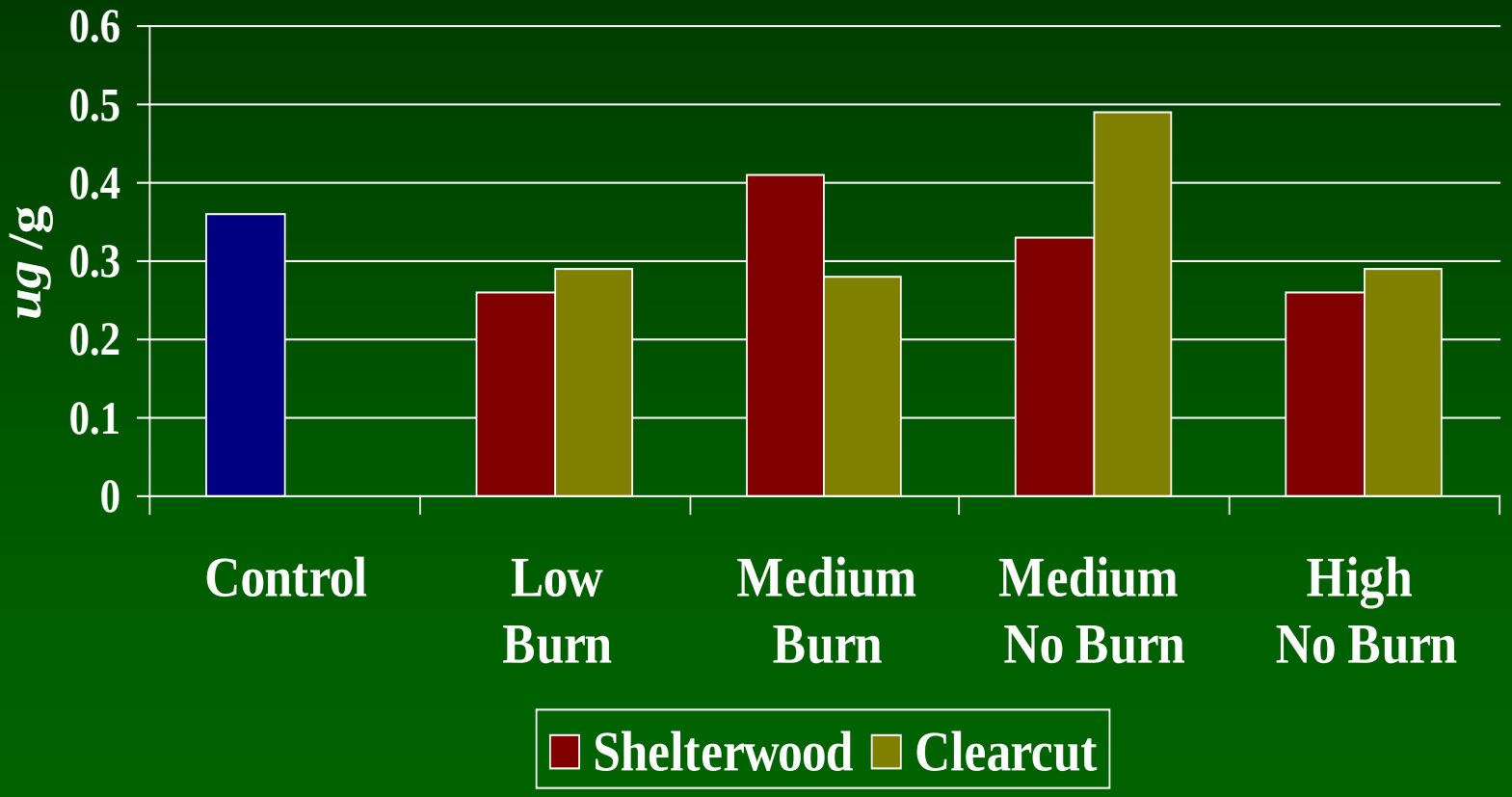
Surface Soil Available K
by Silvicultural Treatment and Utilization



