



AGROMETEOROLOGICAL BULLETIN

*May 2022
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

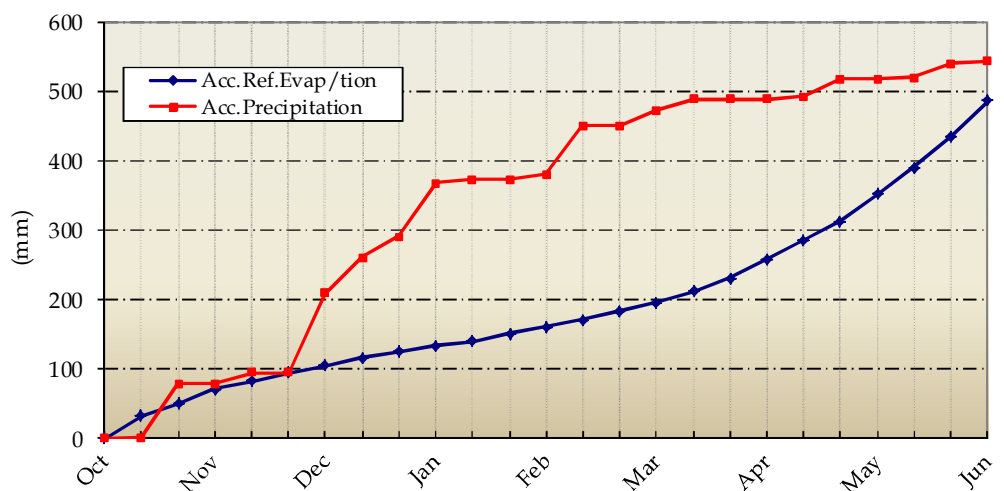
*Web addresses of HNMS
www.hnms.gr
www.emy.gov.gr
www.meteo.gov.gr
www.meteohellas.gr*

Alexandroupoli

3rd 10-day period (21-31/05/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.0	24.8	26.6	27.8	28.2	27.0	31.2	30.6	30.0	27.0	29.8	28.0	25.1	24.7
	Min	9.0	12.2	14.6	15.0	15.4	15.4	17.4	16.0	17.6	18.4	15.6	15.1	13.7	13.8
Relative Humidity	Max	89	86	89	85	89	88	90	90	77	92	83	87	86	87
	Min	36	53	42	37	44	50	36	42	40	53	46	44	48	48
Soil Temperature at 10 cm	06 UTC	17.6	18.8	20.0	21.4	21.5	22.4	23.0	25.0	24.2	23.6	23.8	21.9	20.0	20.4
	12 UTC	21.4	22.2	23.6	25.0	25.4	26.4	27.6	27.0	27.0	26.2	27.0	25.3	22.8	24.2
Sunshine Duration		13.3	9.0	12.5	9.1	12.2	8.9	9.0	11.0	4.2	12.8	11.3	10.3	9.3	9.5
Precipitation					0.0							4.5	4.5	120.2	15.6
Evaporation		7.5	1.8	7.0	8.0	6.4	7.2	5.8	7.0	8.7	9.3	7.5	76.2	67.7	79.6
Growing Degrees	5	12.0	13.5	15.6	16.4	16.8	16.2	19.3	18.3	18.8	17.7	17.7	182.3	158.4	145.0
	10	7.0	8.5	10.6	11.4	11.8	11.2	14.3	13.3	13.8	12.7	12.7	127.3	103.4	94.0

3rd 10-day period (21-31/05/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	51.9	47.5	40.2
Precipitation - Reference Evapotranspiration	-47.4	72.7	-24.6
Number of Rainy Days	1.0	4.0	2.3
Number of Dry Days	11.0	2.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

