



Figure S1. Meteorological data of purple corn planting season (6.12 to 9.09) from 2021 to 2023

Table S1. Meteorological parameters of purple corn growth period from 2021 to 2023

Year	\bar{T}_{\max} (°C)	\bar{T}_{\min} (°C)	\bar{T}_{mean} (°C)	Total precipitation (mm)
2021	30.36	24.63	27.41	606.20
2022	32.98	25.00	28.92	263.47
2023	31.93	24.08	27.68	293.70

Note: \bar{T}_{\max} , \bar{T}_{\min} and \bar{T}_{mean} are the average data of growth period of purple corn, The hourly temperature and precipitation data from hefei meteorological station are provided by Xihe Energy Big Data platform (<https://www.xihe-energy.com/>, accessed on 10 March 2024).