

Table S1. Effects of tillage, depth and their interaction on soil physicochemical property, root length density and bacterial alpha diversity index.

Item	Tillage	Depth	Interaction
TN	**	ns	ns
NH ₄ -N	***	***	***
NO ₃ -N	***	***	***
TOC	***	*	***
VWC	***	***	***
pH	***	***	ns
C/N	ns	ns	ns
SC	***	***	***
RLD	***	***	ns
Chao1	***	***	***
Shannon	**	***	**
Simpson	**	***	ns

Tillage method: rotary tillage (RT), subsoiling-rotary tillage (ST); depth level: 0~10 cm, 10~20 cm. Root length density (RLD) means RLD selected from flowering period. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, ns: not significant difference.