

Accepted Manuscript

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PII: S0960-8524(14)00626-9
DOI: <http://dx.doi.org/10.1016/j.biortech.2014.04.086>
Reference: BITE 13382

To appear in: *Bioresource Technology*

Received Date: 25 January 2014
Revised Date: 23 April 2014
Accepted Date: 26 April 2014



Please cite this article as: Li, M., Feng, S., Wu, L., Li, Y., Fan, C., Zhang, R., Zou, W., Tu, Y., Jing, H-C., Li, S., Peng, L., Sugar-rich sweet sorghum is distinctively affected by wall polymer features for biomass digestibility and ethanol fermentation in bagasse, *Bioresource Technology* (2014), doi: <http://dx.doi.org/10.1016/j.biortech.2014.04.086>

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Sugar-rich sweet sorghum is distinctively affected by wall polymer features for biomass digestibility and ethanol fermentation in bagasse

Meng Li^{a,b,c,†}, Shengqiu Feng^{a,b,c,†}, Leiming Wu^{a,b,c}, Ying Li^{a,b,c}, Chunfen Fan^{a,b,c}, Rui Zhang^{a,b,d}, Weihua Zou^{a,b,c}, Yuanyuan Tu^{a,b,c}, Hai-Chun Jing^e, Shizhong Li^f, Liangcai Peng^{a,b,c,d,*}

^aNational Key Laboratory of Crop Genetic Improvement, Huazhong Agricultural University, Wuhan 430070, China.

^bBiomass and Bioenergy Research Centre, Huazhong Agricultural University, Wuhan 430070, China.

^cCollege of Plant Science and Technology, Huazhong Agricultural University, Wuhan 430070, China.

^dCollege of Life Science and Technology, Huazhong Agricultural University, Wuhan 430070, China.

^eInstitute of Botany, Chinese Academy of Sciences, Beijing 100093, China.

^fInstitute of Nuclear and New Energy Technology, Tsinghua University, Beijing 100084, China.

*Corresponding author: E-mail: lpeng@mail.hzau.edu.cn; liangcaipeng@gmail.com
Tel: 86 27 87281765; Fax: 86 27 87280016.

[†]Authors contributed equally.

Abstract

Sweet sorghum has been regarded as a typical species for rich soluble-sugar and high lignocellulose residues, but their effects on biomass digestibility remain unclear. In this study, we examined total 63 representative sweet sorghum accessions that displayed a varied sugar level at stalk and diverse cell wall composition at bagasse. Correlative analysis showed that both soluble-sugar and dry-bagasse could not significantly affect lignocellulose saccharification under chemical pretreatments. Comparative analyses of five typical pairs of samples indicated that DP of crystalline cellulose and arabinose

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