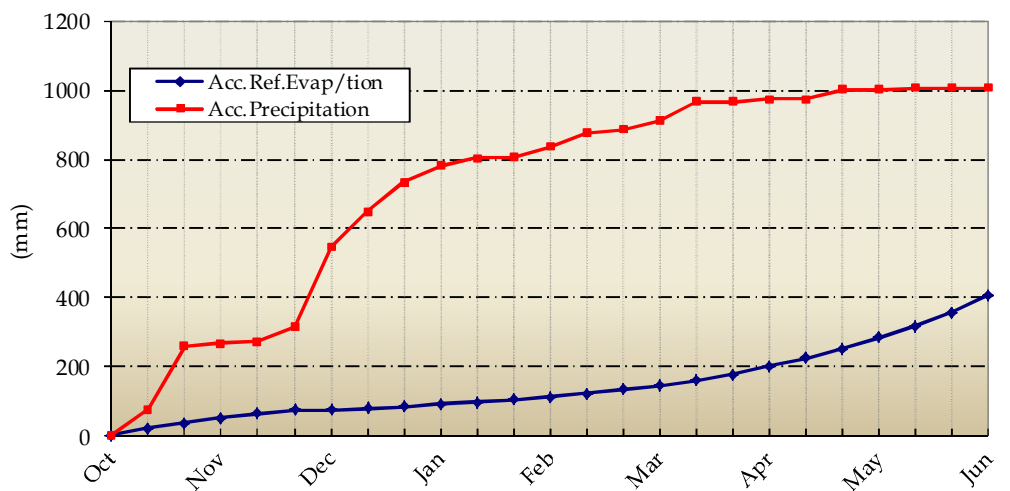


3rd 10-day period (21-31/05/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	27.0	26.8	28.0	29.4	29.2	29.6	30.7	32.6	26.0	27.0	29.1	28.7	27.2	25.7
	Min	8.8	11.7	14.0	15.0	13.7	13.2	13.0	14.5	18.9	16.5	15.2	14.0	13.2	14.6
Relative Humidity	Max	92	94	95	97	89	89	84	88	97	98	96	93	92	91
	Min	31	39	52	32	33	31	30	25	51	54	41	38	35	42
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	22.8	22.1
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	25.9	26.8
Sunshine Duration		13.4	13.0	11.4	10.9	12.2	11.9	12.5	8.9	9.2	12.3	11.8	11.6	12.5	10.1
Precipitation											1.2		1.2		3.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	82.8	73.4
Growing Degrees	5	12.9	14.3	16.0	17.2	16.5	16.4	16.9	18.6	17.5	16.8	17.2	180.0	167.4	138.7
	10	7.9	9.3	11.0	12.2	11.5	11.4	11.9	13.6	12.5	11.8	12.2	125.0	112.4	93.2

3rd 10-day period (21-31/05/2022)	Previous Year Value	Past Years Mean Value	
Reference Evapotranspiration	48.7	49.7	43.0
Precipitation - Reference Evapotranspiration	-47.5	-49.7	-39.1
Number of Rainy Days	1.0	0.0	0.8
Number of Dry Days	27.0	16.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

