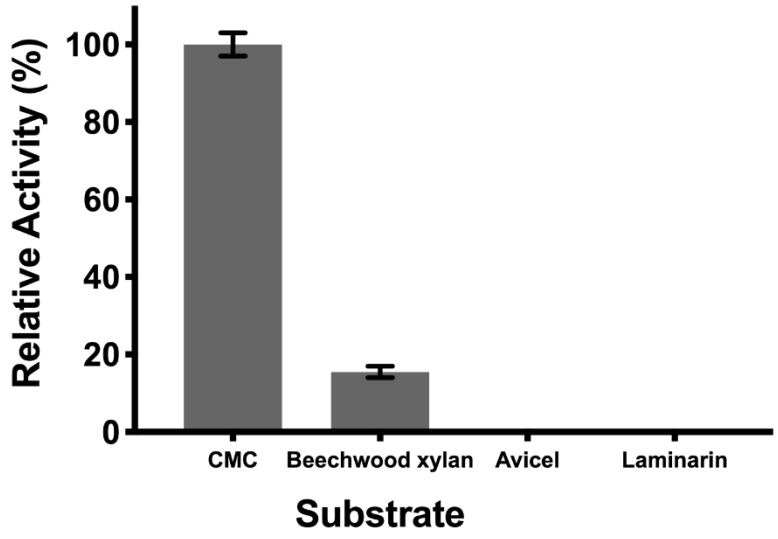

Figure.S1. Effect of substrate on the activity of purified TtCel7A. The activity was assayed using CMC, **Beechwood** xylan, Avicel, or Laminarin at a final concentration of 0.6 % (w/v) in 50 mM acetate buffer, pH 5.5 at 60 ºC.

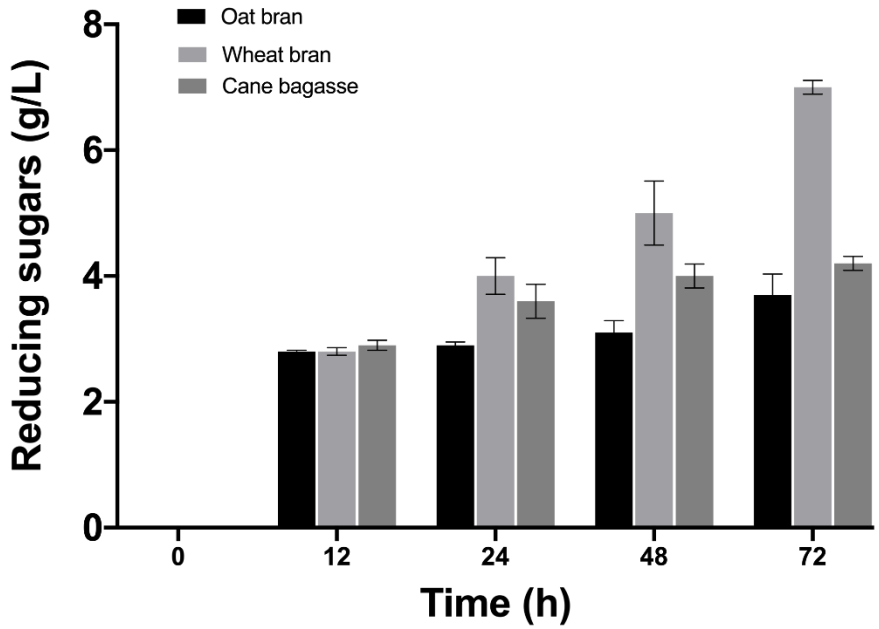

Figure. S2. Reducing sugars released from Oat bran, Wheat bran, or Cane bagasse after incubation with purified TtCel7A (30 mg/mL).

MHAKFAT**LAALVA**SAAA**QQACTLTAENHPTLSWSKCTSGGSCTSVSGAVTIDANWR**WTHQVSSSTNCYTG
NEWDTSICTDGASCAAACCLDGADYSGTYGITTSGNALSLQFVTQGPYSTNIGSRTYLMASDTQYQTFTL
LGNEFTFDVDVSGLGCGLNGALYFVSMDADGGLSKYSGNK**AGAKYGTGYCDSQCPR**DLKFI**NGEANNVGW
TPSSNDK**NAGLGNYGSCCSEMDVWEANSISAAYTPHPCTTIGQTRCEGDACGGTYSTDR**YAGECDPDGCD
FNSYR**MGNTTFYGKGLTVDTSK**KFTVVTQFLTDSSGNLSEIKRFYVQNGVVIPNSNSNIAGVSGNSITQA
FCDAQKTAFGDTNVFDQK**GGLAQMGKALAQPMVLVMSLWDDHAVNMLWLDSTYPTDAAGKPGAAR**GTCPT
TSGVPADVESQAPNSKVIYSNIR**FGPIGSTVSGLPGGGSNPGGGSSSTTTRTSTTTRTTTSSSAGTSPTG
GTAPHWGQCGGIGWTGPTVCASPYTCQK**LNDWYYQCL**

