

# Nutrition Effects on Future Forest Productivity

## Harvest by Site Quality Study



**Intermountain Forest Tree Nutrition Cooperative**  
*"The Site Type Cooperative"*

**University of Idaho**  
**Terry M. Shaw**



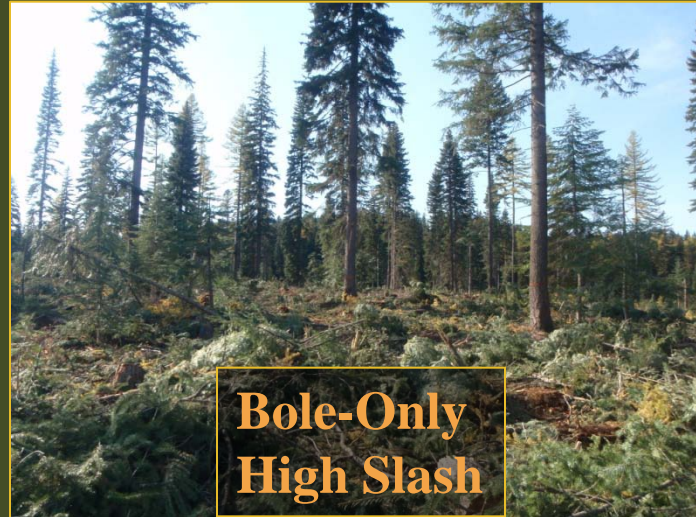
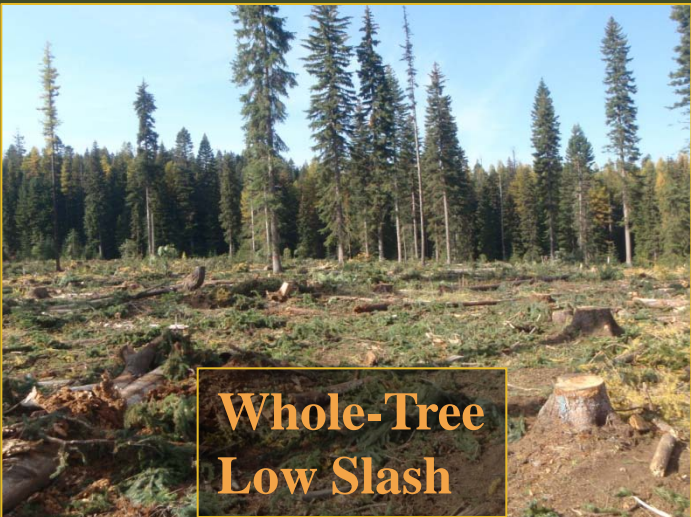
## Harvest Treatments:

- Bole Only - High Slash Retention
- Whole Tree – Low Slash Retention

## Site Quality:

- High Quality – Basalt (Good Soil Productivity)
- Low Quality – Quartzite (Poor Soil Productivity)



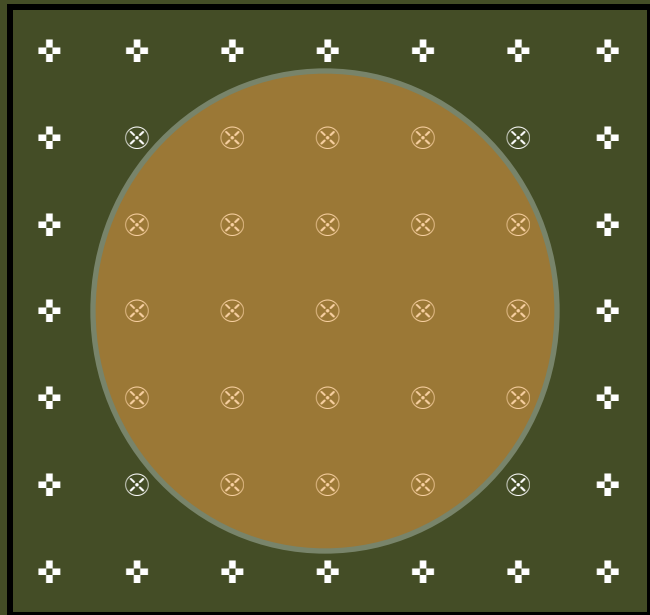




<b>Block 1 Bole Only</b>	<b>Block 2 Whole Tree</b>	<b>Block 3 Bole Only</b>	<b>Block 4 Whole Tree</b>
<b>High Slash</b>	<b>Low Slash</b>	<b>High Slash</b>	<b>Low Slash</b>
<b>High Slash</b>	<b>Low Slash</b>	<b>High Slash</b>	<b>Low Slash</b>
<b>High Slash</b>	<b>Low Slash</b>	<b>High Slash</b>	<b>Low Slash</b>
<b>High Slash w/veg control</b>	<b>Low Slash w/veg control</b>	<b>High Slash w/veg control</b>	<b>Low Slash w/veg control</b>
<b>No Slash</b>	<b>No Slash</b>	<b>No Slash</b>	<b>No Slash</b>
<b>No Slash w/veg control</b>	<b>No Slash w/veg control</b>	<b>No Slash w/veg control</b>	<b>No Slash w/veg control</b>