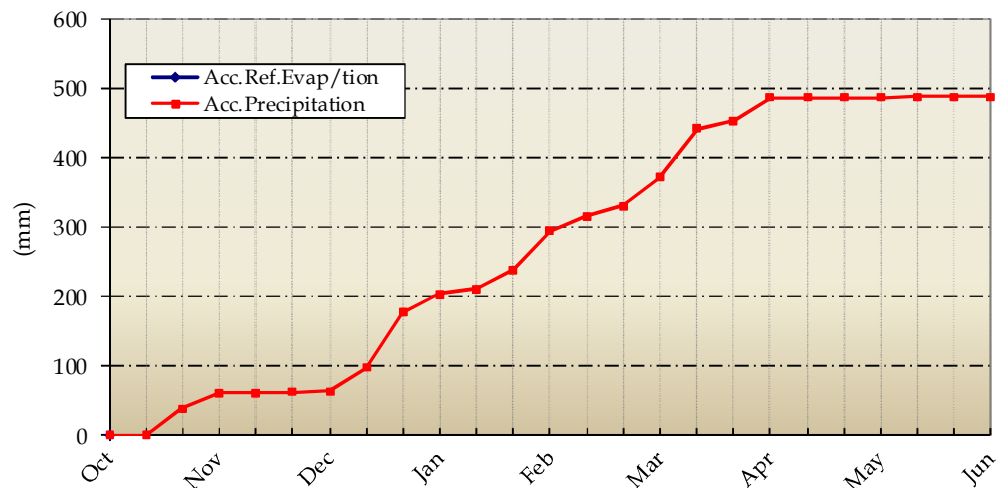


3rd 10-day period (21-31/05/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	21.8	25.2	25.2	25.0	25.8	29.6	29.2	28.2	35.6	25.2	25.6	26.9	25.2	24.8
	Min	17.4	17.0	16.8	16.2	17.0	18.0	19.4	16.4	22.2	17.8	16.4	17.7	16.4	16.6
Relative Humidity	Max	80	77	85	84	82	71	91	85	82	87	86	83	86	84
	Min	57	38	38	60	53	36	33	43	14	66	51	44	58	54
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.6	11.7	12.7	12.7	12.7	12.5	12.6	12.8	11.2	12.7	12.6	12.4	11.8	10.1
Precipitation			0.3										0.3	0.4	3.7
Evaporation		5.8	5.6	3.2	4.7	2.3	8.5	4.1	7.9	7.7	4.9	4.7	59.4	56.6	55.9
Growing Degrees	5	14.6	16.1	16.0	15.6	16.4	18.8	19.3	17.3	23.9	16.5	16.0	190.5	173.7	156.6
	10	9.6	11.1	11.0	10.6	11.4	13.8	14.3	12.3	18.9	11.5	11.0	135.5	118.7	106.9

3rd 10-day period (21-31/05/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	-
Number of Rainy Days	1.0	1.1
Number of Dry Days	19.0	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

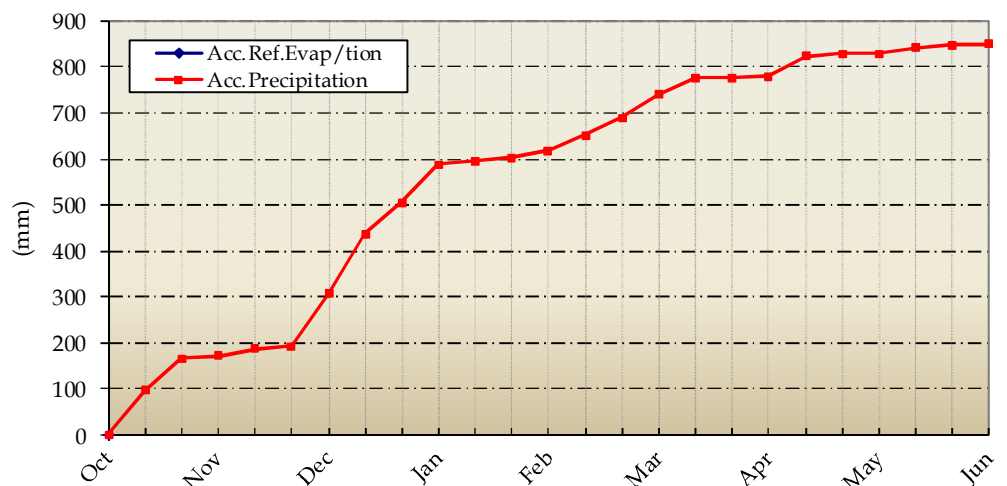


3rd 10-day period (21-31/05/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.5	30.4	28.6	30.6	32.6	32.4	34.3	33.2	24.9	27.9	31.1	30.5	27.2	24.5
	Min	5.6	7.6	10.4	11.5	10.5	10.1	9.9	11.7	14.6	9.3	11.0	10.2	8.7	10.9
Relative Humidity	Max	97	96	100	100	97	95	91	93	100	100	100	97	90	95
	Min	22	27	39	35	23	14	15	19	39	36	25	27	31	46
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	17.4
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	19.9
Sunshine Duration		12.7	12.7	12.2	12.2	12.5	12.7	11.7	9.5	5.0	11.8	11.9	11.4	11.1	7.8
Precipitation										0.6			0.6	0.4	21.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	
Growing Degrees	5	12.6	14.0	14.5	16.1	16.6	16.3	17.1	17.5	14.8	13.6	16.1	168.9	142.5	119.1
	10	7.6	9.0	9.5	11.1	11.6	11.3	12.1	12.5	9.8	8.6	11.1	113.9	87.5	72.8

