



AGROMETEOROLOGICAL BULLETIN

September 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



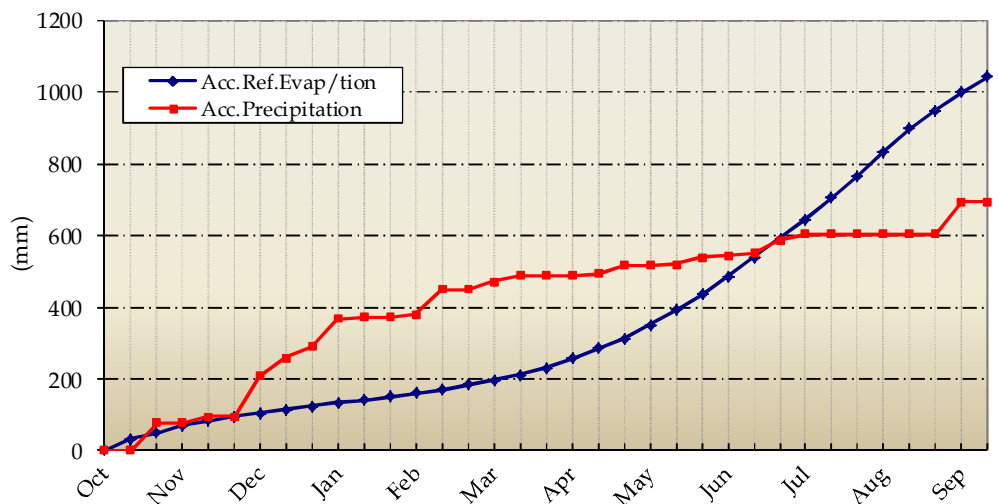
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www.emy.gr
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1st 10-day period (1-10/09/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.6	32.2	30.0	28.4	27.0	27.0	27.6	30.4	29.8	27.6	29.2	27.4	28.3
	Min	18.2	21.4	19.2	19.8	19.8	15.6	16.8	16.0	14.4	15.8	17.7	16.4	16.3
Relative Humidity	Max	94	91	89	91	84	89	74	87	88	85	87	71	81
	Min	48	41	48	45	38	30	30	36	31	35	38	34	36
Soil Temperature at 10 cm	06 UTC	24.4	25.4	24.7	24.6	23.6	22.6	22.4	22.6	22.8	23.4	23.6	23.5	23.8
	12 UTC	27.6	28.4	28.0	27.8	25.2	25.5	25.4	26.0	26.2	25.6	26.6	27.5	27.2
Sunshine Duration		11.4	9.5	10.5	9.5	6.3	11.8	11.8	11.7	11.2	11.4	10.5	9.2	10.1
Precipitation		0.5										0.5	2.6	8.1
Evaporation		6.6	7.0	6.9	3.1	10.0	6.0	9.0	6.1	7.3	6.6	68.6	71.0	78.4
Growing Degrees	5	19.9	21.8	19.6	19.1	18.4	16.3	17.2	18.2	17.1	16.7	184.3	168.8	161.9
	10	14.9	16.8	14.6	14.1	13.4	11.3	12.2	13.2	12.1	11.7	134.3	118.8	115.3

1st 10-day period (1-10/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	44.0	47.0	37.6
Precipitation - Reference Evapotranspiration	-43.5	-44.4	-29.5
Number of Rainy Days	1.0	2.0	0.9
Number of Dry Days	0.0	12.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