# Plot Layout



21 Plot Monitoring Trees



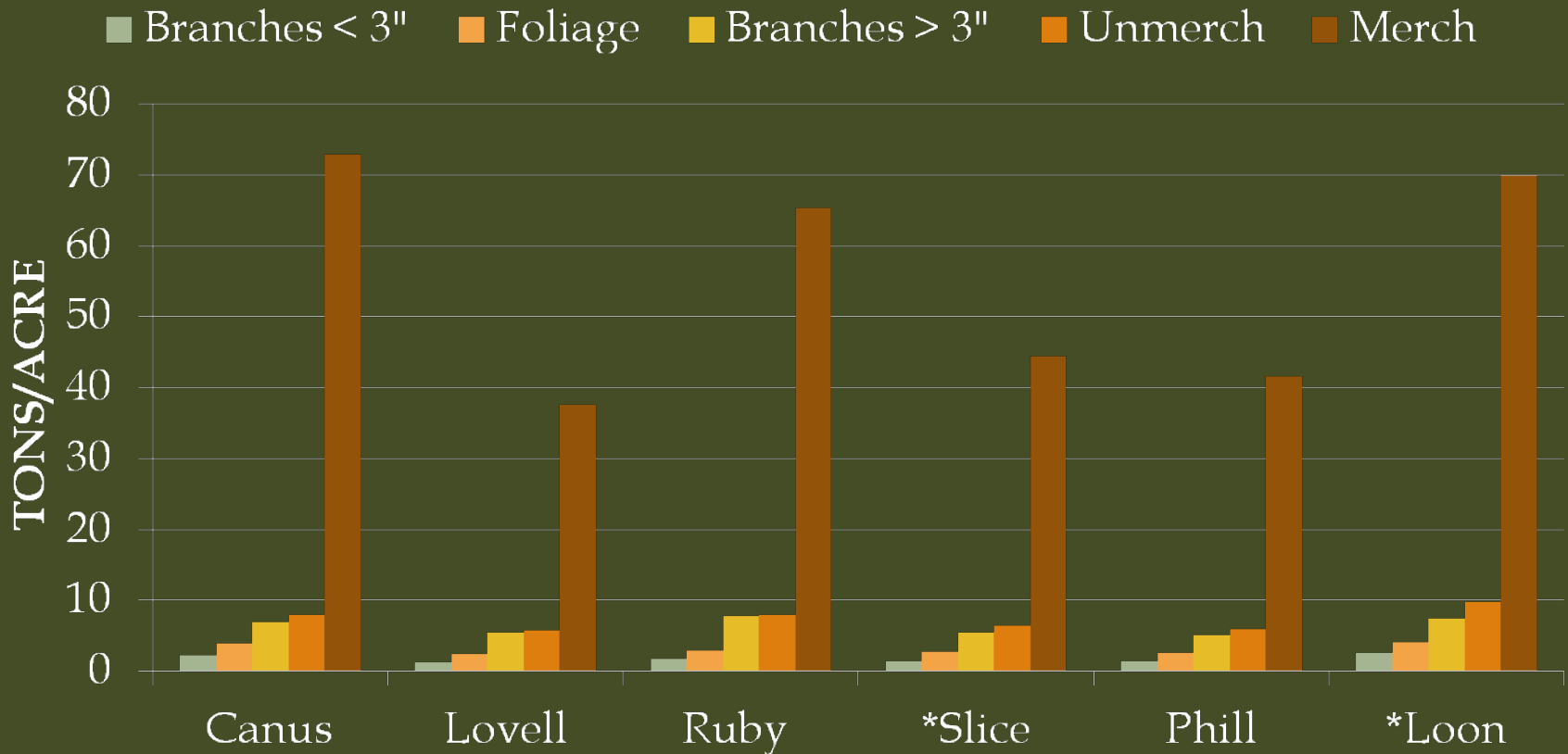


<b>Site</b>	<b>Region/ Owner</b>	<b>Soil Parent Material</b>	<b>Site Quality</b>
<b>Canus</b>	<b>NEO/ Forest Capital</b>	<b>Ash/Loess/Basalt</b>	<b>High</b>
<b>Lovell</b>	<b>NID/ IDL</b>	<b>Loess/Quartzite</b>	<b>Low</b>
<b>Ruby</b>	<b>NID/ Potlatch</b>	<b>Loess/Ash/Quartzite</b>	<b>Low</b>
<b>Slice</b>	<b>NEWA/ WADNR</b>	<b>Ash/Glacial/Quartzite</b>	<b>Low</b>
<b>Phill</b>	<b>NID/ Bennett Lumber</b>	<b>Ash/Loess/Basalt</b>	<b>High</b>
<b>Loon</b>	<b>NEO/ USFS/Umatilla</b>	<b>Ash/Basalt</b>	<b>High</b>



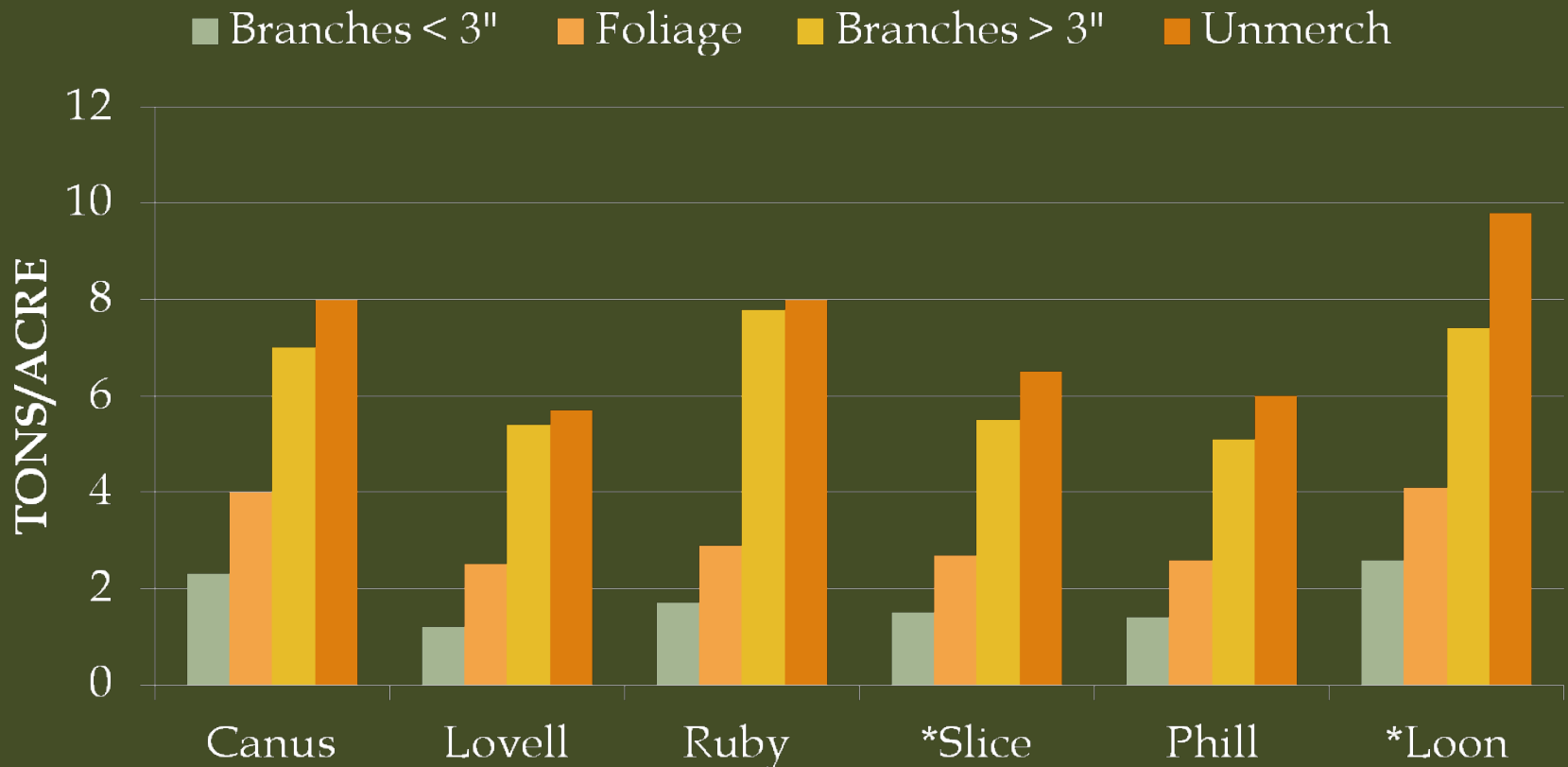
Site	Site Index	Basal Area	Site Height	QMD	Volume	
					Cu/ft/ac	Bd/ft/ac
Canus	73	134	86	11.9	4,218	22,605
Lovell	77	80	68	11.6	2,224	11,736
Ruby	69	123	80	13.2	3,675	19,858
*Slice	57?	90	81	11.8	2,569	13,208
Phill	71	78	89	11.3	2,370	12,646
*Loon	70	130	93	11.5	4,195	19,263