3rd 10-day period (21-31/05/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	34.6
Precipitation - Reference Evapotranspiration	-	-	-13.1
Number of Rainy Days	1.0	1.0	2.9
Number of Dry Days	11.0	15.0	-

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 2022

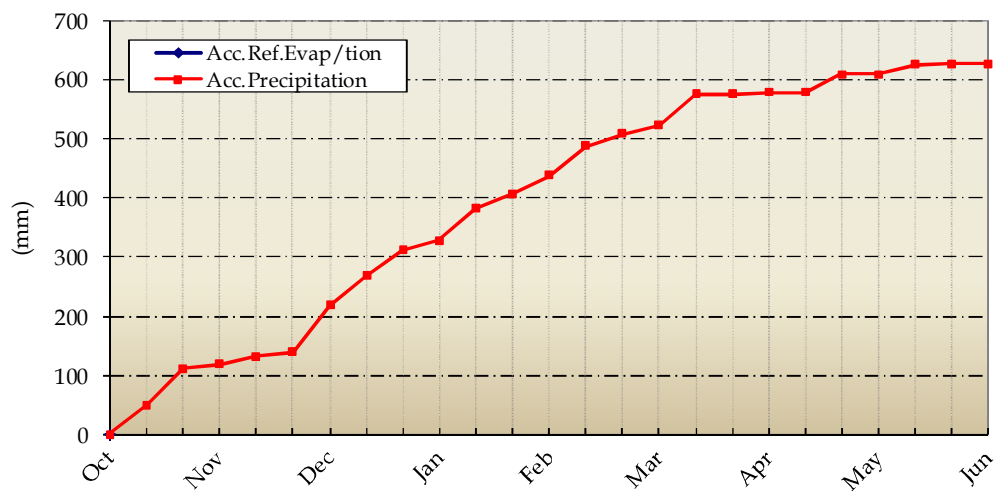
Kalamata

3rd 10-day period (21-31/05/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.3	28.9	28.2	27.4	28.8	31.1	30.0	30.2	26.3	28.6	31.4	28.7	27.7	26.2
	Min	8.7	10.5	13.9	14.8	12.5	13.2	13.1	12.0	15.4	16.0	16.5	13.3	14.0	13.9
Relative Humidity	Max	91	95	95	95	83	81	95	85	92	96	87	90	75	92
	Min	40	30	40	42	35	45	26	20	57	43	27	37	27	41
Soil Temperature at 10 cm	06 UTC	20.0	21.0	22.0	22.6	22.6	23.0	18.8	23.0	23.8	23.4	24.2	22.2	22.9	20.3
	12 UTC	23.4	24.0	25.0	25.2	25.6	25.8	26.0	26.0	25.6	26.4	26.6	25.4	28.8	23.0
Sunshine Duration		13.1	12.9	12.7	12.4	12.4	13.0	13.1	12.2	10.6	13.2	13.1	12.6	12.6	9.7
Precipitation										0.3			0.3	0.1	7.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	106.6	57.6
Growing Degrees	5	11.5	14.7	16.1	16.1	15.7	17.2	16.6	16.1	15.9	17.3	19.0	175.9	174.6	151.1
	10	6.5	9.7	11.1	11.1	10.7	12.2	11.6	11.1	10.9	12.3	14.0	120.9	119.6	101.3

3rd 10-day period (21-31/05/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	45.9
Precipitation - Reference Evapotranspiration	-	-38.3
Number of Rainy Days	1.0	1.5
Number of Dry Days	9.0	-

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Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



