



AGROMETEOROLOGICAL BULLETIN

February 2021
3rd 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

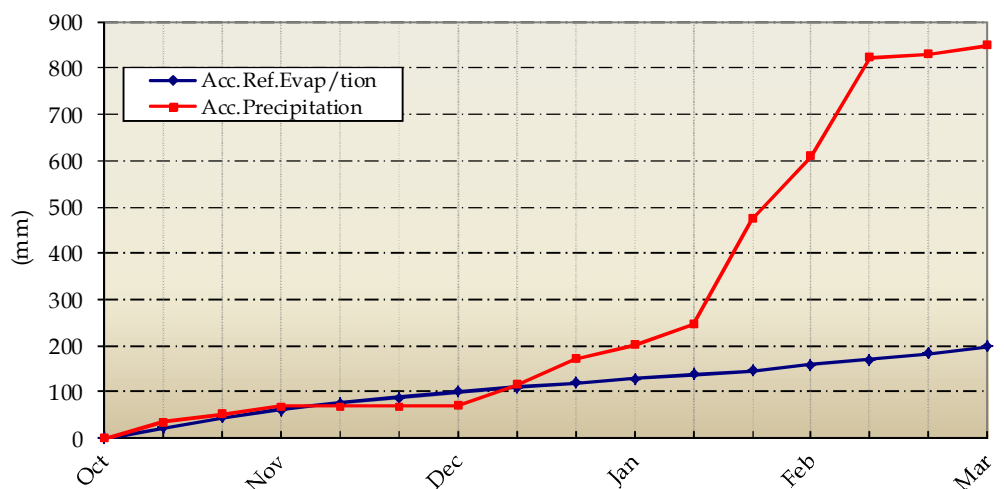
Web addresses of HNMS
www.hnms.gr
www.emy.gov.gr
www.meteo.gov.gr
www.meteohellas.gr

Alexandroupoli

3rd 10-day period (21-28/02/2021)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	10.6	12.0	15.6	15.4	15.4	16.4	15.6	14.0	14.4	13.5	9.7
	Min	4.2	-3.0	-1.4	1.2	4.0	2.0	1.6	7.0	2.0	3.7	1.6
Relative Humidity	Max	88	88	98	89	93	93	93	82	90	85	-
	Min	43	52	52	49	52	50	49	34	48	48	-
Soil Temperature at 10 cm	06 UTC	6.0	4.6	5.4	6.6	7.0	7.2	7.6	9.6	6.8	7.5	5.7
	12 UTC	8.6	7.0	9.4	9.6	9.6	11.0	11.4	11.2	9.7	9.9	7.3
Sunshine Duration		8.2	8.9	9.2	8.2	9.0	9.0	8.7	7.1	8.5	5.4	4.8
Precipitation											18.6	14.4
Evaporation		0.0	0.0	0.0	0.6	4.7	2.0	2.4	0.0	9.7	15.7	9.4
Growing Degrees	5	2.4	0.0	2.1	3.3	4.7	4.2	3.6	5.5	25.8	32.5	17.0
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	4.0	2.5

3rd 10-day period (21-28/02/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	13.6	15.5
Precipitation - Reference Evapotranspiration	-13.6	3.1
Number of Rainy Days	0.0	2.0
Number of Dry Days	10.0	11.0

