



AGROMETEOROLOGICAL BULLETIN

*June 2022
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



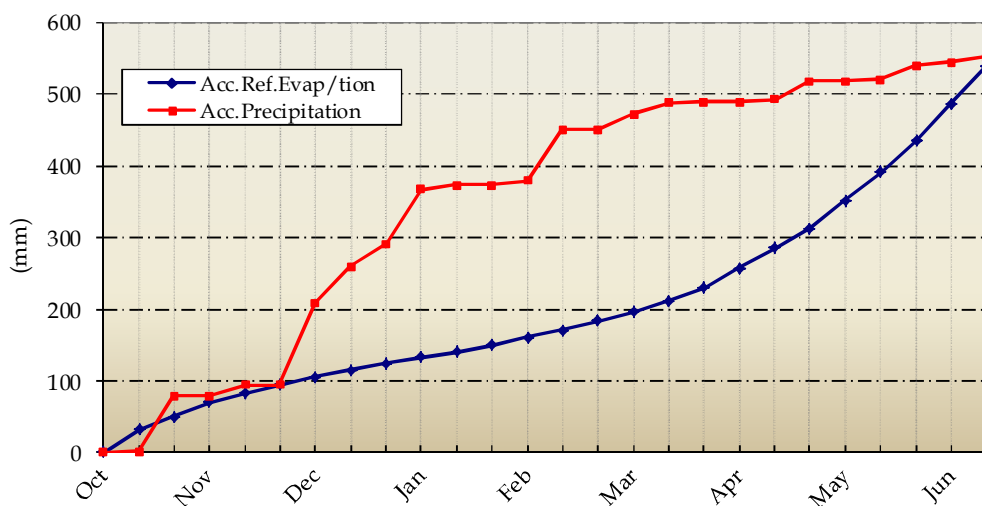
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www.emy.gr
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1st 10-day period (1-10/06/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.2	32.2	32.0	33.2	31.0	28.4	27.4	27.0	27.6	27.2	29.5	24.2	26.6
	Min	16.6	16.4	18.0	17.0	20.4	19.0	16.6	14.4	18.4	19.0	17.6	13.9	15.1
Relative Humidity	Max	90	90	86	73	87	89	88	87	94	94	88	88	87
	Min	54	36	39	37	43	59	37	49	47	48	45	50	46
Soil Temperature at 10 cm	06 UTC	23.4	22.6	23.0	24.6	25.4	25.6	23.5	23.4	24.6	25.4	24.2	19.3	21.7
	12 UTC	26.8	27.0	26.8	28.4	29.2	27.8	26.8	27.4	28.0	27.6	27.6	22.0	25.6
Sunshine Duration		11.1	12.3	11.8	13.4	11.7	3.2	12.4	10.9	12.3	4.3	10.3	8.5	9.5
Precipitation		6.9					0.0			0.2	0.2	7.3	16.4	6.7
Evaporation		7.7	7.2	11.5	9.0	9.5	5.0	8.6	6.1	8.5	6.0	79.1	50.9	67.5
Growing Degrees	5	17.9	19.3	20.0	20.1	20.7	18.7	17.0	15.7	18.0	18.1	185.5	140.3	138.1
	10	12.9	14.3	15.0	15.1	15.7	13.7	12.0	10.7	13.0	13.1	135.5	90.3	94.4

1st 10-day period (1-10/06/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	52.5	40.1	35.0
Precipitation - Reference Evapotranspiration	-45.2	-23.7	-28.3
Number of Rainy Days	3.0	4.0	1.6
Number of Dry Days	0.0	0.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

