Supplementary Information

Submitted to ***Remote Sensing***

Estimation of the Relationship Between Urban Landscape Pattern and Crop Yield by Remote Sensing Data and Field Measurement

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Supplementary Information

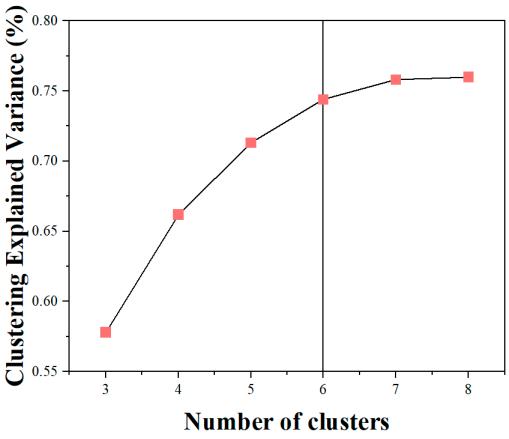


Figure S1. Clustering explanatory power under different clustering numbers.

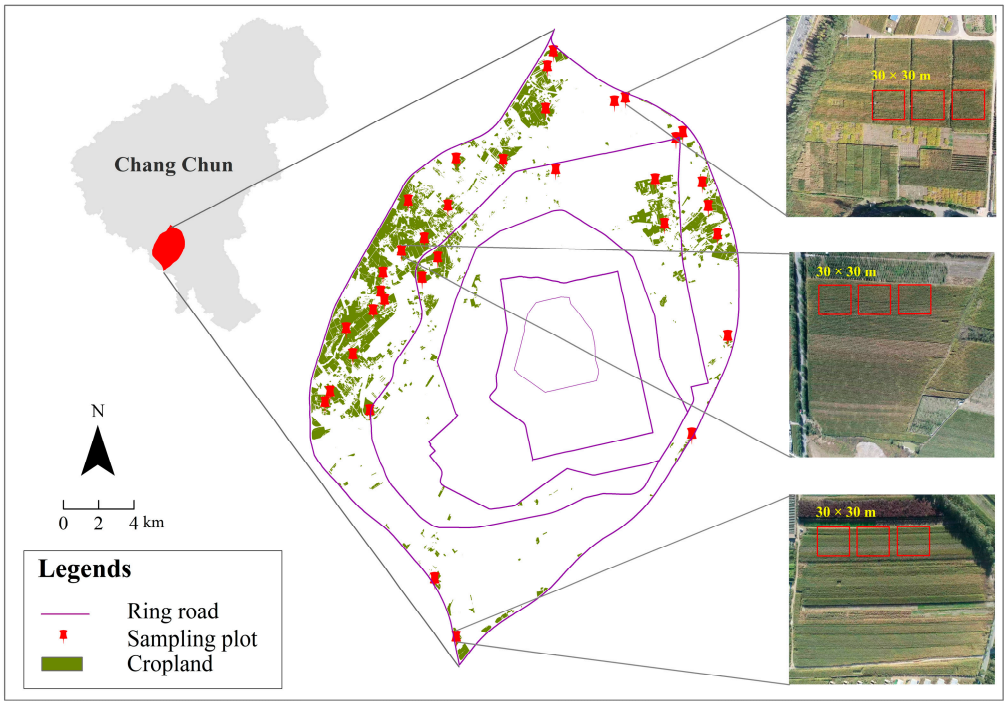


Figure S2. A map of the field measurement locations for crop yield in 34 suburban croplands of Changchun.

Table S1. The landscape coverage within different heterogeneous landscape.

Heterogeneous landscape	Abbreviation	Cropland coverage（%）	ISA coverage（%）	Forest coverage（%）	Grass land coverage（%）	Water coverage（%）	Orchard coverage（%）	Bare land coverage（%）
Impervious surface-cropland Landscape (cropland dominated)	CI	40 - 60%	20 - 40%	0-10%	0-10%	0 - 10%	0 - 10%	0 - 10%
Impervious surface-cropland Landscape (impervious surface dominated)	IC	1 - 10%	50 - 80%	0-5%	0-5%	0 - 5%	0 - 5%	0 - 5%
Impervious surface-cropland landscape (Impervious surface-cropland equilibrium)	CIE	35 - 50%	35 - 50%	5 - 15%	0 - 5%	0 - 5%	0 - 5%	0 - 5%
Impervious surface-grassland landscape (impervious surface dominated)	IG	1 - 5%	50 - 60%	0 - 5%	15 - 20%	0 - 5%	0 - 5%	0 - 5%
Impervious surface-grassland landscape (grassland dominated)	GI	1 - 5%	20 - 30%	0 -10%	30 - 40%	0 - 10%	0 - 5%	0 - 5%
Impervious surface-bare land landscape (impervious surface dominated)	BI	1 - 5%	30 - 40%	0 -10%	0 -10%	0 - 10%	0 -10%	40-60%

Table. S2. Multicollinearity analysis of landscape pattern and diversity index

Multicollinearity		
Landscape variable	VIF	1/VIF
PLAND_ISA	5.674	0.176
PLAND_Forest	8.285	0.121
PLAND_Cropland	8.761	0.114
NP_Cropland	5.267	0.190
PD_Forest	3.921	0.255
PD_Cropland	4.485	0.223
LPI_Forest	1.477	0.677
LPI_Cropland	7.668	0.130
ED_ISA	3.050	0.328
ED_Forest	7.770	0.129
ED_Cropland	7.233	0.138
LSI_Cropland	8.113	0.123
CONNECT	1.758	0.569
COHESION	1.585	0.631
SHDI	6.986	0.143
SIDI	2.245	0.445