

Supplementary Materials

Table S1. Elemental content of diatomaceous earth (DE and peat (P).

Material	N (%)	C (%)	H (%)	S (%)	O (%)
DE	-	-	-	-	49.16
P	2.55	53.25	6.01	0.13	23.18

DE: diatomaceous earth, P: peat

Figure S1a shows the nitrogen adsorption/desorption isotherms of the constituent materials of the DEP carrier material used in this paper, namely diatomite (DE) and pure peat. The volume of N₂ adsorbed by the DE material was much higher than for peat, at about 55 cm³ g⁻¹ STP, while for peat it was only 2.7 cm³ g⁻¹ STP. The rapid increase in gas volume shown in Figure S1a occurred above the relative pressure p/p_0 value of 0.8. The curves presented in Figure S1b show pore size distribution also for DE material and peat.

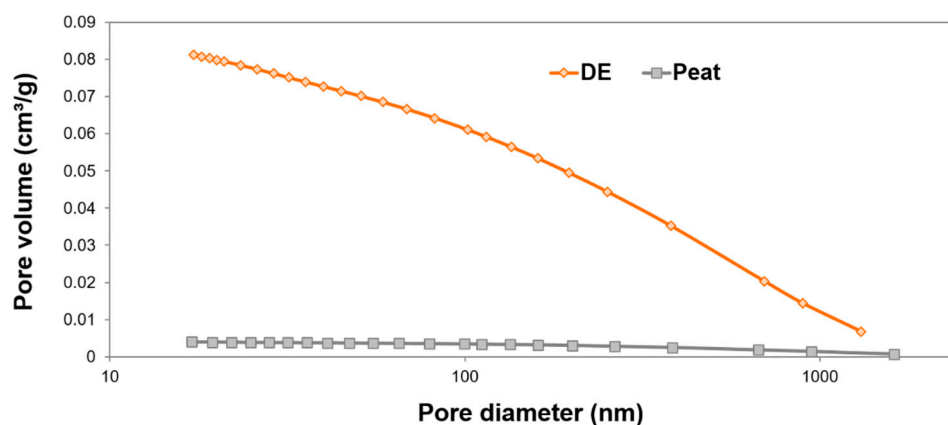
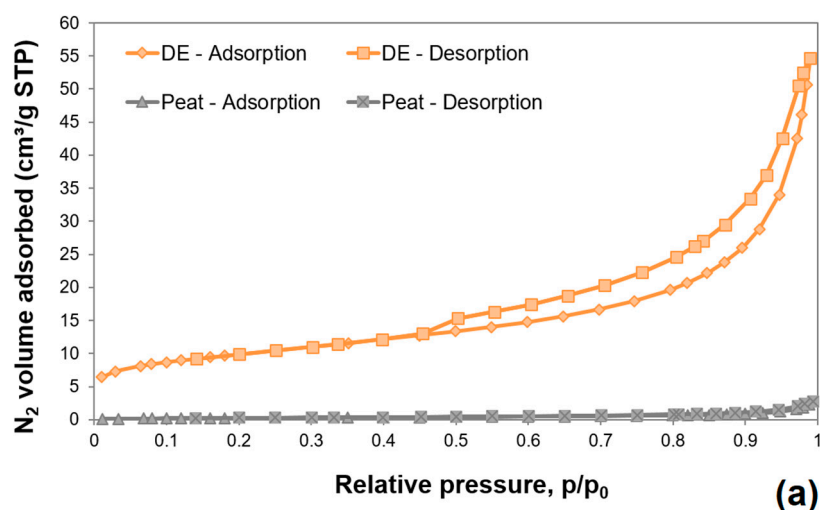


Figure S1. (a) N₂ adsorption/desorption isotherms and (b) pore size distribution of the diatomaceous earth (DE) and peat.

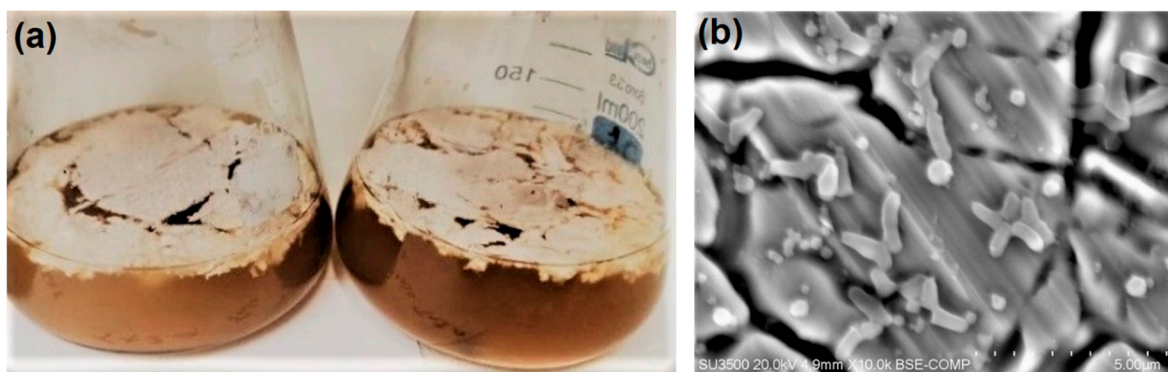


Figure S2. (a) A *Bacillus amyloliquefaciens* culture with the diatomaceous earth/peat system, (b) SEM image of cell *B. amyloliquefaciens* colonisation.

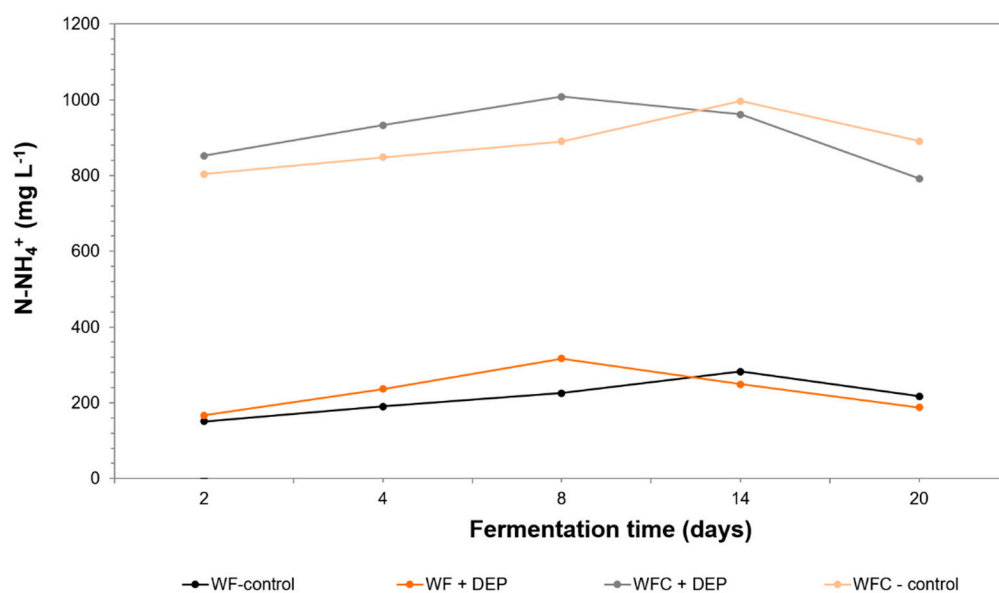


Figure S3. Changes in the N-NH_4^+ during the anaerobic digestion of the WF-control, WF+DEP, WFC-control and WFC+DEP samples.