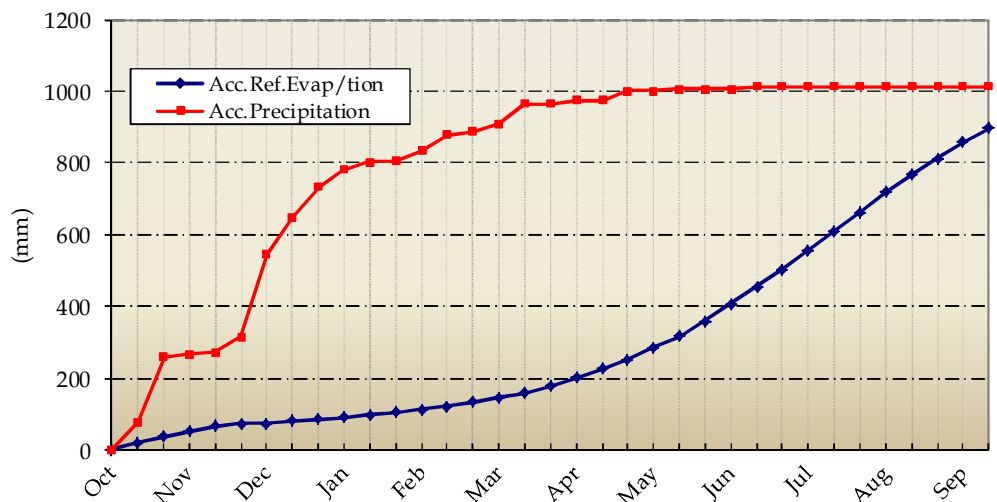


1st 10-day period (1-10/09/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.2	31.0	28.9	31.2	32.0	29.6	31.2	31.2	31.6	31.6	31.0	29.2	29.4
	Min	20.3	21.2	24.0	19.7	19.8	16.8	17.5	16.3	17.8	20.8	19.4	17.4	18.2
Relative Humidity	Max	92	88	84	93	92	78	69	91	89	94	87	89	88
	Min	46	50	55	48	36	38	29	31	39	58	43	37	39
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	26.1	26.3
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	28.8	31.2
Sunshine Duration		11.4	10.5	10.9	10.9	10.5	9.7	9.8	10.3	10.2	10.0	10.4	9.8	10.0
Precipitation													1.4	6.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	65.0	69.5
Growing Degrees	5	20.8	21.1	21.5	20.5	20.9	18.2	19.4	18.8	19.7	21.2	201.9	183.5	154.6
	10	15.8	16.1	16.5	15.5	15.9	13.2	14.4	13.8	14.7	16.2	151.9	133.5	113.5

1st 10-day period (1-10/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	37.6	34.5	46.5
Precipitation - Reference Evapotranspiration	-37.6	-33.1	-39.9
Number of Rainy Days	0.0	1.0	1.1
Number of Dry Days	92.0	11.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