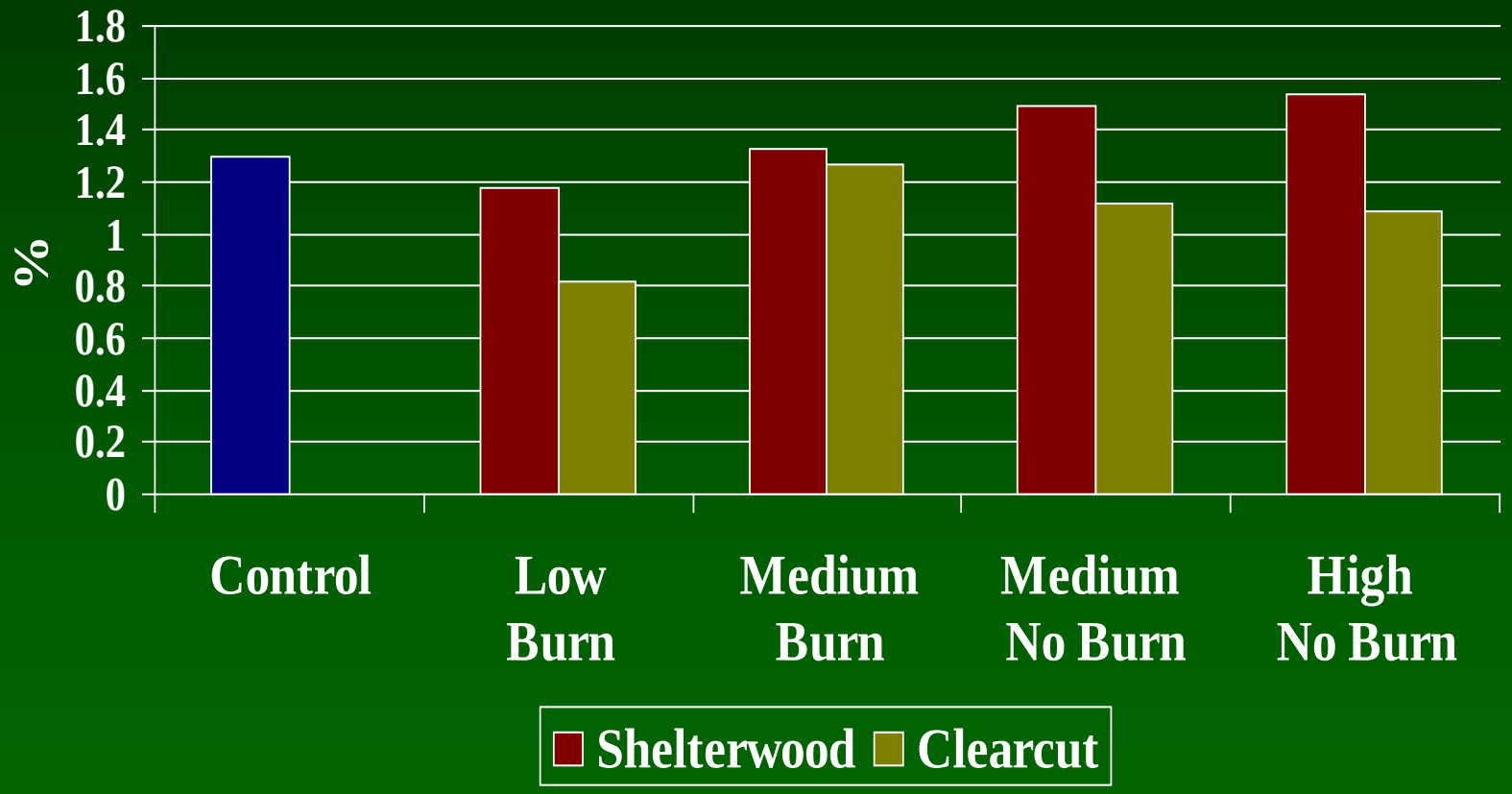
Surface Soil SO_4-S
by Silvicultural Treatment and Utilization