\*Does not include "Heritage " leave trees.

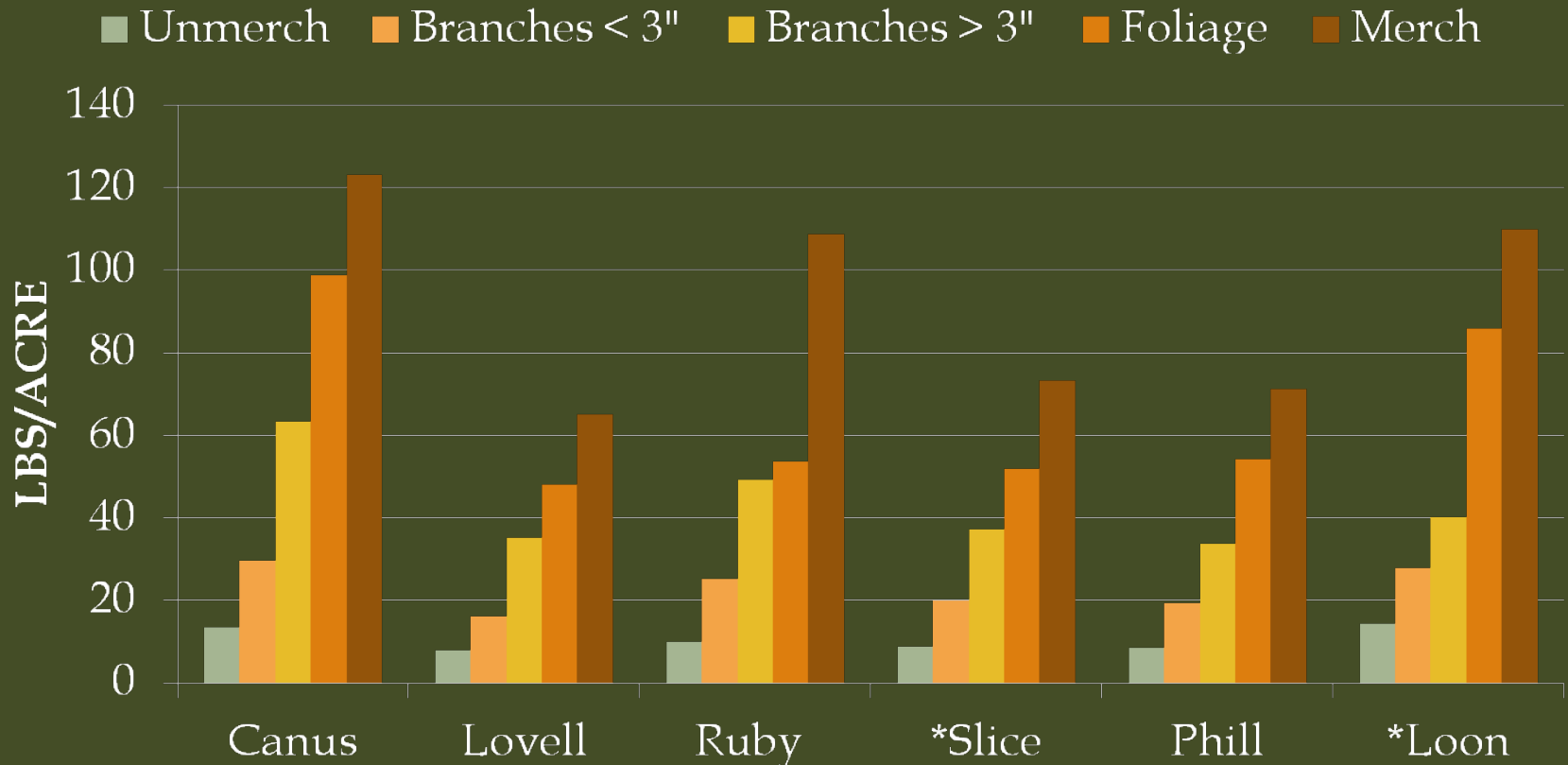


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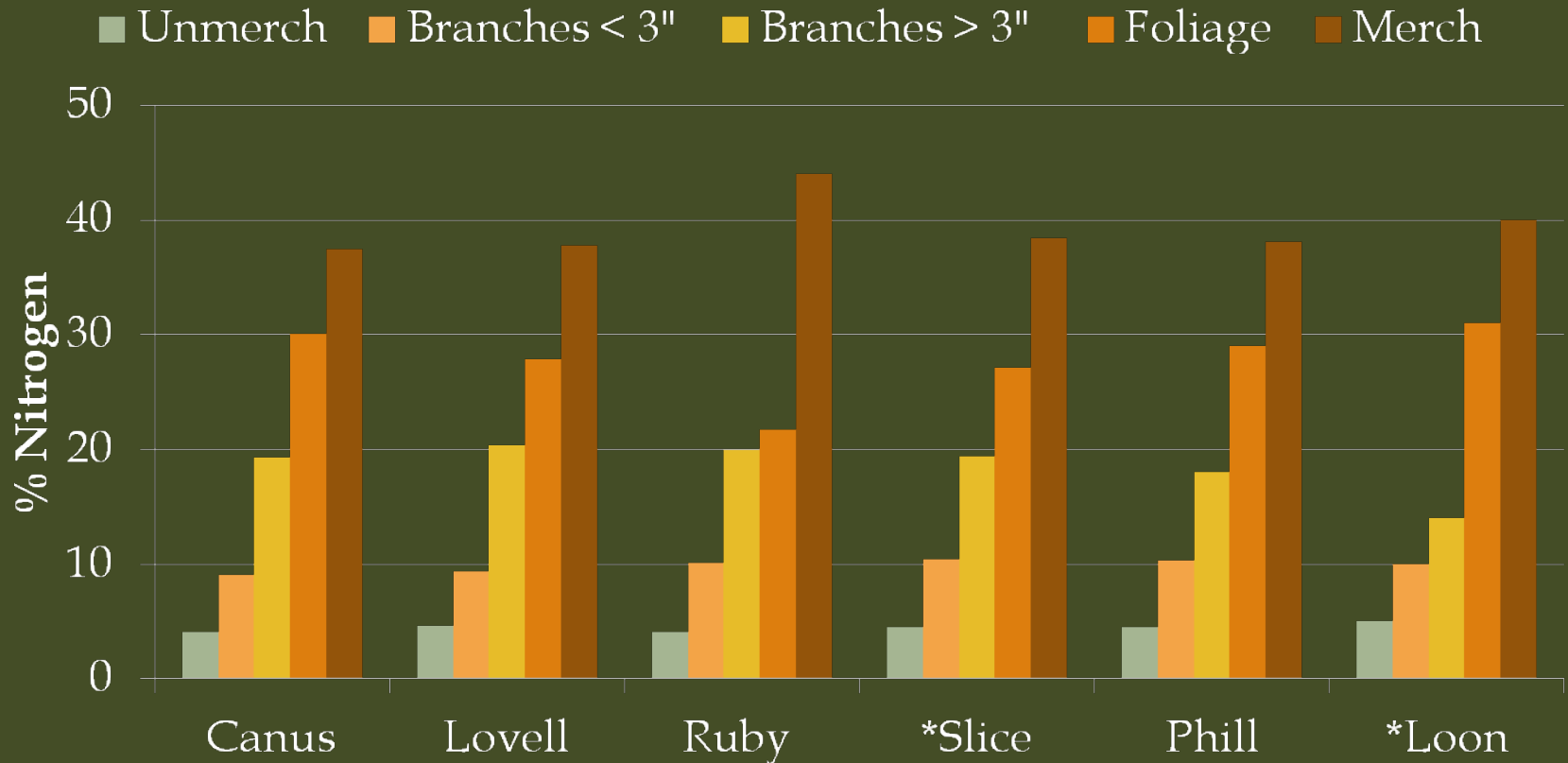




