



AGROMETEOROLOGICAL BULLETIN

*May 2024
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



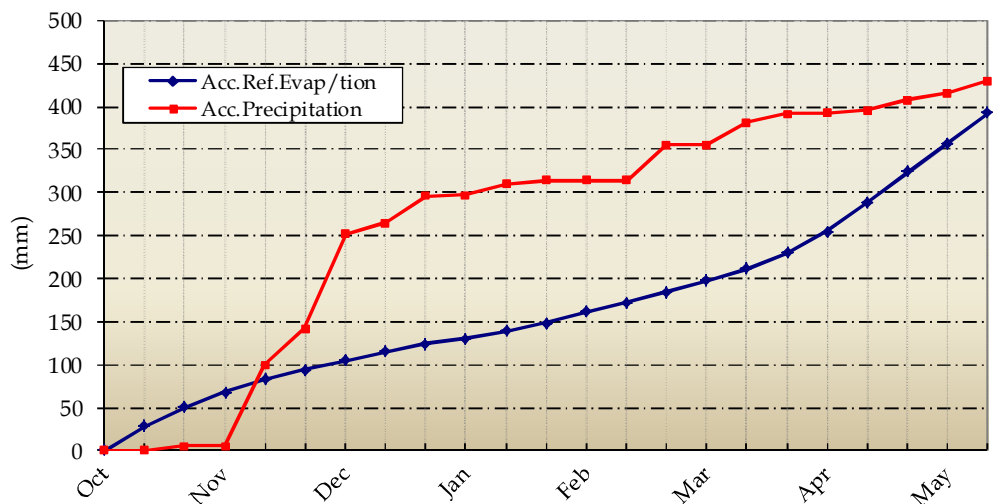
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www.emy.gr
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1st 10-day period (1-10/05/2024)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	20.8	19.8	21.6	18.0	22.2	20.0	22.8	25.0	22.2	19.0	21.1	20.8	21.8
	Min	15.4	9.4	13.2	11.6	13.8	7.0	9.0	11.4	14.6	14.4	12.0	10.9	10.7
Relative Humidity	Max	88	95	93	95	87	92	97	88	87	78	90	89	88
	Min	52	66	52	75	43	55	43	56	52	41	54	47	47
Soil Temperature at 10 cm	06 UTC	17.4	16.2	18.0	17.6	15.8	15.6	16.8	18.2	19.6	18.4	17.4	15.7	16.7
	12 UTC	19.4	20.4	21.4	18.8	19.2	19.8	21.6	22.2	22.0	19.2	20.4	17.5	20.5
Sunshine Duration		6.7	6.8	7.8	0.5	12.1	12.6	10.7	12.5	1.9	0.6	7.2	6.4	8.5
Precipitation				1.8	11.7	0.2						13.7	13.9	10.5
Evaporation		5.2	4.5	4.3	0.9	6.1	4.9	6.0	6.3	4.7	4.9	47.8	47.6	51.5
Growing Degrees	5	13.1	9.6	12.4	9.8	13.0	8.5	10.9	13.2	13.4	11.7	115.6	108.5	99.3
	10	8.1	4.6	7.4	4.8	8.0	3.5	5.9	8.2	8.4	6.7	65.6	58.5	55.3

1st 10-day period (1-10/05/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	35.1	35.1	35.4
Precipitation - Reference Evapotranspiration	-21.4	-21.2	-24.9
Number of Rainy Days	3.0	5.0	1.9
Number of Dry Days	9.0	0.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