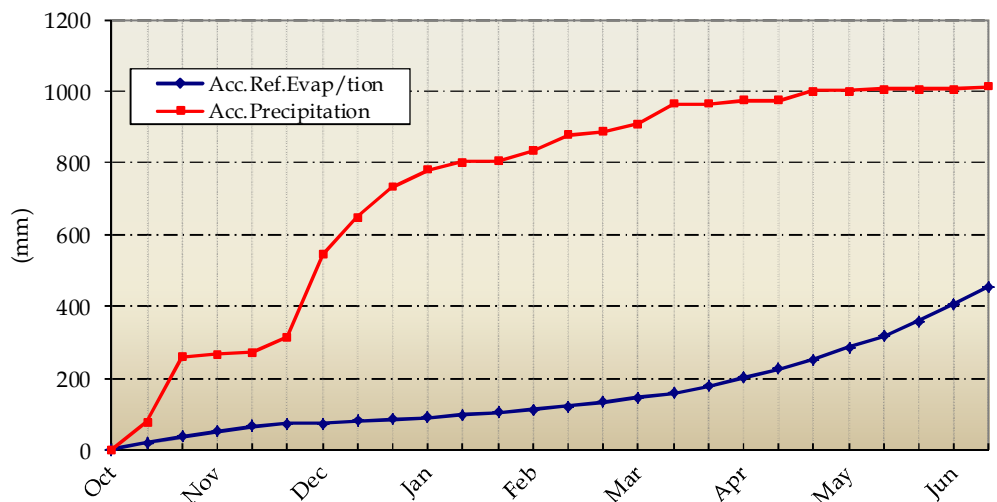


1st 10-day period (1-10/06/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.0	31.5	33.4	33.3	33.2	33.6	30.3	29.3	27.4	25.9	30.9	26.8	27.2
	Min	16.1	17.0	17.3	18.7	19.2	18.7	19.0	19.8	18.7	22.5	18.7	14.0	15.8
Relative Humidity	Max	93	95	92	84	90	92	91	93	90	94	91	92	91
	Min	45	37	35	34	41	41	45	35	61	50	42	36	41
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	24.4	23.9
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	27.2	29.0
Sunshine Duration		13.1	13.1	13.1	12.4	13.3	12.3	11.4	12.7	6.8	7.5	11.6	12.6	10.9
Precipitation											6.7	6.7	1.7	1.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	73.2	68.7
Growing Degrees	5	18.6	19.3	20.4	21.0	21.2	21.2	19.7	19.6	18.1	19.2	198.0	154.4	135.2
	10	13.6	14.3	15.4	16.0	16.2	16.2	14.7	14.6	13.1	14.2	148.0	104.4	94.3

1st 10-day period (1-10/06/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	49.3	46.2	35.4
Precipitation - Reference Evapotranspiration	-42.6	-44.5	-34.0
Number of Rainy Days	1.0	2.0	0.6
Number of Dry Days	10.0	24.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