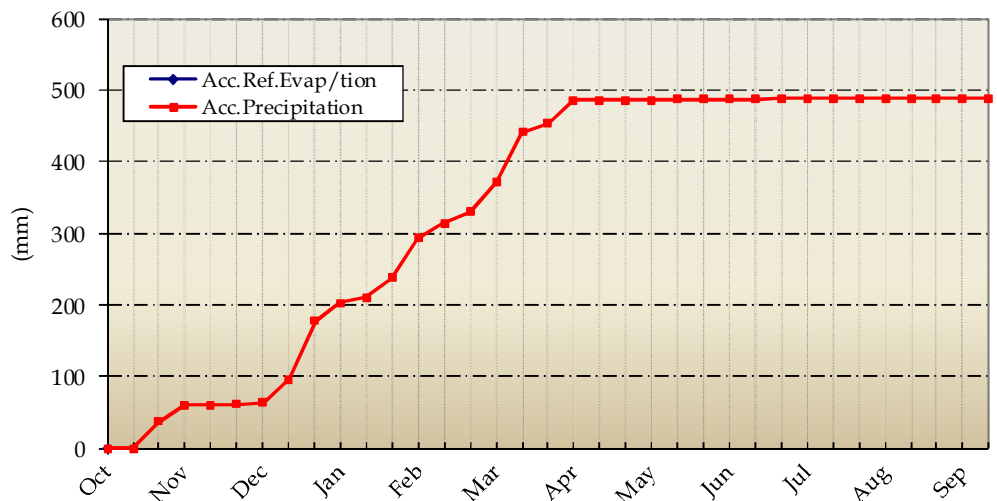
Iraklio

1st 10-day period (1-10/09/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.6	29.6	29.4	29.2	28.0	25.6	25.8	26.0	27.8	30.4	28.1	27.2	28.1
	Min	22.0	21.6	22.0	25.2	25.4	23.6	23.0	23.0	18.4	19.4	22.4	22.3	21.1
Relative Humidity	Max	86	86	89	85	81	70	70	77	80	86	81	92	80
	Min	66	66	58	67	64	54	59	61	54	42	59	73	54
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.5	11.5	11.1	10.6	10.9	9.2	9.0	11.4	11.3	10.5	10.8	10.3	10.6
Precipitation													0.4	1.6
Evaporation		3.4	5.1	6.4	5.1	1.0	5.9	6.2	5.8	5.8	3.8	48.5	59.1	64.7
Growing Degrees	5	20.8	20.6	20.7	22.2	21.7	19.6	19.4	19.5	18.1	19.9	202.5	197.1	188.0
	10	15.8	15.6	15.7	17.2	16.7	14.6	14.4	14.5	13.1	14.9	152.5	147.1	140.0

1st 10-day period (1-10/09/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	-
Number of Rainy Days	0.0	1.0
Number of Dry Days	90.0	84.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

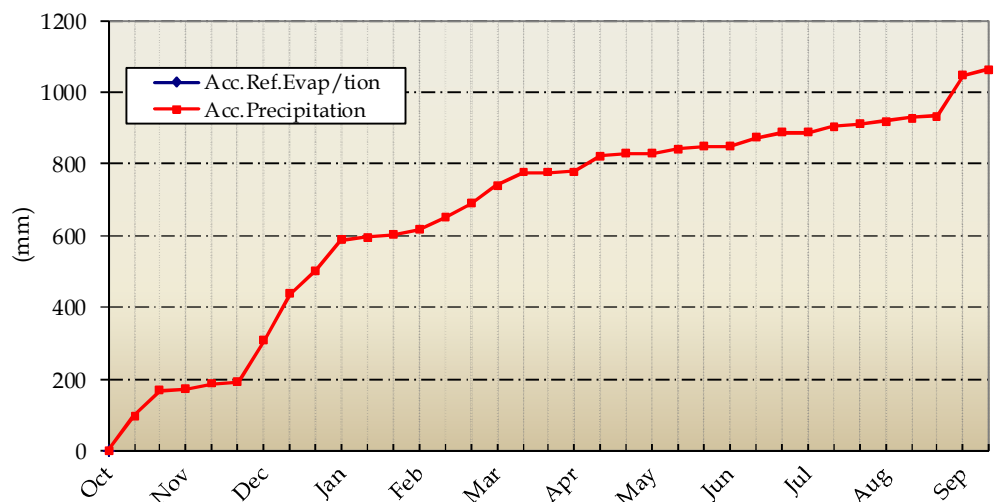


1st 10-day period (1-10/09/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.0	24.4	28.9	30.8	28.3	27.7	28.9	30.9	30.6	30.5	29.1	27.1	27.6
	Min	14.8	18.0	15.0	13.2	14.2	14.5	13.4	12.8	14.1	20.6	15.1	12.7	13.3
Relative Humidity	Max	100	100	100	100	98	94	100	100	100	99	99	87	91
	Min	46	65	52	44	15	40	34	44	31	49	42	31	38
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	20.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	22.0
Sunshine Duration		8.2	1.6	9.3	9.7	11.1	7.8	9.7	11.0	10.3	10.8	9.0	8.1	7.7
Precipitation		8.2	9.1	0.3			0.0					17.6	3.4	14.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	
Growing Degrees	5	17.4	16.2	17.0	17.0	16.3	16.1	16.2	16.9	17.4	20.6	170.8	149.0	120.2
	10	12.4	11.2	12.0	12.0	11.3	11.1	11.2	11.9	12.4	15.6	120.8	99.0	81.2

