



AGROMETEOROLOGICAL BULLETIN

*May 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

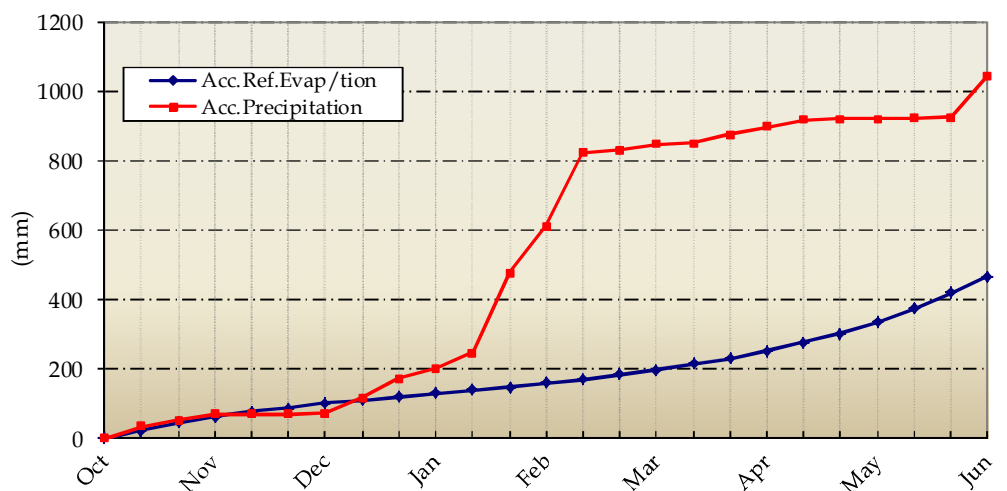
Web addresses of HNMS
www.hnms.gr
www.emy.gov.gr
www.meteo.gov.gr
www.meteohellas.gr

Alexandroupoli

3rd 10-day period (21-31/05/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	21.6	22.2	22.4	28.2	28.8	29.2	28.6	24.6	23.2	25.6	21.8	25.1	21.8	24.2
	Min	12.2	10.4	11.0	12.8	17.4	16.6	15.0	12.8	14.0	13.8	14.6	13.7	12.1	12.7
Relative Humidity	Max	95	88	88	93	56	74	85	93	89	91	95	86	78	-
	Min	41	60	58	48	38	20	37	50	48	48	76	48	48	-
Soil Temperature at 10 cm	06 UTC	18.4	18.4	18.6	19.6	21.2	21.4	21.2	21.4	19.6	20.0	20.6	20.0	15.9	19.3
	12 UTC	18.8	20.8	21.6	23.6	24.2	25.0	24.6	25.2	22.5	23.2	21.0	22.8	19.2	23.6
Sunshine Duration		4.3	12.5	13.1	12.0	12.5	11.7	11.1	8.9	8.4	8.3	0.0	9.3	8.0	8.3
Precipitation		24.0							44.0	44.0		8.2	120.2	7.8	12.4
Evaporation		5.1	4.9	6.7	6.0	11.6	4.4	11.3	6.0	4.0	5.8	1.9	67.7	52.5	70.1
Growing Degrees	5	11.9	11.3	11.7	15.5	18.1	17.9	16.8	13.7	13.6	14.7	13.2	158.4	131.2	147.7
	10	6.9	6.3	6.7	10.5	13.1	12.9	11.8	8.7	8.6	9.7	8.2	103.4	76.2	92.7

3rd 10-day period (21-31/05/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	47.5	43.2	45.7
Precipitation - Reference Evapotranspiration	72.7	-35.4	-33.3
Number of Rainy Days	4.0	5.0	2.4
Number of Dry Days	2.0	17.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