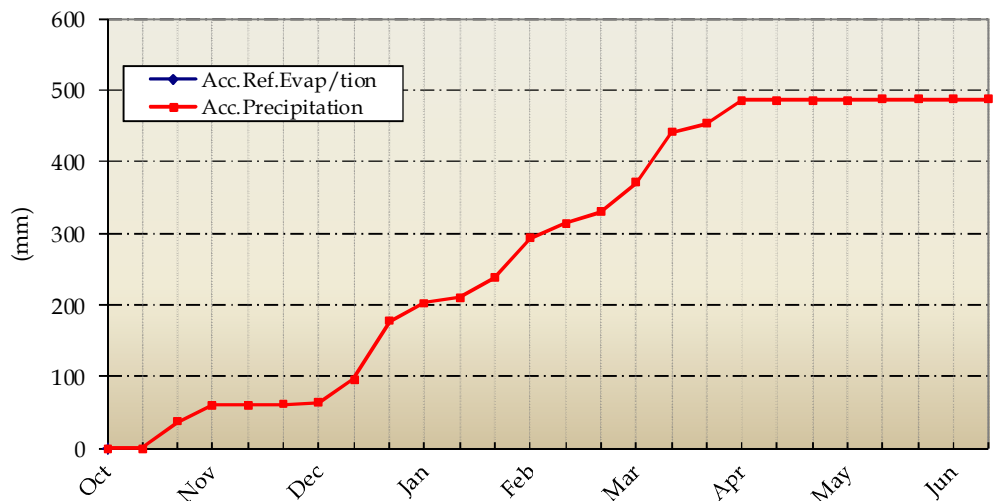


1st 10-day period (1-10/06/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	28.6	26.8	27.2	26.4	28.0	31.4	25.8	26.2	27.6	32.2	28.0	25.0	26.3
	Min	18.0	22.6	23.6	22.0	23.4	21.4	22.0	18.4	19.0	21.0	21.1	17.7	18.1
Relative Humidity	Max	86	67	77	75	73	74	83	78	84	84	78	87	85
	Min	46	47	49	61	42	43	62	53	48	24	48	62	54
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.2	12.8	12.5	12.1	12.5	11.8	12.5	12.7	12.9	9.1	12.2	12.4	11.3
Precipitation														1.3
Evaporation		6.2	8.2	8.2	6.5	7.8	2.5	6.1	6.0	5.3	9.0	65.8	56.1	56.1
Growing Degrees	5	18.3	19.7	20.4	19.2	20.7	21.4	18.9	17.3	18.3	21.6	195.8	163.8	158.4
	10	13.3	14.7	15.4	14.2	15.7	16.4	13.9	12.3	13.3	16.6	145.8	113.8	112.5

1st 10-day period (1-10/06/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	-
Number of Rainy Days	0.0	0.0	0.4
Number of Dry Days	19.0	11.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

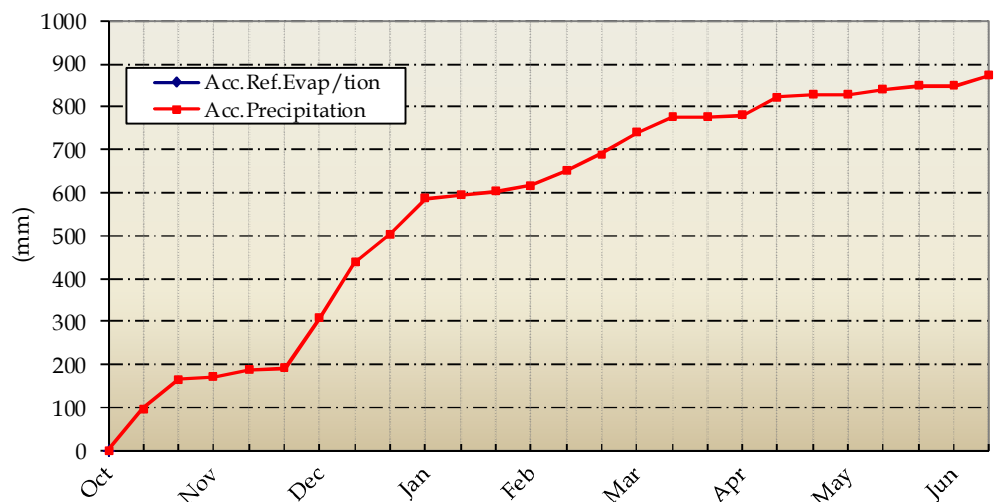


1st 10-day period (1-10/06/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.4	32.3	34.2	33.6	35.6	34.0	32.1	30.2	27.8	20.0	31.2	27.2	26.2
	Min	11.0	13.1	13.5	16.5	15.0	16.0	15.0	19.0	13.3	14.5	14.7	10.0	12.3
Relative Humidity	Max	97	96	98	88	71	76	58	90	81	98	85	88	94
	Min	25	31	24	30	33	26	31	40	49	70	36	31	52
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	19.1
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	21.4
Sunshine Duration		11.7	8.8	11.3	11.9	12.5	9.8	8.4	5.6	6.2	1.7	8.8	9.9	8.4
Precipitation			0.0					0.0	0.0	2.9	21.3	24.2	17.2	16.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	16.7	17.7	18.9	20.1	20.3	20.0	18.6	19.6	15.6	12.3	179.6	136.1	121.1
	10	11.7	12.7	13.9	15.1	15.3	15.0	13.6	14.6	10.6	7.3	129.6	86.1	78.9