Figure. S3. Amino acid sequence of TtCel7A from *T. terrestris* Co3Bag1 (Accession number: AQM74408). Peptides obtained by amino acid partial sequencing of purified TtCel7A by MS/MS are highlighted in blue. The amino acid sequence used for primer design are underline.

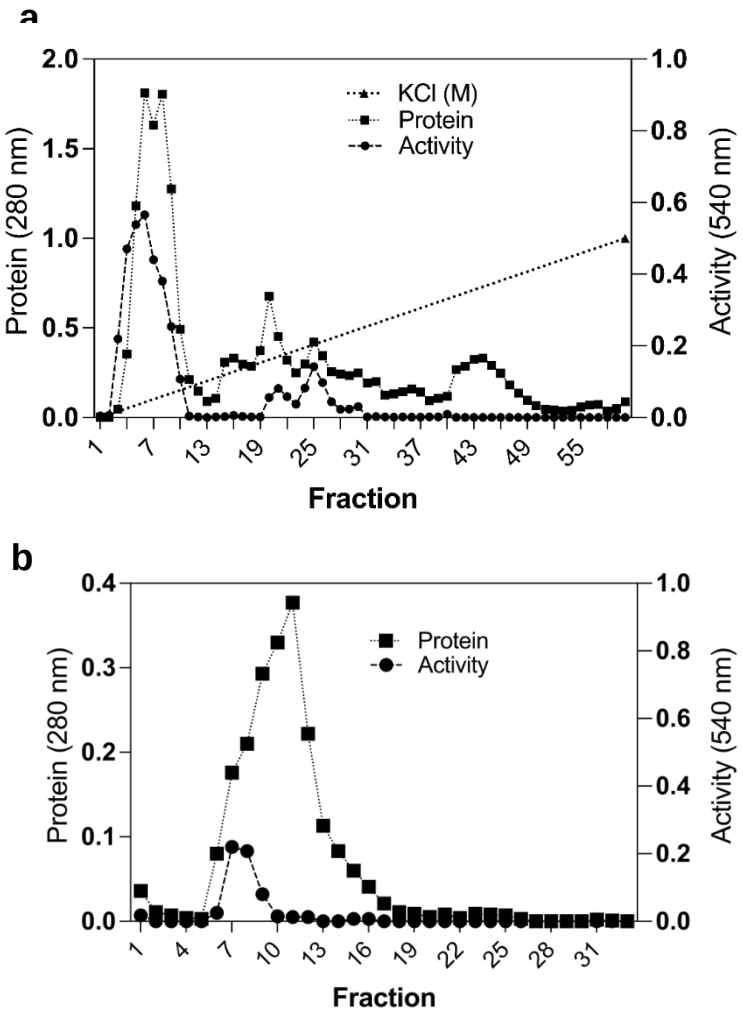

Figure. S4. (**a**) Anion Exchange Chromatography of Cel7A purification. A gradient of 0.0 to 1M of KCl was used for protein elution. Fractions between 19 and 31 section were pooled for the next purification step. (**b**) Gel filtration Chromatography purification, 50 mM acetate buffer, pH 5.5 was used for protein elution, fractions with enzymatic activity were used for further studies. (■) protein 280 nm, (●) enzyme activity 540 nm, (▲) KCl concentration.

Table S1. Primers used for DNA sequencing of Ttcel7A gene

Primer 1: 5´-GACCCTCGCCGCCCTTGTGG-3’
Primer 2: 5´-SRCYCTCGCCGCCCTYGTGG-3
Primer 3: 5’-TGCGACCCTGACGGATGCGAC-3’
Primer 4: 5´-TGCGACCCYGAYGGMTGCGAC-3´
Primer 5: 5’-GAGGCACTGGTAGTACCAGTC-3’