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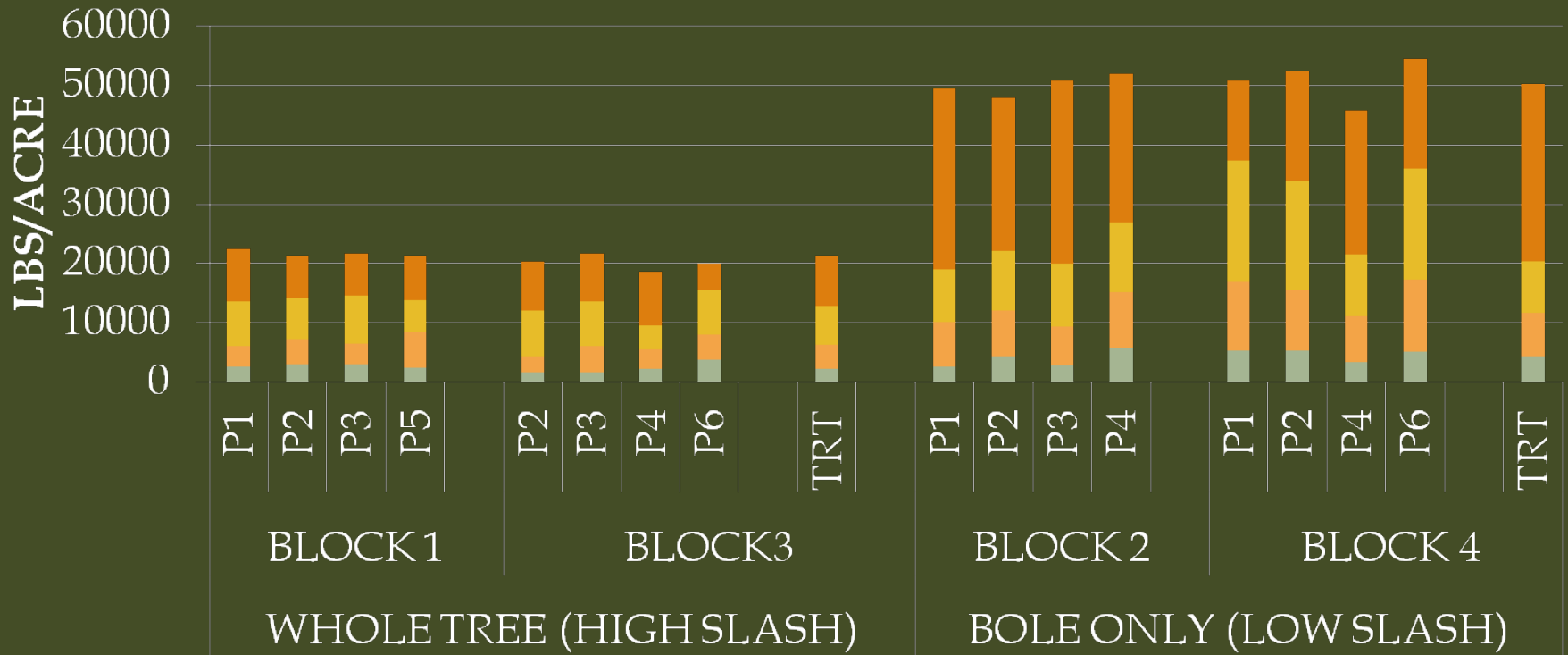
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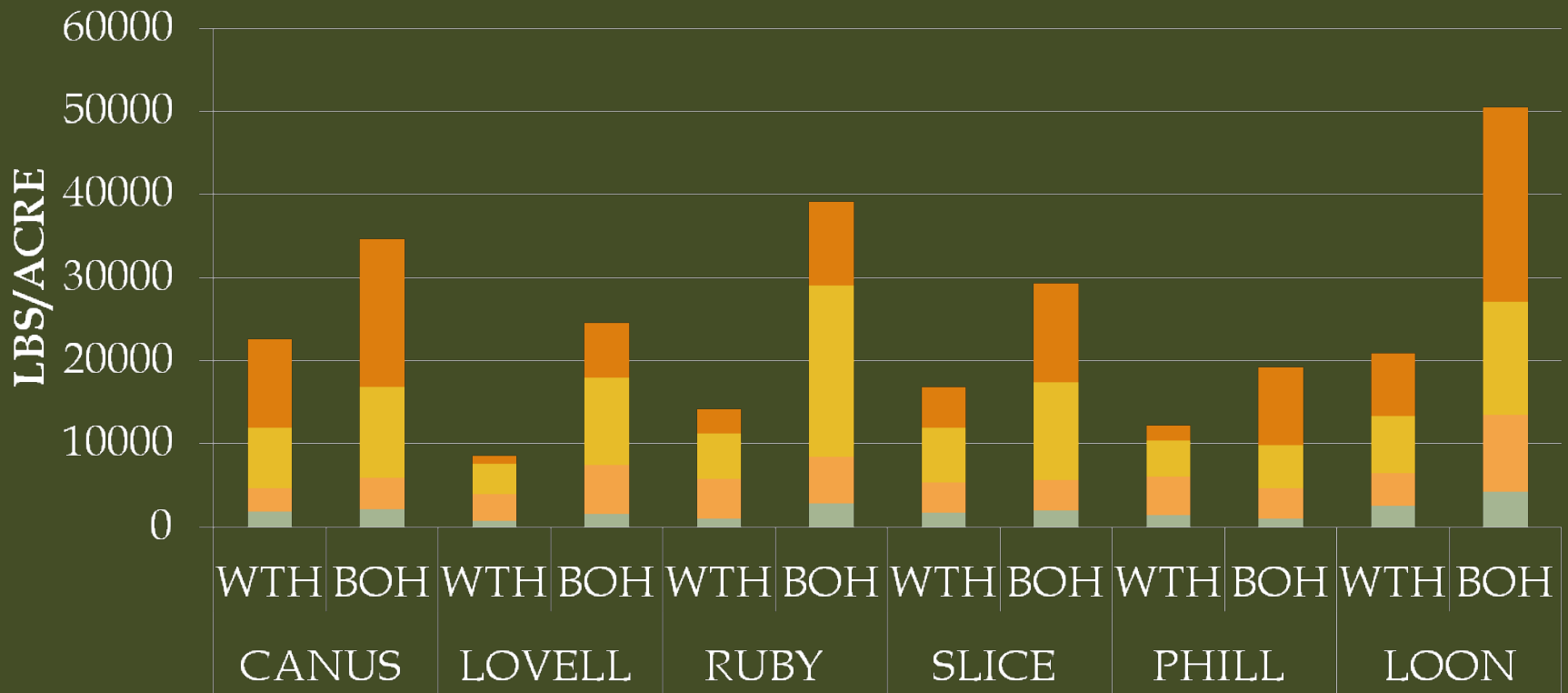
■ 0-1/4"  
 ■ 1/4-1"  
 ■ 1-3"  
 ■ >3"

