



# AGROMETEOROLOGICAL BULLETIN

*August 2020  
1st 10-day period*

- Temperature
- Relative Humidity
- Soil Temperature
- Sunshine Duration
- Precipitation
- Evaporation
- Growing Degrees
- Reference Evapotranspiration
- Accumulated Rainfall from the beginning of wet period
- Accumulated Reference Evapotranspiration
- Number of dry days



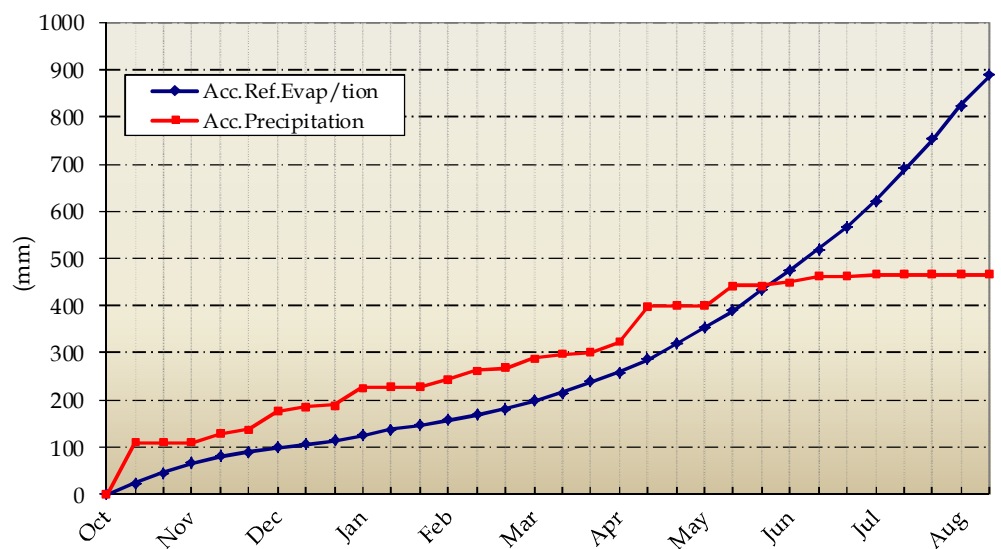
Hellenic National Meteorological Service  
Division of Climatology-Applications  
El. Venizelou Street 14, 16777  
Helliniko, Athens

*Web adresses of HNMS*  
[www.emy.gr](http://www.emy.gr)  
[www.hnms.gr](http://www.hnms.gr)  
[www.emy.gov.gr](http://www.emy.gov.gr)  
[www.meteo.gov.gr](http://www.meteo.gov.gr)  
[www.meteohellas.gr](http://www.meteohellas.gr)

1st 10-day period (1-10/08/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	36.0	33.4	33.0	33.4	33.4	34.2	35.0	35.6	34.0	33.2	34.1	33.3	31.3
	Min	21.0	22.8	22.0	19.0	21.0	22.0	21.0	20.6	27.2	20.4	21.7	19.1	17.9
Relative Humidity	Max	81	68	74	75	68	73	74	82	49	82	73	84	-
	Min	41	35	29	35	32	36	37	34	34	26	34	31	-
Soil Temperature at 10 cm	06 UTC	24.8	25.4	25.6	24.6	24.6	25.4	26.4	26.6	25.4	24.4	25.3	27.2	24.7
	12 UTC	27.4	29.0	29.4	29.4	28.4	29.4	29.6	30.4	28.2	27.0	28.8	31.7	29.0
Sunshine Duration		7.3	11.6	13.2	13.1	12.6	12.9	12.6	9.6	8.5	12.1	11.4	11.9	10.7
Precipitation		0.1	0.7									0.8	0.9	4.0
Evaporation		7.2	7.8	13.3	10.2	9.0	13.4	11.8	12.3	11.7	8.2	104.9	91.9	96.8
Growing Degrees	5	23.5	23.1	22.5	21.2	22.2	23.1	23.0	23.1	25.6	21.8	229.1	211.9	195.9
	10	18.5	18.1	17.5	16.2	17.2	18.1	18.0	18.1	20.6	16.8	179.1	161.9	145.9