1st 10-day period (1-10/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	40.3
Precipitation - Reference Evapotranspiration	-	-	-26.1
Number of Rainy Days	3.0	2.0	1.9
Number of Dry Days	1.0	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

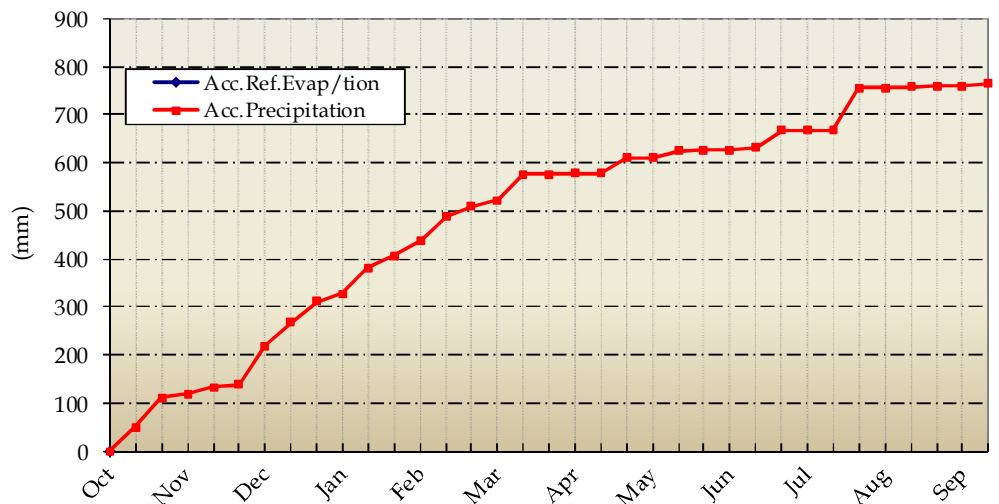


1st 10-day period (1-10/09/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.9	32.0	33.0	32.5	32.1	30.7	32.3	29.6	29.2	33.1	31.6	29.3	30.2
	Min	20.3	18.0	19.9	20.9	20.0	16.9	18.0	15.4	14.3	20.4	18.4	17.7	17.6
Relative Humidity	Max	92	93	88	84	95	82	82	90	91	93	89	86	86
	Min	41	36	44	46	38	32	25	34	49	37	38	40	37
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	24.5	24.8
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	28.9	27.4
Sunshine Duration		11.4	11.3	12.5	11.6	9.7	11.1	11.5	11.7	10.8	11.0	11.3	8.4	10.3
Precipitation						5.7						5.7	24.4	9.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	60.4
Growing Degrees	5	21.1	20.0	21.5	21.7	21.1	18.8	20.2	17.5	16.8	21.8	200.3	185.1	166.8
	10	16.1	15.0	16.5	16.7	16.1	13.8	15.2	12.5	11.8	16.8	150.3	135.1	122.6

1st 10-day period (1-10/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	38.1
Precipitation - Reference Evapotranspiration	-	-	-28.2
Number of Rainy Days	1.0	4.0	1.0
Number of Dry Days	11.0	81.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