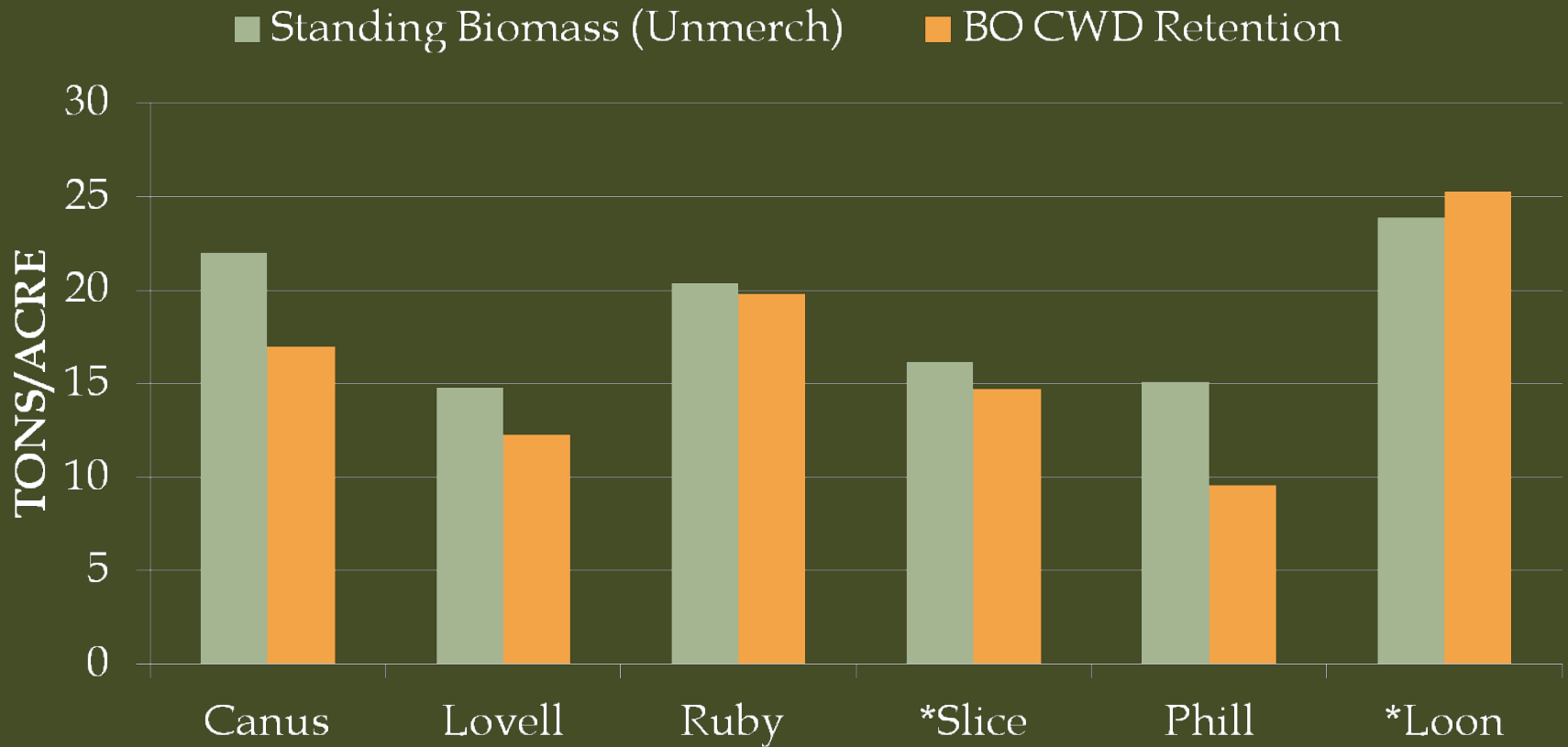




# SITE SLASH RETENTION

■ 0-1/4"  
 ■ 1/4-1"  
 ■ 1-3"  
 ■ >3"