1st 10-day period (1-10/08/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	63.8	56.8	58.5
Precipitation - Reference Evapotranspiration	-63.0	-55.9	-54.5
Number of Rainy Days	2.0	2.0	0.7
Number of Dry Days	40.0	8.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

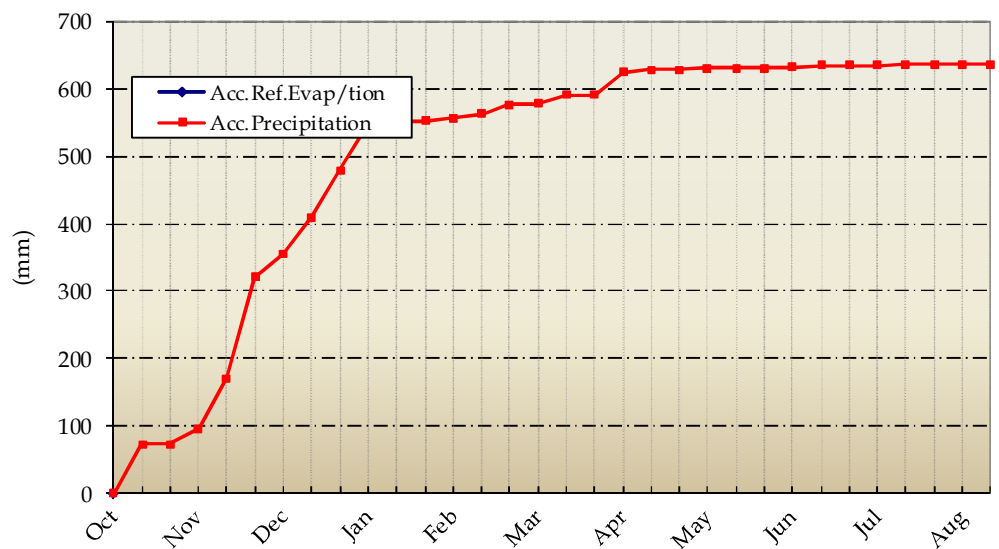


1st 10-day period (1-10/08/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	34.0	36.2	34.4	33.8	33.8	32.4	29.1	29.6	34.1	33.3	33.1	33.0	31.3
	Min	21.0	20.6	21.0	21.5	21.3	22.9	19.9	20.1	20.2	18.6	20.7	20.5	18.8
Relative Humidity	Max	91	95	96	94	95	93	91	90	92	90	93	92	-
	Min	37	33	40	42	45	33	48	51	32	37	40	34	-
Soil Temperature at 10 cm	06 UTC	30.2	30.0	30.4	30.6	30.2	30.4	29.8	29.6	29.0	29.0	29.9	29.7	27.8
	12 UTC	33.0	33.2	33.0	32.8	31.6	32.8	31.6	31.2	31.6	31.8	32.3	32.0	32.1
Sunshine Duration		12.1	9.9	11.6	10.8	7.2	11.2	10.8	10.1	12.1	12.3	10.8	12.2	11.6
Precipitation									0.2			0.2		0.2
Evaporation		11.9	12.2	9.6	8.8	7.2	8.3	8.6	9.2	7.7	10.7	94.2	98.8	74.9
Growing Degrees	5	22.5	23.4	22.7	22.7	22.6	22.7	19.5	19.9	22.2	21.0	218.9	217.6	200.3
	10	17.5	18.4	17.7	17.7	17.6	17.7	14.5	14.9	17.2	16.0	168.9	167.6	150.3

1st 10-day period (1-10/08/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	55.1	52.3
Precipitation - Reference Evapotranspiration	-	-55.1	-52.1
Number of Rainy Days	1.0	0.0	0.1
Number of Dry Days	32.0	25.0	-

