

Supplementary Table 1. Pretreatment collection and measurements for experiment.

Sample	Origin	Measurement	Temperature heated (°C)	Time treated (hrs)
Maize	Alps test plant	g	-	-
Rye	Alps test plant	g	-	-
Maize + cavitation	Alps test plant	g/L	80°C	48
Rye + cavitation	Alps test plant	g/L	80°C	48
Maize + BOC	Oxford laboratory	g/μl	-	48
Rye + BOC	Oxford laboratory	g/μl	-	48
Maize + cavitation + BOC	Alps test plant	g/L	80°C	48
Rye + cavitation + BOC	Alps test plant	g/L	80°C	48
Maize + heat (80°C)	Oxford laboratory	g/L	80°C	48
Rye + heat (80°C)	Oxford laboratory	g/L	80°C	48
Maize + heat (80°C) + BOC	Oxford laboratory	g/L/μl	80°C	48
Rye + heat (80°C) + BOC	Oxford laboratory	g/L/μl	80°C	48
Maize + heat (55°C)	Oxford laboratory	g/L	55°C	48
Rye + heat (55°C)	Oxford laboratory	g/L	55°C	48

Supplementary Table 2. 1-way ANOVA results of SCOD & biomethane results from two agricultural feedstocks.

Variable/Figure	Analysis	Transform	Treatment, error DF	F	<i>P</i> value
SCOD, maize 1a	1-way ANOVA – pretreatment	no	6, 14	31.8	<0.000001
SCOD, rye 1b	1-way ANOVA – pretreatment	no	6, 14	6.368	0.002105
Biomethane, maize 4a	1-way ANOVA – pretreatment	no	6, 13	28.4	<0.0001
Biomethane, rye 4b	1-way ANOVA - pretreatment	no	6, 11	6.333	-0.0043