



2012 Sorghum Variety Evaluation

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Introduction

- Corn sensitive to high temperature and drought
- Forage sorghum more drought tolerant
 - Higher water use efficiency
- Milk production has been lower with conventional forage sorghum cultivars
- BMR cultivars may increase milk production
- Seed cost is lower than corn
 - \$80 to 100/A for corn v/s \$15 to 20/A for sorghum



Materials and Methods

- Trial conducted at Virginia Tech's Southern Piedmont AREC, Blackstone, VA
- Four forage sorghum cultivars no-tilled into small grain cover crop on June 1, 2012
 - Strips were 20 ft wide and 250 ft long
 - Row spacing 30 in
- Random complete block with 2 reps
- Immediately sprayed with Gramoxone, Dual II Magnum, and Atrazine
- Applied 100 lb/A N and K₂O on June 4, 2012

Materials and Methods

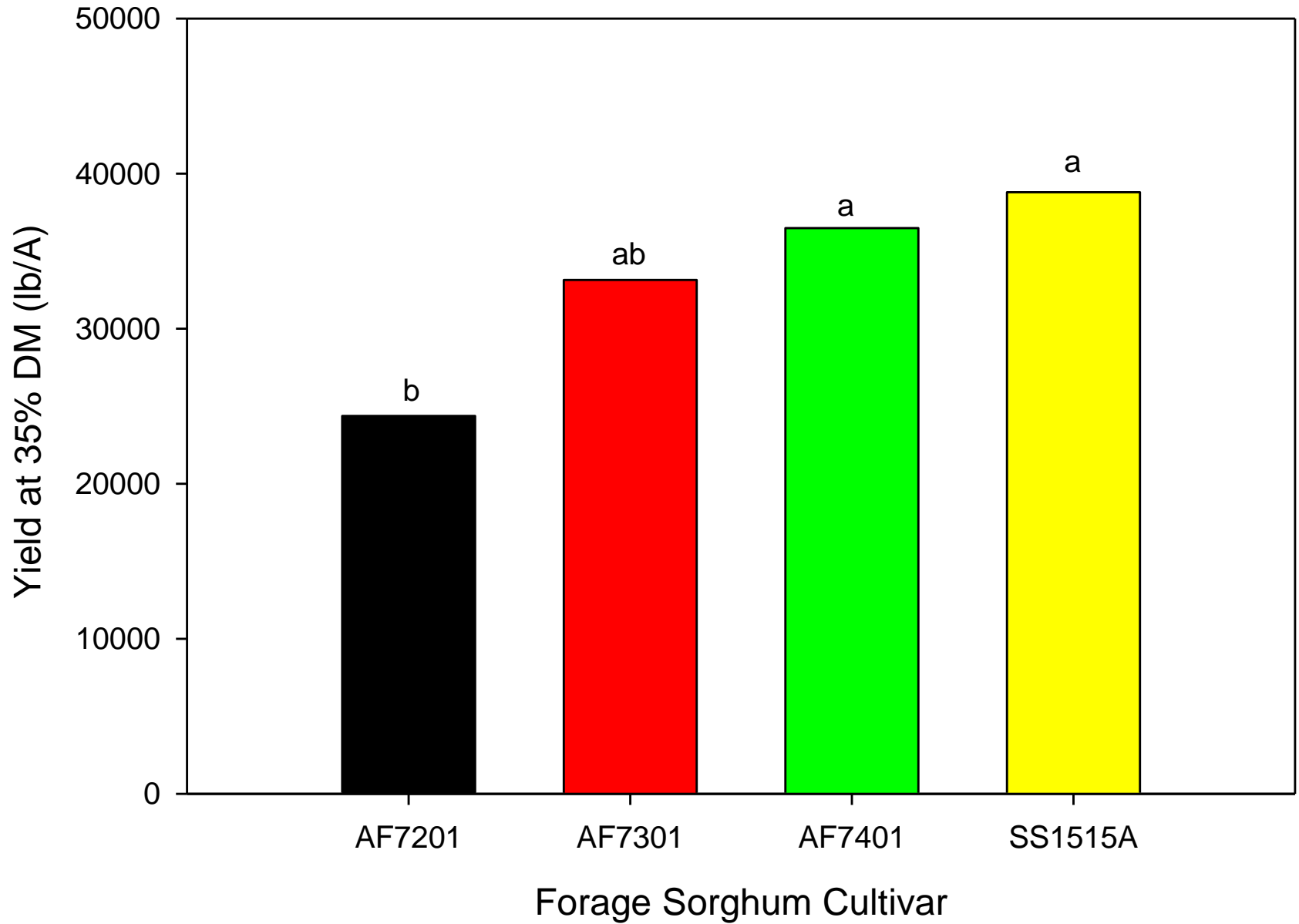
- Harvested at the soft dough stage
 - Cut four 10 ft row sections at four random locations in each strip
 - Selected three representative plants and separated into leaf, stalk, and seedhead
 - Chopped forage using a chipper-shredder
 - Subsampled chopped forage for DM and nutritive value
 - Made six 1-gal minisilos
 - All fresh samples were dried at 140 F for 3-5 days

