



## CropProphet HTTPS Image Service

CropProphet clients can utilize the HTTPS image service to retrieve weather forecast and observation maps and charts for various regions. This service provides an easy way to access any weather forecast or observation chart or map for a specific region. This documentation helps users understand the content of the CropProphet HTTPS image service and guides them in navigating it effectively. Each customer is assigned a URL, username, and password to log into the HTTPS service.

Table 1 lists the regions and their corresponding abbreviations available in the image service. You can choose to receive access to all regions or select specific regions that are most relevant to your needs.

**Table 1.** Regions with their following abbreviations that are included in the CropProphet HTTPS Image Service.

Region	Region Abbreviation
Argentina	ar
Australia	au
Brazil	br
Black Sea	bs
Canada	ca
Europe	eu
South America	sa
United States	us

Each region's weather forecast and observation maps/charts include the following weather variables available for use (i.e., there are both metric and SI unit files available):

**Table 2.** Weather variables included in each weather forecast and observation map and chart.

Weather Variable	Abbreviation
Growing Degree Day Anomaly	gddanom
Precipitation (mm or inches)	pcp
Precipitation Anomaly (% of normal)	pcpanom
Relative Humidity Anomaly (%)	rhanom
Incoming Solar Radiation (% of normal)	swradanom
Soil Moisture Anomaly (StdDevs)	swvl2anom
Maximum Temp Anomaly (°F or °C)	tmaxanom
Minimum Temp Anomaly (°F or °C)	tminanom
Temperature Anomaly (°F or °C)	tmpanom

The CropProphet HTTPS image service offers weather forecast maps and charts generated from multiple forecast models, as outlined in Table 3.

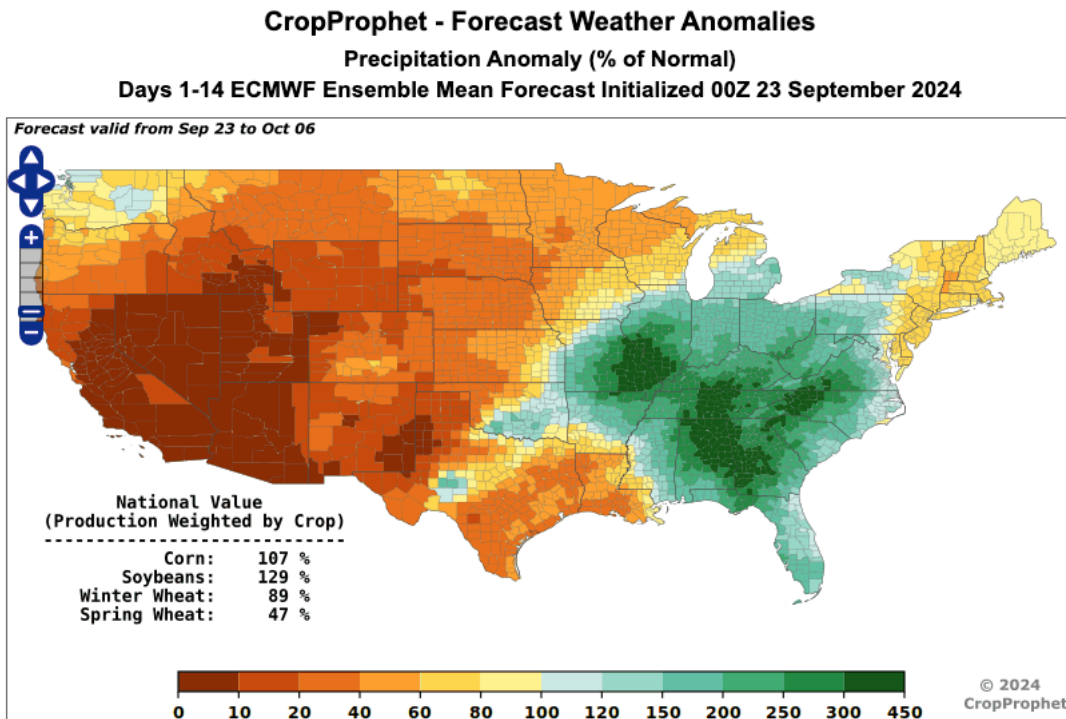
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**Table 3.** Models available in the CropProphet HTTPS Image Service with the abbreviation name in the service.

