Table S1 Detailed lists of crop inputs for organic and non-organic weed managements in different crop plots.

|  |
| --- |
| Details of Crop Inputs, amount ($ ha-1) |
| Content | Details | Price Schedules | H0T | H0T0 | HT | HT0 |
| Machine | Transportation organic compost “\*”“\*\*”Transportation biogas slurry “\*”“\*\*”Corn seeder “\*”Wheat seeder “\*”Combine harvester for wheat “\*”Combine harvester for corn “\*”Rotary tillage fare before winter crop seeding“\*” “\*\*”Plough for summer crops “\*”“\*\*”Solar energy light-traps depreciation costs “\*”“\*\*” | 3.23$ CAR-1 \*22.5 CAR ha-112.9 $ CAR-1, 9 CAR ha-169.2 $ ha-169.2 $ ha-1184.6 $ ha-1184.6 $ ha -1Mechanical rotary tillage, 121.05 $ ha-196.84 $ ha-1322.8 $ light-1, 1 light ha-1, 5 years for 1 light | 72,6116,269,269.2184,6184,6121,0596,8464,6 | 72,6116,269,269,2184,6184,6121,050,064,6 | 72,6116,269,269,2184,6184,6121,0596,840,0 | 72,6116,269,269,2184,6184,6121,050,00,0 |
| Irrigation  | Requirements for irrigation to government “\*” “\*\*” | 217.89 $ ha-1 | 436,0 | 436,0 | 436,0 | 436,0 |
| Labor | Composting “\*”“\*\*”Manual weeding “\*”“\*\*”Fertilizers application “\*”“\*\*”Spray herbicide “\*”“\*\*”Spray insecticide “\*”“\*\*”Drainage “\*”“\*\*”**Sowing** Soybean “\*\*”Garlic “\*\*”**Harvesting** Soybean “\*\*”Garlic“\*\*”**Irrigation**Corn “\*”Soybean“\*\*”Wheat “\*”Garlic“\*\*” | 2 labor ha-1, once a year15 labor ha-1, four times a year15 labor ha-1, once a year4 labor ha-1 , four times a year4 labor ha-1, twice a year4 labor ha-1, once a season15 labor ha-1, once a season15 labor ha-1, once a season18 labor ha-1, once a year18 labor ha-1, once a year9 labor ha -1 , once a quarter9 labor ha -1, once a quarter18 labor ha -1, twice a season27 labor ha -1 , thrice a season | 19,4145,2145,30,00,043,6174,3174,3173,3173,323,123,146,269,2 | 19,4145,2145,30,00,043,6174,3174,3173,3173,323,123,146,269,2 | 19,40,0145,372,643,643,6174,3174,3173,3173,323,123,146,269,2 | 19,40,0145,372,643,643,6174,3174,3173,3173,323,123,146,269,2 |
| Fertilizer | Organic fertilizers “\*”“\*\*”Biogas slurry “\*”“\*\*” | 7.5 t/ ha-1, 4.84$ m-160 cube ha-, 2.98$ m-3 | 363,2179 | 363,2179 | 363,2179 | 363,2179 |
| Herbicide | Paraquat for wheat and garlic “\*”“\*\*”Acetochlor for maize and soybean “\*”“\*\*” | 15 bottle ha-1, 1.6 $ bottle-1, 24.21 $ ha-1 | 0,0 | 0,0 | 24,2 | 24,2 |
| Pesticide | Phoxim for wheat and garlic “\*”“\*\*”Imidacloprid for corn and soybean “\*”“\*\*” | 15 bottle ha-1, 1.6 $ bottle-1, 24.21 $ ha-1 | 0,0 | 0,0 | 24,2 | 24,2 |
| Seeds | Corn “\*”Wheat “\*”Soybean“\*\*”Garlic“\*\*” | 0.48 $ kg-1, 225 kg ha-13.23 $ kg-1, 30 kg ha-10.69 $ kg-1, 45 kg ha-11.19 $ kg-1, 1500 kg ha-1 | 109,096,830,91785,0 | 109,096,830,91785,0 | 109,096,830,91785,0 | 109,096,830,91785,0 |
| Sum | Wheat and maize rotation system (WM) |  | 2585,69 | 2488,85 | 2605,09 | 2508,25 |
| Garlic and soybean rotation system (GS) |  | 4407,39 | 4309,55 | 4425,79 | 4328,95 |

“\*” represents wheat and maize crop rotation system management.

“\*\*” represents garlic and soybean crop rotation system management.