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

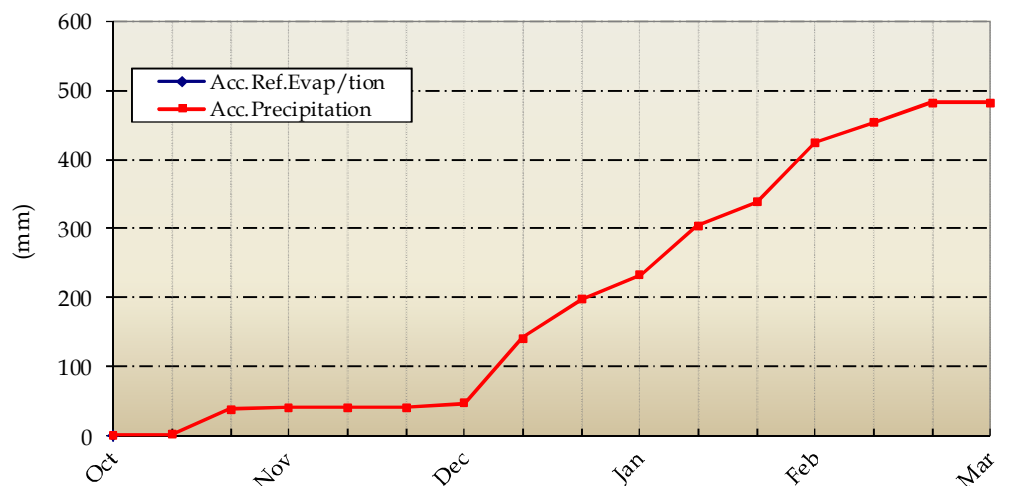


3rd 10-day period (21-28/02/2021)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	17.6	16.8	17.4	18.3	21.6	21.6	18.3	20.8	19.0	16.0	14.1
	Min	2.5	1.0	2.7	3.9	3.4	4.1	6.9	7.8	4.0	5.8	5.3
Relative Humidity	Max	97	95	97	95	95	91	98	98	96	90	-
	Min	45	35	54	45	45	33	54	44	44	44	-
Soil Temperature at 10 cm	06 UTC	10.2	9.4	10.0	10.4	11.4	11.2	11.8	12.4	10.8	11.1	9.0
	12 UTC	11.2	12.0	11.0	11.4	12.2	13.6	12.8	13.6	12.2	12.0	11.2
Sunshine Duration		9.8	9.9	9.9	9.9	8.7	10.1	9.7	7.6	9.4	7.0	5.7
Precipitation									0.1	0.1	1.5	22.1
Evaporation		2.6	2.8	2.6	2.6	2.4	2.6	2.5	2.1	20.2	31.8	19.2
Growing Degrees	5	5.1	3.9	5.1	6.1	7.5	7.9	7.6	9.3	52.4	53.3	39.2
	10	0.1	0.0	0.1	1.1	2.5	2.9	2.6	4.3	13.5	11.1	8.3

3rd 10-day period (21-28/02/2021)	Previous Year Value	Past Years Mean Value	
Reference Evapotranspiration	12.8	-	12.9
Precipitation - Reference Evapotranspiration	-12.7	-	9.2
Number of Rainy Days	1.0	2.0	3.2
Number of Dry Days	9.0	0.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



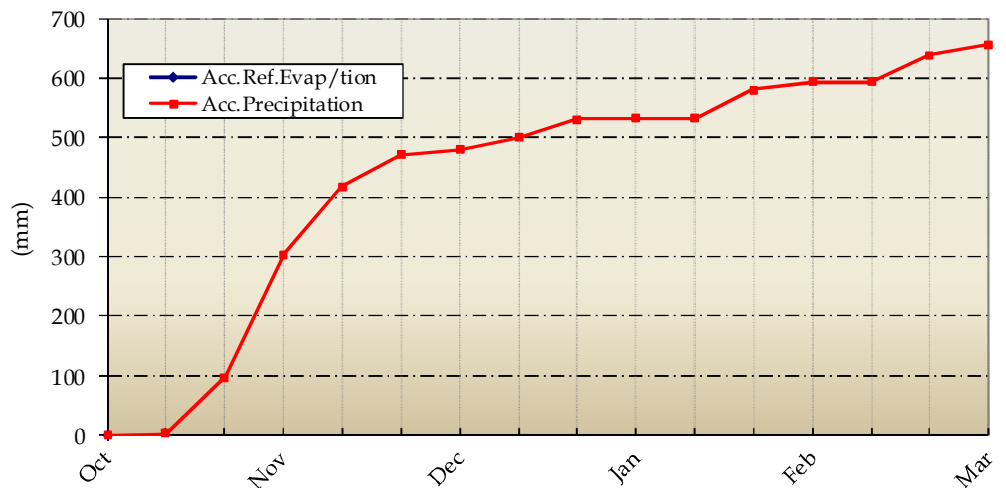
Iraklio

3rd 10-day period (21-28/02/2021)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.0	14.6	16.0	18.0	14.6	16.2	16.8	17.4	16.0	15.7	14.9
	Min	11.2	10.2	8.4	9.0	13.6	12.6	8.0	8.4	10.2	10.0	8.9
Relative Humidity	Max	92	95	92	90	80	90	92	92	90	85	-
	Min	67	65	71	61	64	70	66	72	67	50	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		3.0	7.3	9.0	10.0	0.5	8.9	1.2	7.5	5.9	6.1	4.7
Precipitation		9.0	8.5							17.5	6.7	19.7
Evaporation		3.5	2.7	1.2	2.2	2.4	2.4	2.3	3.6	20.3	26.4	26.4
Growing Degrees	5	7.6	7.4	7.2	8.5	9.1	9.4	7.4	7.9	64.5	70.6	57.1
	10	2.6	2.4	2.2	3.5	4.1	4.4	2.4	2.9	24.5	25.6	18.9