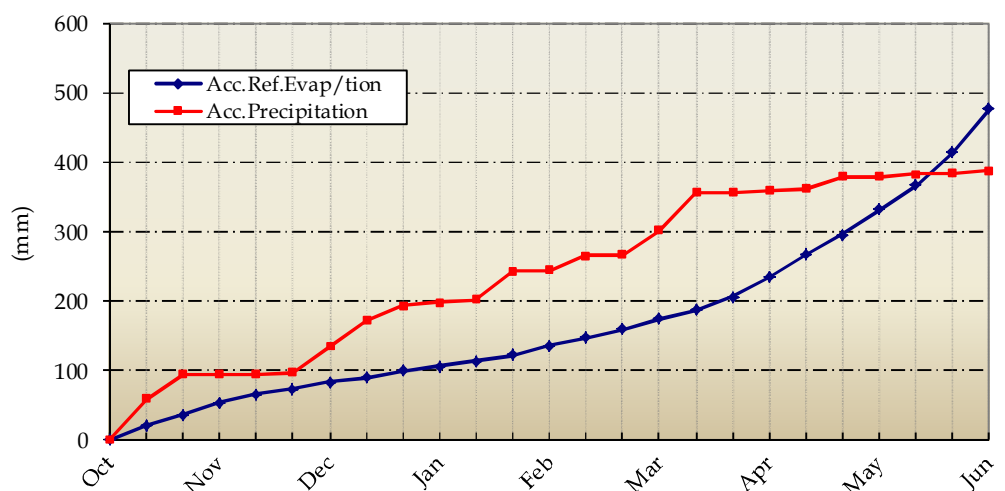
Larisa

3rd 10-day period (21-31/05/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.6	34.0	33.2	32.2	32.8	36.4	34.0	34.2	30.2	32.4	33.4	33.0	29.4	28.0
	Min	8.3	11.6	13.4	14.6	15.8	14.7	17.4	16.2	21.0	14.8	15.0	14.8	13.2	13.5
Relative Humidity	Max	91	98	99	98	95	87	83	89	76	86	90	90	85	89
	Min	22	25	21	37	35	22	29	31	36	25	29	28	29	31
Soil Temperature at 10 cm	06 UTC	20.0	21.4	21.4	21.8	21.4	23.2	23.8	24.2	25.0	23.4	24.2	22.7	-	20.6
	12 UTC	22.2	23.4	23.4	23.8	23.6	25.2	26.0	26.2	26.4	27.4	26.0	24.9	-	22.2
Sunshine Duration		11.1	7.5	8.9	8.9	10.5	10.8	9.4	10.7	7.1	10.7	10.3	9.6	9.7	8.7
Precipitation			2.2	0.9								0.0	3.1	4.0	15.6
Evaporation		7.8	5.5	7.6	8.0	11.8	10.0	9.0	12.5	6.1	12.4	8.6	99.3	102.3	84.1
Growing Degrees	5	14.5	17.8	18.3	18.4	19.3	20.6	20.7	20.2	20.6	18.6	19.2	208.1	179.3	161.9
	10	9.5	12.8	13.3	13.4	14.3	15.6	15.7	15.2	15.6	13.6	14.2	153.1	124.3	110.9

3rd 10-day period (21-31/05/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	62.6	57.8	50.9
Precipitation - Reference Evapotranspiration	-59.5	-53.8	-35.3
Number of Rainy Days	2.0	1.0	2.9
Number of Dry Days	2.0	15.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



