Speedwell Weather
Commodity Product

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Speedwell Commodity Product-Agriculture

Getting Started

The Speedwell Commodity - Agriculture platform brings weather data and forecast information directly to the trader in a concise format for a wide range of global commodities.

Commodity Product: Getting Started

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The Commodity Product homepage provides users with a quick summary of unusual weather conditions that may be impacting commodities. This page serves as a jumping off point for an advanced statistical review of observations and forecasts.

Map displays the location of weather hot spots

Quick links take a user directly to the statistical analysis for a given commodity

Clicking on a map icon brings up a pop-up containing a summary of the situation with links to a statistical analysis and pdf

This main table provides a summary of the commodity / location impacted, the weather variable, summary of the situation, indication of severity, and a link to a more detailed discussion of the situation

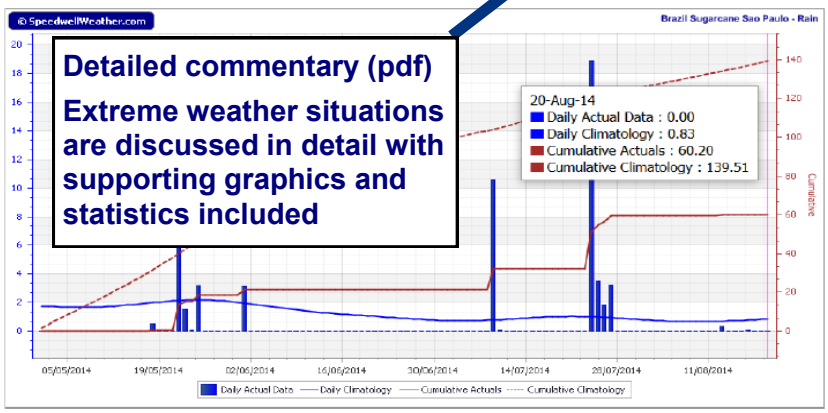
Warning	Commodity							
	Wheat Durum - Canada	Precipitation	10-Sep-14	Data Alert	Wet weather continues in Canadian Prairies	Above normal precipitaton ha across the Canadian Prairies the harvest of durum wheat.		
	Canola - Canada	Precipitation	28-Aug-14	Data Alert	Recent Wet Weather in Canadian Canola Region	Southeastern Saskaetchewan above normal rainfall in Augu crop quality concerns.		
	Cotton - India	Precipitation	22-Aug-14	Data Alert	Dry Conditions in India Cotton Region	A drier than normal monsoon season is underway across India's cotton, but a record crop is still expected	MED	
	Sugarcane - Brazil Sao Paulo	Precipitation	21-Aug-14	Data Alert	Drought continues in Sao Paulo	Since the beginning of 2014, Sao Paulo has experienced much drier than normal conditions, with a worsening drought taking hold since May. From May through the	MED	

Alerts / commentary are produced by Speedwell based upon:

- **Statistical analysis of weather data and forecasts using the analysis tools provided within the Commodity Product**
- **Awareness of the impact of weather upon a given commodity at a given time (crop cycle)**
- **Severity of the weather phenomena as compared with the climatological normal**

Drought Continues in the state of Sao Paulo

The Brazilian state of Sao Paulo, producer of nearly 25% of the world's sugarcane, has been in the middle of a severe drought for the past several months. Speedwell's Sao Paulo Sugarcane Index below shows that only 40% of normal rainfall has occurred over the region since the start of May. In fact, since the start of 2014, the region has experienced a rainfall deficit of nearly 400mm.



Detailed commentary (pdf)

Extreme weather situations are discussed in detail with supporting graphics and statistics included

UNICA, the Brazilian Sugarcane Industry Association, said last week that sugar mills in the Sao Paulo region have been slowing down their rate of processing. For the second-half of July, production volumes in the Centre-South sugarcane region, including Sao Paulo, were down over 12% from the first half of July. While some of this may be attributed to the brief bout of rain in late July that halted processing, it is chiefly due to diminished expectations of sugarcane volumes in response to drought.