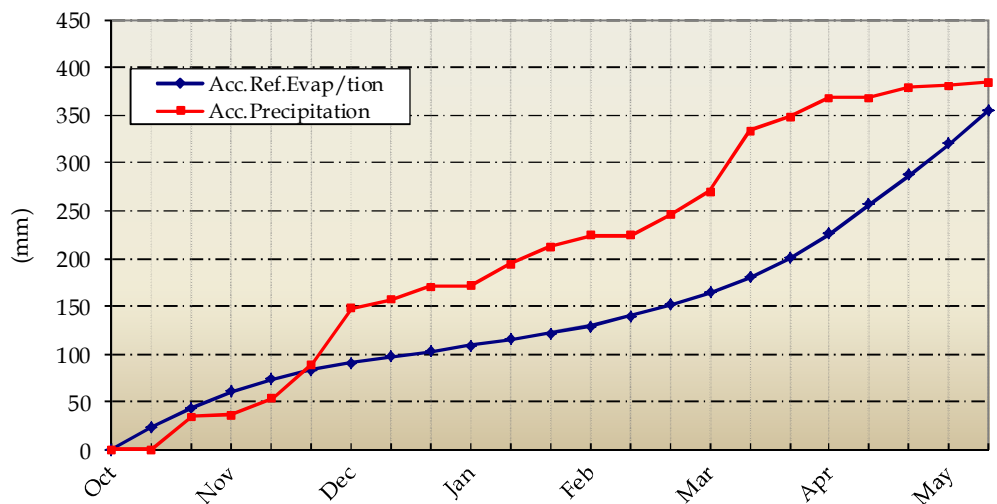


1st 10-day period (1-10/05/2024)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.6	23.2	21.4	19.6	24.8	24.4	23.8	25.8	20.6	23.2	23.2	21.8	23.0
	Min	12.0	14.1	13.0	10.1	9.6	9.3	11.3	10.8	14.6	15.0	12.0	12.5	12.2
Relative Humidity	Max	99	98	100	95	99	97	99	98	99	87	97	97	92
	Min	46	61	51	50	36	36	38	44	62	42	47	57	44
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	18.4
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	23.1
Sunshine Duration		10.6	10.9	10.8	6.1	12.6	12.7	12.2	8.6	0.0	7.7	9.2	5.0	9.5
Precipitation			0.1		0.5					2.2	0.7	3.5	38.9	4.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	51.2
Growing Degrees	5	13.8	13.7	12.2	9.9	12.2	11.9	12.6	13.3	12.6	14.1	126.1	121.6	102.1
	10	8.8	8.7	7.2	4.9	7.2	6.9	7.6	8.3	7.6	9.1	76.1	71.6	61.4

1st 10-day period (1-10/05/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	35.2	27.4	25.8
Precipitation - Reference Evapotranspiration	-31.7	11.5	-21.5
Number of Rainy Days	4.0	5.0	1.1
Number of Dry Days	6.0	0.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



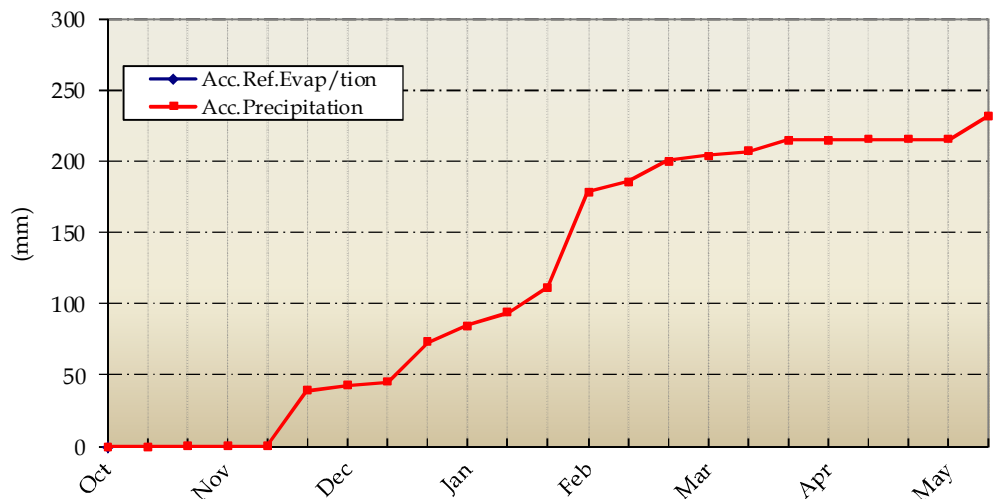
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1st 10-day period (1-10/05/2024)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	21.4	21.4	24.4	23.2	20.4	21.0	23.6	21.6	22.8	20.8	22.1	21.0	22.6
	Min	18.0	15.4	15.0	17.0	16.0	17.0	13.0	13.2	17.2	18.4	16.0	14.2	14.4
Relative Humidity	Max	89	89	83	85	78	76	79	75	86	92	83	86	85
	Min	67	65	31	38	61	51	40	31	39	80	50	53	54
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		7.4	11.3	12.7	12.6	9.7	12.6	12.9	8.3	7.0	1.6	9.6	5.4	10.1
Precipitation						1.9					14.5	16.4	5.8	2.9
Evaporation		2.7	4.8	8.7	6.7	7.6	5.1	4.3	5.4	3.6	0.0	48.9	33.6	41.8
Growing Degrees	5	14.7	13.4	14.7	15.1	13.2	14.0	13.3	12.4	15.0	14.6	140.4	125.9	118.4
	10	9.7	8.4	9.7	10.1	8.2	9.0	8.3	7.4	10.0	9.6	90.4	75.9	74.4