Agrometeorological Data

May 2021

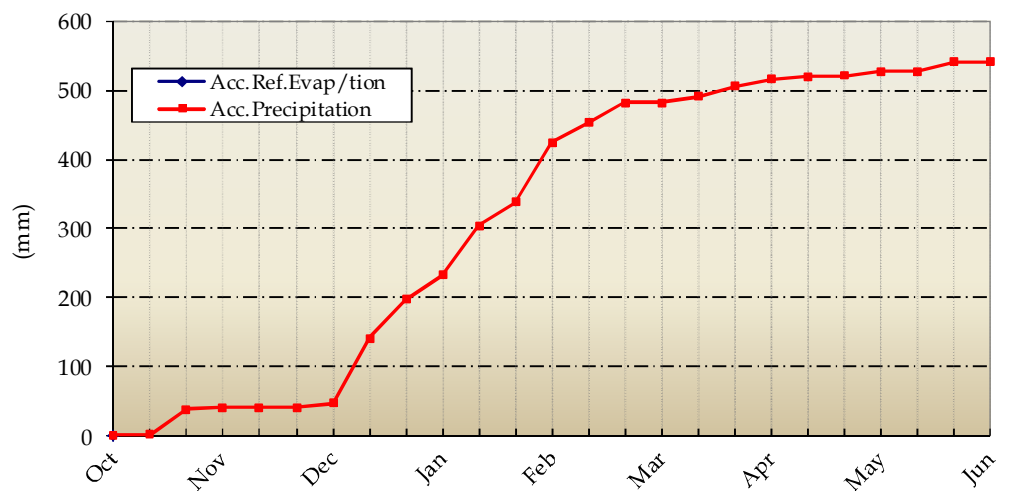
Andravida

3rd 10-day period (21-31/05/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.4	25.1	26.5	30.0	32.6	29.0	28.1	26.9	26.8	26.7	24.1	27.2	25.0	25.4
	Min	16.7	11.3	9.4	12.4	14.3	13.5	13.0	14.0	12.7	13.7	14.5	13.2	13.4	14.0
Relative Humidity	Max	89	93	95	92	89	94	94	90	92	90	90	92	92	-
	Min	38	42	25	35	30	26	42	33	36	34	47	35	41	-
Soil Temperature at 10 cm	06 UTC	21.2	21.2	21.0	22.0	23.2	23.4	23.4	23.6	23.6	24.0	24.2	22.8	23.1	21.4
	12 UTC	23.6	24.6	24.2	25.4	26.2	26.6	26.8	27.0	26.6	26.8	26.6	25.9	25.5	25.8
Sunshine Duration		12.9	13.2	13.2	11.9	12.8	12.7	12.3	12.4	12.8	11.3	12.3	12.5	11.0	10.2
Precipitation														1.0	6.8
Evaporation		6.4	6.6	7.3	8.8	6.4	6.9	9.4	7.6	9.2	7.0	7.2	82.8	74.9	63.7
Growing Degrees	5	15.1	13.2	13.0	16.2	18.5	16.3	15.6	15.5	14.8	15.2	14.3	167.4	156.0	161.7
	10	10.1	8.2	8.0	11.2	13.5	11.3	10.6	10.5	9.8	10.2	9.3	112.4	101.0	106.7

3rd 10-day period (21-31/05/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	49.7	- 48.0
Precipitation - Reference Evapotranspiration	-49.7	- -41.2
Number of Rainy Days	0.0	1.0 1.0
Number of Dry Days	16.0	27.0 -