Cultivar Information

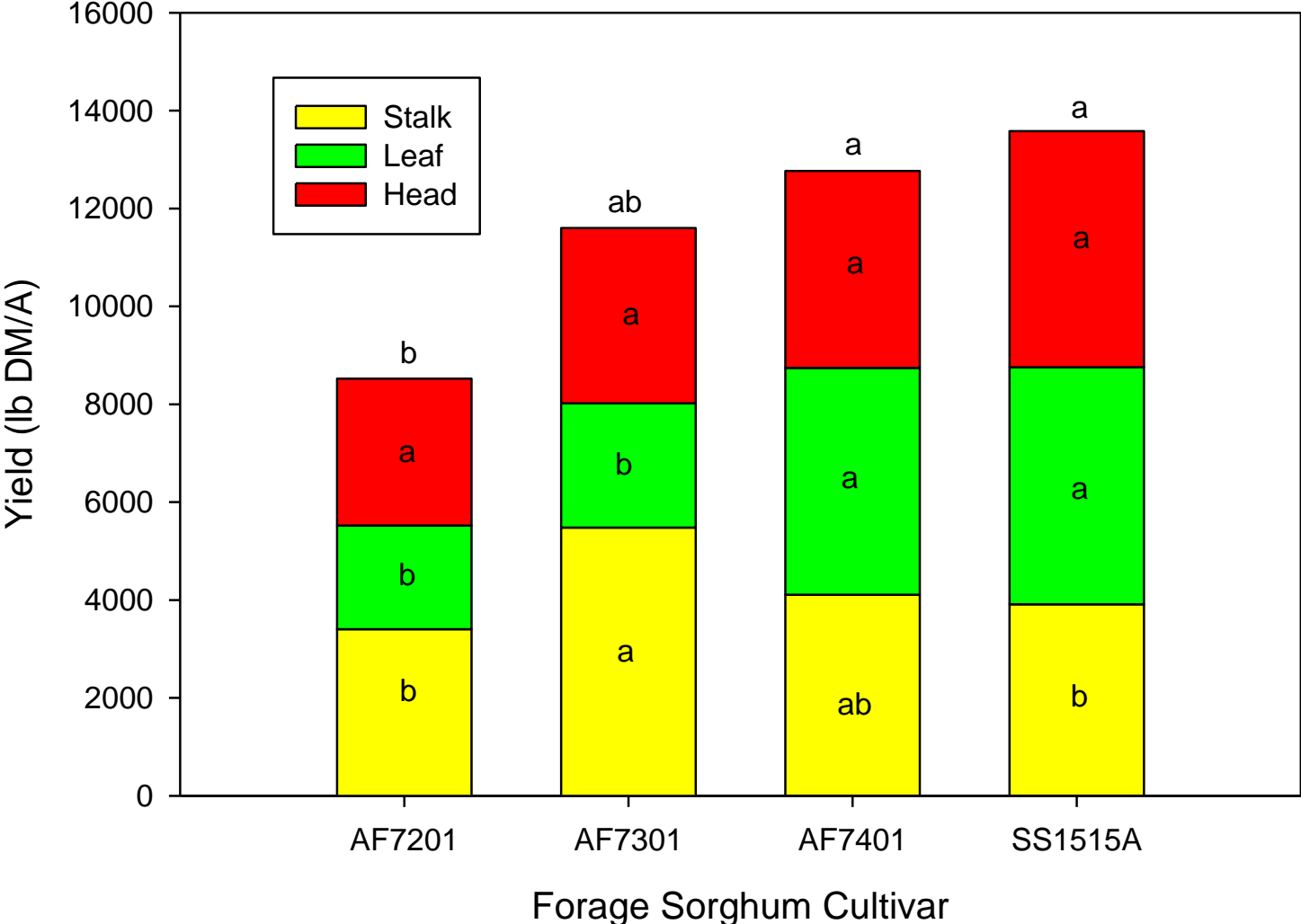
Cultivar	BMR trait	Maturity (days)	Harvest date	Days to harvest	Growth stage	Lodging
AF7201	BMR-6	95	9-14-12	105	Soft Dough	Slight
AF7301	BMR-6	105	9-26-12	117	Soft Dough	None
AF7401	BMR-6	115	10-12-12	133	Late Milk	None
SS1515A	Non-BMR	110	9-26-12	117	Soft Dough	None



