



AGROMETEOROLOGICAL BULLETIN

*June 2021
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



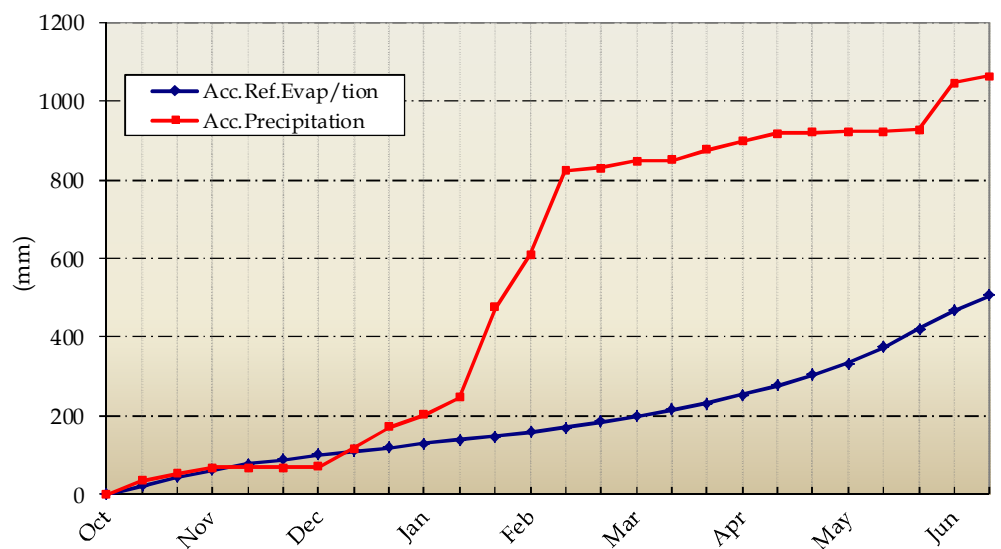
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1st 10-day period (1-10/06/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	20.0	19.6	22.8	22.6	25.2	25.2	26.0	24.4	28.8	27.4	24.2	25.2	25.8
	Min	11.6	12.6	12.6	14.6	12.6	11.2	17.0	17.4	14.0	15.0	13.9	14.4	14.0
Relative Humidity	Max	93	81	88	87	86	81	95	94	89	89	88	88	-
	Min	56	53	59	48	39	46	58	56	37	46	50	52	-
Soil Temperature at 10 cm	06 UTC	18.0	17.2	17.8	19.4	18.6	19.0	21.4	19.6	20.6	21.2	19.3	18.7	20.6
	12 UTC	20.2	20.0	20.8	21.4	21.4	22.6	24.2	22.2	23.6	23.4	22.0	22.2	25.3
Sunshine Duration		7.9	8.5	9.3	5.2	10.2	13.1	7.3	4.6	11.3	7.9	8.5	10.1	9.7
Precipitation		2.1	0.0		0.2			0.6	13.5			16.4	13.5	10.6
Evaporation		5.5	3.9	4.5	2.7	5.2	7.3	5.5	4.6	6.8	4.9	50.9	60.9	72.8
Growing Degrees	5	10.8	11.1	12.7	13.6	13.9	13.2	16.5	15.9	16.4	16.2	140.3	148.0	148.7
	10	5.8	6.1	7.7	8.6	8.9	8.2	11.5	10.9	11.4	11.2	90.3	98.0	98.7

1st 10-day period (1-10/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	40.1	44.5	48.0
Precipitation - Reference Evapotranspiration	-23.7	-31.0	-37.4
Number of Rainy Days	4.0	1.0	2.2
Number of Dry Days	0.0	2.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