**The missing info in the tables and the graph are due to the absence of data.**

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



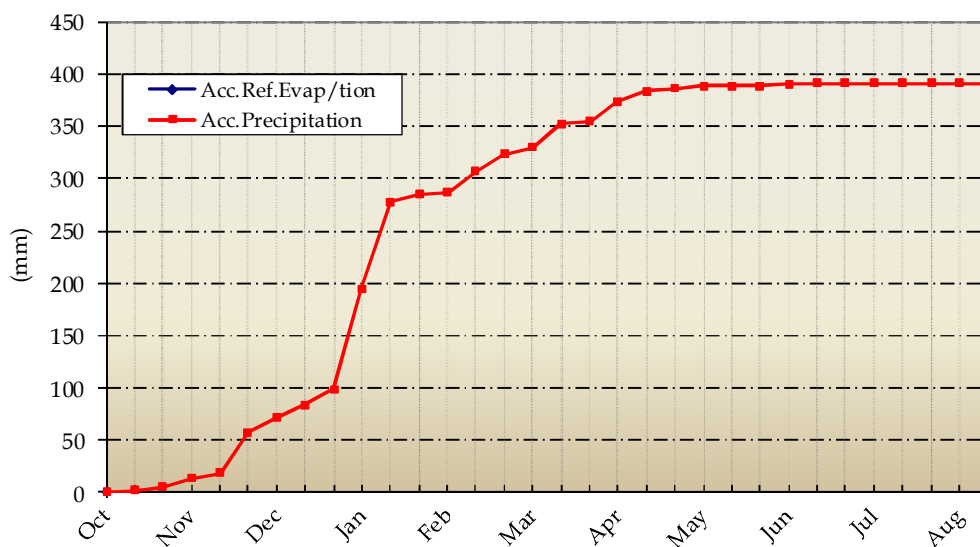
Iraklio

1st 10-day period (1-10/08/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.4	30.0	29.4	30.6	30.6	30.0	29.2	29.0	28.8	28.2	29.9	30.2	28.6
	Min	23.8	26.0	23.0	21.2	23.4	22.2	23.0	21.0	23.8	25.2	23.3	24.3	22.4
Relative Humidity	Max	81	70	74	74	87	88	90	82	75	83	80	73	-
	Min	38	60	53	44	46	56	59	58	58	60	53	44	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.0	12.4	12.7	12.7	12.1	11.8	12.4	12.7	12.6	10.6	12.3	12.7	11.6
Precipitation														0.0
Evaporation		7.7	7.8	9.7	5.9	6.5	2.9	8.2	6.9	7.7	6.2	69.5	80.5	88.8
Growing Degrees	5	23.6	23.0	21.2	20.9	22.0	21.1	21.1	20.0	21.3	21.7	215.9	222.7	205.0
	10	18.6	18.0	16.2	15.9	17.0	16.1	16.1	15.0	16.3	16.7	165.9	172.7	155.0

1st 10-day period (1-10/08/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	66.2	-
Precipitation - Reference Evapotranspiration	-	-66.2	0.0
Number of Rainy Days	0.0	0.0	0.0
Number of Dry Days	69.0	24.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