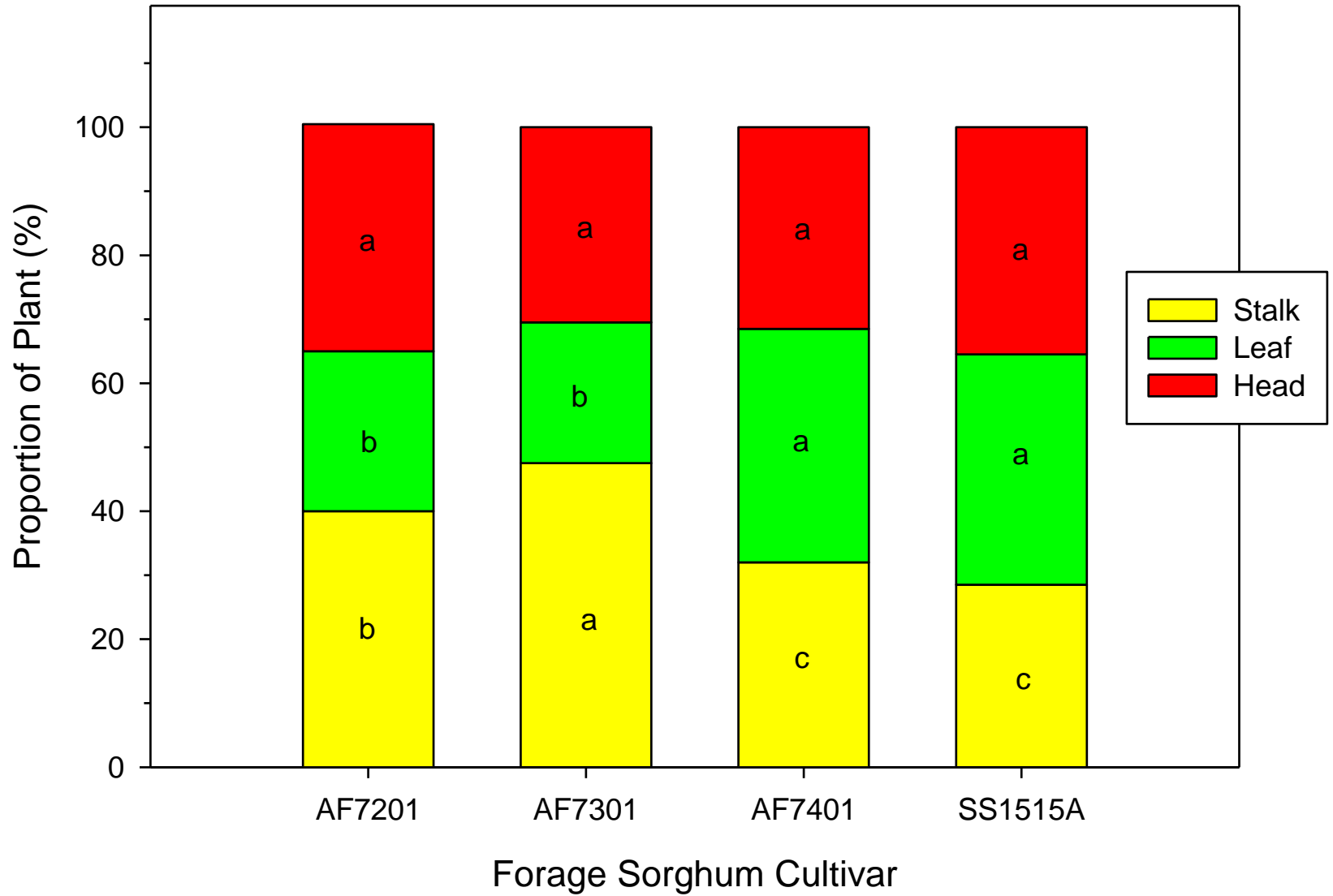
Adjusted Yield in 2012



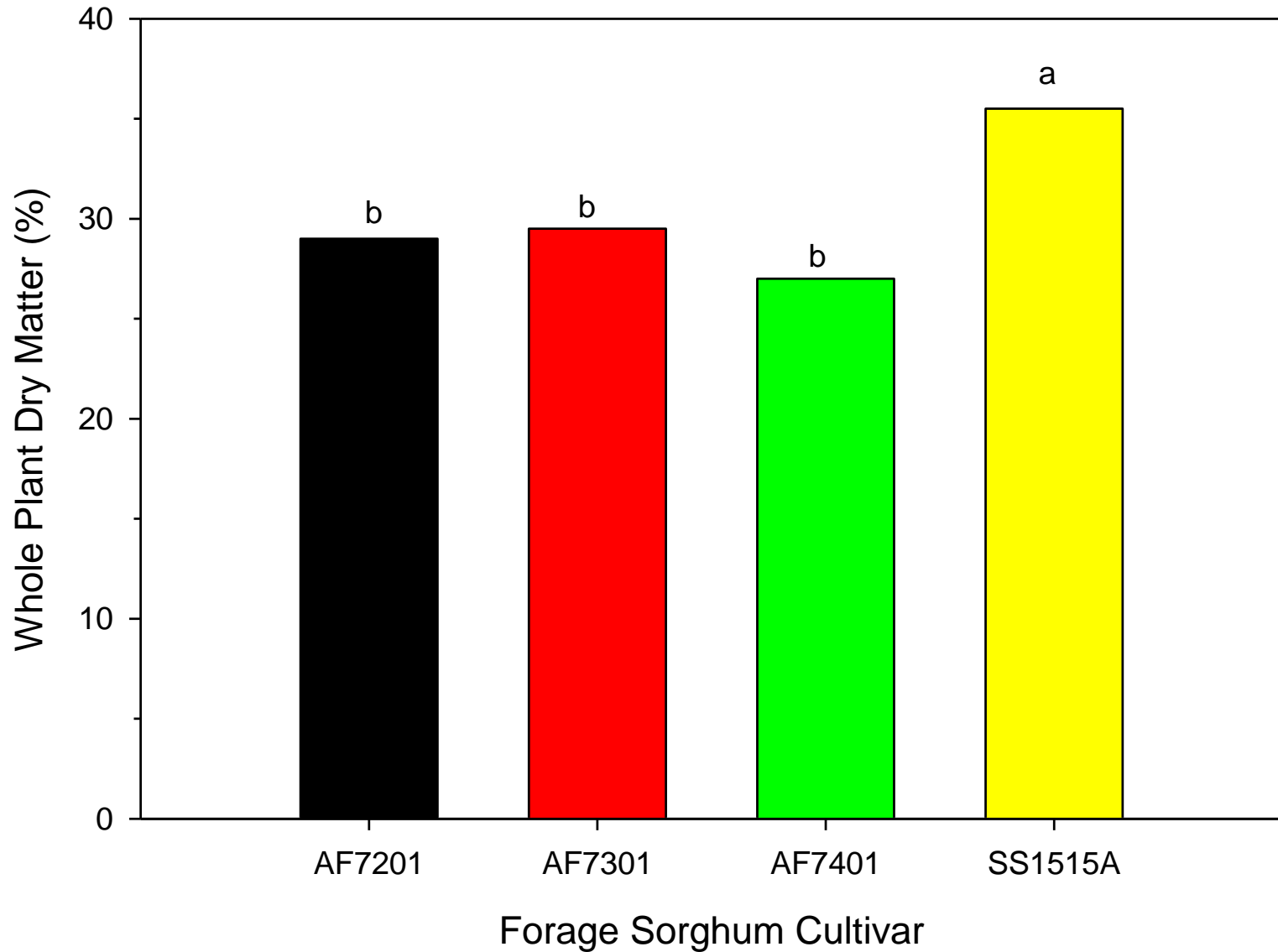
Dry Matter Yield in 2012



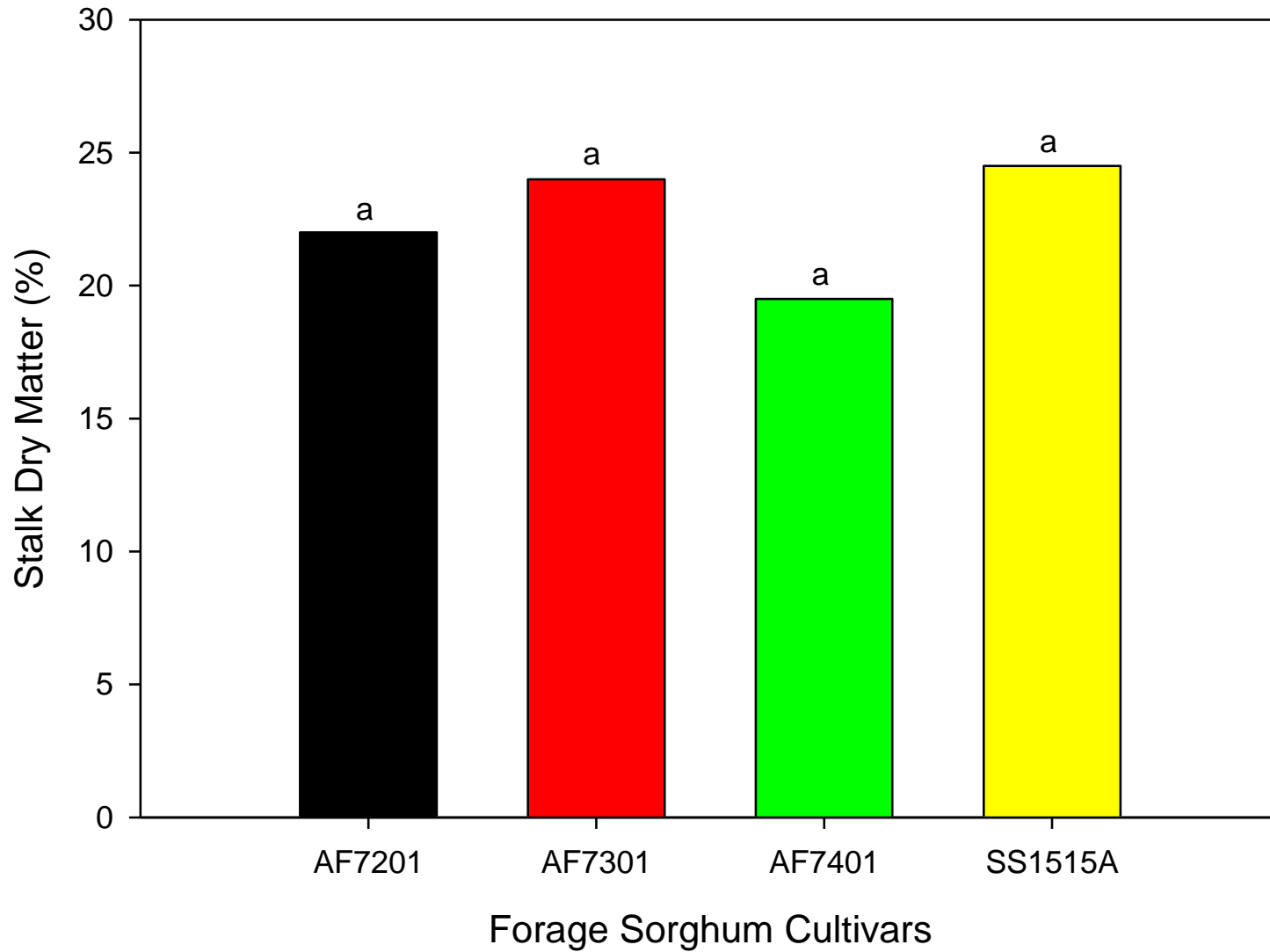