1st 10-day period (1-10/05/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	2.0	5.0	1.1
Number of Dry Days	26.0	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

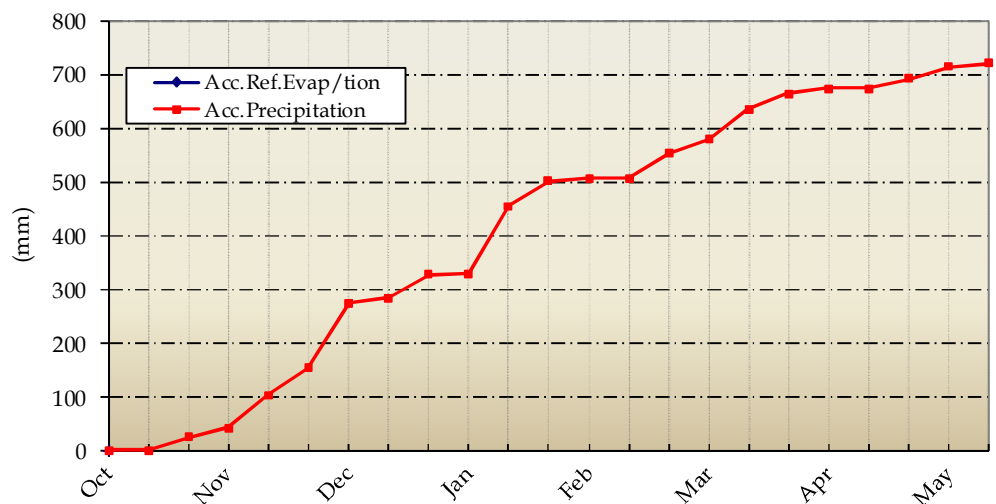


1st 10-day period (1-10/05/2024)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.1	20.7	18.3	16.3	22.7	22.9	23.6	26.0	23.1	19.4	21.8	20.0	21.9
	Min	10.2	11.2	10.3	7.9	4.7	6.0	4.6	7.9	10.1	13.1	8.6	9.5	9.1
Relative Humidity	Max	100	100	100	100	100	100	100	100	100	70	97	100	94
	Min	30	61	35	61	50	32	33	43	37	50	43	49	46
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	13.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	16.0
Sunshine Duration		7.8	3.6	10.3	1.9	10.8	12.2	10.5	6.1	3.4	0.9	6.8	4.2	7.2
Precipitation			1.3	1.9	0.4				2.6			6.2	69.0	18.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	
Growing Degrees	5	12.7	11.0	9.3	7.1	8.7	9.5	9.1	12.0	11.6	11.3	102.1	97.2	85.0
	10	7.7	6.0	4.3	2.1	3.7	4.5	4.1	7.0	6.6	6.3	52.1	47.2	44.7