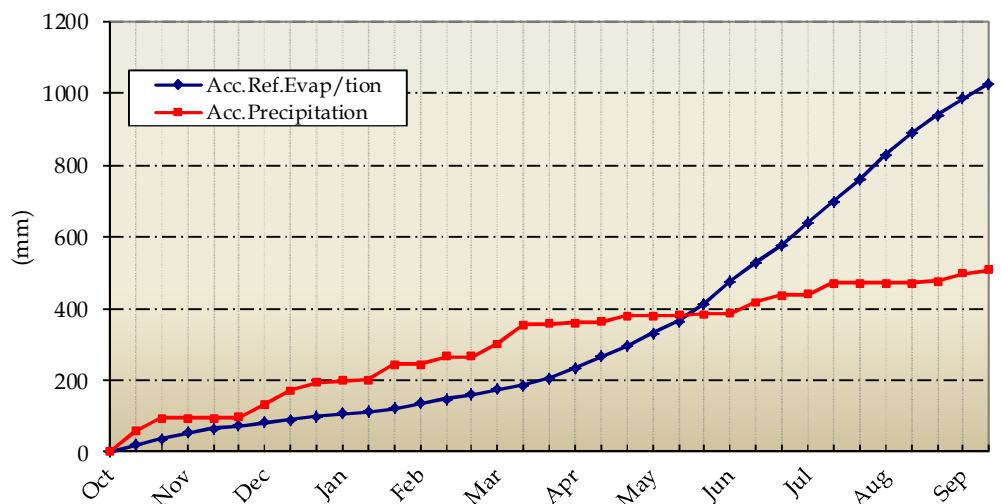
Larisa

1st 10-day period (1-10/09/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.9	29.8	32.2	32.2	26.0	28.4	27.8	30.6	32.8	34.4	30.7	27.5	30.2
	Min	18.6	21.0	17.4	18.2	18.2	17.6	15.7	15.0	14.6	16.6	17.3	16.5	16.1
Relative Humidity	Max	91	100	100	93	100	100	96	98	100	100	98	88	84
	Min	39	51	37	40	49	18	41	36	24	28	36	37	31
Soil Temperature at 10 cm	06 UTC	26.2	27.0	25.6	24.8	26.8	24.6	24.4	23.6	24.2	23.8	25.1	-	25.0
	12 UTC	27.6	27.6	27.0	27.2	26.8	25.8	25.4	26.2	26.0	25.8	26.5	-	26.5
Sunshine Duration		9.4	4.5	9.7	9.9	4.3	6.6	9.8	10.0	10.0	9.2	8.3	7.3	8.6
Precipitation		0.1	1.5	0.1		7.7	0.6					10.0	28.7	11.0
Evaporation		8.4	5.8	5.8	9.4	14.7	2.0	5.9	4.1	7.6	8.5	72.2	67.1	80.6
Growing Degrees	5	20.8	20.4	19.8	20.2	17.1	18.0	16.8	17.8	18.7	20.5	190.0	170.2	163.0
	10	15.8	15.4	14.8	15.2	12.1	13.0	11.8	12.8	13.7	15.5	140.0	120.2	118.1

1st 10-day period (1-10/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	41.7	39.7	50.0
Precipitation - Reference Evapotranspiration	-31.7	-11.0	-39.0
Number of Rainy Days	5.0	3.0	1.6
Number of Dry Days	5.0	11.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