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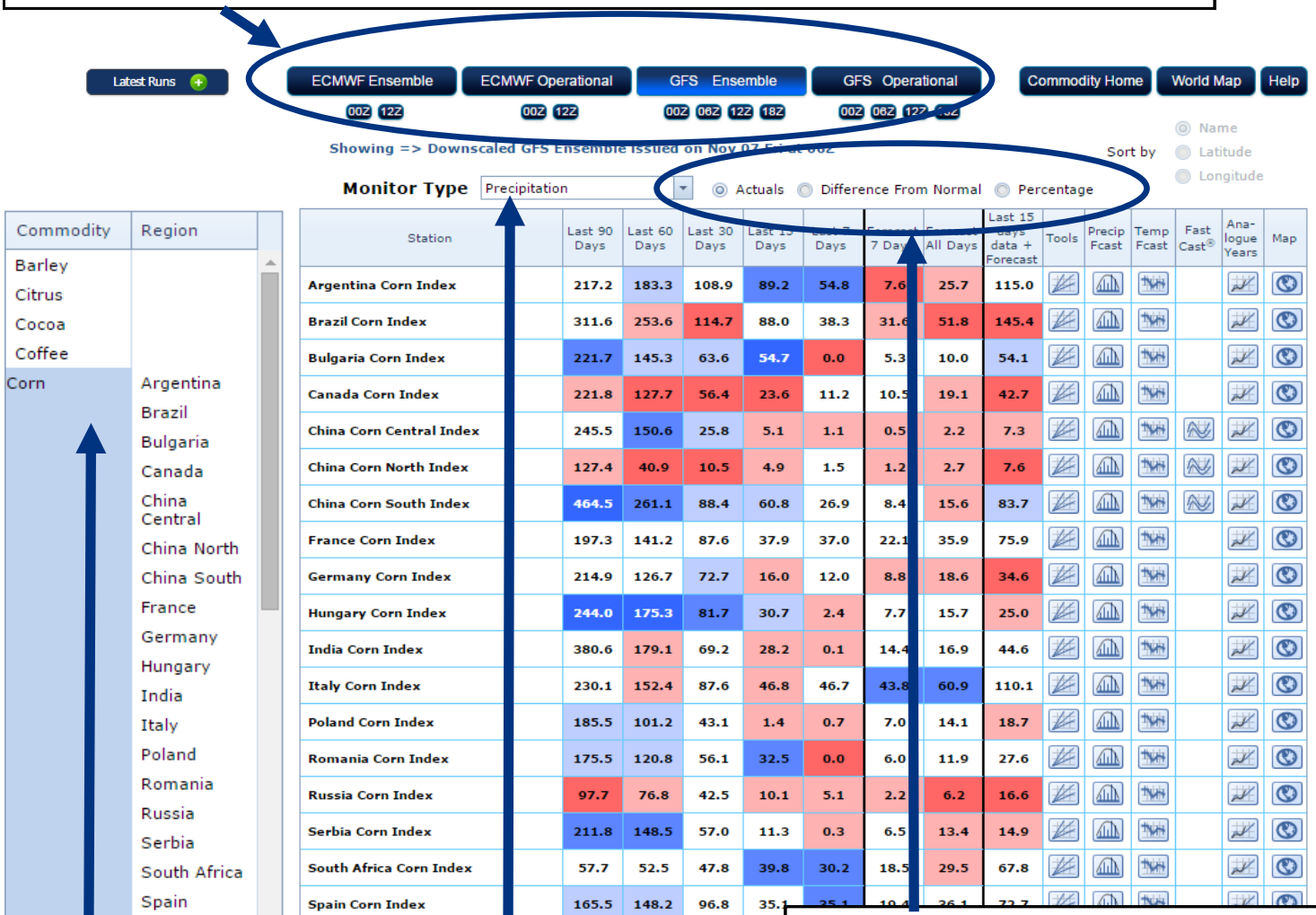
User-configurable statistical analysis

The Commodity Product statistical analysis homepage provides users with a summary of weather conditions across various commodities and regions. Users are able to configure the type of analysis that is most relevant to their concerns. Where applicable Speedwell has selected default settings that are relevant to a given analysis.

Select which forecast model and model run to be used for the analysis. The default is based upon the most recent forecast release and model availability for a region.

<u>All</u> forecasts are based upon the Speedwell downscaled forecast for a given model.



Select the commodity / region of interest. If <u>only</u> a commodity is selected then indices for all regions appear in the main table. If <u>both</u> a commodity and region are selected then the regional index plus individual stations that compose that index appear in the main table.

Select the type of weather for the analysis:

- **Precipitation**
- **Frost**
- **Growing <u>degree</u> days**
- **Mean temperature**

Select how the results will be displayed

- **Actuals - results in the main table will be displayed in terms of observed values (i.e. mm of precipitation)**
- **Difference From <u>Normal</u> - results will be displayed in terms of the observed value vs. normal conditions (climatology) (i.e. the number of mm of precipitation above normal)**
- **Percentage (difference from normal) - the difference from normal displayed as a percentage of normal**

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Understanding the results

The Commodity Product statistical analysis homepage provides users with a summary of weather conditions across various commodities and regions. Results are based upon user settings (forecast model, weather variable, commodity, region, display type). Results are updated as configuration settings are adjusted.