1st 10-day period (1-10/06/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	29.2
Precipitation - Reference Evapotranspiration	-	-	-13.0
Number of Rainy Days	2.0	2.0	2.6
Number of Dry Days	10.0	8.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

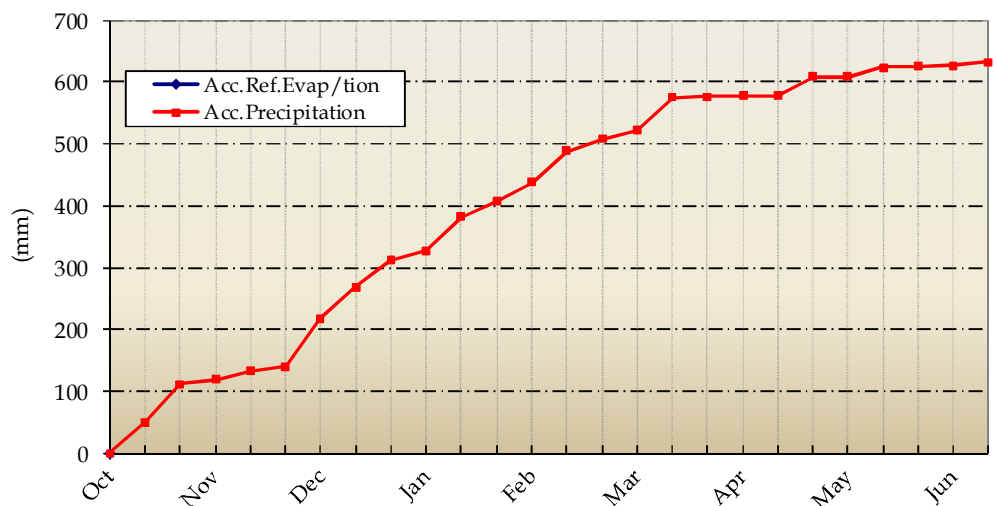


1st 10-day period (1-10/06/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.4	32.7	37.1	35.9	33.3	34.6	31.5	29.1	27.0	28.0	31.9	26.8	28.1
	Min	17.4	14.5	16.9	19.7	19.0	17.2	19.0	18.1	16.0	19.5	17.7	13.2	15.2
Relative Humidity	Max	96	96	90	92	95	95	94	95	97	97	95	82	90
	Min	31	29	18	17	39	36	42	40	47	54	35	32	39
Soil Temperature at 10 cm	06 UTC	24.2	24.4	25.0	25.8	26.0	26.0	25.0	25.8	25.8	26.5	25.4	23.1	21.5
	12 UTC	25.6	27.2	27.2	28.0	28.2	28.8	28.6	28.6	28.0	27.8	27.8	29.2	24.5
Sunshine Duration		13.2	11.7	13.0	13.0	11.0	13.1	11.5	11.7	11.6	9.2	11.9	11.9	10.5
Precipitation								0.1			5.5	5.6	1.2	5.0
Evaporation		-	-	-	-	-	-	-	-	-	-	-	94.0	66.4
Growing Degrees	5	18.4	18.6	22.0	22.8	21.2	20.9	20.3	18.6	16.5	18.8	198.0	150.4	147.7
	10	13.4	13.6	17.0	17.8	16.2	15.9	15.3	13.6	11.5	13.8	148.0	100.4	103.4

1st 10-day period (1-10/06/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	33.7
Precipitation - Reference Evapotranspiration	-	-	-28.7
Number of Rainy Days	2.0	1.0	0.9
Number of Dry Days	8.0	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