1st 10-day period (1-10/05/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	29.1
Precipitation - Reference Evapotranspiration	-	-	-11.0
Number of Rainy Days	4.0	6.0	3.0
Number of Dry Days	6.0	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

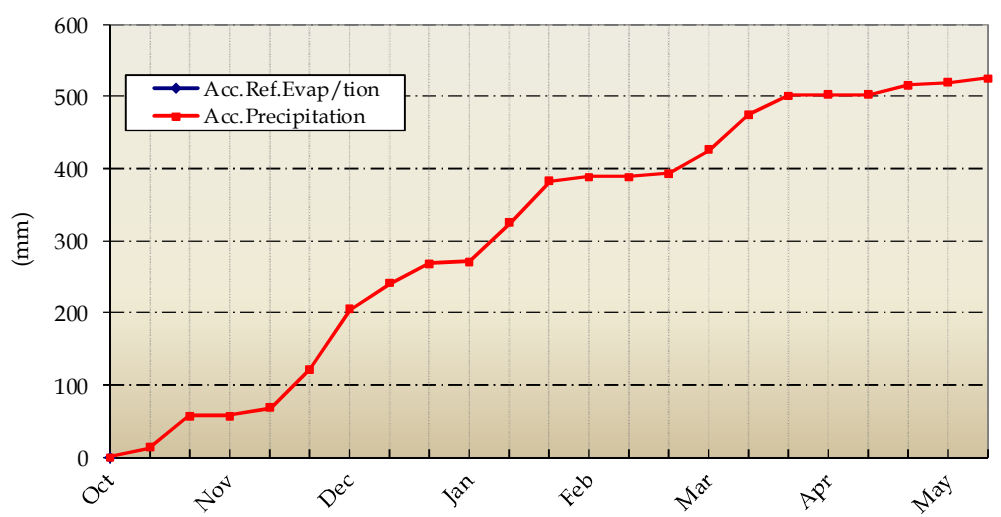


1st 10-day period (1-10/05/2024)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.2	24.6	24.0	21.2	25.8	24.1	25.5	23.7	21.2	22.5	23.6	22.8	23.5
	Min	10.7	13.1	13.0	8.5	10.7	10.1	10.0	10.1	14.4	15.1	11.6	12.3	11.3
Relative Humidity	Max	96	96	96	94	94	91	91	94	95	84	93	93	91
	Min	55	50	21	40	28	44	39	48	50	46	42	52	42
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	17.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	20.2
Sunshine Duration		11.9	11.9	12.0	7.5	12.7	13.0	11.9	9.4	0.1	0.5	9.1	5.7	9.5
Precipitation					1.0					1.2	3.9	6.1	16.8	6.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	54.5
Growing Degrees	5	12.0	13.9	13.5	9.9	13.3	12.1	12.8	11.9	12.8	13.8	125.8	125.6	106.0
	10	7.0	8.9	8.5	4.9	8.3	7.1	7.8	6.9	7.8	8.8	75.8	75.6	63.0

1st 10-day period (1-10/05/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	41.0
Precipitation - Reference Evapotranspiration	-	-	-34.4
Number of Rainy Days	3.0	5.0	1.8
Number of Dry Days	8.0	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

