

**Table S1.** Total annual cost for each treatment

Year	Cost of each component	N <sub>G</sub>	A <sub>L</sub>	A <sub>G</sub>	A <sub>L+G</sub>	P <sub>L</sub>	P <sub>G</sub>	P <sub>L+G</sub>
2021	Annual fertilizer purchase expenditure (CNY/ha)	3011	3011	3011	3011	3011	3011	3011
	Annual seed purchase expenditure (CNY/ha)	0	600	1500	1470	190	400	413
	Annual labor employment cost (CNY/ha)	47000	57000	57000	57000	57000	57000	57000
	<b>Total input cost (CNY/ha)</b>	<b>50011</b>	<b>60611</b>	<b>61511</b>	<b>61481</b>	<b>60201</b>	<b>60411</b>	<b>60424</b>
2022	Annual fertilizer purchase expenditure (CNY/ha)	3011	3011	3011	3011	3011	3011	3011
	Annual seed purchase expenditure (CNY/ha)	0	600	1500	1470	0	0	0
	Annual labor employment cost (CNY/ha)	47000	57000	57000	57000	52000	52000	52000
	<b>Total input cost (CNY/ha)</b>	<b>50011</b>	<b>60611</b>	<b>61511</b>	<b>61481</b>	<b>55011</b>	<b>55011</b>	<b>55011</b>
2023	Annual fertilizer purchase expenditure (CNY/ha)	3011	3011	3011	3011	3011	3011	3011
	Annual seed purchase expenditure (CNY/ha)	0	600	1500	1470	0	0	0
	Annual labor employment cost (CNY/ha)	47000	57000	57000	57000	52000	52000	52000
	<b>Total input cost (CNY/ha)</b>	<b>50011</b>	<b>60611</b>	<b>61511</b>	<b>61481</b>	<b>55011</b>	<b>55011</b>	<b>55011</b>
2024	Annual fertilizer purchase expenditure (CNY/ha)	3011	3011	3011	3011	3011	3011	3011
	Annual seed purchase expenditure (CNY/ha)	0	600	1500	1470	0	0	0
	Annual labor employment cost (CNY/ha)	47000	57000	57000	57000	52000	52000	52000
	<b>Total input cost (CNY/ha)</b>	<b>50011</b>	<b>60611</b>	<b>61511</b>	<b>61481</b>	<b>55011</b>	<b>55011</b>	<b>55011</b>

Price of N, P and K fertilizer is 7.48, 8.32 and 8.67 CNY/kg. Price of *Avena sativa* L., *Vicia sativa* L., *Medicago sativa* L. and *Dactylis glomerata* L. is 12, 15, 38 and 40 CNY/kg.

**Table S2.** Value division of Shannon–Wiener index  $H$  grades.

The number	Shannon–Wiener index	Class of biodiversity	Unit value (CNY/ha)
1	$H < 1$	7	3000
2	$1 \leq H < 2$	6	5000
3	$2 \leq H < 3$	5	10000
4	$3 \leq H < 4$	4	20000
5	$4 \leq H < 5$	3	30000
6	$5 \leq H < 6$	2	40000
7	$\geq 6$	1	50000