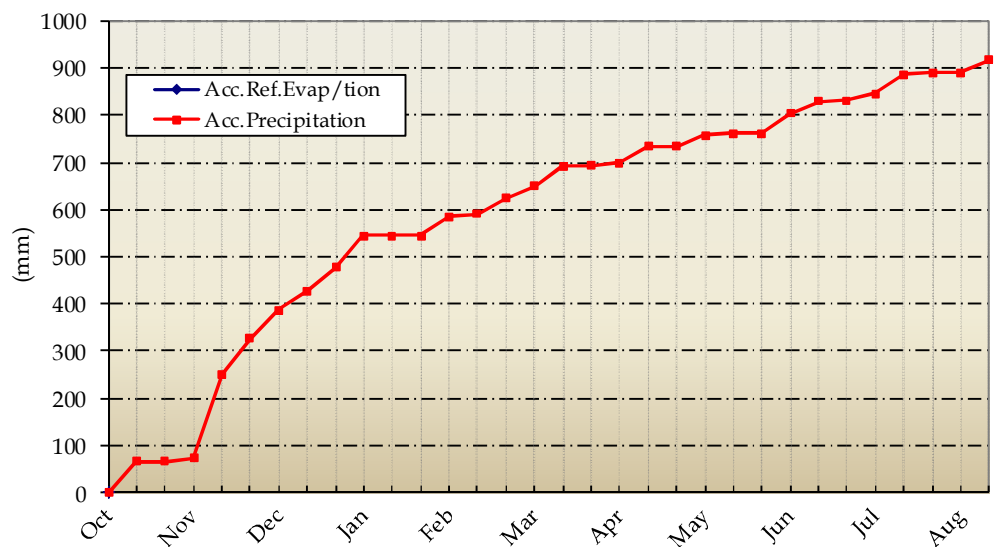


1st 10-day period (1-10/08/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	36.8	35.2	32.7	34.8	31.6	26.2	27.2	28.6	29.4	32.1	31.5	33.9	31.8
	Min	16.0	18.0	19.8	15.2	15.8	17.0	13.6	14.8	17.0	16.4	16.4	19.7	15.9
Relative Humidity	Max	90	84	91	76	96	96	96	96	87	100	91	73	-
	Min	29	32	36	27	51	58	57	45	41	31	41	31	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	24.0
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	28.0
Sunshine Duration		9.2	10.7	9.6	11.3	7.6	3.9	3.8	3.9	11.0	9.1	8.0	11.4	10.1
Precipitation				0.0		2.3	10.2	10.0	0.6	4.9	0.0	28.0		5.8
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	79.9
Growing Degrees	5	21.4	21.6	21.3	20.0	18.7	16.6	15.4	16.7	18.2	19.3	189.1	217.9	183.5
	10	16.4	16.6	16.3	15.0	13.7	11.6	10.4	11.7	13.2	14.3	139.1	167.9	134.7

1st 10-day period (1-10/08/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	50.7
Precipitation - Reference Evapotranspiration	-	-	-44.9
Number of Rainy Days	5.0	0.0	1.3
Number of Dry Days	18.0	12.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



