

Table S1. Effects of planting pattern and phosphorus application on topsoil mechanical aggregate.

Treatment	>2		2-1		1-0.5		0.5-0.25		<0.25	
	<i>F</i>	<i>P</i>								
P level	63.6	***	0.9	ns	18.2	***	46.8	***	21.0	***
Planting pattern	43.0	***	80.4	***	8.1	***	76.6	***	187.2	***
P level × Planting pattern	69.9	***	14.2	***	7.4	***	110.2	***	71.7	***

F: equality of variances; *P*: significant test. *Significant at $P < 0.05$. **Significant at $P < 0.01$. ***Significant at $P < 0.001$. ns: not significant. Data are presented as mean \pm standard error.

Table S2. Effects of planting pattern and phosphorus application on topsoil water-stable aggregate.

Treatment	>2		2-1		1-0.5		0.5-0.25		0.25-0.053		<0.053	
	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>
P level	33.0	***	97.8	***	4.4	*	9.2	**	10.1	**	191.1	***
Planting pattern	19.5	***	90.4	***	99.9	***	4.8	**	24.4	***	54.9	***
P level × Planting pattern	1.6	ns	0.3	ns	4.8	**	0.2	ns	6.0	**	3.0	ns

F: equality of variances; *P*: significant test. *Significant at $P < 0.05$. **Significant at $P < 0.01$. ***Significant at $P < 0.001$. ns: not significant. Data are presented as mean \pm standard error.

Table S3. Effects of planting pattern and phosphorus application on topsoil organic carbon concentration in aggregates.

Treatment	>2		2-1		1-0.5		0.5-0.25		<0.25	
	<i>F</i>	<i>P</i>								
P level	193.5	***	35.8	***	29.3	***	9.6	***	47.0	***
Planting pattern	100.3	***	96.1	***	42.3	***	3.6	***	8.9	***
P level × Planting pattern	11.7	***	28.2	***	36.9	***	8.8	***	11.4	***

F: equality of variances; *P*: significant test. *Significant at $P < 0.05$. **Significant at $P < 0.01$. ***Significant at $P < 0.001$. ns: not significant. Data are presented as mean \pm standard error.

Table S4. Effects of planting pattern and phosphorus application on topsoil organic carbon contribution rate in aggregates.

Treatment	>2		2-1		1-0.5		0.5-0.25		<0.25	
	<i>F</i>	<i>P</i>								
P level	5.6	*	15.1	***	0.5	ns	2.3	ns	4.1	ns
Planting pattern	50.6	***	7.7	***	20.2	***	70.4	***	161.3	***
P level × Planting pattern	39.8	***	2.0	ns	11.4	***	62.3	***	39.7	***

F: equality of variances; *P*: significant test. *Significant at $P < 0.05$. **Significant at $P < 0.01$. ***Significant at $P < 0.001$. ns: not significant. Data are presented as mean \pm standard error.