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

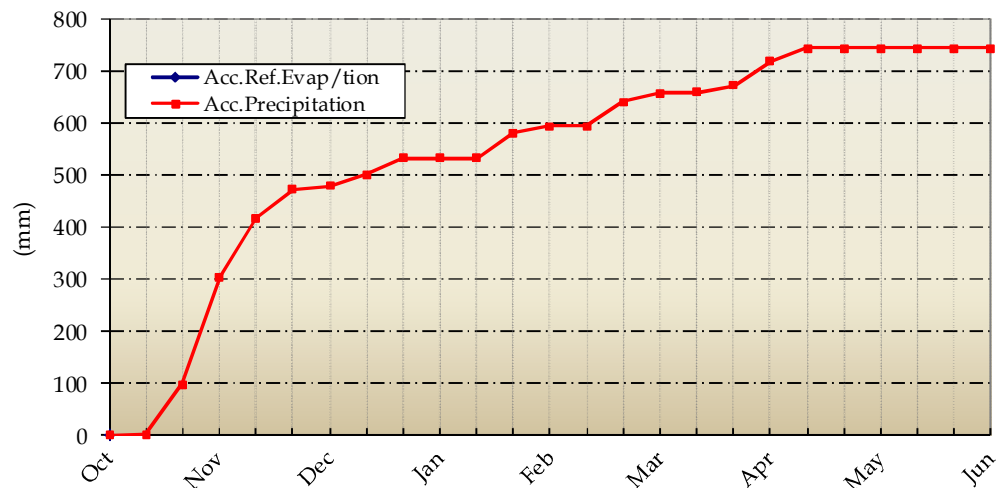


3rd 10-day period (21-31/05/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.0	22.2	24.0	28.6	28.0	28.4	26.0	25.4	24.4	23.0	25.0	25.2	22.5	24.9
	Min	17.4	12.8	14.0	14.8	18.0	19.4	17.0	17.8	17.0	16.8	15.4	16.4	16.2	16.6
Relative Humidity	Max	91	83	81	81	87	79	84	88	92	93	87	86	81	-
	Min	55	60	53	56	27	55	63	56	68	70	70	58	50	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.9	12.9	12.9	13.0	12.8	12.7	12.6	12.8	12.3	2.4	12.8	11.8	10.0	10.1
Precipitation											0.4		0.4	1.7	4.4
Evaporation		9.1	2.7	4.7	6.8	4.6	5.3	5.3	6.8	5.9	0.1	5.3	56.6	63.1	74.4
Growing Degrees	5	14.7	12.5	14.0	16.7	18.0	18.9	16.5	16.6	15.7	14.9	15.2	173.7	158.1	173.1
	10	9.7	7.5	9.0	11.7	13.0	13.9	11.5	11.6	10.7	9.9	10.2	118.7	103.1	118.1

3rd 10-day period (21-31/05/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	4.4
Number of Rainy Days	1.0	0.7
Number of Dry Days	50.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

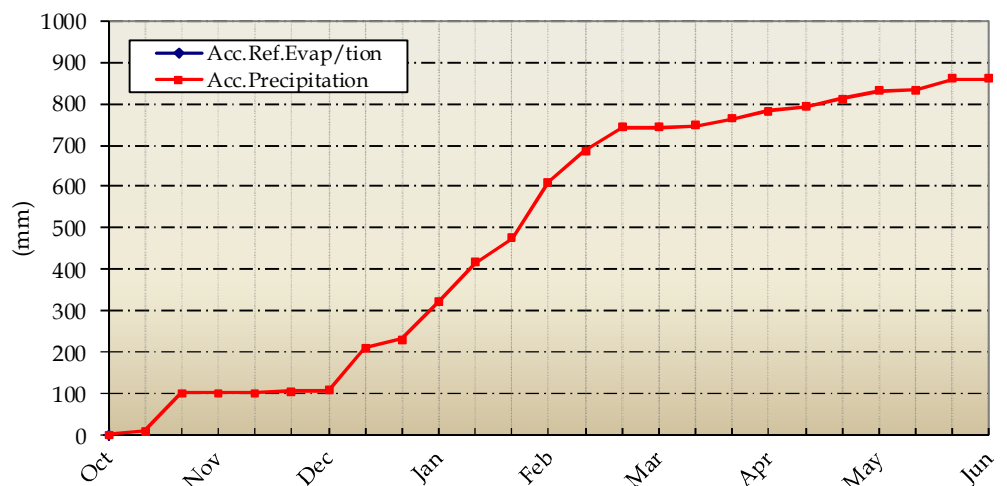


3rd 10-day period (21-31/05/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.1	22.9	28.7	32.5	31.5	30.4	28.9	27.7	27.7	24.2	22.6	27.2	22.1	24.6
	Min	6.8	6.3	5.2	9.6	12.1	9.1	9.3	11.6	6.8	9.5	9.4	8.7	8.6	10.6
Relative Humidity	Max	95	93	100	100	100	95	77	80	66	95	88	90	97	-
	Min	36	32	23	32	29	29	36	24	25	35	44	31	43	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	17.3
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	21.4
Sunshine Duration		12.4	11.5	12.0	13.0	12.1	11.2	11.7	12.8	12.7	4.0	9.0	11.1	6.9	8.1
Precipitation												0.4	0.4	42.0	20.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	55.4
Growing Degrees	5	9.5	9.6	12.0	16.1	16.8	14.8	14.1	14.7	12.3	11.9	11.0	142.5	114.0	138.9
	10	4.5	4.6	7.0	11.1	11.8	9.8	9.1	9.7	7.3	6.9	6.0	87.5	59.0	83.9