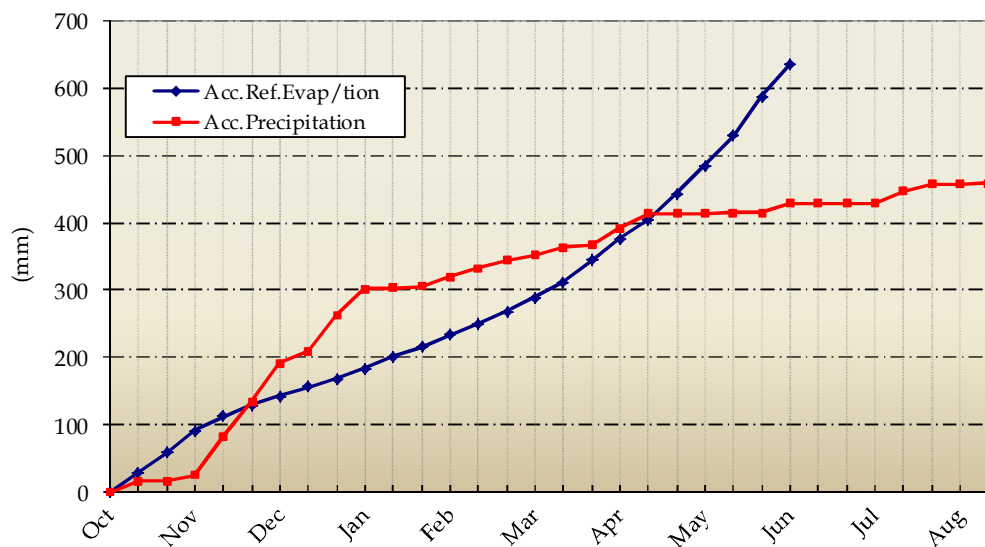
Kalamata

1st 10-day period (1-10/08/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	35.8	32.8	32.6	31.6	33.7	32.2	31.8	31.8	29.8	35.8	32.8	33.8	31.8
	Min	21.0	20.3	21.2	20.7	18.8	21.8	19.6	18.8	19.9	20.4	20.2	20.5	18.3
Relative Humidity	Max	77	87	90	94	97	98	88	83	85	88	89	79	-
	Min	27	39	33	45	31	34	32	32	38	19	33	28	-
Soil Temperature at 10 cm	06 UTC	30.0	30.0	27.8	28.8	28.4	29.2	29.0	29.0	28.5	28.0	28.9	28.4	26.3
	12 UTC	33.5	32.5	31.5	33.0	32.5	32.5	32.5	32.0	31.6	31.5	32.3	31.7	30.4
Sunshine Duration		12.0	6.1	11.5	11.9	11.9	10.7	12.2	9.9	6.3	10.0	10.2	11.9	11.0
Precipitation			1.1									1.1		3.9
Evaporation		12.0	1.7	12.4	10.2	8.2	11.8	7.0	8.2	7.8	11.0	90.3	87.8	84.1
Growing Degrees	5	23.4	21.6	21.9	21.2	21.3	22.0	20.7	20.3	19.9	23.1	215.2	221.6	200.7
	10	18.4	16.6	16.9	16.2	16.3	17.0	15.7	15.3	14.9	18.1	165.2	171.6	150.7

1st 10-day period (1-10/08/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	66.0	56.0
Precipitation - Reference Evapotranspiration	-	-66.0	-52.1
Number of Rainy Days	1.0	0.0	0.5
Number of Dry Days	18.0	25.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

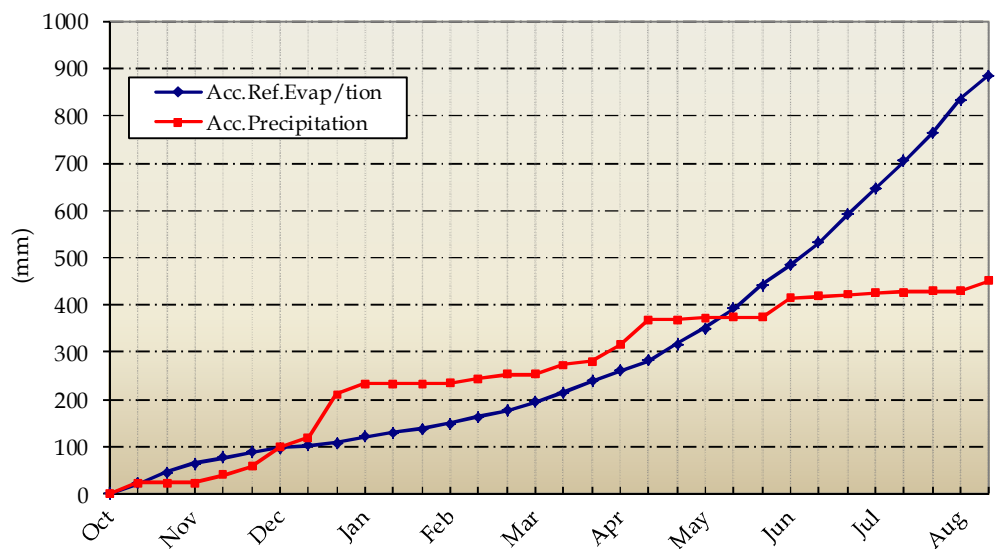


1st 10-day period (1-10/08/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	37.8	34.0	33.0	33.4	31.6	29.0	30.2	31.8	33.0	33.6	32.7	35.5	33.2
	Min	23.4	20.0	19.4	20.5	21.2	20.5	18.0	18.8	21.4	21.6	20.5	20.3	18.0
Relative Humidity	Max	91	92	83	80	81	98	97	95	76	79	87	78	-
	Min	26	34	39	39	46	46	45	36	33	29	37	27	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	27.1
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	29.4
Sunshine Duration		5.7	10.8	10.6	11.2	8.5	4.0	5.0	6.0	5.6	10.7	7.8	10.8	10.5
Precipitation		0.9					17.4	4.7			0.1	23.1		4.2
Evaporation		8.4	7.8	9.7	12.0	7.0	4.2	3.0	9.3	4.4	9.4	75.2	118.0	91.8
Growing Degrees	5	25.6	22.0	21.2	22.0	21.4	19.8	19.1	20.3	22.2	22.6	216.1	229.3	206.1
	10	20.6	17.0	16.2	17.0	16.4	14.8	14.1	15.3	17.2	17.6	166.1	179.3	156.1