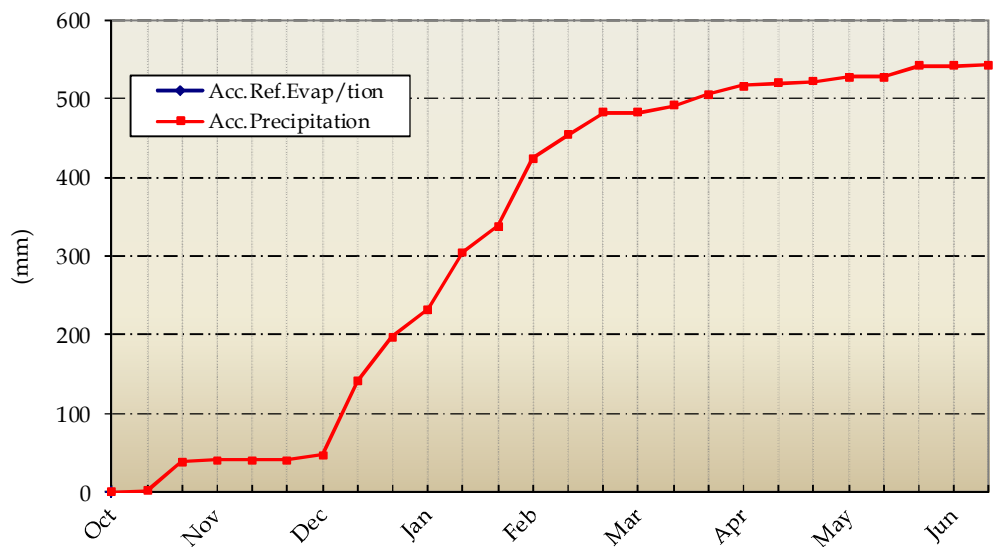


1st 10-day period (1-10/06/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.0	24.5	25.2	27.3	26.6	29.0	28.5	28.7	27.3	28.2	26.8	26.4	26.9
	Min	17.5	11.0	12.6	11.6	12.6	15.0	15.5	13.2	15.1	16.4	14.0	14.3	15.3
Relative Humidity	Max	86	93	92	94	93	93	92	93	93	96	92	93	-
	Min	41	33	36	33	40	36	31	29	54	31	36	44	-
Soil Temperature at 10 cm	06 UTC	24.0	23.2	23.4	23.4	24.2	24.8	25.0	25.0	25.4	25.2	24.4	23.1	23.0
	12 UTC	26.4	25.8	26.2	26.6	27.0	27.8	28.4	27.6	27.8	28.0	27.2	26.2	27.7
Sunshine Duration		12.6	12.6	13.1	13.4	13.7	13.2	11.7	13.3	10.1	12.0	12.6	12.0	11.1
Precipitation										1.4	0.3	1.7	2.1	2.3
Evaporation		7.0	7.4	6.2	9.6	7.0	7.0	7.0	8.5	4.7	8.8	73.2	74.3	67.5
Growing Degrees	5	15.3	12.8	13.9	14.5	14.6	17.0	17.0	16.0	16.2	17.3	154.4	153.6	160.7
	10	10.3	7.8	8.9	9.5	9.6	12.0	12.0	11.0	11.2	12.3	104.4	103.6	110.7

1st 10-day period (1-10/06/2021)	Previous Year Value	Past Years Mean Value	
Reference Evapotranspiration	46.2	-	48.5
Precipitation - Reference Evapotranspiration	-44.5	-	-46.2
Number of Rainy Days	2.0	2.0	0.7
Number of Dry Days	24.0	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