3rd 10-day period (21-31/05/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	42.6
Precipitation - Reference Evapotranspiration	-	-	-21.7
Number of Rainy Days	1.0	7.0	3.4
Number of Dry Days	15.0	13.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



Agrometeorological Data

May 2021

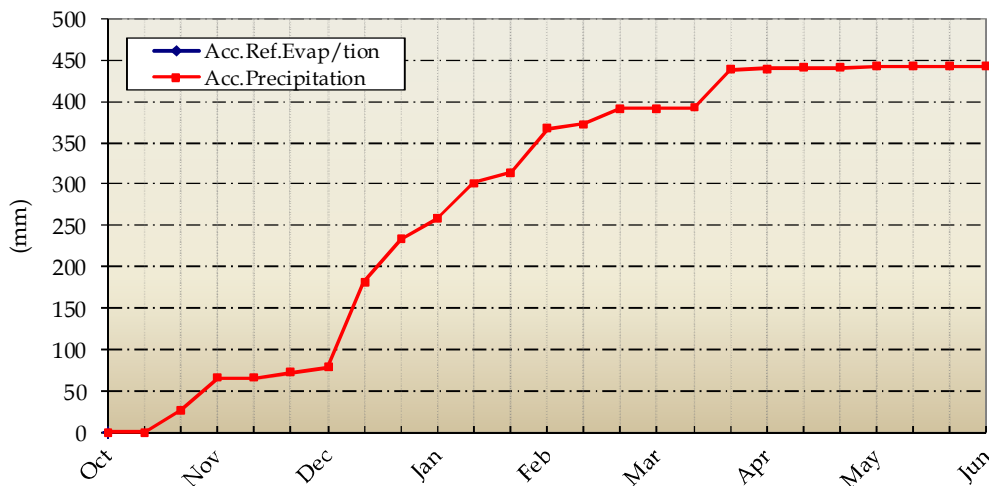
Kalamata

3rd 10-day period (21-31/05/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.6	24.4	25.7	27.7	28.9	31.2	32.0	29.2	26.0	26.0	27.9	27.7	24.6	26.1
	Min	13.3	10.9	11.5	12.9	14.4	13.8	17.0	16.8	14.2	15.9	13.8	14.0	12.7	13.4
Relative Humidity	Max	81	85	84	78	74	69	68	57	66	86	81	75	98	-
	Min	27	29	26	27	30	16	16	25	37	38	25	27	40	-
Soil Temperature at 10 cm	06 UTC	22.0	21.4	21.6	22.2	22.2	23.6	24.0	24.0	23.2	24.0	23.4	22.9	21.6	20.5
	12 UTC	26.8	27.4	32.6	28.0	29.2	29.4	29.6	28.8	28.6	28.2	28.6	28.8	24.7	24.4
Sunshine Duration		13.0	13.0	13.1	12.7	12.9	13.1	12.8	12.5	13.0	8.9	13.1	12.6	9.1	9.6
Precipitation											0.1		0.1	15.2	3.4
Evaporation		12.2	7.8	8.0	9.0	9.0	11.4	11.0	12.2	8.4	7.2	10.4	106.6	58.7	68.8
Growing Degrees	5	14.5	12.7	13.6	15.3	16.7	17.5	19.5	18.0	15.1	16.0	15.9	174.6	149.8	162.7
	10	9.5	7.7	8.6	10.3	11.7	12.5	14.5	13.0	10.1	11.0	10.9	119.6	94.8	107.7

3rd 10-day period (21-31/05/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	48.1	49.3
Precipitation - Reference Evapotranspiration	-	-32.9	-45.9
Number of Rainy Days	1.0	5.0	1.1
Number of Dry Days	31.0	14.0	-

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Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