Model	Abbreviation
ECMWF 00Z	ecmwf00z
ECMWF 12Z	ecmwf12z
ECMWF Extended	ecmwf_ext
GEFS 00Z	gefs00z
GEFS 12Z	gefs12z
GFS 00Z	gfs00z
GFS 12Z	gfs12z

## Map and Chart Differences:

What distinguishes maps from charts? A map, as shown in Figure 1, provides a visual representation of weather variables across geographic regions or subregions, highlighting spatial variations. In contrast, a chart, illustrated in Figure 2, presents weather data in graph form, allowing for the observation of trends or changes in weather variables over time.



**Figure 1.** An example of a weather forecast precipitation map for the United States and its counties.

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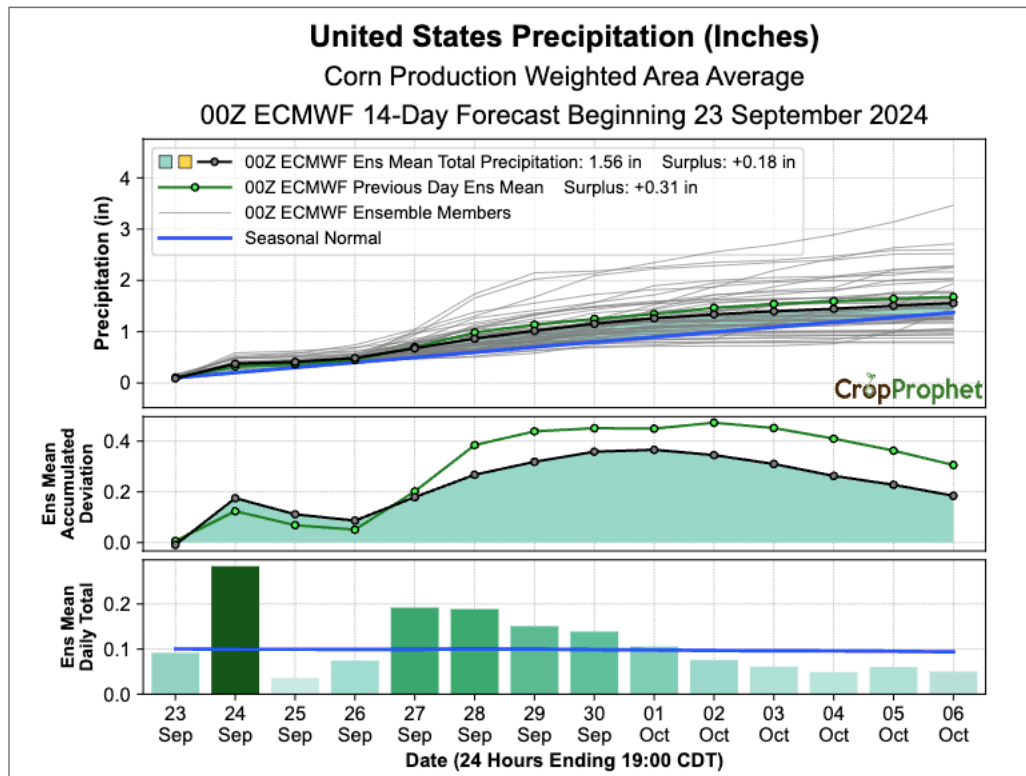


Figure 2. An example of a weather forecast precipitation chart for the United States.

## Filepaths and Navigating the CropProphet Image Service:

There are two different filepaths depending on which graphic you seek: (1) Forecasts and (2) Observations

### 1.) Forecasts:

Once you access the base URL (provided via email along with your account credentials), you will find multiple folder names. For forecast graphics, each region (e.g., us, ca, etc.) will have two folders: one for charts and one for maps. However, charts for Brazil (br) and Argentina (ar) are not available in their respective folders; instead, they can be found in the South America (sa) folder.

#### Weather forecast map folder name:

region\_wxfest\_maps/

#### Weather forecast chart folder name:

region\_wxfest\_charts/

After selecting a specific region and graphic type, you will be directed to a directory containing a list of dates in the format (yyyymmdd). Choose the desired date to access the corresponding graphic.

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Finally, after selecting a specific date, you can choose a specific model, weather variable, and time period. Note that the region in these file paths should be spelled out (e.g., “us” should be written as "united\_states"). After the region, the file path will include the subregion (e.g., state and county for the United States). The subregions for the forecast maps are listed in Table 4.

**Table 4.** Regions and subregions with their following abbreviations that are included in the CropProphet HTTPS Image Service forecast maps.

Region	Region Abbreviation	Subregion View
<b>Argentina</b>	ar	department
		province
<b>Australia</b>	au	sa2
		state
<b>Brazil</b>	br	microregion
		state
<b>Black Sea</b>	bs	admin1
		district
<b>Canada</b>	ca	csd
		province
<b>Europe</b>	eu	country
		nuts3
<b>South America</b>	sa	x
		x
<b>United States</b>	us	county
		state

Additionally, the following time periods are available in the weather forecast graphics (Table 5).