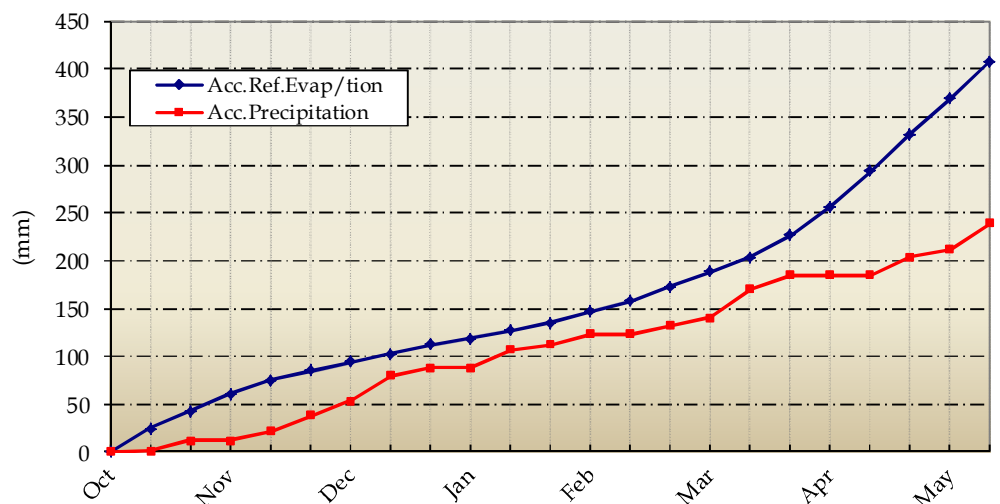


Larisa

1st 10-day period (1-10/05/2024)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.9	25.6	25.0	20.9	24.4	27.2	30.2	30.4	23.2	17.4	24.7	21.2	24.5
	Min	14.0	10.8	8.8	12.2	8.0	6.8	9.0	10.4	13.8	14.4	10.8	11.5	10.3
Relative Humidity	Max	97	100	100	100	100	100	100	100	100	100	100	100	91
	Min	41	41	19	18	29	30	19	41	53	79	37	45	34
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	18.5	16.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	19.4	18.3
Sunshine Duration		3.5	7.7	10.9	3.0	11.3	11.2	11.3	7.1	1.2	0.0	6.7	4.9	8.0
Precipitation			0.0		3.1						24.6	27.7	33.7	8.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	40.1	65.3
Growing Degrees	5	13.5	13.2	11.9	11.6	11.2	12.0	14.6	15.4	13.5	10.9	127.7	113.5	111.8
	10	8.5	8.2	6.9	6.6	6.2	7.0	9.6	10.4	8.5	5.9	77.7	63.5	66.6

1st 10-day period (1-10/05/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	38.8	33.2	42.1
Precipitation - Reference Evapotranspiration	-11.1	0.5	-33.2
Number of Rainy Days	2.0	5.0	2.3
Number of Dry Days	8.0	5.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