For this example the user has selected an analysis of global corn precipitation displayed as a* percentage *of normal

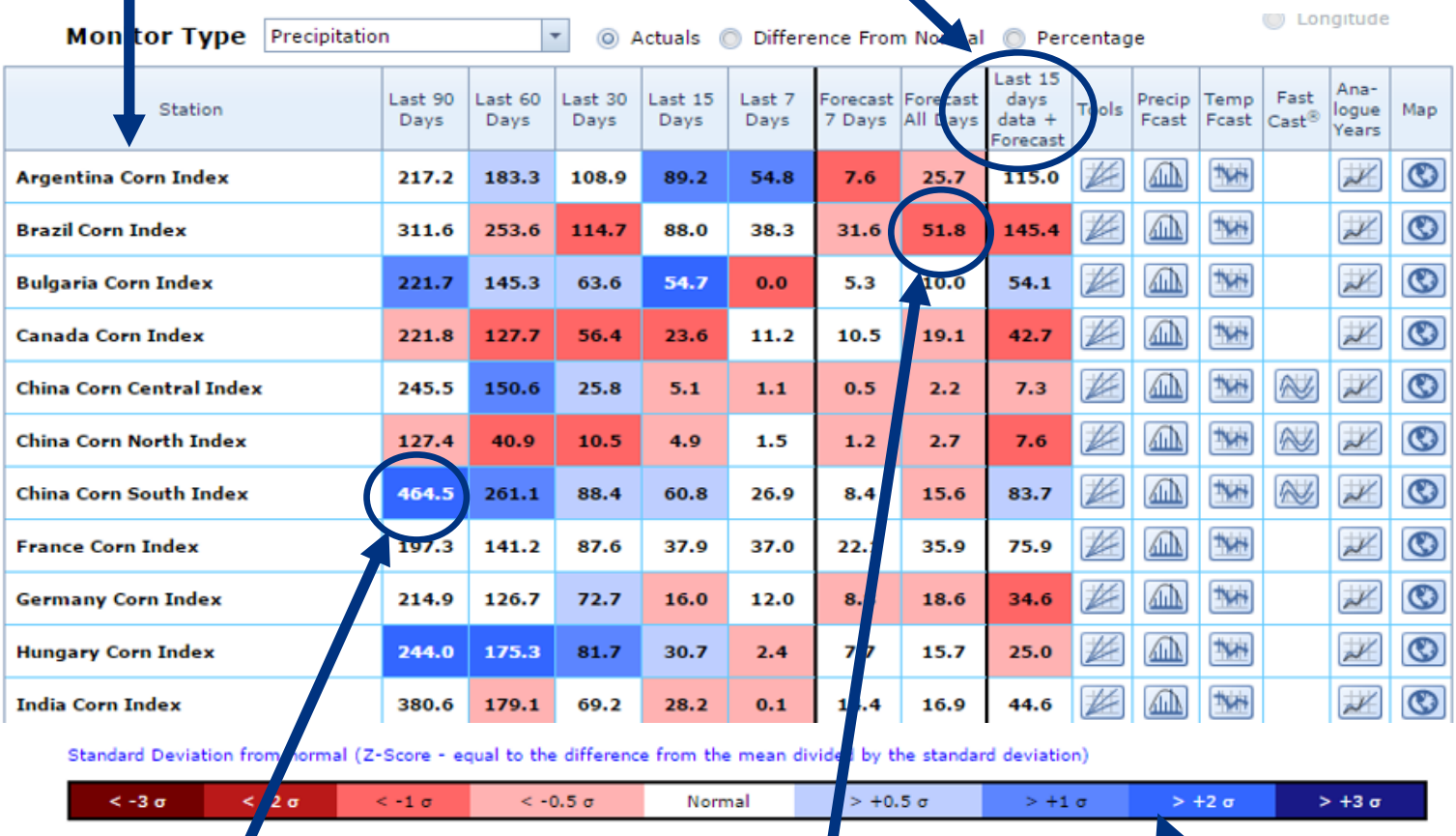
Each of the global corn indices are displayed (a selection only are shown below). If the user selects a specific region, then the grid will display that regional Index together with the composite stations.

Historical + Forecast analysis

This statistic combines what has recently happened (last 15 -days) + what will happen (forecasts)

**** Units ****

When selecting "actuals" the units may vary from region to region. U.S. regions are in Fahrenheit and inches, while the rest of the world is in Celsius and millimetres. More details can be found in the Help document.