**Table 5.** Forecast time periods that are made available through the CropProphet HTTPS Image Service (additional options are made available through the Extended ECMWF model).

Forecast Time Period	Abbreviation
Week 1 lead fcst – 12 hr change	week_1_12hrchg_fcst
Week 1 lead fcst - 1 day change	week_1_1dychg_fcst
Week 1 lead forecast	week_1_fcst
Week 2 lead fcst – 12 hr change	week_2_12hrchg_fcst
Week 2 lead fcst - 1 day change	week_2_1dychg_fcst
Week 2 lead forecast	week_2_fcst
Week 1 through 2 lead fcst– 1 day change	week_1-2_1dychg_fcst
Week 1-2 lead forecast	week_1-2_fcst

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For each region and subregion, the forecast charts are organized by crop, as outlined in Table 6. Please note, the forecast charts for Argentina and Brazil are located in the South America (sa) folder, not their individual country folders.

**Table 6.** Lists the crops made available for forecast charts in each region and their subregion.

Region	Crop	Subregion
<b>Argentina (ar)</b>	barley	BA LP
	corn	CB BA SF SE LP ER SA SL CC TM
	sorghum	CB SF BA ER SE CC
	soybeans	CB BA SF SE LP ER SA SL CC TM
	sunflower	BA SF LP CC CB
	wheat	BA SF CB ER SE LP
<b>Australia (au)</b>	barley	AU NSW WA SA VIC QLD
	canola	AU NSW WA SA VIC
	cotton	AU NSW QLD
	oats	AU NSW WA SA VIC QLD
	sorghum	AU NSW QLD
	wheat	AU NSW WA SA VIC QLD TAS
<b>Brazil (br)</b>	corn1	MG RS PR SC SP PI BA GO MA PA
	corn2	MT PR GO MS MG SP RO TO MA BA
	soybeans	MT PR RS GO MS MG BA SP TO MA
	sugarcane	SP GO MG MS PR MT AL PE
	coffee	MG ES SP BA RO
	cotton	MT BA
	rice	RS SC TO MT
<b>Black Sea (bs)</b>	corn	UA RU Central Southern Volga NorthCaucasus
	winterwheat	UA RU Central Southern Volga NorthCaucasus Northwestern
	sunflower	UA RU Central Southern Volga NorthCaucasus
	soybeans	UA RU Central Southern Volga

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	winterbarley	UA RU Southern NorthCaucasus
	springbarley	UA RU Central Southern Volga
<b>Canada (ca)</b>	canola	CA SK AB MB BC
	springwheat	CA SK AB MB QC
	winterwheat	CA ON AB SK MB
	corn	CA ON QC
	soybeans	CA ON QC MB SK
	oats	CA SK AB MB QC ON BC
	barley	CA SK AB MB QC ON BC
<b>Europe (eu)</b>	winterwheat	EU FR DE UK PL RO BG ES HU CZ DK LT IT SE SK BE LV
	winterbarley	EU DE FR UK RO HU IT ES PL DK AT CS BG IE
	springbarley	EU ES UK FR DK PL DE FI SE CZ IE LT
	winterrapeseed	EU FR DE PL UK CZ RO HU DK LT SK BG SE LV
	corn	EU RO FR HU IT PL ES DE BG AT HR SK EL
	oats	EU PL ES FI UK DE SE FR IT
	sunflower	EU RO BG HU FR ES IT EL
	rye	EU DE PL DK ES AT SE LV CZ FR
<b>South America (sa)</b>	x	x
<b>United States (us)</b>	corn	IA IL NE MN IN KS SD OH WI MO
	soybeans	IA IL NE MN IN MO OH SD ND KS
	winterwheat	KS WA OK MT CO TX ID OR NE IL
	springwheat	ND MT MN ID SD WA

**Weather forecast map filepath:**

model\_weathervarriable\_region\_subregion\_init\_date\_timeperiod.png

**Weather forecast chart filepath:**

subregion\_crop\_model\_weathervarriable\_svgz

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## 2.) Observations:

Once you access the base URL (provided to you via email with your account credentials), you will see multiple folder names. For observation graphics, each region (e.g., US, CA, etc.) will have two folder names: one for charts and one for maps. However, charts for Brazil (br) and Argentina (AR) are not available in their respective folders; instead, they can be found in the South America (sa) folder.