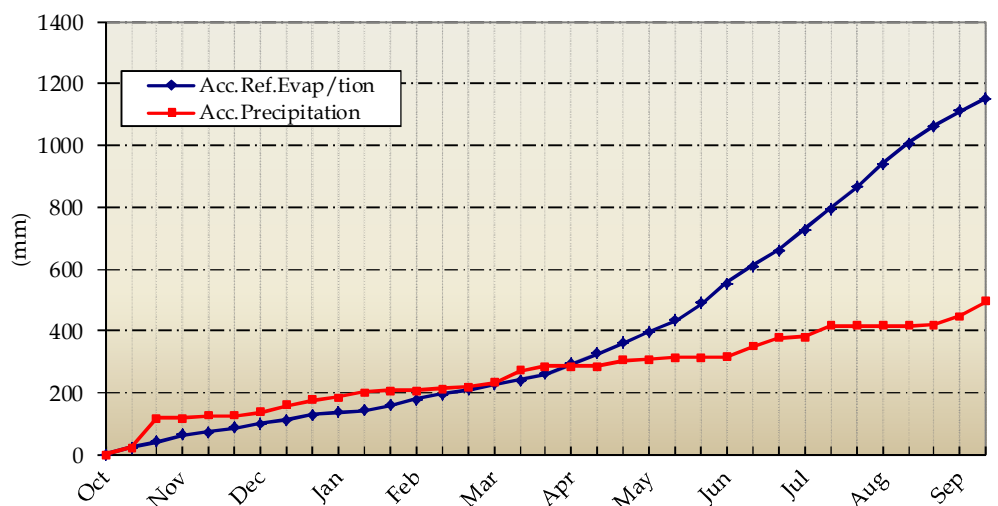
Mikra

1st 10-day period (1-10/09/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.6	26.0	30.0	29.7	26.2	26.3	26.6	27.4	29.6	29.9	28.2	26.8	28.7
	Min	20.2	19.0	19.2	19.2	19.6	20.6	19.4	16.9	17.6	18.0	19.0	17.8	18.0
Relative Humidity	Max	100	100	100	100	100	94	93	96	99	100	98	81	77
	Min	51	74	53	52	60	53	50	49	38	55	54	39	37
Soil Temperature at 10 cm	06 UTC	25.4	26.0	24.8	24.6	23.2	24.2	24.2	23.4	23.4	23.4	24.3	24.5	24.6
	12 UTC	26.8	25.8	25.4	26.2	24.4	26.4	25.6	25.8	25.0	25.0	25.6	27.3	28.6
Sunshine Duration		11.5	2.5	11.6	10.5	6.2	9.0	10.4	12.2	11.3	12.3	9.8	7.6	8.8
Precipitation			7.7			40.9						48.6	9.4	8.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	69.9
Growing Degrees	5	20.4	17.5	19.6	19.5	17.9	18.5	18.0	17.2	18.6	19.0	186.0	172.8	171.3
	10	15.4	12.5	14.6	14.5	12.9	13.5	13.0	12.2	13.6	14.0	136.0	122.8	124.6

1st 10-day period (1-10/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	40.2	46.1	38.5
Precipitation - Reference Evapotranspiration	8.4	-36.7	-30.1
Number of Rainy Days	2.0	4.0	1.3
Number of Dry Days	6.0	9.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