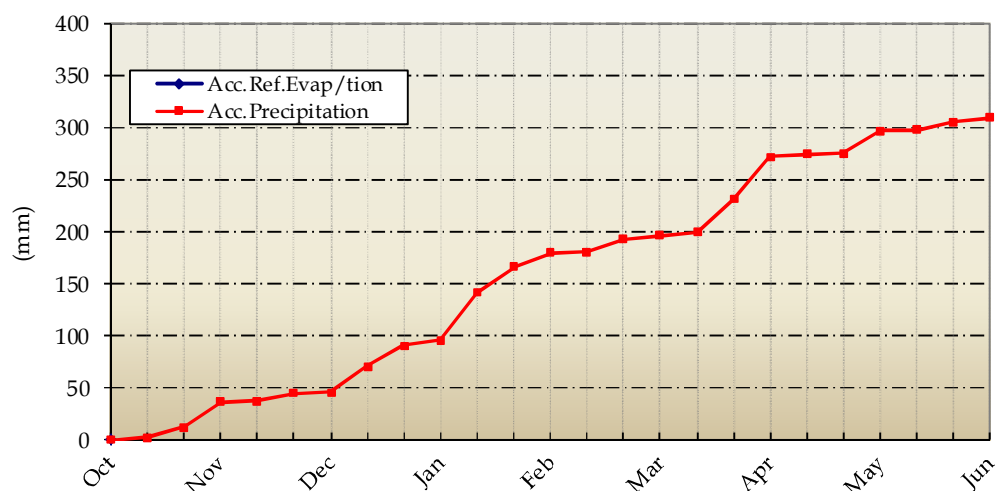


3rd 10-day period (21-31/05/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.4	28.8	30.8	33.6	31.4	30.1	31.6	32.0	29.4	25.0	26.4	29.4	24.3	27.7
	Min	14.0	9.2	10.2	13.0	15.0	13.0	12.0	13.8	14.0	15.2	15.7	13.2	11.0	12.6
Relative Humidity	Max	72	88	90	94	79	83	82	79	71	97	98	85	95	-
	Min	30	23	24	23	34	35	19	17	27	45	39	29	37	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	20.0
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	22.3
Sunshine Duration		11.5	12.1	12.0	11.2	8.5	9.3	10.7	11.4	11.8	0.3	7.7	9.7	6.9	8.8
Precipitation											0.0	4.0	4.0	40.4	17.2
Evaporation		8.3	11.7	9.4	14.2	8.2	10.5	10.7	10.0	9.6	9.7	0.0	102.3	61.3	67.8
Growing Degrees	5	14.2	14.0	15.5	18.3	18.2	16.6	16.8	17.9	16.7	15.1	16.1	179.3	139.5	166.2
	10	9.2	9.0	10.5	13.3	13.2	11.6	11.8	12.9	11.7	10.1	11.1	124.3	84.5	111.2

3rd 10-day period (21-31/05/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	57.8	42.6	50.4
Precipitation - Reference Evapotranspiration	-53.8	-2.2	-33.2
Number of Rainy Days	1.0	8.0	3.0
Number of Dry Days	15.0	16.0	-

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Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