1st 10-day period (1-10/08/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	51.7	61.9	58.6
Precipitation - Reference Evapotranspiration	-28.6	-61.9	-54.4
Number of Rainy Days	4.0	0.0	1.1
Number of Dry Days	14.0	24.0	-

The missing info in the tables are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



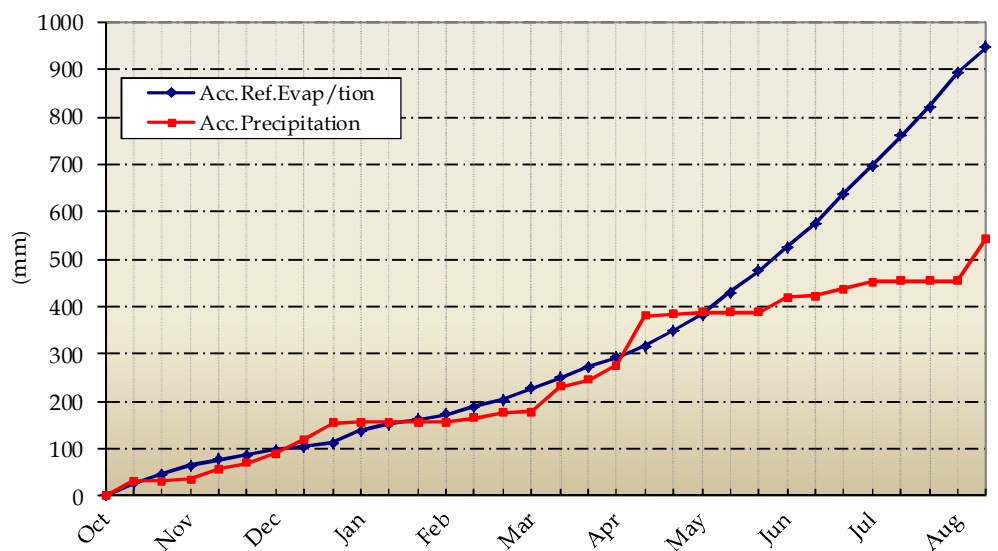
Mikra

1st 10-day period (1-10/08/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	36.0	32.8	32.0	31.6	30.8	28.1	28.2	29.8	31.7	32.2	31.3	33.8	31.9
	Min	25.4	22.9	11.5	20.6	19.8	20.0	20.2	22.7	19.6	19.8	20.2	22.1	19.4
Relative Humidity	Max	70	81	82	84	97	96	92	87	99	95	88	75	-
	Min	40	43	42	43	52	56	49	55	52	39	47	34	-
Soil Temperature at 10 cm	06 UTC	30.0	31.0	28.0	29.4	29.4	27.4	25.4	25.4	25.0	24.4	27.5	28.9	26.9
	12 UTC	34.2	30.0	32.5	32.6	31.4	27.4	26.4	27.2	26.8	27.0	29.6	32.0	31.6
Sunshine Duration		11.5	10.4	12.3	12.1	9.9	6.1	8.2	6.0	7.8	11.7	9.6	11.7	10.2
Precipitation		0.0				7.8	28.6	1.7	5.2	45.7	0.0	89.0		5.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	88.0
Growing Degrees	5	25.7	22.9	16.8	21.1	20.3	19.1	19.2	21.3	20.7	21.0	207.9	229.6	206.4
	10	20.7	17.9	11.8	16.1	15.3	14.1	14.2	16.3	15.7	16.0	157.9	179.6	156.4

1st 10-day period (1-10/08/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	54.8	63.6	56.6
Precipitation - Reference Evapotranspiration	34.2	-63.6	-51.3
Number of Rainy Days	5.0	0.0	1.3
Number of Dry Days	16.0	18.0	-