Plant Composition in 2012



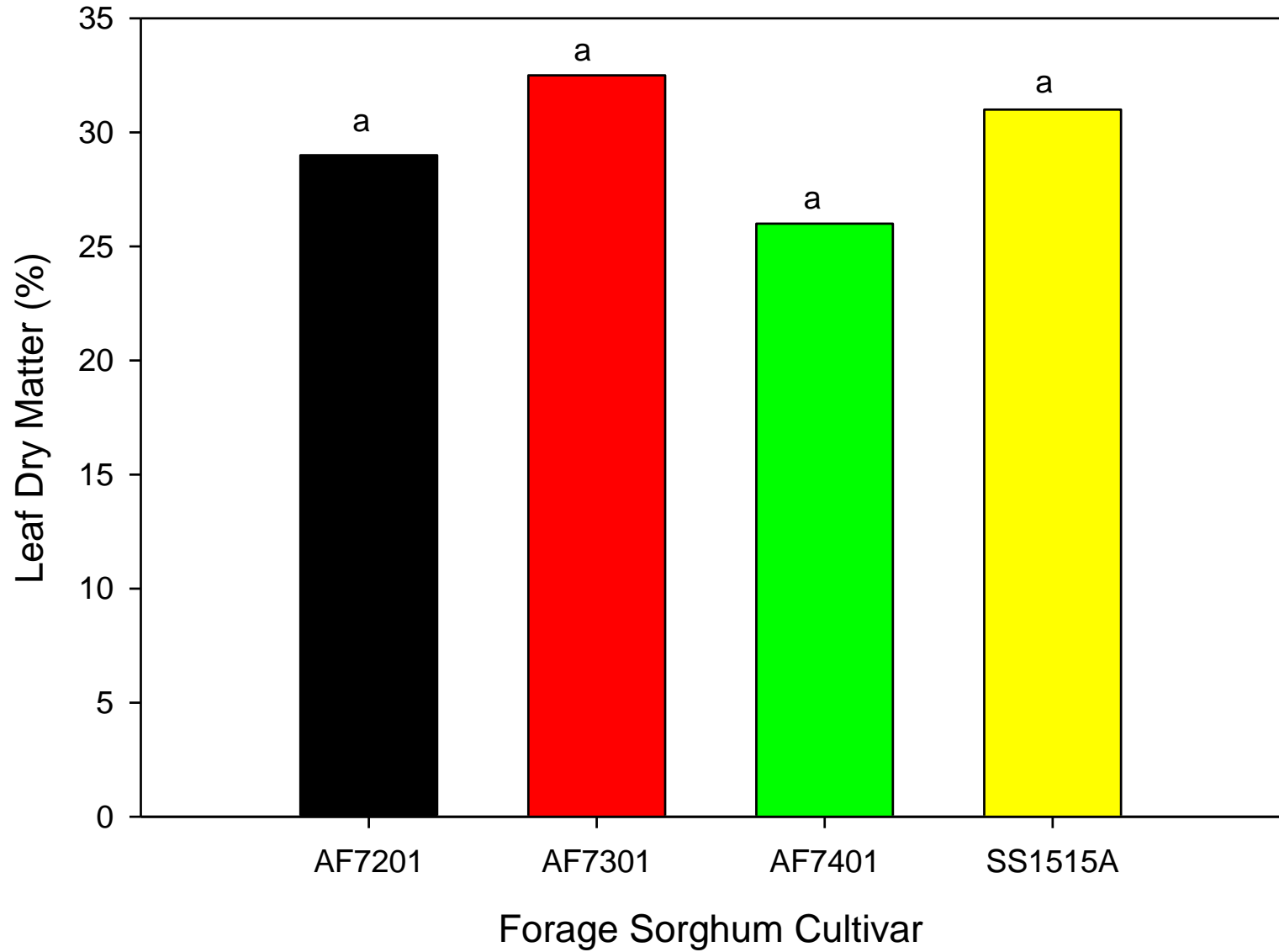
Whole Plant DM in 2012



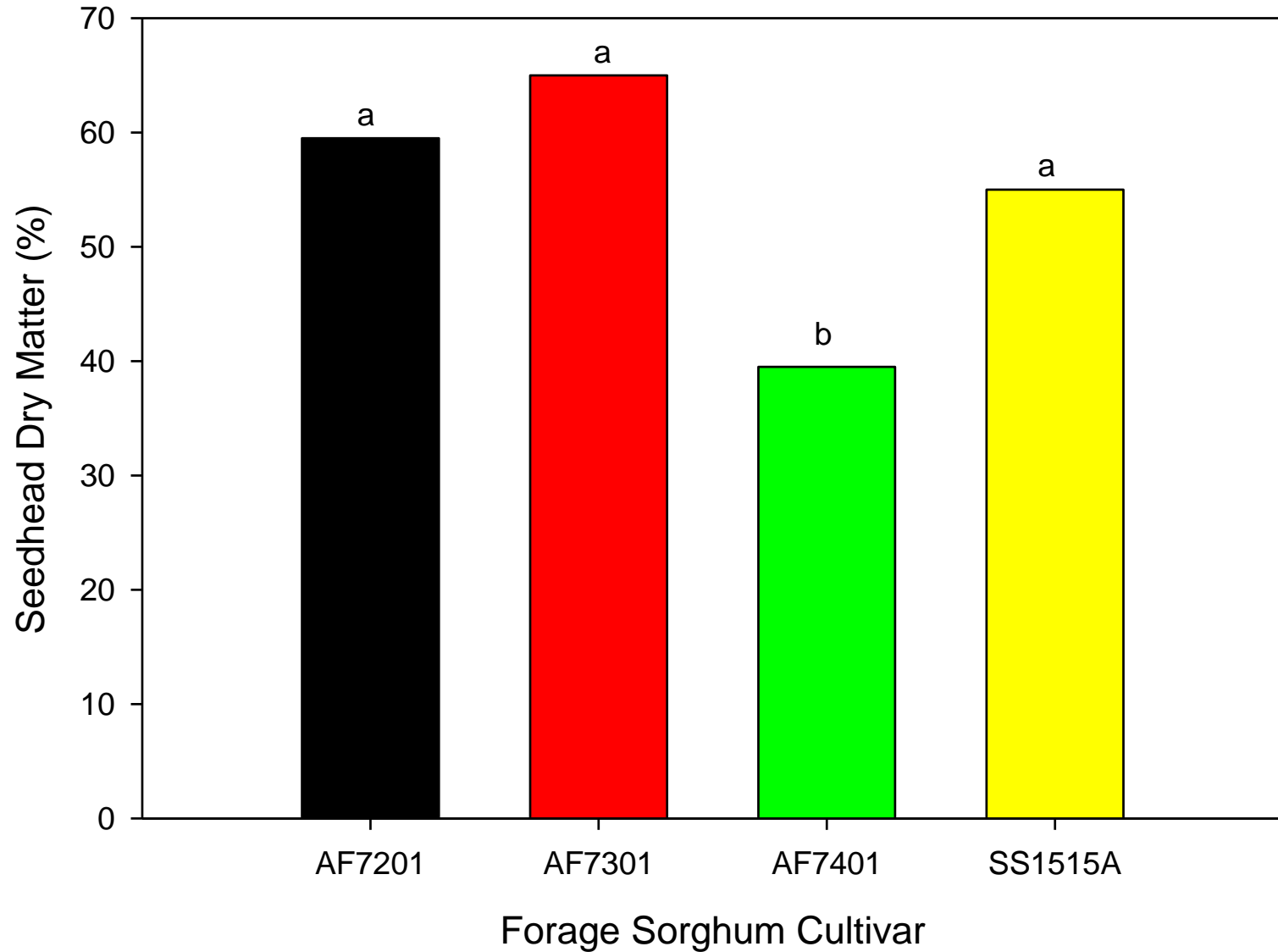
Stalk Dry Matter in 2012



Leaf Dry Matter in 2012



Seedhead Dry Matter in 2012



Summary of Results

- Adjusted yield ranged from 12 to 19.5 ton/A
- Average for the 2012 Corn Silage Variety Evaluation held at SPAREC was 6.1 ton/A
- Varieties with dwarf trait yielded the highest
- SS1515A and AF7401 appeared to be less susceptible to lodging
- Varieties with the dwarf trait had a higher proportion of leaves and a lower proportion of stalks
- Whole plant dry matter at harvest was highest for the conventional dwarf variety