Agrometeorological Data

May 2021

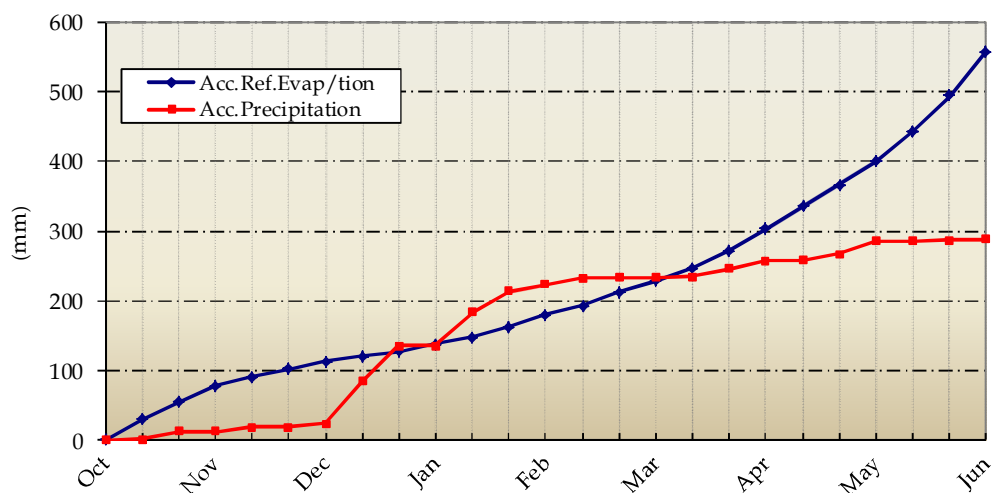
Mikra

3rd 10-day period (21-31/05/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.7	26.9	27.4	31.9	29.4	29.7	29.9	27.4	27.8	25.1	24.4	27.6	23.4	26.2
	Min	15.0	11.8	12.0	14.2	17.0	15.8	15.6	16.0	16.0	16.4	17.4	15.2	13.6	13.9
Relative Humidity	Max	74	81	81	83	87	97	85	94	77	89	84	85	88	-
	Min	39	34	35	34	38	39	38	34	28	39	37	36	39	-
Soil Temperature at 10 cm	06 UTC	20.4	20.4	21.0	22.0	23.0	23.2	23.4	23.2	22.2	22.4	20.8	22.0	18.4	20.7
	12 UTC	23.2	24.2	25.2	26.2	25.8	26.4	26.8	25.8	25.8	25.0	22.2	25.1	21.4	25.4
Sunshine Duration		12.0	13.2	12.6	11.9	8.2	12.0	9.2	11.6	13.4	2.8	10.3	10.7	8.8	8.3
Precipitation									1.0				1.0	31.2	16.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	70.6
Growing Degrees	5	14.4	14.4	14.7	18.1	18.2	17.8	17.8	16.7	16.9	15.8	15.9	180.4	148.7	165.0
	10	9.4	9.4	9.7	13.1	13.2	12.8	12.8	11.7	11.9	10.8	10.9	125.4	93.7	110.0

3rd 10-day period (21-31/05/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	63.5	50.7	48.7
Precipitation - Reference Evapotranspiration	-62.5	-19.5	-32.5
Number of Rainy Days	1.0	5.0	2.9
Number of Dry Days	12.0	13.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