3rd 10-day period (21-28/02/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	19.7
Number of Rainy Days	2.0	4.0	3.4
Number of Dry Days	3.0	4.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



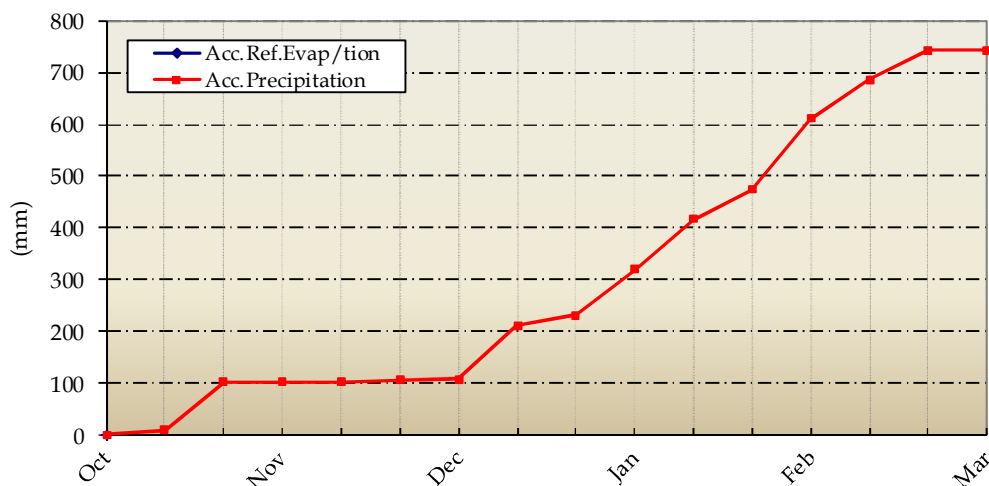
Ioannina

3rd 10-day period (21-28/02/2021)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.4	17.6	19.5	22.0	19.5	21.4	20.6	18.1	19.3	14.1	10.4
	Min	-1.1	-3.7	-2.6	-2.0	5.6	3.3	0.1	1.1	0.1	-0.2	1.4
Relative Humidity	Max	100	100	100	100	69	100	99	100	96	99	-
	Min	34	36	46	31	28	27	43	39	36	47	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	4.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	5.7
Sunshine Duration		8.7	8.9	7.5	9.3	9.2	9.8	9.2	3.3	8.2	5.8	4.3
Precipitation											26.6	21.1
Evaporation		-	-	-	-	-	-	-	-	-	-	6.7
Growing Degrees	5	2.2	2.0	3.5	5.0	7.6	7.4	5.4	4.6	37.4	20.4	14.5
	10	0.0	0.0	0.0	0.0	2.6	2.4	0.4	0.0	5.3	1.5	1.1

3rd 10-day period (21-28/02/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	10.3
Precipitation - Reference Evapotranspiration	-	-	10.8
Number of Rainy Days	0.0	2.0	2.9
Number of Dry Days	14.0	6.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



