Bayer® Historical Weather

Historical weather data is a critical input for agronomic modeling and portfolio risk assessment in insurance underwriting.

Bayer has integrated data from diverse sources into a single asset that provides over 40 years (1979-present) of weather insights across the majority of global agricultural regions.

What's Included?

- IBM Currents on Demand - historical data from 2019-present
- IBM Historical on Demand - historical data 2016-2019 and regions where geographic backfill expansion occurs
- IBM 4km Precipitation Products - data from 2016-present (*except US)
- ERA5 Publicly Sourced Data
- Bayer derived data sets (i.e. growing degree days, evapotranspiration)
- All data will have an hourly resolution and be updated every 24 hours

Benefits:

- Single source of weather data.
- Access model-ready, usable, data.
- Quickly understand environmental impacts on crops.

Key Notes:

- This service has the ability to cover many of the modeling use cases where weather data is required.
- For data not provided by IBM prior to 2016 we use public sources (ERA5).
- *For data not provided by IBM between 2016-present, we use ERA5 or MRMS (in the case of precipitation in the US).

Variables:

IBM

- Temperature
- Relative Humidity
- Dew Point Temp (RH)
- Pressure
- Wind Speed and Direction (spotty data prior to 2017)
- Precipitation (*except US)

Public (ERA5)

- Solar Radiation
- Soil Temperature
- Soil Moisture
- Surface Heat Fluxes
- Snow Depth
- Cloud Cover
- Evapotranspiration
- Precipitation

Use Case Thought Starters:

- *Weather risk assessments for actuary and underwriting purpose.*
- *Training of agronomic models that require a historic view of the production environment.*
- *Forecasting crop seasonality to monitor agronomic production changes year-over-year.*