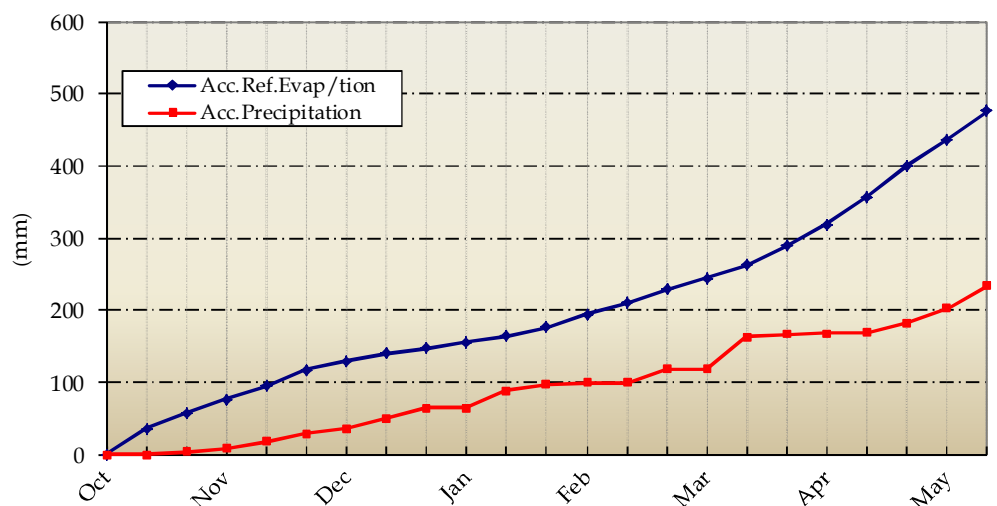
Mikra

1st 10-day period (1-10/05/2024)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.2	23.2	23.2	20.2	23.2	24.6	27.0	25.4	23.6	18.8	23.2	20.8	23.4
	Min	13.0	12.4	11.7	15.1	10.6	9.5	11.8	12.6	12.6	16.1	12.5	12.4	12.0
Relative Humidity	Max	100	100	100	92	93	85	90	100	100	100	96	97	83
	Min	52	35	34	53	33	33	38	46	50	74	45	57	39
Soil Temperature at 10 cm	06 UTC	18.4	18.0	15.4	18.0	15.6	16.8	17.6	18.4	18.8	18.8	17.6	16.9	17.9
	12 UTC	19.6	20.4	19.8	18.0	19.6	20.0	22.0	21.0	21.0	21.0	20.2	18.5	22.7
Sunshine Duration		9.4	8.2	9.5	2.1	12.9	12.5	11.3	9.1	5.1	0.0	8.0	5.5	8.5
Precipitation				1.2	5.5					4.4	19.7	30.8	37.5	12.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	59.5
Growing Degrees	5	13.1	12.8	12.5	12.7	11.9	12.1	14.4	14.0	13.1	12.5	128.9	115.8	114.1
	10	8.1	7.8	7.5	7.7	6.9	7.1	9.4	9.0	8.1	7.5	78.9	65.8	69.5

1st 10-day period (1-10/05/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	39.8	30.7	34.7
Precipitation - Reference Evapotranspiration	-9.0	6.8	-21.8
Number of Rainy Days	4.0	6.0	2.2
Number of Dry Days	7.0	4.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