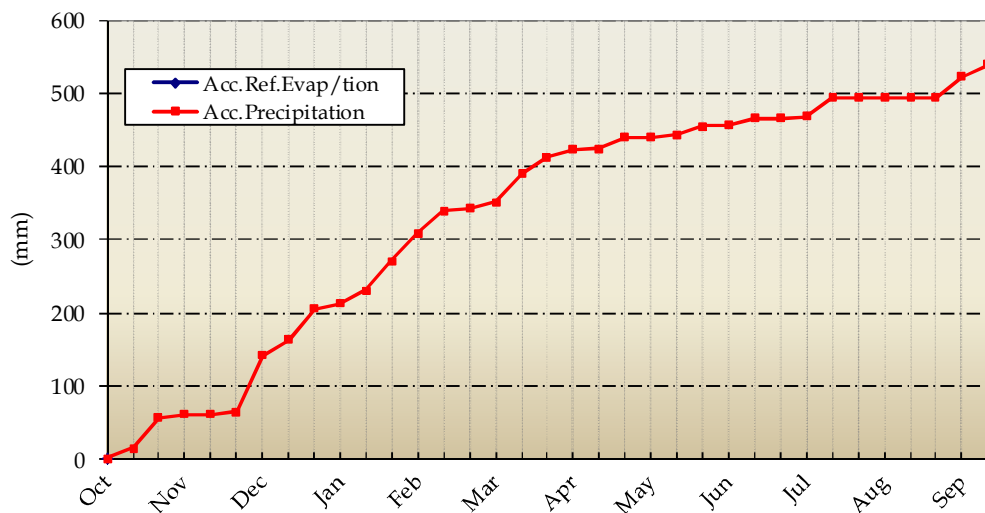
Tanagra

1st 10-day period (1-10/09/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.0	30.4	30.0	31.8	24.8	25.4	25.5	27.8	31.8	34.4	29.4	26.3	29.2
	Min	19.5	20.2	20.5	19.7	18.0	16.5	17.6	15.3	13.7	18.4	17.9	17.6	17.5
Relative Humidity	Max	76	98	98	95	100	75	67	74	74	90	85	75	77
	Min	30	43	47	30	50	39	36	29	17	28	35	38	32
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		11.2	8.2	8.8	11.1	7.0	11.5	11.6	11.6	11.3	10.3	10.3	7.4	9.8
Precipitation			5.3			11.3						16.6	6.7	3.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	75.8
Growing Degrees	5	20.8	20.3	20.3	20.8	16.4	16.0	16.6	16.6	17.8	21.4	186.7	169.6	161.9
	10	15.8	15.3	15.3	15.8	11.4	11.0	11.6	11.6	12.8	16.4	136.7	119.6	117.9

1st 10-day period (1-10/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	-
Number of Rainy Days	2.0	3.0	0.9
Number of Dry Days	7.0	24.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

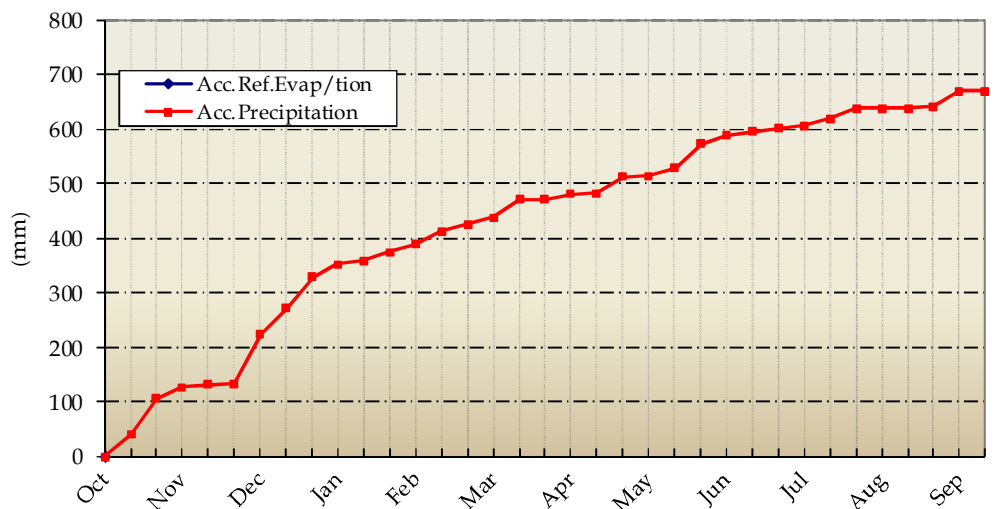


1st 10-day period (1-10/09/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.9	29.2	29.7	31.7	25.2	25.8	26.1	28.5	32.3	32.2	29.1	25.3	28.0
	Min	13.7	13.3	13.7	14.1	13.8	14.8	14.0	10.3	9.0	13.9	13.1	12.5	12.3
Relative Humidity	Max	98	97	96	97	94	78	79	86	89	94	91	91	87
	Min	26	26	38	26	41	19	31	19	21	24	27	35	29
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	22.4
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	26.0
Sunshine Duration		8.3	10.4	10.3	9.8	11.1	11.1	11.0	10.8	10.7	10.7	10.4	7.9	9.2
Precipitation													24.1	10.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	42.0
Growing Degrees	5	16.8	16.3	16.7	17.9	14.5	15.3	15.1	14.4	15.7	18.1	160.6	139.4	120.7
	10	11.8	11.3	11.7	12.9	9.5	10.3	10.1	9.4	10.7	13.1	110.6	89.4	80.9

1st 10-day period (1-10/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	40.9	35.3	27.2
Precipitation - Reference Evapotranspiration	-40.9	-11.2	-16.6
Number of Rainy Days	0.0	2.0	1.4
Number of Dry Days	11.0	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.

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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