Historical analysis (observations)

The historical analysis is divided into 5 time periods, past 90-days, 60-days…

The results represent that cumulative weather during the given period (in this example displayed as a percentage of normal)

In the example above you will find that the China South Corn Index has been more than two standard deviations wetter than normal over the past 90-days

Forecast analysis

The forecast analysis is divided into two time periods, 7-days and "all days". In general "all days" represents a 15-day period.

In the example above you will find that the Brazil Corn Index is forecasted to be drier than normal

Shading indicates the departure from normal for a given result (calculated as a z-score). Z-score represents the number of standard deviations above or below normal the value is. The darker the colour the greater the more extreme the weather

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Understanding the results - Tools (i)

There are a number of tools that a user can access to further analyse data and forecasts. This page looks at the Recent Weather Monitor and the Map

Station	Last 90 Days	Last 60 Days	Last Day	Last 15 days forecast	Weather Monitor	Precip Fcast	Temp Fcast	Fast Cast®	Ana-logue Years	Map
Brazil Cocoa (Coastal) Index	295.0	201.6	141	38.1						
Ghana Cocoa Index	354.4	229.9	96.	57.9						
Ivory Coast Cocoa Index	375.3	258.7	142							

- **Recent Weather Monitor**
- Precipitation forecast
- Temperature forecast
- FastCast®
- Analogue Years
- **Map**

The Recent Weather Monitor provides detailed statistics on the observed weather and forecasts

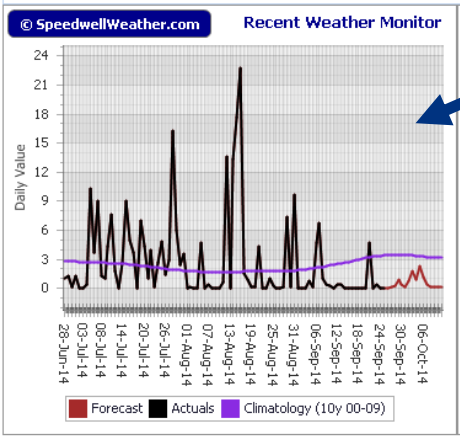
Recent Weather Monitor

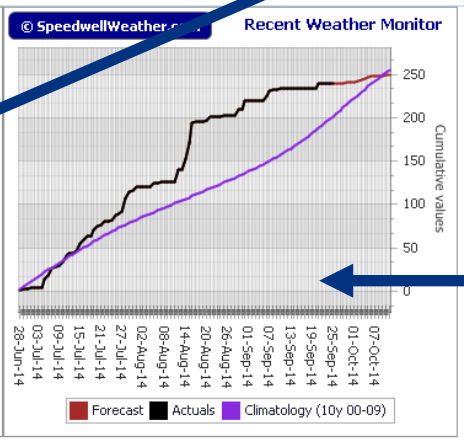
Brazil Cocoa Index - Precipitation - Speedwell GFS Op Forecast Issue Date: 2014-Sep-26-12Z

Period	Index Value	Historical Avg	Index Value - Mean	Percentage Difference	Historical Median	Historical Min	Historical Max	Historical StDev
Forecast all days	9.8	43.0	-33.2	-77.3 %	46.2		70.2	
Forecast 7 days	5.4	21.1	-15.7	-74.4 %	18.4	0.1	55.5	16.4
Last 15 days + forecast	15.7	71.1	-55.5	-78.0 %	68.1	40.1	119.8	24.0
7 days	5.1	13.7	-8.6	-62.8 %	8.1	0.7	35.4	13.2
15 days	5.8	28.8	-22.9	-79.7 %	19.8	11.9	69.9	18.0
30 days	37.1	50.0	-12.9	-25.7 %	47.6	23.1	100.5	22.8
60 days	147.2	106.2	41.0	38.6 %	107.5	47.4	163.8	37.3
90 days	239.1	178.3	60.8	34.1 %	163.7	120.9	275.6	51.8

Standard Deviation from normal (Z-Score - equal to the difference from the mean divided by the standard deviation)

< -3 σ | < -2 σ | < -1 σ | < -0.5 σ | Normal | > +0.5 σ | > +1 σ | > +2 σ | > +3 σ





Detailed statistics

Statistical summary of the data plus information concerning the historical maximum and minimum values (i.e. wettest ever, coolest ever…)

Actuals vs. Climatology

Daily analysis

This graph represents the progression of the weather over the past 90-days. The purple line represents climatology, the black line represents individual daily events.