Agrometeorological Data

May 2021

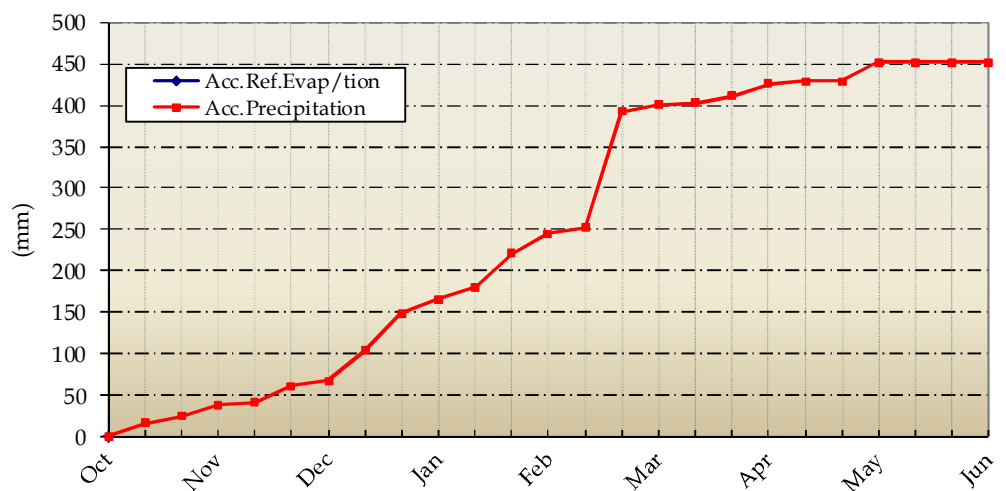
Tanagra

3rd 10-day period (21-31/05/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.2	26.6	29.4	31.5	32.4	30.0	30.6	29.4	27.5	22.8	24.8	27.9	22.7	26.9
	Min	12.4	9.3	11.2	13.4	14.0	15.0	14.8	15.1	13.7	14.8	13.6	13.4	11.5	12.8
Relative Humidity	Max	71	77	78	70	75	72	73	79	82	94	94	79	94	-
	Min	30	24	23	24	21	29	19	27	26	35	40	27	36	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.6	13.2	13.2	12.5	12.5	10.7	10.8	12.5	11.4	0.1	10.5	11.0	8.1	
Precipitation											0.2		0.2	17.3	6.0
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	12.3	13.0	15.3	17.5	18.2	17.5	17.7	17.3	15.6	13.8	14.2	172.3	133.3	
	10	7.3	8.0	10.3	12.5	13.2	12.5	12.7	12.3	10.6	8.8	9.2	117.3	78.3	

3rd 10-day period (21-31/05/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	6.0
Number of Rainy Days	1.0	4.0	2.3
Number of Dry Days	34.0	20.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



Agrometeorological Data

May 2021

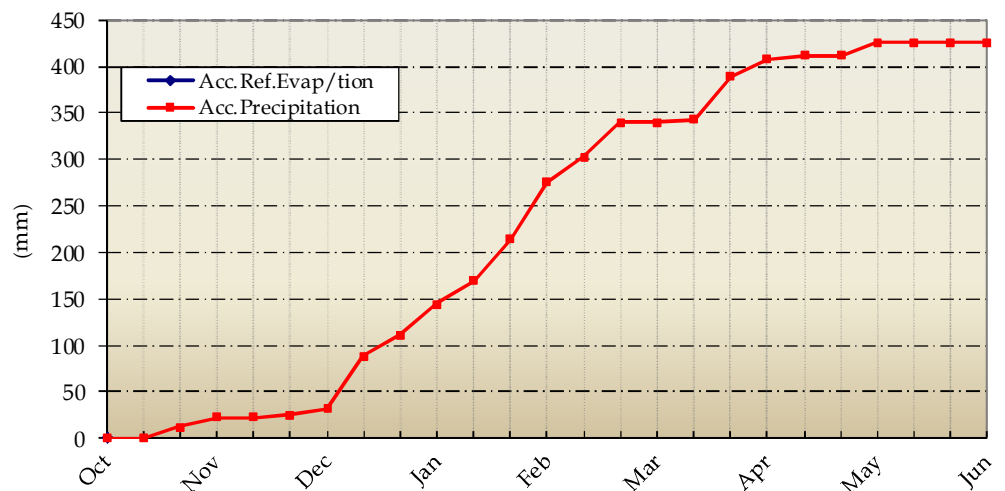
Tripoli

3rd 10-day period (21-31/05/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.4	24.3	29.4	31.3	32.8	32.0	28.6	29.0	26.0	24.7	24.9	27.8	20.1	24.8
	Min	8.0	5.2	5.6	9.6	11.7	11.2	9.0	14.8	8.3	12.7	8.7	9.5	8.5	9.2
Relative Humidity	Max	86	91	90	82	81	84	76	65	77	84	85	82	96	-
	Min	23	31	15	17	18	12	20	16	19	20	24	20	42	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	18.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	21.5
Sunshine Duration		10.5	13.1	0.0	12.8	12.8	13.0	13.1	13.2	12.7	4.9	13.3	10.9	6.1	8.9
Precipitation			0.0	0.0							0.0		0.0	20.5	11.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	48.7
Growing Degrees	5	10.2	9.8	12.5	15.5	17.3	16.6	13.8	16.9	12.2	13.7	11.8	150.1	102.5	132.1
	10	5.2	4.8	7.5	10.5	12.3	11.6	8.8	11.9	7.2	8.7	6.8	95.1	47.5	77.1

3rd 10-day period (21-31/05/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	52.0	35.0	47.0
Precipitation - Reference Evapotranspiration	-52.0	-14.5	-35.7
Number of Rainy Days	0.0	5.0	2.6
Number of Dry Days	37.0	14.0	-

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

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ΜΕΤΕΩΡΟΛΟΓΙΚΗ
ΥΠΗΡΕΣΙΑ

HELLENIC NATIONAL METEOROLOGICAL SERVICE

Division of Climatology-Applications

Issue Editors :

Papakrivou Anastasia

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