

Supplementary Table S1 The geographical information of Qingshu 9 from different areas in China.

	Longitude	Latitude	Average temperature	Amount of precipitation (mm)	Moisture (%)	Sunlight (h)	Soil pH	Soil type
Inner Mongolia	109°16' ~ 114°49'	39°37' ~ 43°28'	5 - 7 °C	340	52.5	2927.5	5.7	Chestnut-calcium soil and chestnut-brown soil, being sandy
Hubei	108°23'12" ~ 110°38'08"	29°07'10" ~ 31°24'13"	16.2 °C	1,600	82	1300	5	Carbonate rocks, mudstone shale, quartz sandstone, red sandstone, purple sandstone shale, Quaternary clay and river alluvial deposits, etc.
Gansu	103°52'—105°13'	34°26'—35°35'	7 °C	350-600	47-68	3000	6.5-7.5	Mountain white soil, loess soil, black loam soil, chernozem soil, black soil, gray-brown soil
Yunnan	102°10' ~ 103°40'	24°23' ~ 26°33'	15 °C	1,000	70	2250	6.27	Red soil and purple soil
Shanxi	110°22'~112°19'	36°43'~38°43'	9.4 °C	466	58	2693	9.78	Brown soil, chestnut brown soil, mountain meadow soil, tidal soil, loess soil