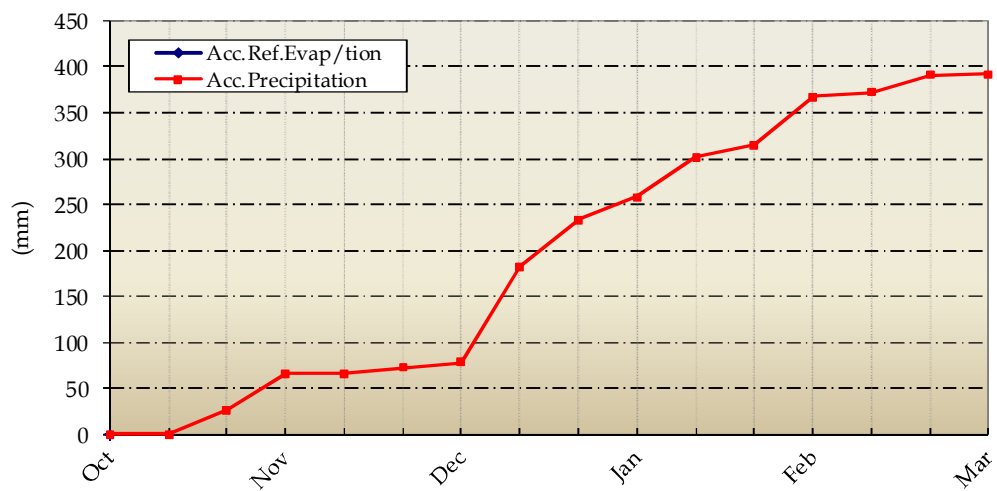
Kalamata

3rd 10-day period (21-28/02/2021)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	18.5	17.2	17.3	21.0	20.0	19.2	18.8	18.4	18.8	16.9	14.8
	Min	5.9	2.9	1.9	2.3	5.0	10.8	3.7	4.3	4.6	4.9	5.1
Relative Humidity	Max	81	79	91	95	82	77	99	100	88	90	-
	Min	31	26	47	20	30	35	45	57	36	41	-
Soil Temperature at 10 cm	06 UTC	10.0	9.0	9.2	9.5	10.4	11.4	11.0	11.4	10.2	10.1	9.6
	12 UTC	12.5	12.0	12.4	13.0	13.4	14.4	14.5	14.4	13.3	12.3	11.1
Sunshine Duration		9.7	10.0	9.7	9.9	9.6	9.9	9.9	7.4	9.5	6.8	5.3
Precipitation									0.3	0.3	7.9	28.6
Evaporation		3.4	3.6	2.4	3.0	4.6	3.2	2.2	3.8	26.2	23.4	20.1
Growing Degrees	5	7.2	5.1	4.6	6.7	7.5	10.0	6.3	6.4	53.6	53.1	40.8
	10	2.2	0.1	0.0	1.7	2.5	5.0	1.3	1.4	14.0	12.1	8.0

3rd 10-day period (21-28/02/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	20.5	13.5
Precipitation - Reference Evapotranspiration	-	-12.6	15.1
Number of Rainy Days	1.0	4.0	3.3
Number of Dry Days	12.0	0.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



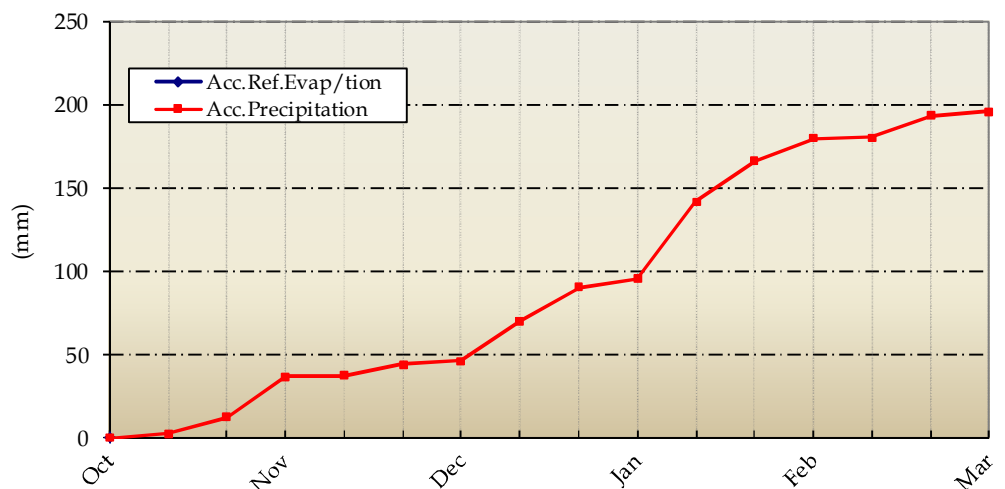
Larisa

3rd 10-day period (21-28/02/2021)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	11.2	9.6	17.0	18.6	17.7	18.6	20.8	13.0	15.8	15.9	11.9
	Min	5.0	1.4	-1.4	0.2	0.6	0.9	0.0	7.6	1.8	2.3	1.7
Relative Humidity	Max	99	100	100	100	97	98	99	99	99	88	-
	Min	71	80	53	42	41	44	43	45	52	37	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	7.0
	12 UTC	-	-	-	-	-	-	-	-	-	-	7.7
Sunshine Duration		1.4	3.2	5.9	8.8	8.5	9.2	9.3	0.0	5.8	7.5	4.6
Precipitation		3.0								3.0		13.4
Evaporation		1.7	0.7	0.8	2.3	1.0	0.7	2.7	1.8	11.7	21.4	9.6
Growing Degrees	5	3.1	0.5	2.8	4.4	4.2	4.8	5.4	5.3	30.4	36.8	20.2
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.7	2.8	2.5