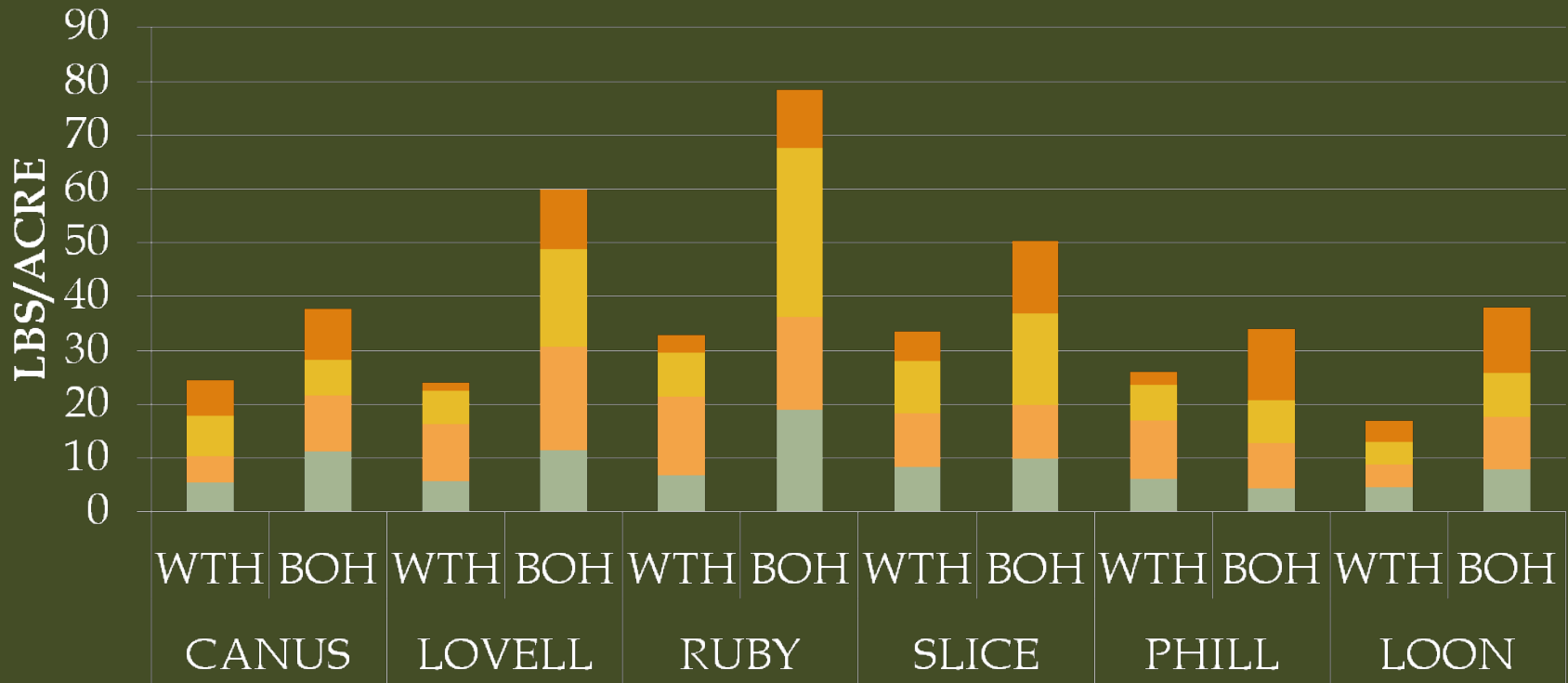


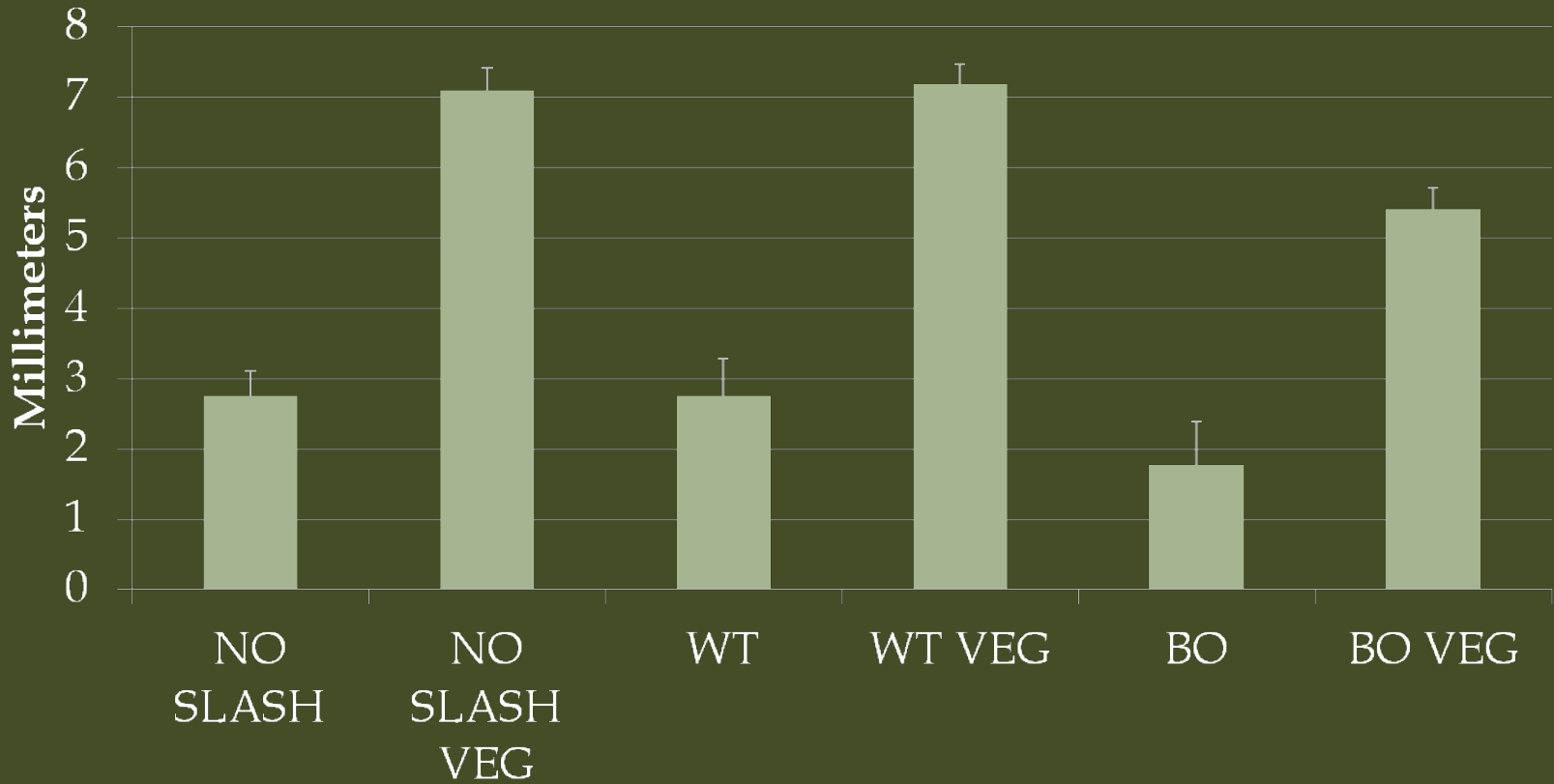