The missing info in the tables are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration





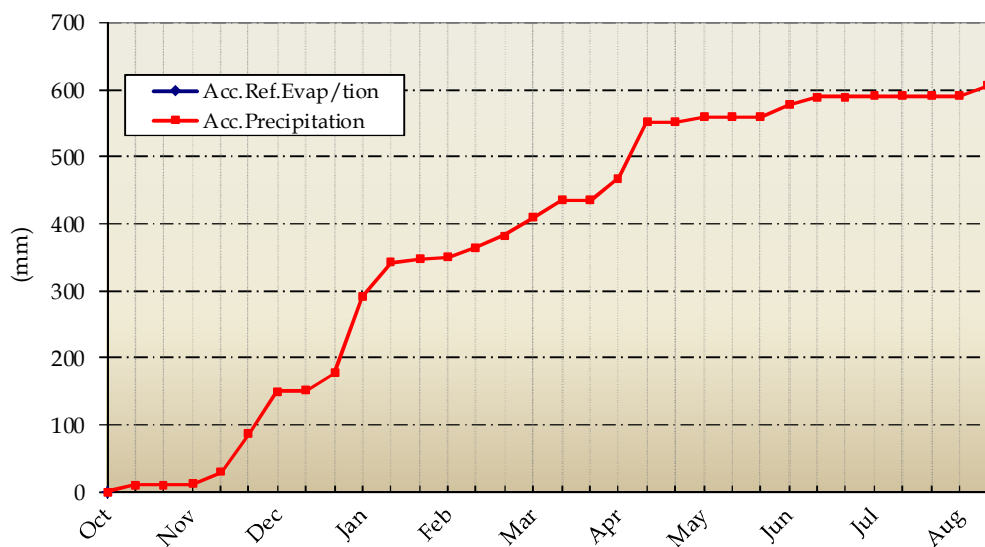
Tanagra

1st 10-day period (1-10/08/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	36.2	32.0	32.4	32.8	33.4	31.1	29.9	30.7	29.4	30.1	31.8	33.8	32.1
	Min	22.0	21.6	21.3	19.3	20.4	18.9	20.8	20.3	17.6	20.6	20.3	20.2	18.7
Relative Humidity	Max	65	70	63	62	69	74	77	98	99	69	75	64	-
	Min	23	26	23	28	27	33	36	32	44	27	30	23	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		10.2	11.3	12.5	12.9	12.1	11.3	6.0	11.0	8.9	12.7	10.9	12.4	
Precipitation										16.2		16.2		0.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	24.1	21.8	21.9	21.1	21.9	20.0	20.4	20.5	18.5	20.4	210.4	220.0	
	10	19.1	16.8	16.9	16.1	16.9	15.0	15.4	15.5	13.5	15.4	160.4	170.0	

1st 10-day period (1-10/08/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	55.8	
Precipitation - Reference Evapotranspiration	-	-55.8	0.7
Number of Rainy Days	1.0	0.0	0.4
Number of Dry Days	47.0	24.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