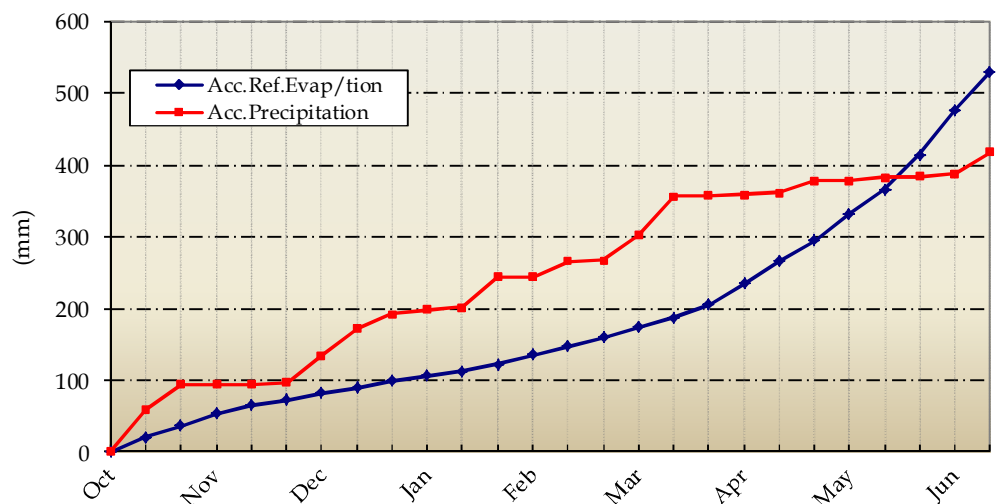
Larisa

1st 10-day period (1-10/06/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.0	33.6	35.2	33.8	37.2	37.2	29.8	30.6	31.2	24.6	32.6	28.7	29.9
	Min	16.0	16.6	18.0	18.4	19.8	19.2	17.4	19.8	15.2	18.4	17.9	13.2	14.9
Relative Humidity	Max	94	81	77	73	76	94	100	98	100	100	89	92	88
	Min	27	26	18	32	26	25	46	39	37	56	33	31	30
Soil Temperature at 10 cm	06 UTC	24.6	24.8	25.6	26.0	26.4	27.0	26.0	25.4	25.2	25.4	25.6	-	22.5
	12 UTC	26.6	26.8	27.4	27.6	28.2	28.6	27.4	28.0	27.0	24.4	27.2	-	24.2
Sunshine Duration		10.5	10.3	10.9	9.4	10.3	4.8	8.1	7.8	7.1	3.3	8.2	9.1	9.2
Precipitation		2.0					0.2	0.0	0.4	1.2	26.8	30.6	5.9	5.4
Evaporation		10.9	10.2	4.7	8.5	11.2	5.5	10.8	5.9	10.0	0.6	78.3	68.2	84.9
Growing Degrees	5	19.5	20.1	21.6	21.1	23.5	23.2	18.6	20.2	18.2	16.5	202.5	159.6	157.2
	10	14.5	15.1	16.6	16.1	18.5	18.2	13.6	15.2	13.2	11.5	152.5	109.6	112.4

1st 10-day period (1-10/06/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	52.7	49.4	60.4
Precipitation - Reference Evapotranspiration	-22.1	-43.5	-55.0
Number of Rainy Days	5.0	3.0	1.7
Number of Dry Days	8.0	3.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



