

Supplementary Data

Cassava Bagasse as a Low-Cost Substrate for Cellulase and Organic Acid Production using Co-Cultivated Fungi

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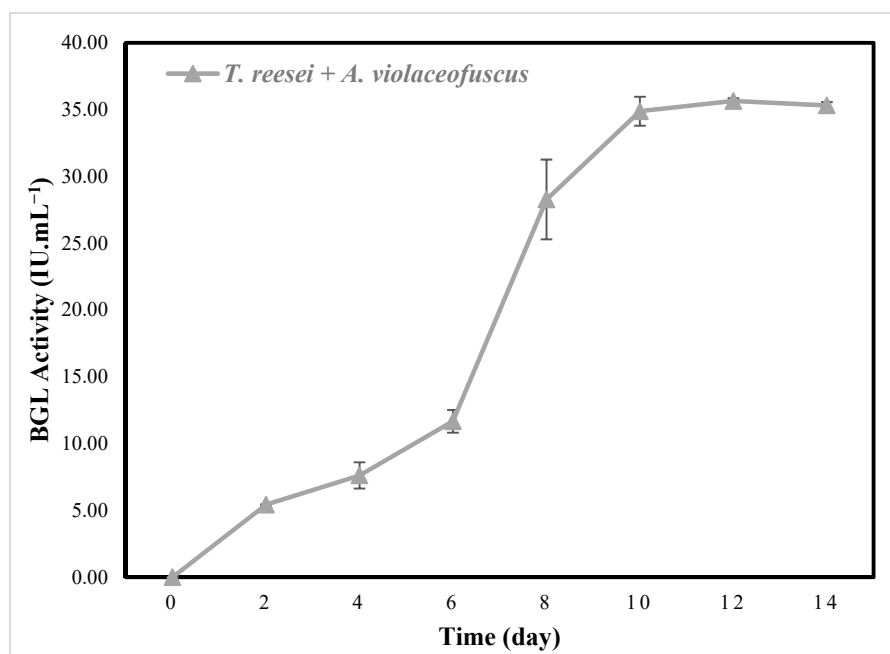


Figure S1. BGL production from *Trichoderma reesei* RUT-C30 and *Aspergillus violaceofuscus* co-cultivation under SMF using avicel PASC substrate. All experiments were performed in duplicate, and error bars indicate the standard deviation.

Table S1. List of fungal isolates and their cellulase enzymatic indices on avicel PASC substrate.

Number	Isolate code	Fungi	Cellulase enzymatic index
1	FI-01	<i>Aspergillus niger</i>	1.74 ± 0.04 ^a
2	FI-02	<i>Penicillium</i> sp.	1.07 ± 0.02 ^{de}
3	FI-03	<i>Penicillium</i> sp.	1.12 ± 0.03 ^{cde}
4	FI-04	<i>Aspergillus niger</i>	1.34 ± 0.20 ^b
5	FI-05	<i>Penicillium sumatraensis</i>	1.00 ± 0 ^e
6	FI-06	<i>Penicillium</i> sp.	1.22 ± 0.02 ^{bcd}
7	FI-07	<i>Aspergillus aculeatus</i>	1.13 ± 0.06 ^{cde}
8	FI-08	NI	ND
9	FI-09	NI	ND
10	FI-10	NI	ND
11	FI-11	<i>Aspergillus aculeatus</i>	1.24 ± 0.07 ^{bcd}
12	FI-12	NI	ND
13	FI-13	NI	ND
14	FI-14	NI	ND
15	FI-15	<i>Aspergillus violaceofuscus</i>	1.31 ± 0.04 ^{bc}
16	FI-16	NI	ND
17	FI-17	<i>Aspergillus oryzae</i>	1.07 ± 0 ^{de}
18	FI-18	NI	ND
19	FI-19	NI	ND
20	FI-20	<i>Aspergillus aculeatus</i>	1.23 ± 0.08 ^{bcd}
21	FI-21	NI	ND
22	FI-22	NI	ND
23	FI-23	NI	ND
24	-	<i>Trichoderma reesei</i> RUT-C30	1.11 ± 0.06 ^{cde}

The analysis was carried out in triplicate. Different letters indicate statistically significant difference in means based on Tukey's HSD at a 95% confidence level. NI: Not Identified; ND: Not Detected.

Table S2. Cellulase activity of monocultures and mixed-cultures under SMF using avicel PASC substrate.

Organism	¹ BGL (IU.gds ⁻¹)
<i>Trichoderma reesei</i> RUT C-30 (TR)	1.83 ± 0.142
<i>Aspergillus violaceofuscus</i> (AV)	28.48 ± 0.295
<i>Aspergillus niger</i> (AN)	29.15 ± 4.22
Mixed culture (TR+AV)	39.73 ± 3.910
Mixed culture (TR+AN)	31.21 ± 6.20
Mixed culture (AV+AN)	30.90 ± 4.11

¹Enzyme activity analysis was carried out in triplicate.