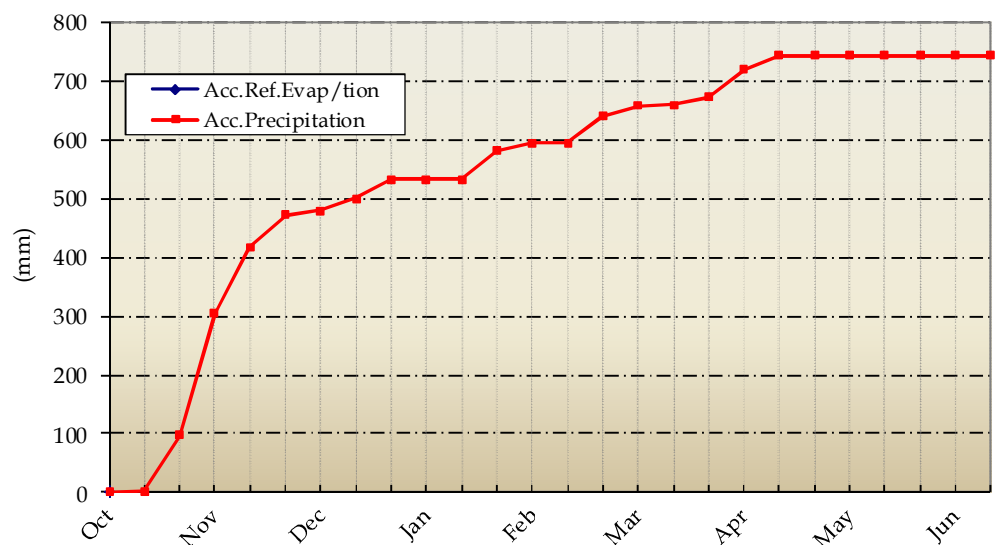


1st 10-day period (1-10/06/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.6	24.2	23.2	24.2	23.6	25.6	27.4	28.0	26.0	24.6	25.0	26.3	25.7
	Min	17.8	14.0	14.6	14.4	20.0	20.0	18.2	20.0	18.0	20.2	17.7	17.3	17.9
Relative Humidity	Max	88	91	87	87	83	91	87	82	86	89	87	87	-
	Min	47	59	70	70	67	67	52	49	70	66	62	45	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.8	12.8	12.9	12.8	12.9	12.6	12.8	12.0	11.2	11.4	12.4	11.4	11.2
Precipitation													0.5	3.5
Evaporation		8.2	1.9	5.4	6.0	6.4	6.1	5.7	5.4	4.2	6.8	56.1	75.2	76.6
Growing Degrees	5	15.7	14.1	13.9	14.3	16.8	17.8	17.8	19.0	17.0	17.4	163.8	168.1	167.8
	10	10.7	9.1	8.9	9.3	11.8	12.8	12.8	14.0	12.0	12.4	113.8	118.1	117.8

1st 10-day period (1-10/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	3.5
Number of Rainy Days	0.0	1.0	0.5
Number of Dry Days	11.0	5.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

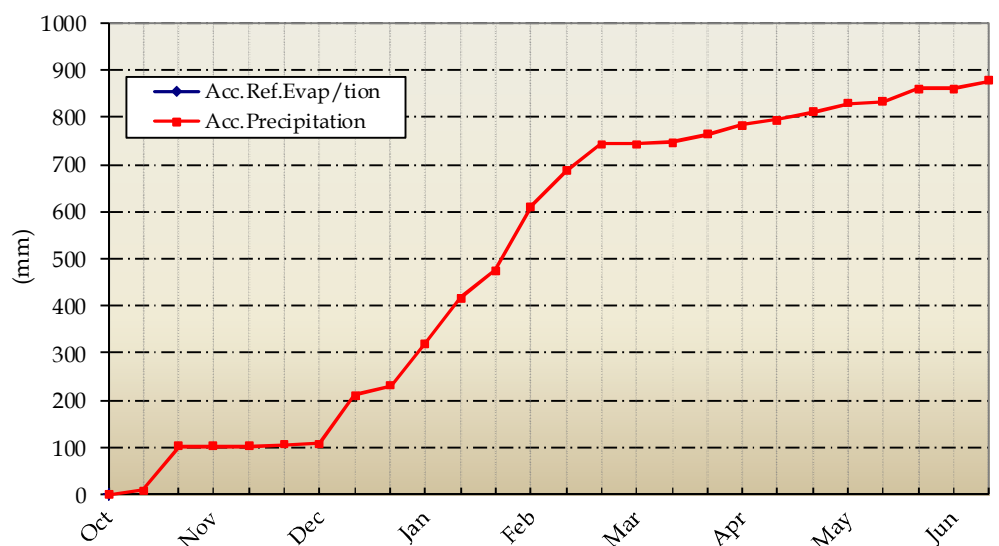


1st 10-day period (1-10/06/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.1	22.8	26.9	28.9	28.6	29.0	27.2	28.4	29.7	27.8	27.2	23.8	26.3
	Min	5.0	15.0	6.3	8.5	9.2	8.6	12.8	11.1	11.2	12.1	10.0	9.7	12.0
Relative Humidity	Max	69	60	77	95	95	100	96	94	96	100	88	99	-
	Min	33	31	30	28	32	34	31	26	22	45	31	49	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	18.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	22.9
Sunshine Duration		10.6	13.0	12.9	12.5	12.7	12.0	7.5	11.6	1.3	4.5	9.9	8.1	9.1
Precipitation								0.0	0.0	7.9	9.3	17.2	24.3	14.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	46.7
Growing Degrees	5	9.1	13.9	11.6	13.7	13.9	13.8	15.0	14.8	15.5	15.0	136.1	117.1	141.5
	10	4.1	8.9	6.6	8.7	8.9	8.8	10.0	9.8	10.5	10.0	86.1	67.1	91.5