### Weather observation map folder name:

region\_wxobs\_maps/

### Weather observation chart folder name:

region\_wxobs\_charts/

After specifying a region and graphic type, you will see a directory with a list of dates in the format (yyymmdd). Choose the specific date for which you want a graphic.

Finally, after selecting a date, you can choose a specific weather variable model along with a time period. Note that the region in these file paths must be fully spelled out (e.g., "us" should be "united\_states"). Following the region, the file path will include the subregion, which consists of the state and county for the United States. The subregions for the observation maps are detailed in Table 7.

**Table 7.** Regions and subregions with their following abbreviations that are included in the CropProphet HTTPS Image Service observation maps.

Region	Region Abbreviation	Subregion View
Argentina	ar	department
		province
Australia	au	sa2
		state
Brazil	br	microregion
		state
Black Sea	bs	admin1
		district
Canada	ca	csd
		province
Europe	eu	country
		nuts3
South America	sa	x
		x
United States	us	county
		state

Additionally, the following time periods are available in the weather observation graphics (Table 8).

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**Table 8.** Observation time periods that are made available through the CropProphet HTTPS Image Service.

Observation Time Period	Abbreviation
Previous 1 day	prev_1day
Previous 3 days	prev_3day
Previous 7 days	prev_7day
Previous 14 days	prev_14day
Previous 30 days	prev_30day
Previous 60 days	prev_60day
Previous 90 days	prev_90day
Previous 180 days	prev_180day
Prior 1 week	prior_1week
Prior 2 weeks	prior_2week

For each region and subregion, the observation charts are organized by crop, as shown in Table 9. Note that the observation charts for Argentina and Brazil are located in the South America folder.

**Table 9.** Lists the crops made available for observation charts in each region and their subregion.

Region	Crop	Subregion
<b>Argentina (ar)</b>	barley	BA LP
	corn	CB BA SF SE LP ER SA SL CC TM
	sorghum	CB SF BA ER SE CC
	soybeans	CB BA SF SE LP ER SA SL CC TM
	sunflower	BA SF LP CC CB
	wheat	BA SF CB ER SE LP
<b>Australia (au)</b>	barley	AU NSW WA SA VIC QLD
	canola	AU NSW WA SA VIC
	cotton	AU NSW QLD
	oats	AU NSW WA SA VIC QLD
	sorghum	AU NSW QLD
	wheat	AU NSW WA SA VIC QLD TAS
<b>Brazil (br)</b>	corn1	MG RS PR SC SP PI BA GO MA PA
	corn2	MT PR GO MS MG SP RO TO MA BA



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	soybeans	MT PR RS GO MS MG BA SP TO MA
	sugarcane	SP GO MG MS PR MT AL PE
	coffee	MG ES SP BA RO
	cotton	MT BA
	rice	RS SC TO MT
<b>Black Sea (bs)</b>	corn	UA RU Central Southern Volga NorthCaucasus
	winterwheat	UA RU Central Southern Volga NorthCaucasus Northwestern
	sunflower	UA RU Central Southern Volga NorthCaucasus
	soybeans	UA RU Central Southern Volga
	winterbarley	UA RU Southern NorthCaucasus
	springbarley	UA RU Central Southern Volga
<b>Canada (ca)</b>	canola	CA SK AB MB BC
	springwheat	CA SK AB MB QC
	winterwheat	CA ON AB SK MB
	corn	CA ON QC
	soybeans	CA ON QC MB SK
	oats	CA SK AB MB QC ON BC
	barley	CA SK AB MB QC ON BC
<b>Europe (eu)</b>	winterwheat	EU FR DE UK PL RO BG ES HU CZ DK LT IT SE SK BE LV
	winterbarley	EU DE FR UK RO HU IT ES PL DK AT CS BG IE
	springbarley	EU ES UK FR DK PL DE FI SE CZ IE LT
	winterrapeseed	EU FR DE PL UK CZ RO HU DK LT SK BG SE LV
	corn	EU RO FR HU IT PL ES DE BG AT HR SK EL
	oats	EU PL ES FI UK DE SE FR IT
	sunflower	EU RO BG HU FR ES IT EL
	rye	EU DE PL DK ES AT SE LV CZ FR

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<b>South America (sa)</b>	x	x
<b>United States (us)</b>	corn	IA IL NE MN IN KS SD OH WI MO
	soybeans	IA IL NE MN IN MO OH SD ND KS
	winterwheat	KS WA OK MT CO TX ID OR NE IL
	springwheat	ND MT MN ID SD WA

**Weather observations map filepath:**

weathervarriable\_region\_subregion\_timeperiod.png

**Weather observation chart filepath:**

subregion\_crop\_weathervarriable\_timeperiod\_svgz