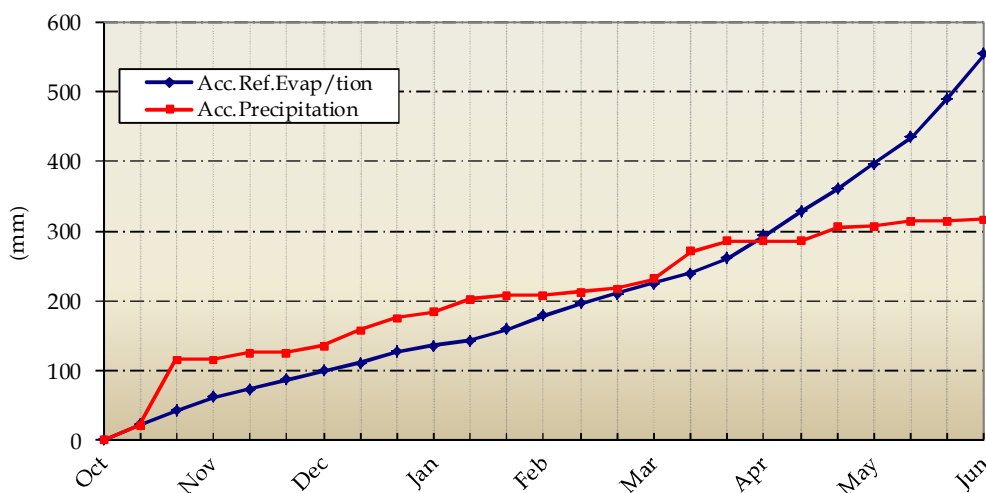
Mikra

3rd 10-day period (21-31/05/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.4	31.2	28.2	28.2	29.2	34.0	32.2	31.0	30.0	30.6	32.0	30.5	27.6	26.3
	Min	11.2	13.0	14.6	15.8	15.8	17.6	18.8	19.3	19.1	14.6	16.8	16.1	15.2	15.3
Relative Humidity	Max	72	78	89	100	100	90	94	92	100	100	96	92	85	83
	Min	24	29	38	45	46	33	34	44	33	33	33	36	36	37
Soil Temperature at 10 cm	06 UTC	20.2	21.0	21.8	21.4	21.8	22.4	23.4	24.0	23.8	23.0	23.0	22.3	22.0	21.5
	12 UTC	24.6	24.0	23.6	24.8	24.2	25.4	27.0	28.8	27.2	25.8	28.4	25.8	25.1	26.5
Sunshine Duration		13.6	7.6	6.8	12.0	11.4	12.8	10.8	11.2	7.7	13.2	12.3	10.9	10.7	9.0
Precipitation			0.0	0.1		2.3				0.5			2.9	1.0	13.8
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	79.3
Growing Degrees	5	15.3	17.1	16.4	17.0	17.5	20.8	20.5	20.2	19.6	17.6	19.4	201.3	180.4	157.4
	10	10.3	12.1	11.4	12.0	12.5	15.8	15.5	15.2	14.6	12.6	14.4	146.3	125.4	107.7

3rd 10-day period (21-31/05/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	63.3	63.5	42.2
Precipitation - Reference Evapotranspiration	-60.4	-62.5	-28.4
Number of Rainy Days	3.0	1.0	2.7
Number of Dry Days	3.0	12.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