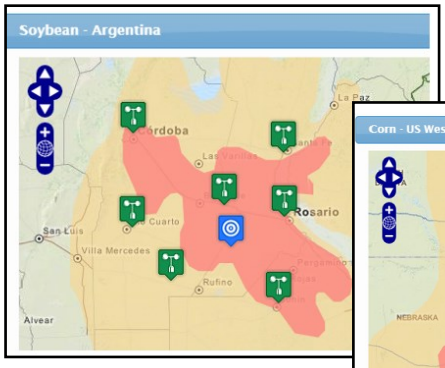
Actuals vs. Climatology

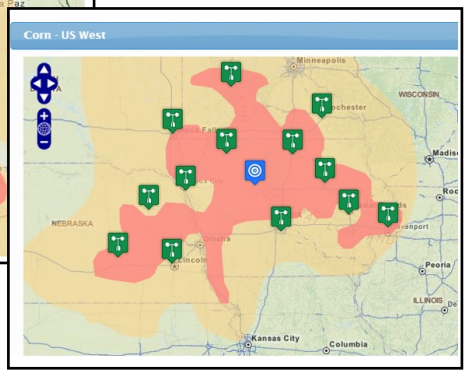
Cumulative analysis

This graph represents the progression of the weather over the past 90-days. The purple line represents climatology, the black line represents observations, and the red line is the forecasted value. The greater the separation of the lines the more extreme the weather.

Map

The map provides information concerning the commodity region and the weather stations used to monitor the commodity. In the example to the right, dark shading represents the major producing region, while the lighter shading represents minor production. The green markers display the location of weather stations used in this analysis and for the creation of the index.





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Understanding the results - Tools (ii)

There are a number of tools that a user can access to further analyse data and forecasts. This page looks at the Precipitation Forecast tool and the Temperature Forecast tool

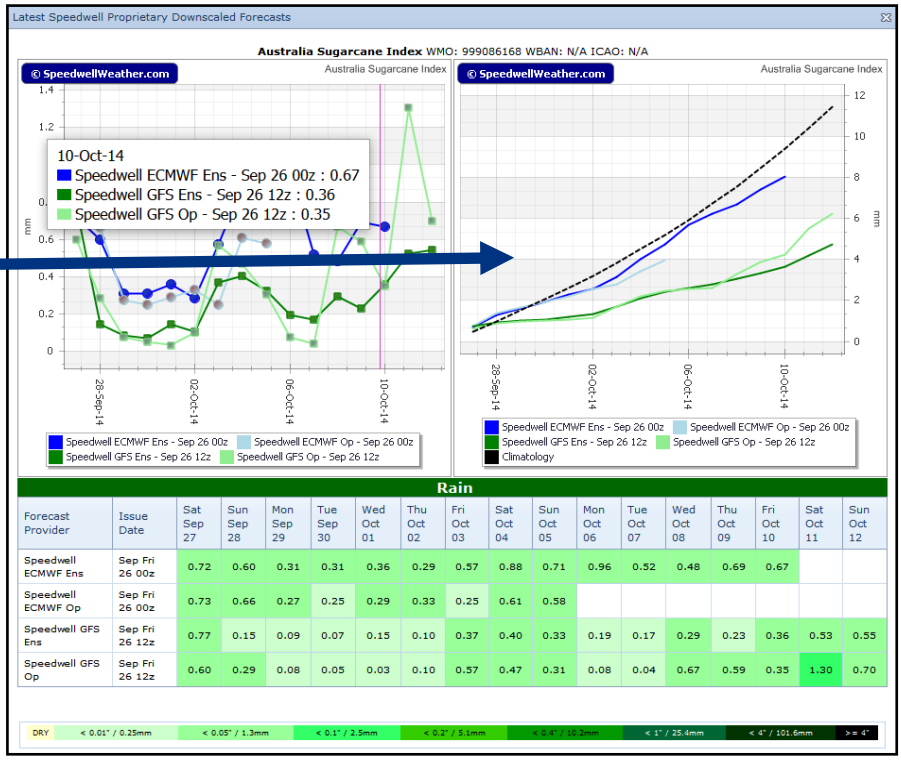
Station	Last 90 Days	Last 60 Days	Last 30 Days	La					Weather Monitor	Precip Fcast	Temp Fcast	Fast Cast®	Ana-logue Years	Map
Brazil Cocoa (Coastal) Index	295.0	201.6	141.2											
Ghana Cocoa Index	354.4	229.9	96.9											
Ivory Coast Cocoa Index	375.3	258.7	142.3	95.7	55.3	46.6	108.5	204.2						