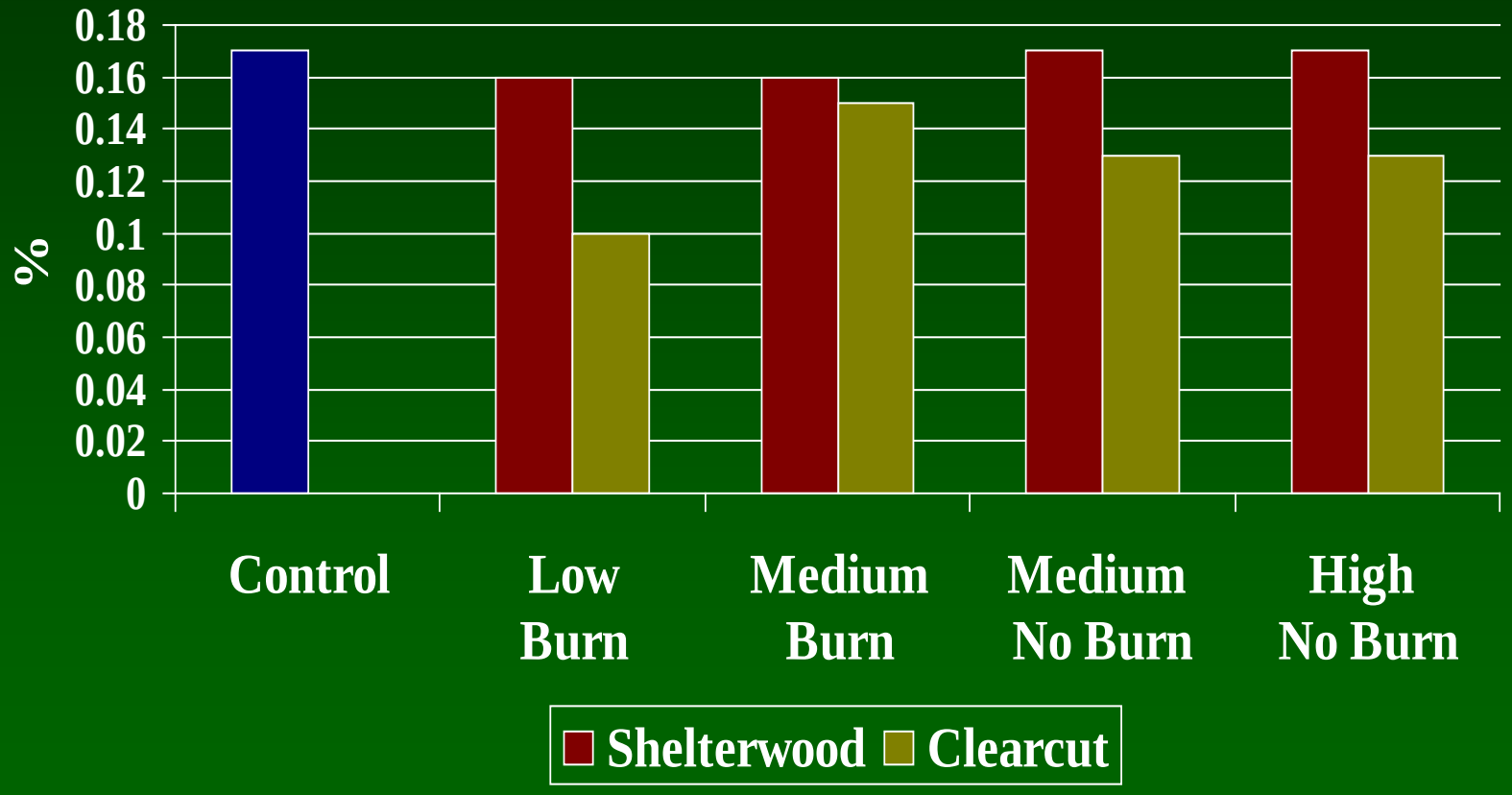
Surface Soil Available B
by Silvicultural Treatment and Utilization