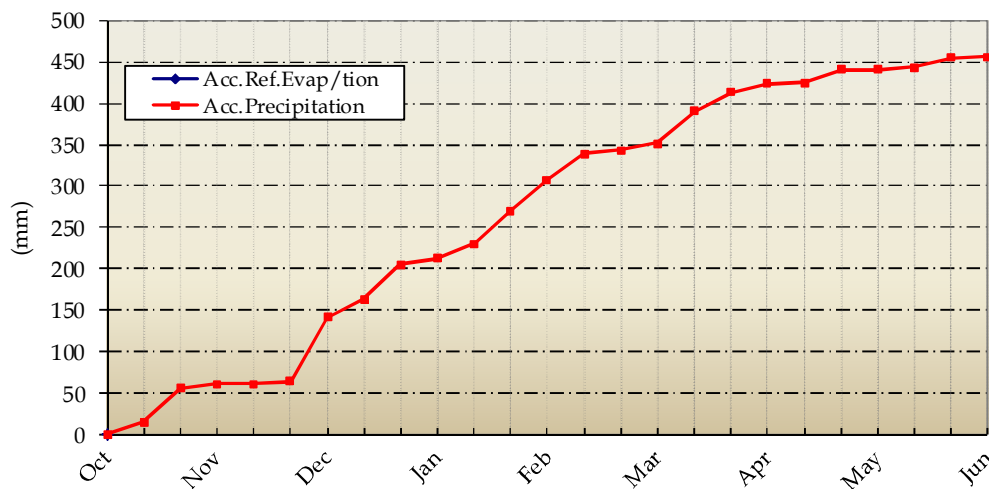
Tanagra

3rd 10-day period (21-31/05/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	28.0	31.1	31.1	31.1	31.4	33.6	32.4	34.1	32.4	31.1	32.8	31.7	27.9	26.6
	Min	10.0	11.0	15.8	17.2	15.3	15.2	16.4	16.2	16.9	15.8	16.4	15.1	13.4	14.0
Relative Humidity	Max	74	71	76	80	79	83	77	76	77	80	81	78	79	85
	Min	17	24	21	29	28	27	29	11	19	22	24	23	27	35
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.1	10.7	13.0	12.6	11.5	13.0	12.6	12.6	10.1	13.4	13.1	12.3	11.0	9.2
Precipitation										1.1			1.1	0.2	12.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	65.5
Growing Degrees	5	14.0	16.1	18.5	19.2	18.4	19.4	19.4	20.2	19.7	18.5	19.6	202.7	172.3	144.3
	10	9.0	11.1	13.5	14.2	13.4	14.4	14.4	15.2	14.7	13.5	14.6	147.7	117.3	97.5

3rd 10-day period (21-31/05/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	-
Number of Rainy Days	1.0	1.0	1.9
Number of Dry Days	9.0	34.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

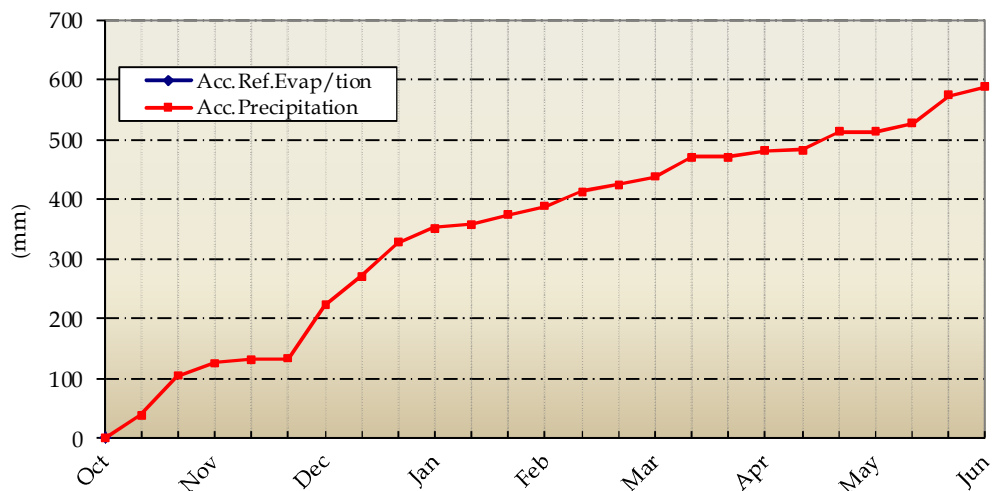


3rd 10-day period (21-31/05/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.9	28.2	26.9	29.0	31.6	31.6	32.0	31.2	24.6	28.3	29.8	29.0	27.8	24.7
	Min	4.2	6.1	9.1	10.4	10.7	10.8	9.1	9.5	11.7	12.4	9.1	9.4	9.5	9.7
Relative Humidity	Max	85	92	97	98	94	96	88	91	89	97	99	93	82	88
	Min	12	23	32	23	20	10	13	13	29	25	19	20	20	34
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	19.1
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	23.4
Sunshine Duration		12.4	11.6	10.0	12.7	10.0	13.0	13.0	11.6	9.5	12.0	11.9	11.6	10.9	9.2
Precipitation			2.3	3.9						8.2		0.9	15.3	0.0	13.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	49.7
Growing Degrees	5	10.1	12.2	13.0	14.7	16.2	16.2	15.6	15.4	13.2	15.4	14.5	156.1	150.1	115.5
	10	5.1	7.2	8.0	9.7	11.2	11.2	10.6	10.4	8.2	10.4	9.5	101.1	95.1	68.7

3rd 10-day period (21-31/05/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	50.7	52.0	27.7
Precipitation - Reference Evapotranspiration	-35.4	-52.0	-14.0
Number of Rainy Days	4.0	0.0	2.5
Number of Dry Days	3.0	37.0	-

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.

Past Years Mean Values 1991-2020 (Evaporation, Reference Evapotranspiration, Max and Min Relative Humidity 2005-2020)

UTC (Universal Time coordinates) in Greece

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

Mesurements Units

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

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HELLENIC NATIONAL METEOROLOGICAL SERVICE

Division of Climatology-Applications

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Papakrivou Anastasia

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