- Recent weather
- **Precipitation Forecast**
- **Temperature Forecast**
- FastCast®
- Analogue Years
- Map

Precipitation Forecast

Graphical representation of the Speedwell downscaled ECMWF & GFS models (both operational and ensemble average)

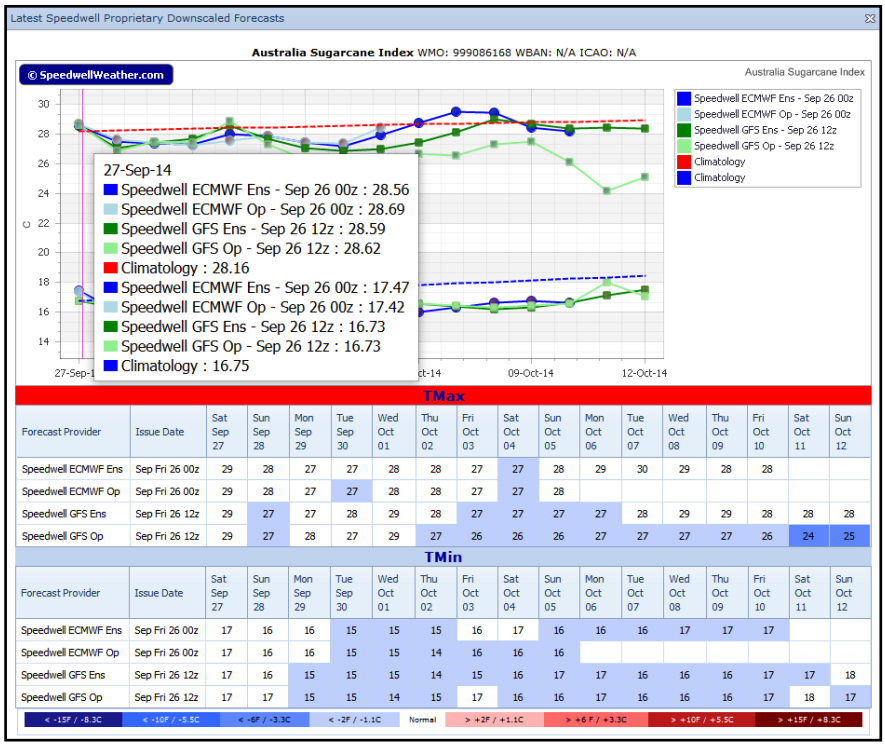
- **Cumulative forecast values vs. climatology. The dashed black line represents climatology with the forecasts as shades of blue and green. Forecast lines below the dashed line represent drier than normal conditions.**
- **The table displays forecasted values of daily precipitation. Colour coding is based upon the amount of precipitation falling on any given day. The more precipitation the darker the shading.**



Rain

Forecast Provider	Issue Date	Sat Sep 27	Sun Sep 28	Mon Sep 29	Tue Sep 30	Wed Oct 01	Thu Oct 02	Fri Oct 03	Sat Oct 04	Sun Oct 05	Mon Oct 06	Tue Oct 07	Wed Oct 08	Thu Oct 09	Fri Oct 10	Sat Oct 11	Sun Oct 12
Speedwell ECMWF Ens	Sep Fri 26 00z	0.72	0.60	0.31	0.31	0.36	0.29	0.57	0.88	0.71	0.96	0.52	0.48	0.69	0.67		
Speedwell ECMWF Op	Sep Fri 26 00z	0.73	0.66	0.27	0.25	0.29	0.33	0.25	0.61	0.58							
Speedwell GFS Ens	Sep Fri 26 12z	0.77	0.15	0.09	0.07	0.15	0.10	0.37	0.40	0.33	0.19	0.17	0.29	0.23	0.36	0.53	0.55
Speedwell GFS Op	Sep Fri 26 12z	0.60	0.29	0.08	0.05	0.03	0.10	0.57	0.47	0.31	0.08	0.04	0.67	0.59	0.35	1.30	0.70

DRY | < 0.01" / 0.25mm | < 0.05" / 1.3mm | < 0.1" / 2.5mm | < 0.2" / 5.1mm | < 0.4" / 10.2mm | < 1" / 25.4mm | < 4" / 101.6mm | >= 4"