3rd 10-day period (21-28/02/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	11.9	18.5	11.5
Precipitation - Reference Evapotranspiration	-8.9	-18.5	1.9
Number of Rainy Days	1.0	0.0	2.6
Number of Dry Days	6.0	9.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



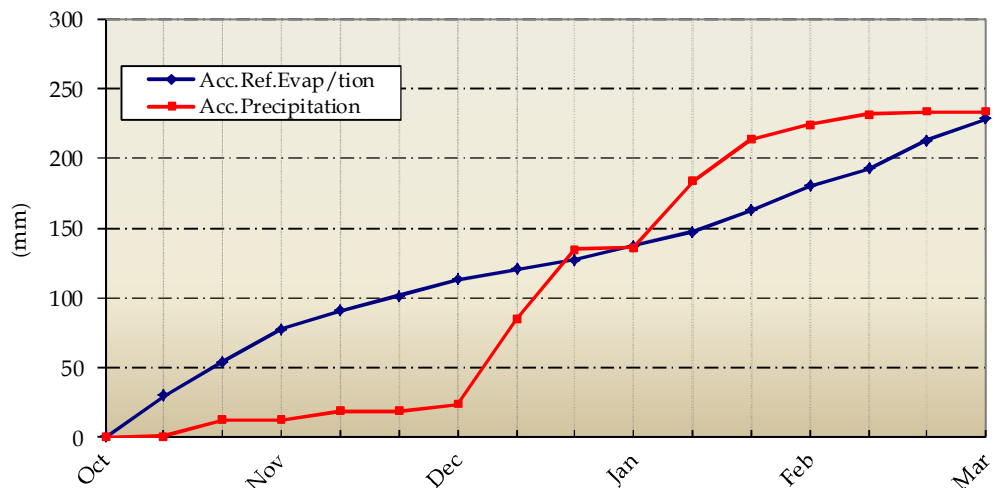
Mikra

3rd 10-day period (21-28/02/2021)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	13.1	14.2	19.0	19.7	17.6	16.0	19.0	16.0	16.8	15.3	11.1
	Min	7.0	3.2	1.9	4.0	4.5	4.5	3.5	7.0	4.4	4.6	2.8
Relative Humidity	Max	92	95	95	92	95	91	92	88	92	80	-
	Min	65	59	39	36	44	46	45	52	48	38	-
Soil Temperature at 10 cm	06 UTC	9.0	8.0	8.0	8.8	9.4	9.6	9.4	10.8	9.1	8.6	6.7
	12 UTC	10.2	11.0	10.2	11.0	11.2	12.0	13.4	10.6	11.2	10.0	9.0
Sunshine Duration		5.2	7.3	9.2	9.2	7.8	8.0	9.4	2.4	7.3	7.1	4.4
Precipitation		0.1								0.1	1.6	13.2
Evaporation		-	-	-	-	-	-	-	-	-	-	13.2
Growing Degrees	5	5.1	3.7	5.5	6.9	6.1	5.3	6.3	6.5	45.1	44.4	21.0
	10	0.1	0.0	0.5	1.9	1.1	0.3	1.3	1.5	6.4	5.9	2.4

3rd 10-day period (21-28/02/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	15.8	23.0	11.8
Precipitation - Reference Evapotranspiration	-15.7	-21.4	1.4
Number of Rainy Days	1.0	2.0	2.4
Number of Dry Days	6.0	6.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