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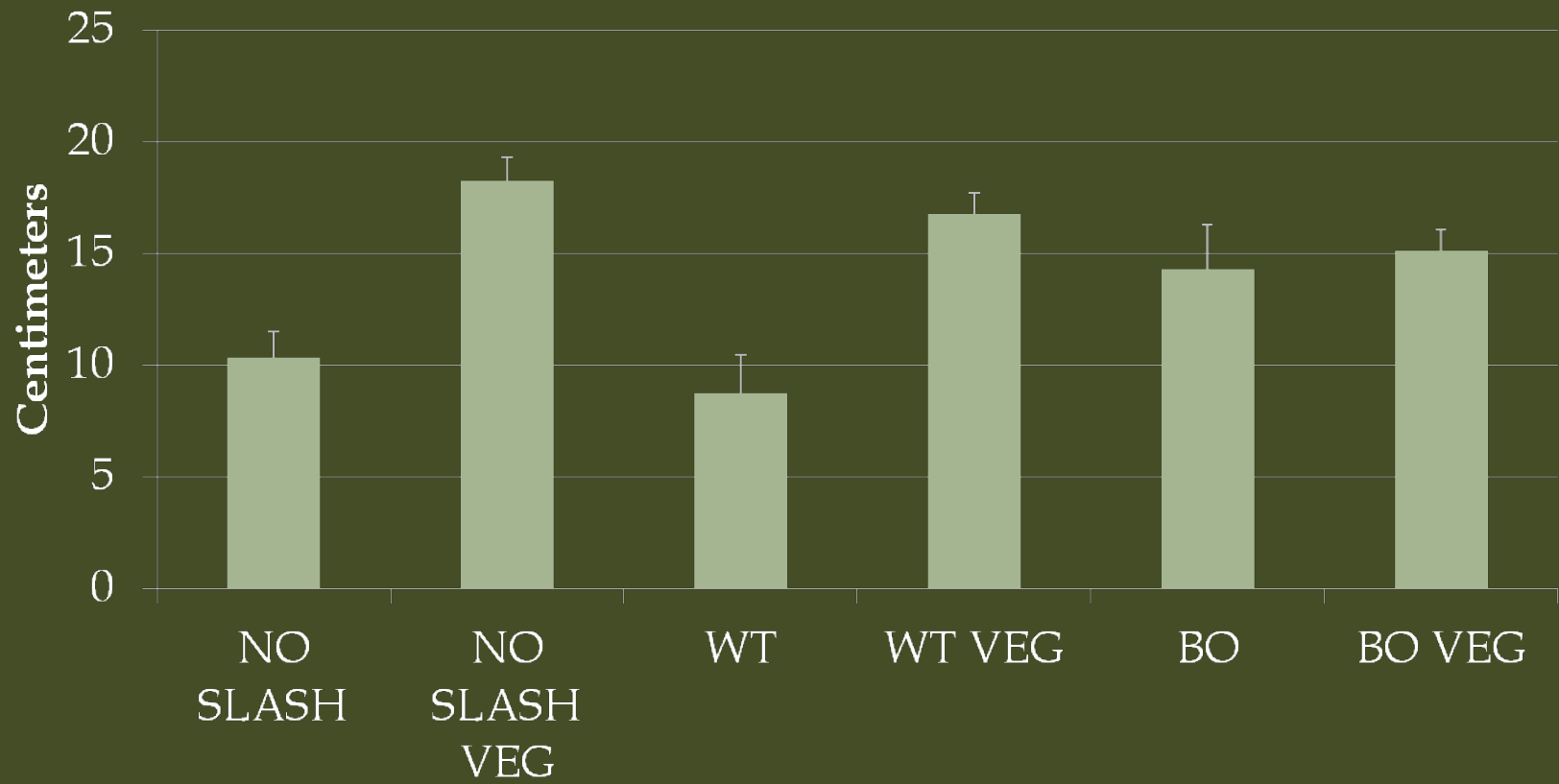