TMax

Forecast Provider	Issue Date	Sat Sep 27	Sun Sep 28	Mon Sep 29	Tue Sep 30	Wed Oct 01	Thu Oct 02	Fri Oct 03	Sat Oct 04	Sun Oct 05	Mon Oct 06	Tue Oct 07	Wed Oct 08	Thu Oct 09	Fri Oct 10	Sat Oct 11	Sun Oct 12
Speedwell ECMWF Ens	Sep Fri 26 00z	29	28	27	27	28	28	27	27	28	29	30	29	28	28		
Speedwell ECMWF Op	Sep Fri 26 00z	29	28	27	27	28	28	27	27	28							
Speedwell GFS Ens	Sep Fri 26 12z	29	27	27	28	29	28	27	27	27	27	28	29	29	28	28	28
Speedwell GFS Op	Sep Fri 26 12z	29	27	28	27	29	27	26	26	26	27	27	27	27	26	24	25

TMin

Forecast Provider	Issue Date	Sat Sep 27	Sun Sep 28	Mon Sep 29	Tue Sep 30	Wed Oct 01	Thu Oct 02	Fri Oct 03	Sat Oct 04	Sun Oct 05	Mon Oct 06	Tue Oct 07	Wed Oct 08	Thu Oct 09	Fri Oct 10	Sat Oct 11	Sun Oct 12
Speedwell ECMWF Ens	Sep Fri 26 00z	17	16	16	15	15	15	16	17	16	16	16	17	17	17		
Speedwell ECMWF Op	Sep Fri 26 00z	17	16	16	15	15	14	16	16	16							
Speedwell GFS Ens	Sep Fri 26 12z	17	16	15	15	15	14	15	16	17	17	16	16	16	17	17	18
Speedwell GFS Op	Sep Fri 26 12z	17	17	15	15	14	15	17	16	16	17	16	16	16	17	18	17

< -15F / -8.3C | < -10F / -5.5C | < -6F / -3.3C | < -2F / -1.1C | Normal | > +2F / +1.1C | > +6 F / +3.3C | > +10F / +5.5C | > +15F / +8.3C

Temperature Forecast

Graphical representation of the Speedwell downscaled ECMWF & GFS models (both operational and ensemble average)

- **Both maximum and minimum temperature forecasts are displayed.**
- **Forecast models are shown as shaded blue or green lines with climatology represented as a dashed red line.**
- **The table is colour coded to represent the number of degrees of temperature above or below normal. The darker the shading the greater the departure from normal (the more extreme the weather is)**

Commodity Product: Getting Started

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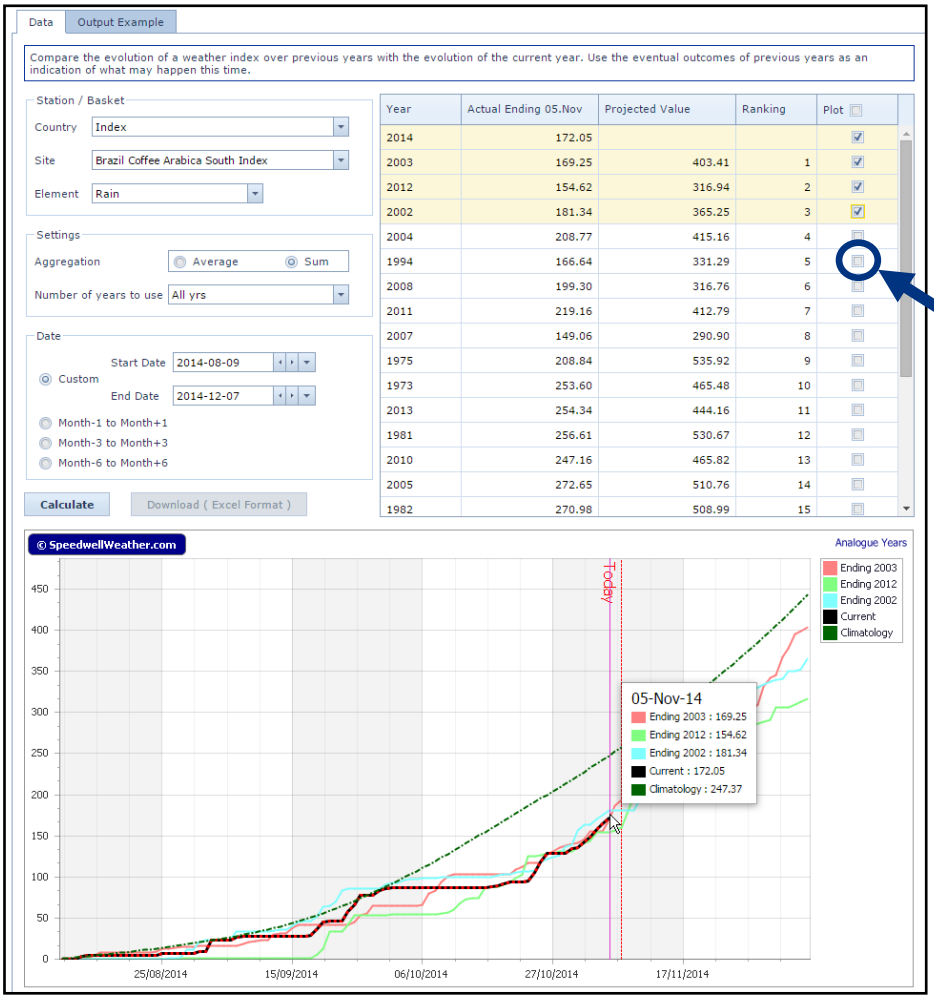
Understanding the results - Tools (iii)