Forest Floor N
by Silvicultural Treatment and Utilization

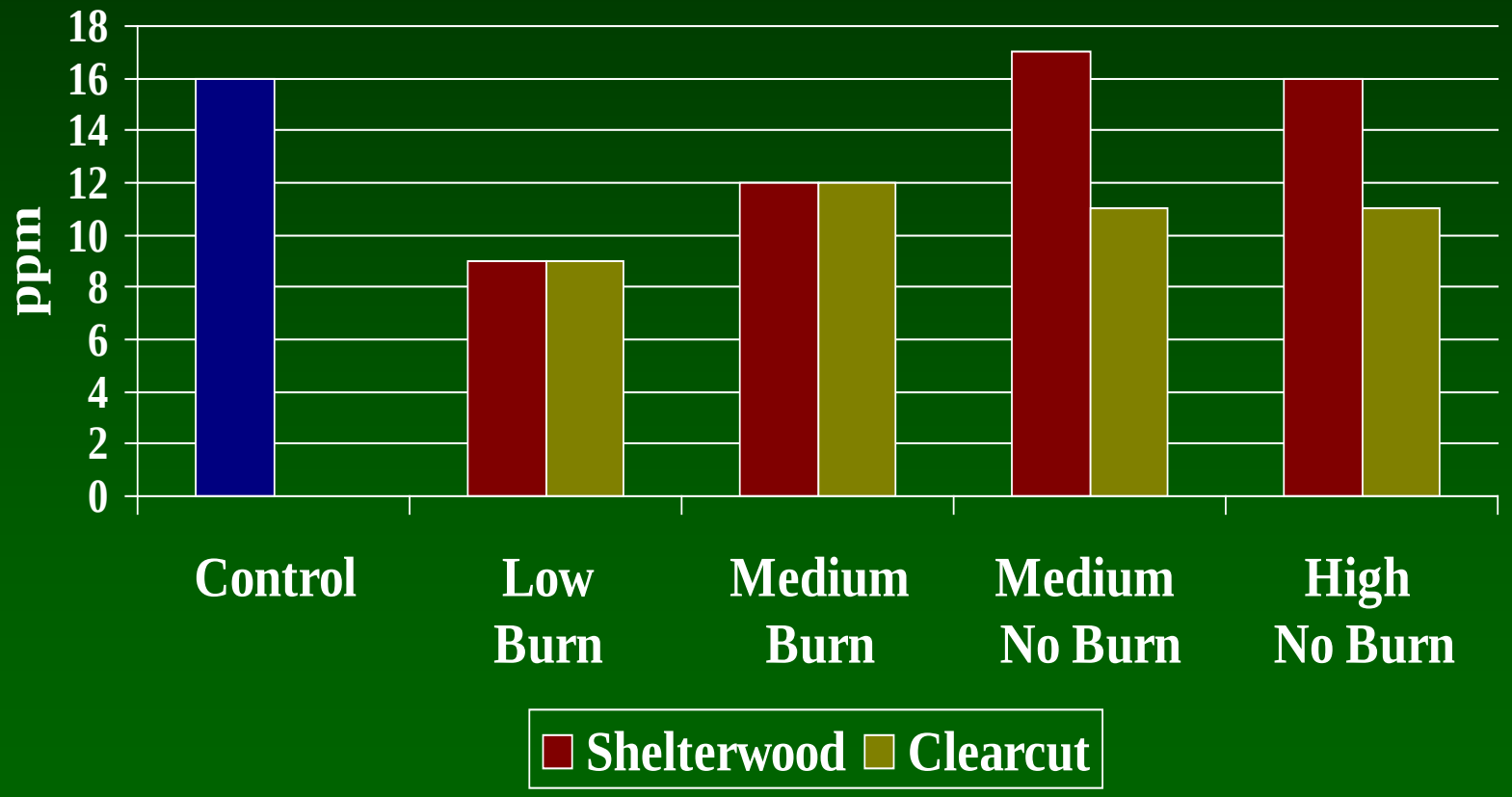


Forest Floor K