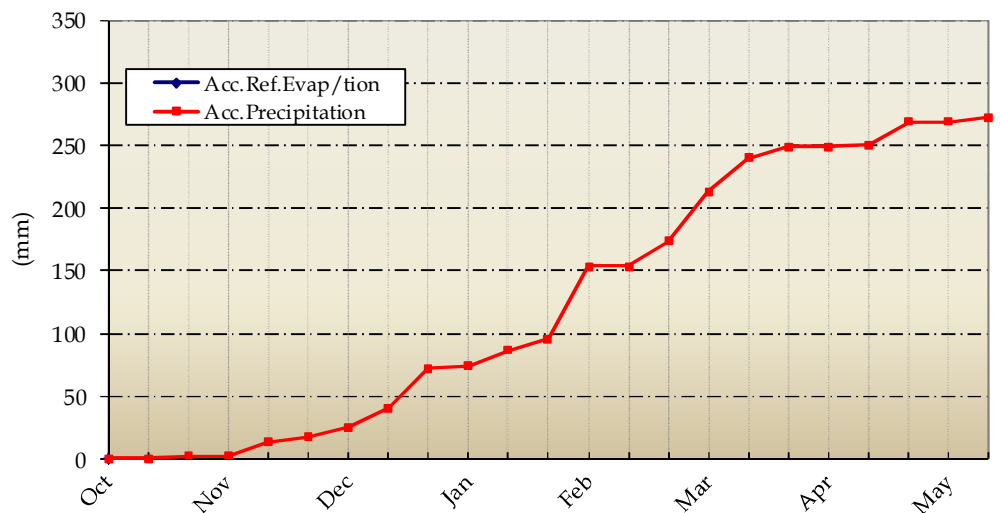


1st 10-day period (1-10/05/2024)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	20.6	23.6	25.0	20.9	21.0	25.1	27.4	27.4	23.2	18.1	23.2	20.2	23.4
	Min	15.9	9.4	13.3	8.8	12.8	5.4	10.5	11.0	12.3	15.0	11.4	11.3	10.9
Relative Humidity	Max	93	96	79	92	76	80	86	77	95	84	86	92	85
	Min	52	36	12	29	38	23	25	21	36	59	33	48	32
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		-	-	-	-	-	-	-	-	-	-	-	4.9	9.3
Precipitation					0.5	0.6				0.0	1.7	2.8	8.8	6.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	48.7
Growing Degrees	5	13.3	11.5	14.2	9.9	11.9	10.3	14.0	14.2	12.8	11.6	123.4	107.4	99.0
	10	8.3	6.5	9.2	4.9	6.9	5.3	9.0	9.2	7.8	6.6	73.4	57.4	57.8

1st 10-day period (1-10/05/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	-
Number of Rainy Days	3.0	3.0	1.5
Number of Dry Days	11.0	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



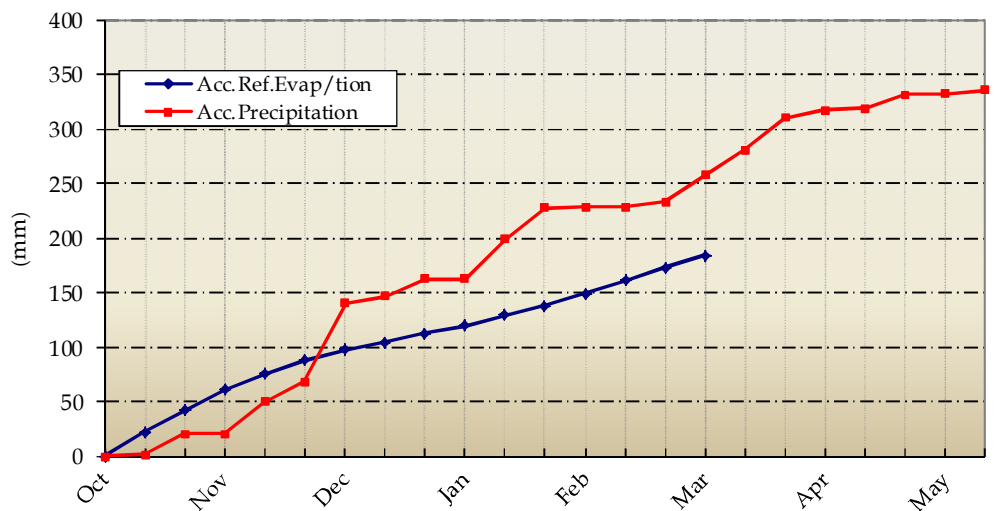
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1st 10-day period (1-10/05/2024)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.5	24.3	19.2	16.9	21.3	23.0	25.4	24.0	16.2	18.4	21.2	18.2	21.8
	Min	5.9	8.6	9.0	9.8	7.3	3.5	5.2	6.3	8.6	10.7	7.5	8.3	7.2
Relative Humidity	Max	95	97	90	92	89	94	92	92	86	89	92	96	89
	Min	39	41	22	40	27	21	11	18	44	53	32	48	34
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	15.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	19.8
Sunshine Duration		11.1	11.6	12.3	6.1	11.3	9.9	11.6	11.5	0.0	9.7	9.5	4.1	9.0
Precipitation		0.0	0.0	0.0	0.7			0.0		0.8	2.0	3.5	36.5	10.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	35.1
Growing Degrees	5	9.7	11.5	9.1	8.4	9.3	8.3	10.3	10.2	7.4	9.6	93.6	82.5	77.5
	10	4.7	6.5	4.1	3.4	4.3	3.3	5.3	5.2	2.4	4.6	43.6	32.5	37.5

1st 10-day period (1-10/05/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	25.9	31.0
Precipitation - Reference Evapotranspiration	-	10.6	-20.9
Number of Rainy Days	3.0	6.0	2.3
Number of Dry Days	8.0	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





◆ **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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