There are a number of tools that a user can access to further analyse data and forecasts. This page looks at the Analogue Years tool and FastCast®

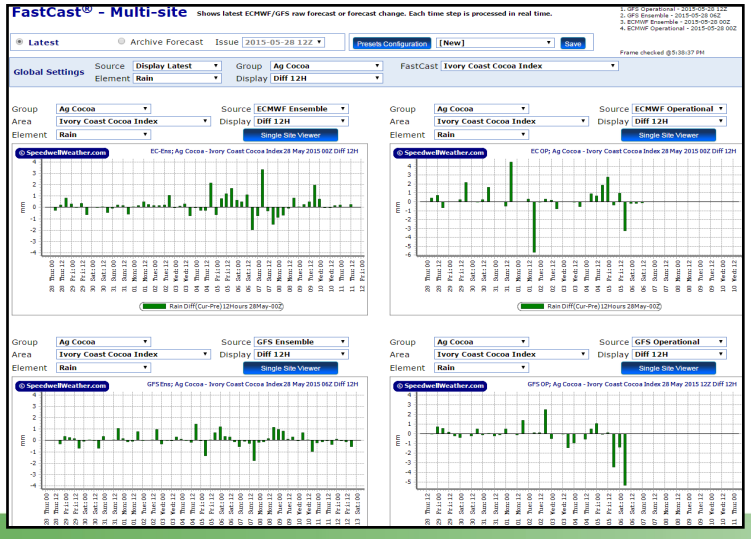
Station	Last 90 Days	Last 60 Days	Last 30 Days	Last 15 Days	Last 7 Days	Temp Fcast	Fast Cast®	Ana-logue Years	Map
Brazil Cocoa (Coastal) Index	295.0	201.6	141.2	96.8	18.4				
Ghana Cocoa Index	354.4	229.9	96.9	60.0	24.3				
Ivory Coast Cocoa Index	375.3	258.7	142.3	95.7	55.3	46.6	108.5	204.2	

- Recent weather
- Precipitation Forecast
- Temperature Forecast
- **FastCast®**
- **Analogue Years**
- Map



Analogue Years Tool

- **The Analogue Years tool shows the accumulation of the chosen index over a specified period and allows this to be compared with previous years showing how these then progressed.**
- **To show a particular historical year check the box here. Or select All at the top**
- **The example shows the cumulative rainfall progression for the previous four months (dark red) overlaid with the four most similar years.**
- **The historical years shown on the right are ordered using a simple algorithm calculating the difference between each historical year and the current at four "gates". The total of the absolute differences is used to sort with the year with the lowest difference at the top.**



Fast Cast®

- **FastCast shows the change in forecast for temperature or rainfall from the previous run. Use this to assess the impact of the latest forecast model runs on the rainfall / temperature forecasts for the crop growing region of interest.**
- **The view shown shows the change in rainfall predicted by four different forecast models for the Ivory Coast Cocoa region.**

Commodity Product Trial

To request a free trial of the Commodity Product, please contact us at **info@SpeedwellWeather.com** or go direct to the website here and follow the links to set up a trial.

Please also contact us about *Commodity Product-Energy*.

World-wide weather data

Speedwell carries an archive of many tens of thousands of quality weather data sets world-wide. Historical data and feeds are available via web download, by Speedwell API or by FTP. Our data sets are available for individual sites or, for users looking for unlimited access through SuperPack®. SuperPack

About Speedwell Weather Limited

Speedwell Weather provides quality weather data, weather forecasts, software, and weather-risk consultancy. With offices in the UK and the USA we serve clients in sectors including weather-risk, energy and agriculture world-wide. We are the dominant provider of settlement data for parametric weather risk contracts.

Contacts

For more information about Commodity Product or other data and forecast services please see www.SpeedwellWeather.com or contact:

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