1st 10-day period (1-10/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	43.4
Precipitation - Reference Evapotranspiration	-	-	-29.0
Number of Rainy Days	2.0	5.0	2.5
Number of Dry Days	8.0	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

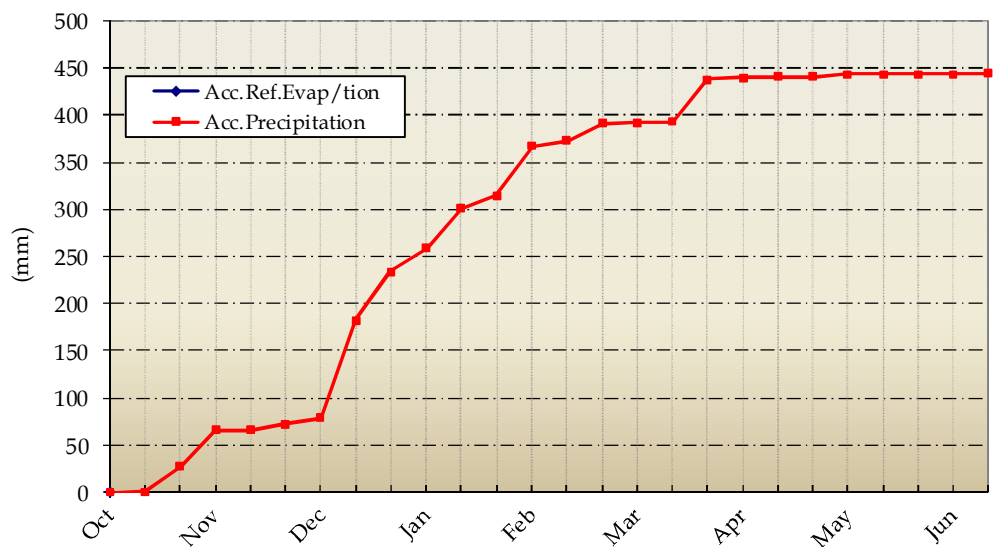


1st 10-day period (1-10/06/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.4	23.8	24.4	25.8	25.1	29.0	33.3	27.8	26.8	26.0	26.8	26.6	27.6
	Min	13.8	11.0	11.8	11.3	11.4	12.3	16.9	13.7	14.2	16.0	13.2	12.9	14.5
Relative Humidity	Max	74	73	84	72	96	82	65	83	88	98	82	96	-
	Min	27	29	30	33	29	28	16	25	53	49	32	36	-
Soil Temperature at 10 cm	06 UTC	23.0	22.4	23.0	22.8	23.5	23.4	24.5	24.5	24.4	19.8	23.1	22.2	21.6
	12 UTC	28.2	28.9	29.0	29.0	29.0	29.2	30.0	30.0	30.2	28.4	29.2	25.4	25.8
Sunshine Duration		13.3	13.1	12.9	13.3	13.0	12.9	12.9	13.3	7.8	6.6	11.9	10.9	10.5
Precipitation								0.0		1.2	0.0	1.2		2.7
Evaporation		10.8	10.0	8.0	8.0	10.0	11.0	11.0	10.0	6.8	8.4	94.0	78.0	75.1
Growing Degrees	5	15.1	12.4	13.1	13.6	13.3	15.7	20.1	15.8	15.5	16.0	150.4	147.3	160.6
	10	10.1	7.4	8.1	8.6	8.3	10.7	15.1	10.8	10.5	11.0	100.4	97.3	110.6

1st 10-day period (1-10/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	50.2
Precipitation - Reference Evapotranspiration	-	-	-47.5
Number of Rainy Days	1.0	0.0	0.9
Number of Dry Days	9.0	10.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



