

Dataset	Data description	Resolution	Data sources
DEM	–	30 × 30 m	Geospatial data cloud (CAS, 2009a)
Soil	Soil type map, soil physical and chemical properties	1 : 1 000 000	China Soil Scientific Database (CAS, 2009b)
Land use	–	1 : 100 000 (2010)	Data Center for Resources and Environmental Sciences (CAS, 2010)
Weather	Precipitation, wind speed, solar radiation, maximum temperature, minimum temperature, relative humidity	Daily (1980–2012)	China Meteorological Data Network (NMIC, 2015) The Administration of Hetao irrigation district (AHID, 2015)
Hydrologic	Stream map, discharge	Monthly (2003–2012)	The Administration of Hetao irrigation district (AHID, 2015)
Crop parameter data	Dates of plant and harvest, dates of irrigation, irrigation quota	–	The Administration of Hetao irrigation district (AHID, 2015)