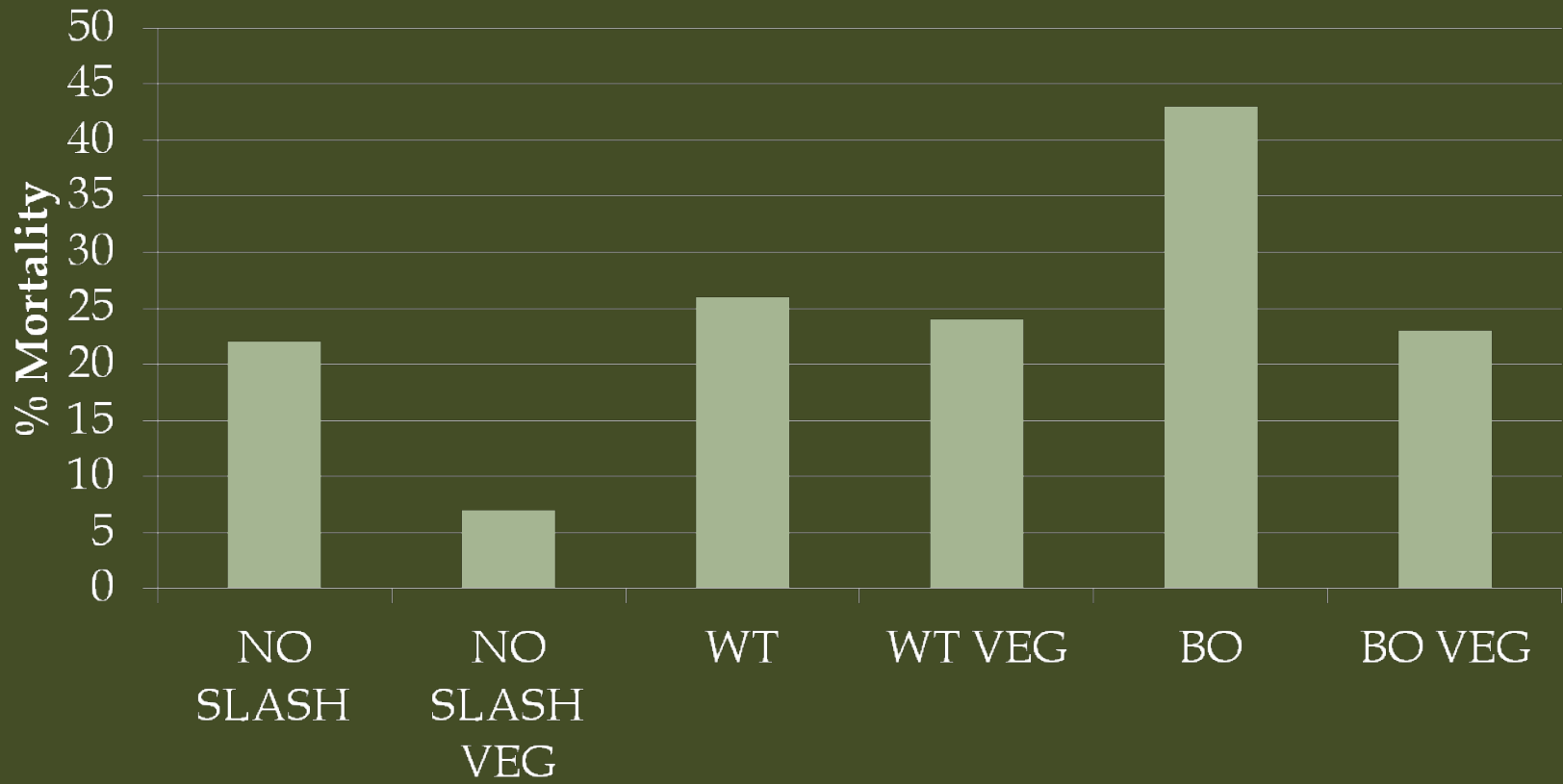
■ 0-1/4"  
 ■ 1/4-1"  
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 ■ >3"













- ▣ Finish Establishment
- ▣ Total Biomass (Carbon) and Nutrient Budget
- ▣ Surface Soil and Resin Capsule Nutrient Assessment
- ▣ Long Term Growth Productivity Assessment
- ▣ Soil-Site Disturbance Assessment