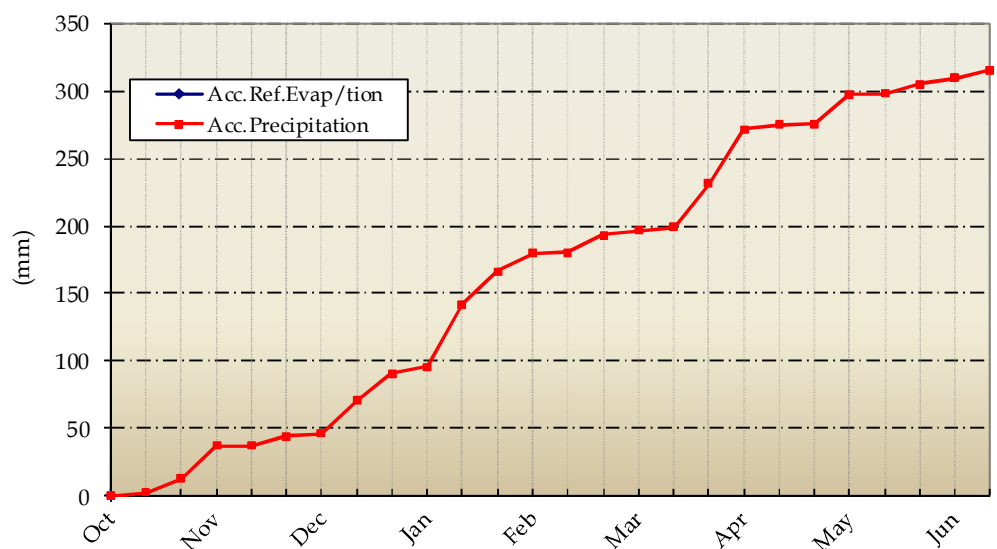
Larisa

1st 10-day period (1-10/06/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.8	26.0	28.8	28.4	29.4	33.2	32.0	29.8	25.4	29.0	28.7	28.5	29.7
	Min	9.6	8.0	10.2	14.2	13.1	12.4	16.8	17.8	17.6	12.6	13.2	13.3	14.1
Relative Humidity	Max	99	97	92	94	84	89	84	89	95	98	92	94	-
	Min	28	26	25	28	25	20	32	40	54	33	31	33	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	21.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	24.3
Sunshine Duration		8.5	11.5	11.9	11.8	11.6	10.8	9.3	6.0	2.1	7.8	9.1	8.7	10.4
Precipitation		0.0			0.6				0.3	5.0		5.9	4.5	9.2
Evaporation		8.3	7.2	9.7	9.1	4.0	9.6	7.5	7.8	2.0	3.0	68.2	71.4	79.0
Growing Degrees	5	12.2	12.0	14.5	16.3	16.3	17.8	19.4	18.8	16.5	15.8	159.6	158.9	169.0
	10	7.2	7.0	9.5	11.3	11.3	12.8	14.4	13.8	11.5	10.8	109.6	108.9	119.0

1st 10-day period (1-10/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	49.4	48.4	54.0
Precipitation - Reference Evapotranspiration	-43.5	-43.9	-44.8
Number of Rainy Days	3.0	3.0	2.3
Number of Dry Days	3.0	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