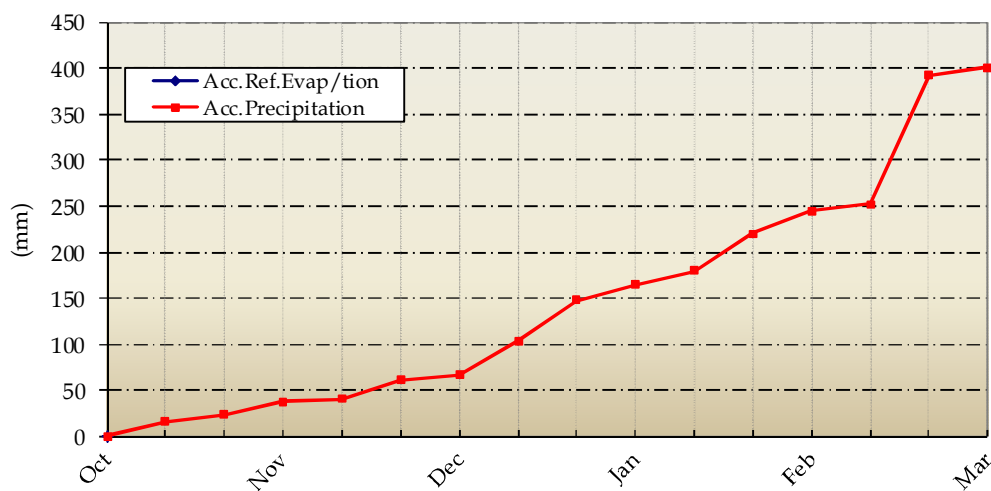
Tanagra

3rd 10-day period (21-28/02/2021)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	11.1	15.3	18.0	18.4	15.2	16.9	18.8	12.9	15.8	14.4	12.6
	Min	2.1	1.6	0.1	-0.3	5.9	6.5	2.4	5.0	2.9	4.2	3.5
Relative Humidity	Max	100	100	100	97	81	97	99	85	95	90	-
	Min	57	43	32	34	49	47	35	56	44	43	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		4.7	8.7	9.4	9.1	6.9	9.3	9.0	0.0	7.1	5.9	-
Precipitation		8.2								8.2	27.3	17.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	1.6	3.5	4.1	4.1	5.6	6.7	5.6	4.0	35.0	40.2	-
	10	0.0	0.0	0.0	0.0	0.6	1.7	0.6	0.0	2.9	7.8	-

3rd 10-day period (21-28/02/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	17.9
Number of Rainy Days	1.0	3.0	3.5
Number of Dry Days	4.0	0.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



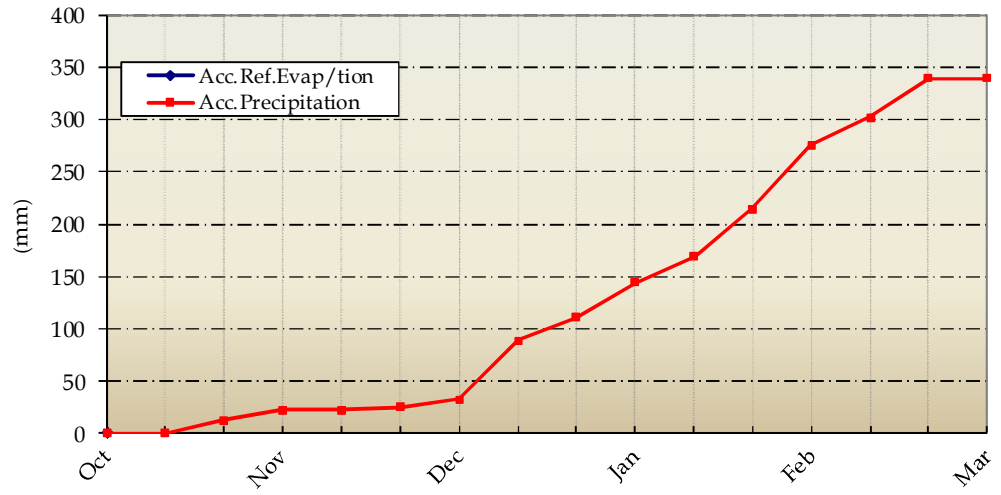
Tripoli

3rd 10-day period (21-28/02/2021)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	10.4	15.9	19.2	19.3	14.7	17.1	20.2	15.1	16.5	15.1	10.1
	Min	-0.5	-4.9	-4.1	-3.5	3.2	8.0	-1.4	-1.4	-0.6	1.2	1.0
Relative Humidity	Max	100	99	97	92	73	60	99	99	90	86	-
	Min	49	16	17	20	39	33	17	42	29	35	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	3.8	5.0
	12 UTC	-	-	-	-	-	-	-	-	-	-	6.2
Sunshine Duration		6.2	8.5	8.8	9.5	9.4	9.5	9.2	5.7	8.4	5.5	5.1
Precipitation		0.2							0.0	0.2	4.8	27.0
Evaporation		-	-	-	-	-	-	-	-	-	-	9.7
Growing Degrees	5	0.0	0.5	2.6	2.9	4.0	7.6	4.4	1.9	23.7	-	14.5
	10	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	-	1.4

3rd 10-day period (21-28/02/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.1	-	12.6
Precipitation - Reference Evapotranspiration	-11.9	-	14.4
Number of Rainy Days	1.0	2.0	3.2
Number of Dry Days	5.0	7.0	-

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_n 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