by Silvicultural Treatment and Utilization



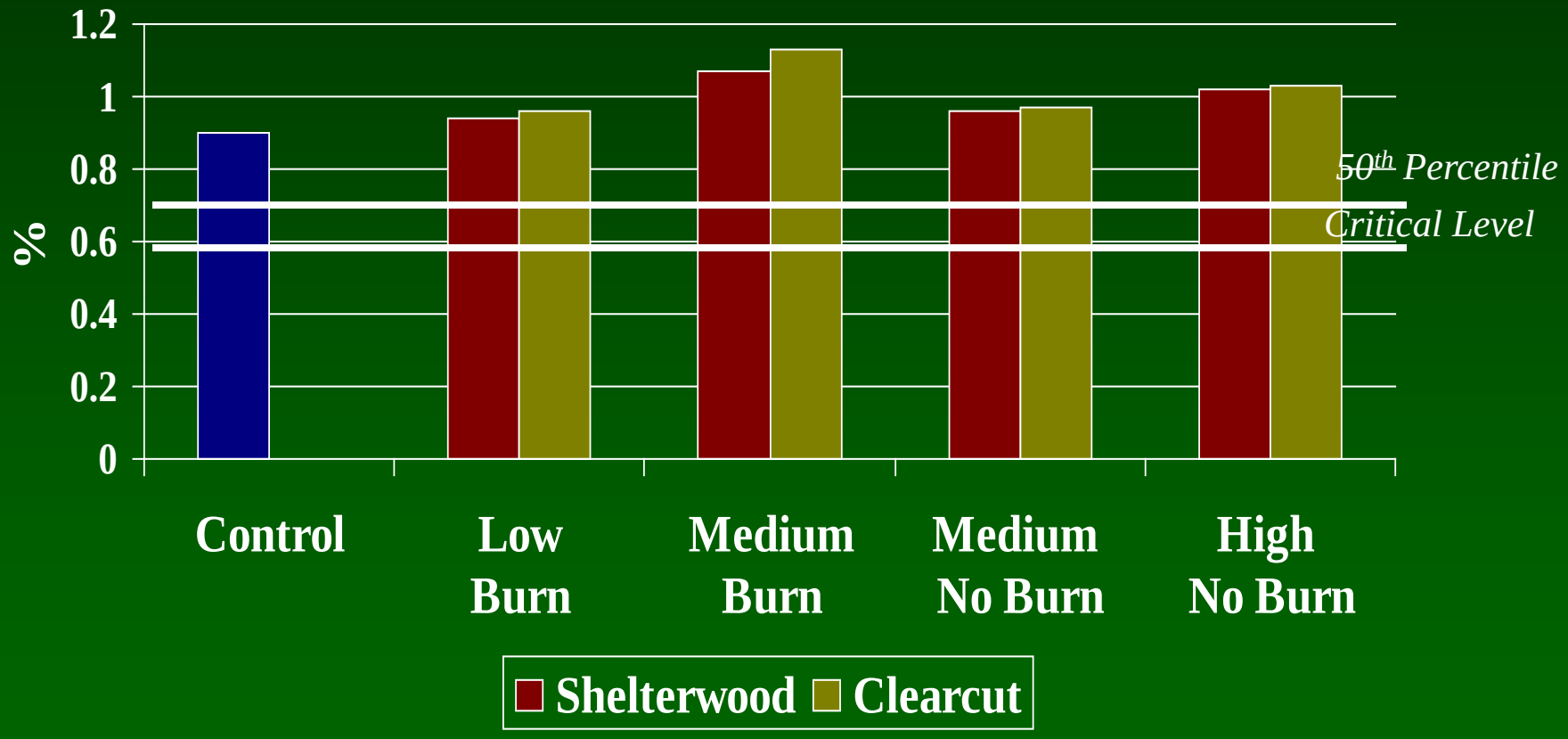
Forest Floor S
by Silvicultural Treatment and Utilization

