README file for "The Spatiotemporal Pattern of Surface Ozone and Its Impact on Agricultural Productivity in China"

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Purpose of Document:
This README file provides guidance on replicating the analyses presented in our research. Due to the confidentiality of the agricultural data used in our research, we have recoded the county identification numbers in the replication dataset to prevent the direct identification of their geographical locations, which is sufficient to replicate all the results in our paper.

Data File Description:
We have included a copy of compiled data file for replicating our analysis in the subfolder "./Data". The dataset is structured at the county-year level and includes variables such as agricultural TFP measures, crop yields, pollution, and weather variables that are required to replicate all results in our paper. All scripts used for summary statistics and regression results is included in the subfolder "./Code". More details of each script can be found below:

"1.summary_stats.do"	Calculate summary statistics of main variables (Table S3)
"2.baseline.do"	OLS and IV estimates of the air pollution and temperature extremes on agricultural TFP (Table 1, Table S4, Table S5, Table S6, Table S11)
"3.regional_heterogeneity.do"	IV estimates of the air pollution and temperature extremes on agricultural TFP across regions in China (Table S13)
"4.robustness_check.do"	Robustness check of main results (Table S7, Table S8, Table S9, Table S10, Table S12, Table S18, Table S19, Table S24)
"5.placebo_test.do"	Placebo tests: estimating the "effects" of the air pollution on agricultural TFP using reshuffled data (Figure S8)

"6. crop_livestock_yields.do"	IV estimates of the air pollution and temperature extremes on crop and livestock yields (Table S14, Table S15, Table S16)
"7.projection.do"	Projected changes in agricultural TFP from hypothetical pollution reductions and a scenario of 2°C warming (Figure 4, Table S17, Figure S10)