

Corn Stover

REFERENCE MATERIAL

Pedigree

Location: Hugoton, KS
 Institution: Mid America Cattle Co.
 Harvested: 2015

Variety: Pioneer P1151AMX
 Harvest Method: Field chopped
 Ensiling Method: Stored in a silage pile

Proximate, Ultimate & Calorimetry

Table 2. Proximate, ultimate, and calorific values for Reference Corn Stover (reported on a dry basis; completed 5/2016)

Proximate ^a			Ultimate ^b					Calorimetry ^c	
%Volatile	%Ash	%Fixed Carbon	%Hydrogen	%Carbon	%Nitrogen	%Oxygen	%Sulfur	HHV	LHV
68.55	13.03	18.42	5.16	41.62	0.85	39.26	0.09	7203.35	5939.98

^aProximate analysis was done according to ASTM D 5142-09

^bUltimate analysis was conducted using a modified ASTM D5373-10 method (Flour and Plant Tissue Method) that uses a slightly different burn profile. Elemental sulfur content was determined using ASTM D4239-10, and oxygen content was determined by difference

^cHeating values (HHV, LHV) were determined with a calorimeter using ASTM D5865-10

Elemental Ash

Table 3. Elemental ash composition^a of Reference Corn Stover (completed 7/2016)

%Al as Al ₂ O ₃	%Ca as CaO	%Fe as Fe ₂ O ₃	%K as K ₂ O	%Mg as MgO	%Mn as MnO	%Na as Na ₂ O	%P as P ₂ O ₅	%Si as SiO ₂	%Ti as TiO ₂	%S as SO ₃
3.73	4.21	2.25	15.26	2.85	0.10	0.89	1.64	65.24	0.20	1.59

^aDetermined as described in ASTM standards D3174, D3682 and D6349

Contact

For questions regarding biomass material or analytical data please contact Amber Hoover at amber.hoover@inl.gov or 208-526-5992.

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Revised on 11/29/2016.