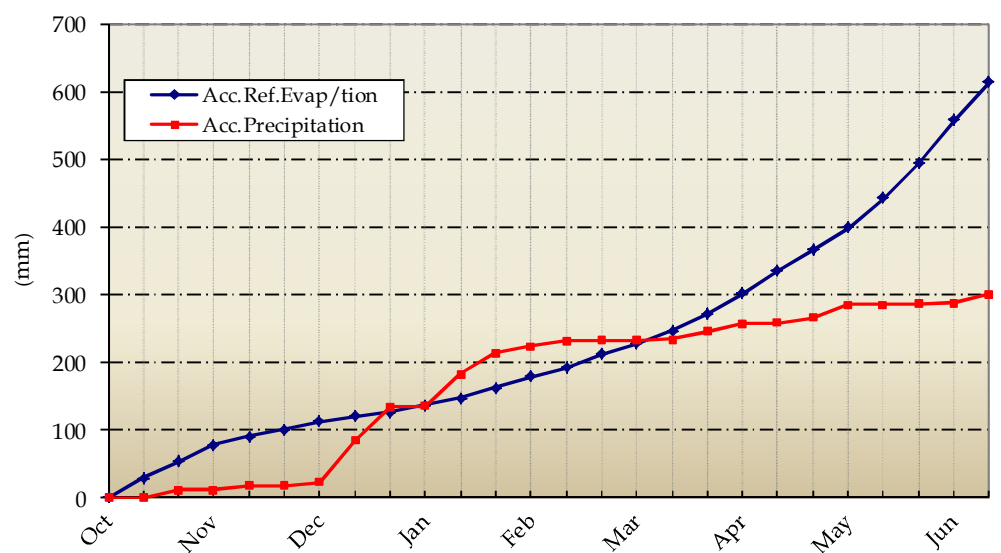
Mikra

1st 10-day period (1-10/06/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.4	26.2	27.5	28.2	28.1	29.2	29.0	25.8	28.3	28.8	27.4	26.9	27.9
	Min	15.6	15.8	11.6	13.2	13.8	14.4	19.0	16.2	16.5	16.8	15.3	15.7	15.4
Relative Humidity	Max	59	77	83	83	88	77	94	96	95	95	85	86	-
	Min	36	29	26	27	35	37	41	61	43	35	37	39	-
Soil Temperature at 10 cm	06 UTC	19.4	19.2	20.2	21.6	22.0	22.4	24.0	23.6	22.8	22.6	21.8	21.8	22.3
	12 UTC	21.8	24.4	24.6	25.2	25.2	25.0	27.2	25.6	26.2	25.4	25.1	24.7	27.3
Sunshine Duration		11.9	13.5	12.8	12.9	13.1	12.3	5.0	5.0	9.6	8.8	10.5	10.4	10.0
Precipitation								0.5	0.7	12.2		13.4	2.4	11.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	74.4
Growing Degrees	5	14.5	16.0	14.6	15.7	16.0	16.8	19.0	16.0	17.4	17.8	163.7	162.7	166.4
	10	9.5	11.0	9.6	10.7	11.0	11.8	14.0	11.0	12.4	12.8	113.7	112.7	116.4

1st 10-day period (1-10/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	56.0	51.3	52.1
Precipitation - Reference Evapotranspiration	-42.6	-48.9	-40.9
Number of Rainy Days	3.0	3.0	2.7
Number of Dry Days	9.0	6.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