Forest Floor B
by Silvicultural Treatment and Utilization



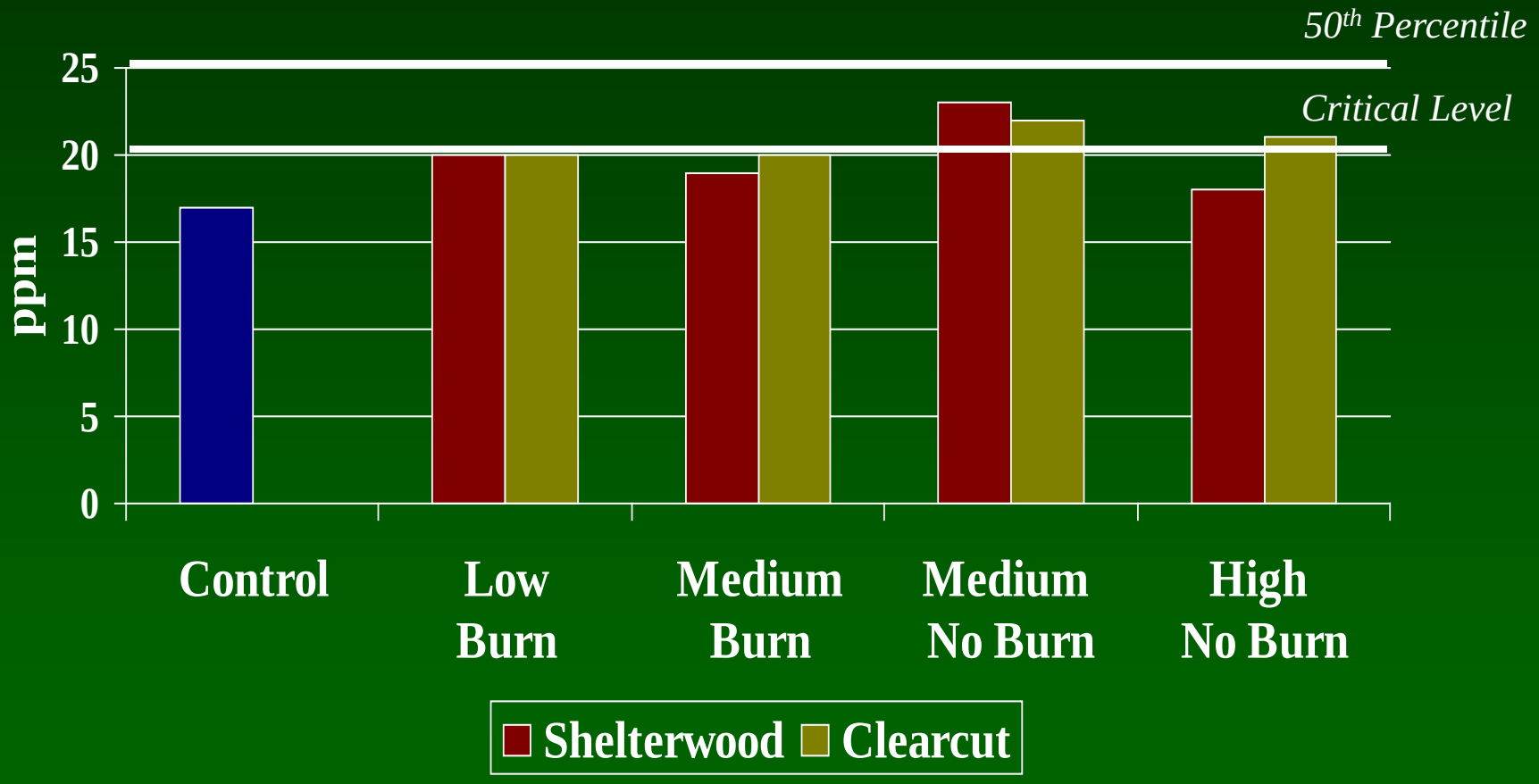
Douglas-fir Foliar N
by Silvicultural Treatment and Utilization

Douglas-fir Foliar K
by Silvicultural Treatment and Utilization



Douglas-fir Foliar S
by Silvicultural Treatment and Utilization

Douglas-fir Foliar B
by Silvicultural Treatment and Utilization



Coram Experimental Forest Logging Study

Summary

- There were no **strong** biomass or nutritional differences shown between utilization treatments 30 years after harvest
- CWD levels were much higher on the control than all utilization treatments
- Nutrient levels did tend to be lower on the low utilization-burn treatment than other utilization treatments
- Clearcut soil N concentrations were higher when not burned
- Forest floor nutrient concentrations were lower on the clearcut than the shelterwood cut
- Douglas-fir foliar N, S and B concentrations were noticeably low at the Coram study site


Thank You!