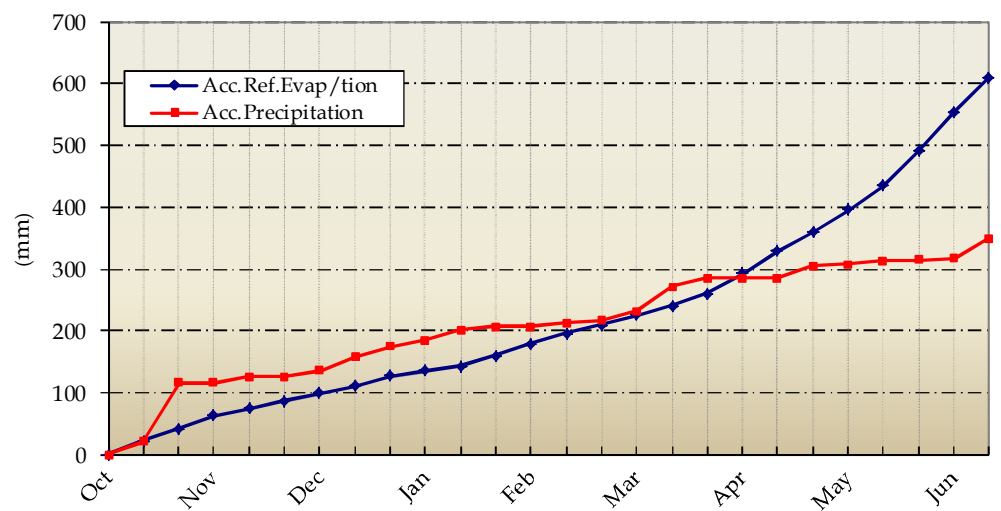
Mikra

1st 10-day period (1-10/06/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.9	32.8	34.5	32.8	35.7	33.2	28.5	28.4	28.6	22.5	30.9	27.4	28.2
	Min	18.4	18.6	18.9	21.2	21.1	21.5	17.6	18.0	16.8	17.6	19.0	15.3	16.8
Relative Humidity	Max	99	91	95	75	78	94	89	100	100	100	92	85	83
	Min	31	33	31	38	34	40	52	41	46	80	43	37	38
Soil Temperature at 10 cm	06 UTC	24.0	25.0	25.4	26.2	26.8	27.0	24.2	24.5	24.4	23.6	25.1	21.8	23.3
	12 UTC	28.6	28.0	28.0	28.8	29.8	30.0	29.2	26.8	27.6	23.4	28.0	25.1	28.2
Sunshine Duration		13.6	13.0	12.5	10.0	12.0	6.1	11.8	3.2	9.8	2.5	9.4	10.5	9.8
Precipitation		0.4		0.8			1.8	1.0	0.0	11.0	18.2	33.2	13.4	7.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	74.7
Growing Degrees	5	20.2	20.7	21.7	22.0	23.4	22.4	18.1	18.2	17.7	15.1	199.3	163.7	151.6
	10	15.2	15.7	16.7	17.0	18.4	17.4	13.1	13.2	12.7	10.1	149.3	113.7	108.4

1st 10-day period (1-10/06/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	55.8	56.0	40.2
Precipitation - Reference Evapotranspiration	-22.6	-42.6	-32.6
Number of Rainy Days	6.0	3.0	1.8
Number of Dry Days	2.0	9.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