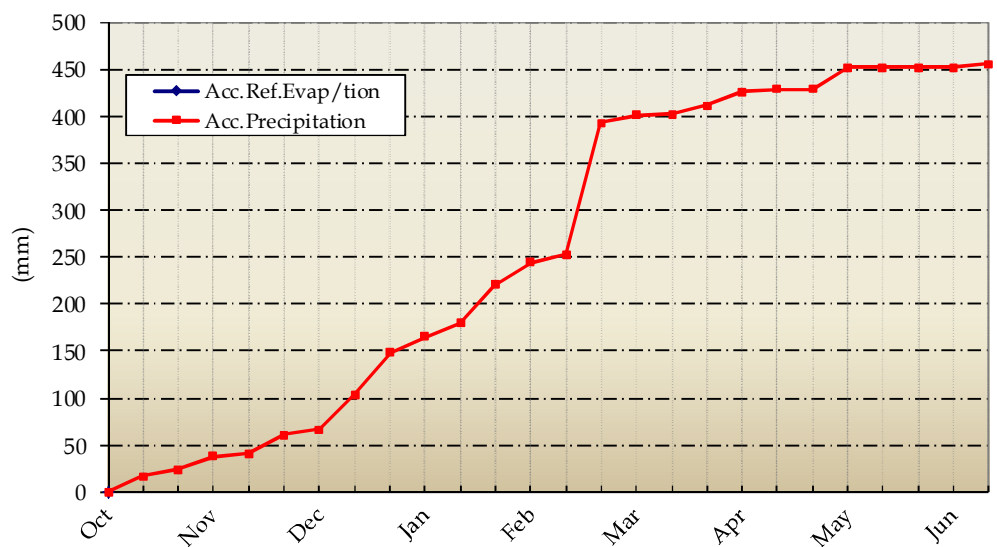


1st 10-day period (1-10/06/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.1	24.0	27.1	26.6	27.2	31.0	32.4	28.6	28.2	28.8	27.9	27.6	28.3
	Min	13.6	8.8	11.0	11.5	11.9	13.6	18.2	15.4	16.8	17.8	13.9	14.1	14.2
Relative Humidity	Max	97	98	89	79	73	76	93	97	95	70	87	93	-
	Min	26	25	22	28	29	21	23	34	33	27	27	30	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		11.4	12.5	12.8	11.9	12.8	13.3	10.2	8.8	8.4	12.3	11.4	11.1	
Precipitation		1.5	0.3					1.5				3.3	12.4	6.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	14.4	11.4	14.1	14.1	14.6	17.3	20.3	17.0	17.5	18.3	158.8	158.2	
	10	9.4	6.4	9.1	9.1	9.6	12.3	15.3	12.0	12.5	13.3	108.8	108.2	

1st 10-day period (1-10/06/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	6.3
Number of Rainy Days	3.0	2.0
Number of Dry Days	1.0	3.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

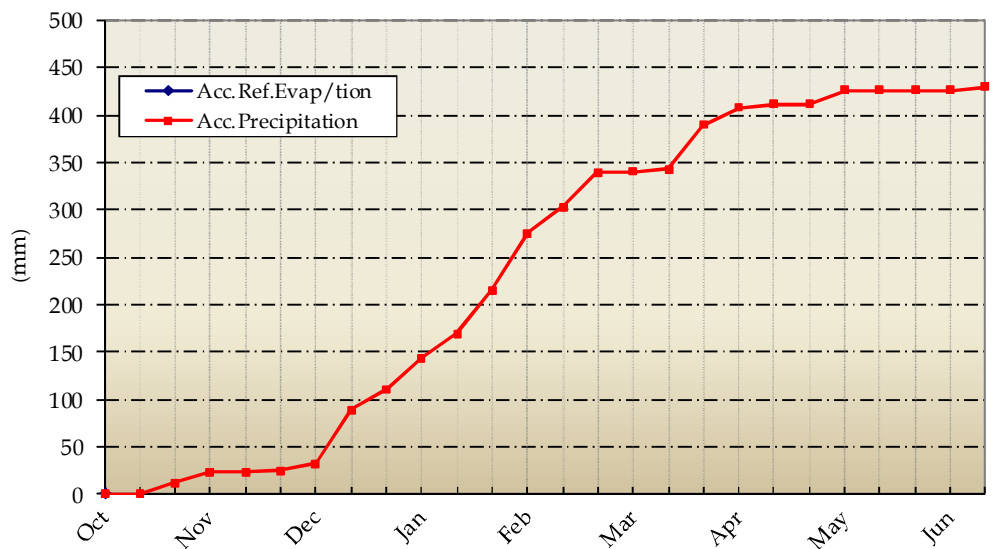


1st 10-day period (1-10/06/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.0	23.4	25.0	24.4	25.4	28.6	30.9	27.0	23.0	24.0	25.5	24.2	26.4
	Min	6.5	4.6	8.6	8.2	7.6	8.3	11.5	11.3	12.5	12.4	9.2	10.2	10.7
Relative Humidity	Max	86	89	91	86	86	92	81	83	98	98	89	92	-
	Min	15	22	24	29	28	22	19	22	44	33	26	31	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	20.3
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	23.4
Sunshine Duration		12.5	10.6	7.9	7.9	7.2	12.2	11.7	12.8	1.0	3.3	8.7	10.5	10.2
Precipitation										3.6	0.5	4.1	21.3	6.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	55.4
Growing Degrees	5	9.8	9.0	11.8	11.3	11.5	13.5	16.2	14.2	12.8	13.2	123.1	122.3	135.3
	10	4.8	4.0	6.8	6.3	6.5	8.5	11.2	9.2	7.8	8.2	73.1	72.3	85.3

1st 10-day period (1-10/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	40.9	43.7	48.9
Precipitation - Reference Evapotranspiration	-36.8	-22.4	-42.8
Number of Rainy Days	2.0	3.0	1.6
Number of Dry Days	45.0	2.0	-

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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**ΕΘΝΙΚΗ
ΜΕΤΕΩΡΟΛΟΓΙΚΗ
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