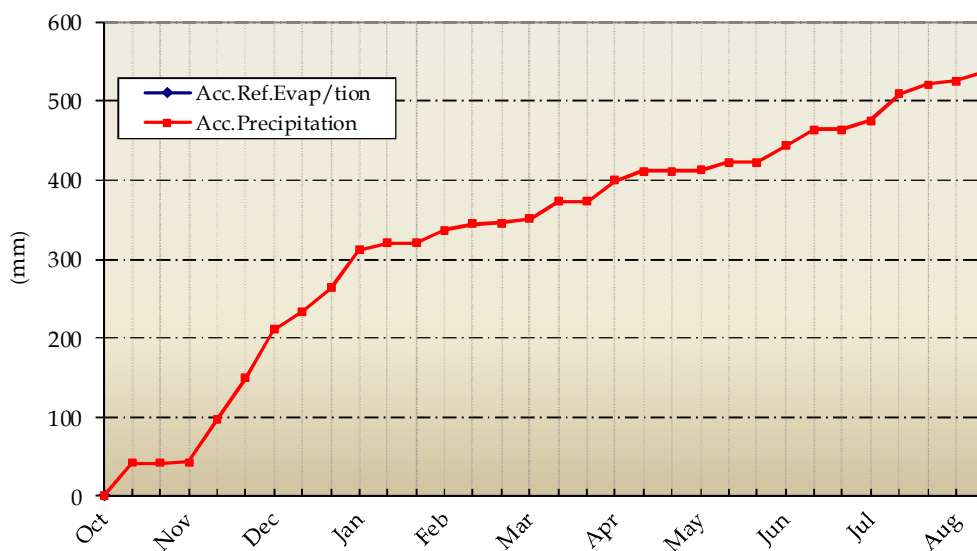
Tripoli

1st 10-day period (1-10/08/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	36.4	30.8	31.7	32.6	33.5	30.5	28.6	28.0	26.5	30.2	30.9	32.3	30.8
	Min	16.8	16.5	14.5	15.3	15.0	16.4	14.0	14.0	15.2	21.6	15.9	15.9	14.8
Relative Humidity	Max	89	98	100	93	93	93	93	99	100	78	94	87	-
	Min	16	33	24	25	21	22	30	34	43	24	27	21	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	25.4	25.8
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	32.4	28.5
Sunshine Duration		9.4	7.5	9.3	11.8	12.2	12.6	12.1	7.1	4.7	12.4	9.9	11.5	10.5
Precipitation		3.3	5.6					0.1	3.4	0.1		12.5	5.9	6.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	66.4
Growing Degrees	5	21.6	18.7	18.1	19.0	19.3	18.5	16.3	16.0	15.9	20.9	184.1	190.9	178.4
	10	16.6	13.7	13.1	14.0	14.3	13.5	11.3	11.0	10.9	15.9	134.1	140.9	128.4

1st 10-day period (1-10/08/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	46.9	54.4	53.5
Precipitation - Reference Evapotranspiration	-34.4	-48.5	-46.8
Number of Rainy Days	5.0	3.0	1.1
Number of Dry Days	6.0	1.0	-

The missing info in the tables and the graph are due to the absence of data.

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration





◆ **List of Symbols and Abbreviations**

**Reference Evapotranspiration ETo (mm):**

Calculated by the FAO Penman-Montieth equation

$$ET_0 = \frac{0.408 * \Delta * (R_n - G) + \gamma * \frac{900}{T + 273} * u_2 * (e_s - e_a)}{\Delta + \gamma * (1 + 0.34 * u_2)}$$

using 10-day step.

R<sub>n</sub> is estimated from sunshine measurements and G assumed to be zero.

**Growing Degrees:** Degrees with mean temperature exceeding the base of 5 or 10 °C.

**Number of Rainy Days:** Number of days with precipitation of at least 0.1 mm.

**Number of Dry Days:** Number of dry days recorded since the last rainy day.

**Measurements Units**

- ◆ Temperature : °C
- ◆ Relative Humidity : %
- ◆ Soil Temperature : °C
- ◆ Sunshine Duration : Hours
- ◆ Precipitation : mm
- ◆ Evaporation (Pan) : mm
- ◆ Growing Degrees : °C

**UTC (Universal Time coordinates) in Greece**

- ◆ Winter : Time(UTC) = Local time - 2
- ◆ Summer : Time(UTC) = Local time - 3

© HELLENIC NATIONAL METEOROLOGICAL SERVICE

Reproduction is prohibited without written permission

El. Venizelou street 14, Zip Code 16777

Helliniko, Athens



ΕΘΝΙΚΗ  
ΜΕΤΕΩΡΟΛΟΓΙΚΗ  
ΥΠΗΡΕΣΙΑ

HELLENIC NATIONAL METEOROLOGICAL SERVICE

Division of Climatology-Applications

Issue Editors :

Papakrivou Anastasia

The present bulletin was designed and implemented under the support of Water Resources Management Division of Agriculture University of Athens