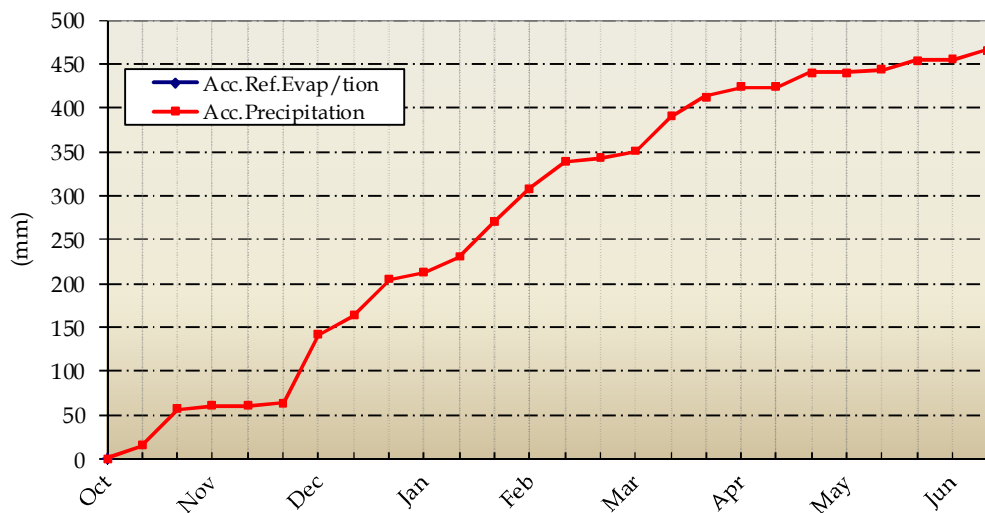
Tanagra

1st 10-day period (1-10/06/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.8	30.7	31.4	31.6	34.2	35.3	28.4	29.8	29.5	30.8	31.4	27.9	28.5
	Min	17.6	17.2	18.4	20.2	19.8	20.2	18.6	16.4	16.2	20.0	18.5	13.9	15.3
Relative Humidity	Max	69	65	67	62	59	97	97	71	78	100	76	87	83
	Min	27	27	28	28	24	18	29	31	34	29	28	27	32
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.5	13.4	13.3	12.9	13.3	8.7	12.2	8.8	9.7	5.3	11.1	11.4	10.2
Precipitation							1.2	1.4			7.4	10.0	3.3	4.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	70.9
Growing Degrees	5	19.7	19.0	19.9	20.9	22.0	22.8	18.5	18.1	17.9	20.4	199.1	158.8	139.2
	10	14.7	14.0	14.9	15.9	17.0	17.8	13.5	13.1	12.9	15.4	149.1	108.8	98.0

1st 10-day period (1-10/06/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	-
Number of Rainy Days	3.0	3.0	1.2
Number of Dry Days	7.0	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

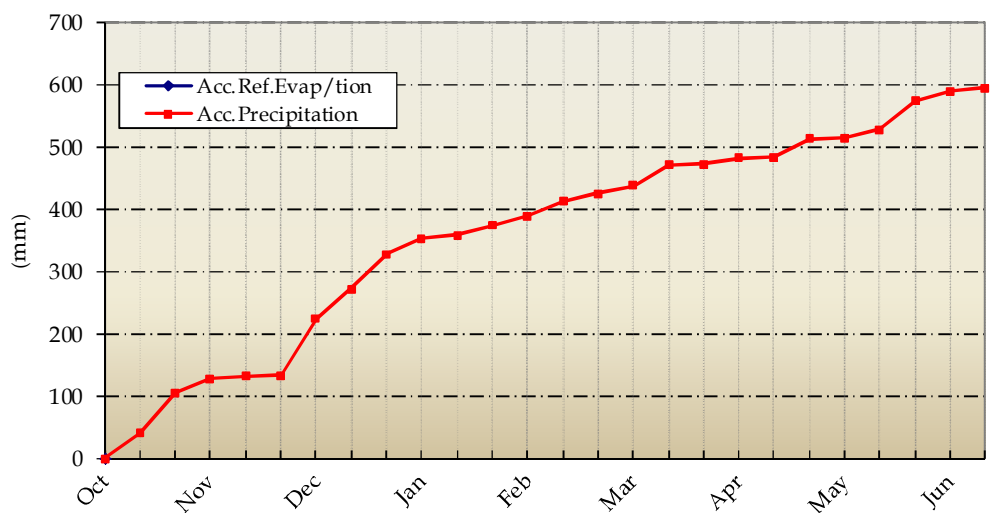


1st 10-day period (1-10/06/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.7	29.4	30.0	29.9	32.3	32.5	25.3	27.3	26.8	26.8	29.0	25.5	26.6
	Min	10.4	10.9	18.0	17.9	13.3	13.8	14.0	13.8	12.3	15.7	14.0	9.2	10.8
Relative Humidity	Max	92	92	63	81	90	92	98	99	97	93	90	89	88
	Min	23	23	22	22	21	20	43	33	26	31	26	26	31
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	20.9
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	25.5
Sunshine Duration		9.5	12.3	13.6	13.1	11.7	11.1	6.4	10.2	9.5	8.6	10.6	8.7	10.0
Precipitation		0.6					0.0	5.1			0.2	5.9	4.1	8.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	49.4
Growing Degrees	5	15.1	15.2	19.0	18.9	17.8	18.2	14.7	15.6	14.6	16.3	165.1	123.1	117.9
	10	10.1	10.2	14.0	13.9	12.8	13.2	9.7	10.6	9.6	11.3	115.1	73.1	75.4

1st 10-day period (1-10/06/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	48.3	40.9	42.0
Precipitation - Reference Evapotranspiration	-42.4	-36.8	-33.9
Number of Rainy Days	3.0	2.0	1.5
Number of Dry Days	0.0	45.0	-

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)

Mesurements 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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