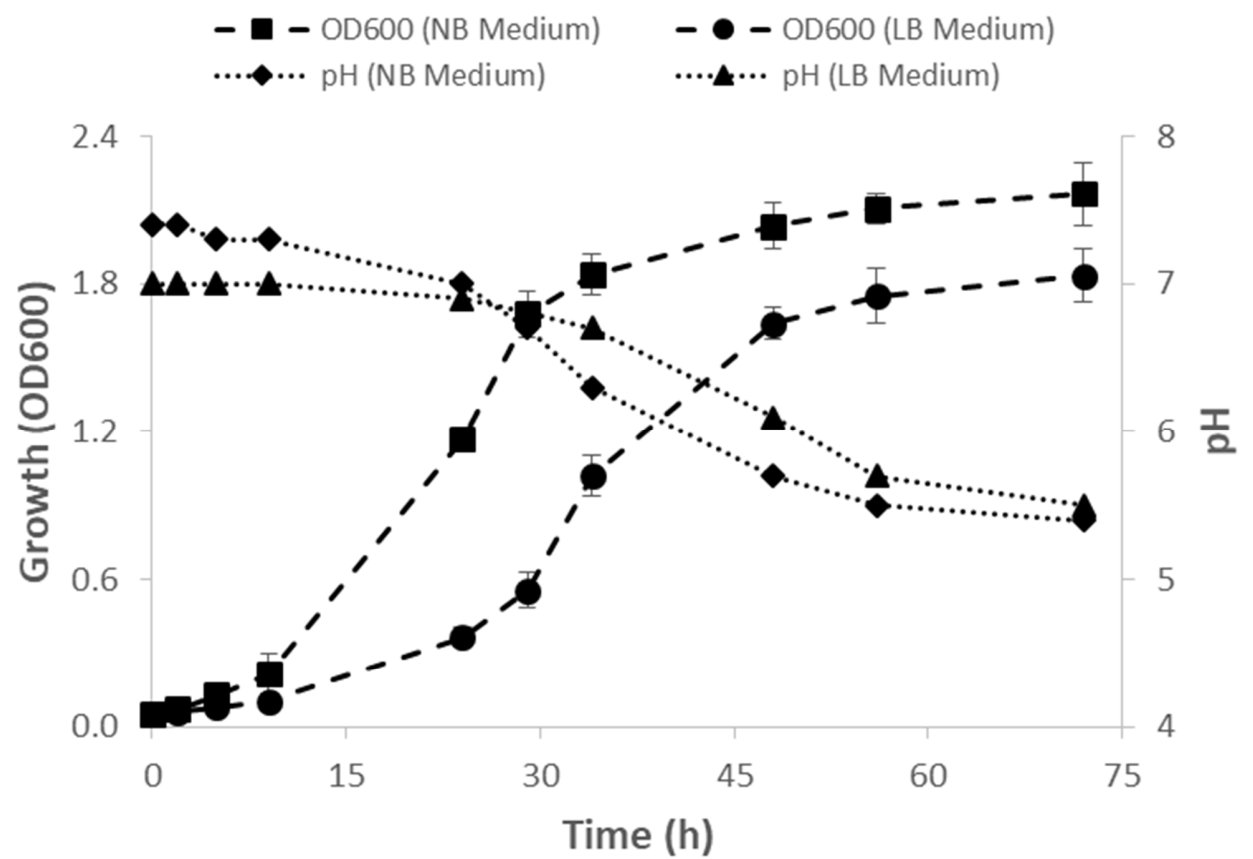


**Supplimentary Figure S1.** Neighbour joining phylogenetic tree of *Bacillus* sp. ZV16.



**Supplementary Figure S2.** Growth of *Bacillus* sp. ZV16 in Nutrient Broth and LB broth media, and its impact on pH.

**Supplementary Table S1.** Properties of leaf manure (LM) and animal manure (AM).

Properties	Leaf Manure (LM)		Animal Manure (AM)	
	Values	Units	Values	Units
<b>Organic carbon (OC)</b>	4.82	%	3.17	%
<b>Total N</b>	1.31	%	0.88	%
<b>Total P</b>	0.58	%	0.22	%
<b>Total K</b>	1.68	%	0.97	%
<b>OM</b>	8.31	%	5.41	%
<b>Total sulfur</b>	0.47	%	0.21	%
<b>Fe</b>	3820	mg kg <sup>-1</sup>	1237	mg kg <sup>-1</sup>
<b>Zn</b>	703	mg kg <sup>-1</sup>	345	mg kg <sup>-1</sup>
<b>Mn</b>	1631	mg kg <sup>-1</sup>	487	mg kg <sup>-1</sup>
<b>Cu</b>	31.2	mg kg <sup>-1</sup>	7.2	mg kg <sup>-1</sup>
<b>Na</b>	0.29	mg kg <sup>-1</sup>	0.14	mg kg <sup>-1</sup>
<b>Ca</b>	5.26	%	1.13	%
<b>Mg</b>	0.67	%	0.19	%
<b>pH (H<sub>2</sub>O)</b>	8.2	–	8.0	–
<b>EC</b>	2.31	dS m <sup>-1</sup>	1.05	dS m <sup>-1</sup>
<b>CEC</b>	6.13	cmol <sub>c</sub> kg <sup>-1</sup>	2.24	Cmol <sub>c</sub> kg <sup>-1</sup>