



AGROMETEOROLOGICAL BULLETIN

September 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



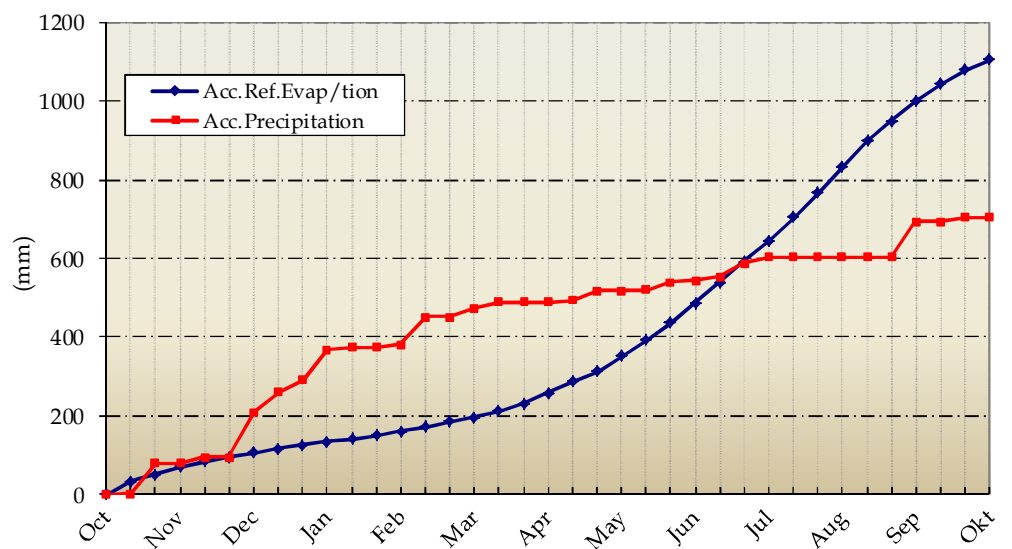
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3rd 10-day period (21-30/09/2022)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	20.4	21.0	22.2	22.0	25.4	25.0	23.8	26.6	26.8	26.8	24.0	24.6	24.9
	Min	14.8	12.0	6.0	5.2	7.8	8.6	18.4	18.0	16.0	16.0	12.3	12.7	13.9
Relative Humidity	Max	77	78	87	94	94	92	91	96	92	94	90	82	85
	Min	38	35	33	36	38	48	72	60	55	64	48	40	45
Soil Temperature at 10 cm	06 UTC	20.6	18.0	17.6	17.2	18.0	18.8	21.6	21.8	22.4	22.4	19.8	20.6	20.1
	12 UTC	21.0	21.8	21.4	21.0	22.4	22.8	22.6	24.8	25.6	25.6	22.9	24.4	23.1
Sunshine Duration		1.1	8.4	7.8	10.3	9.5	9.3	0.3	8.2	9.9	9.3	7.4	8.4	7.3
Precipitation		0.0		0.0				0.0				0.0	2.5	17.6
Evaporation		3.5	3.2	5.2	2.1	6.0	4.8	1.7	5.5	4.7	4.8	41.5	56.5	50.9
Growing Degrees	5	12.6	11.5	9.1	8.6	11.6	11.8	16.1	17.3	16.4	16.4	131.4	136.3	128.6
	10	7.6	6.5	4.1	3.6	6.6	6.8	11.1	12.3	11.4	11.4	81.4	86.3	83.8

3rd 10-day period (21-30/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	27.0	32.0	27.7
Precipitation - Reference Evapotranspiration	-27.0	-29.5	-10.1
Number of Rainy Days	0.0	1.0	1.6
Number of Dry Days	18.0	4.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

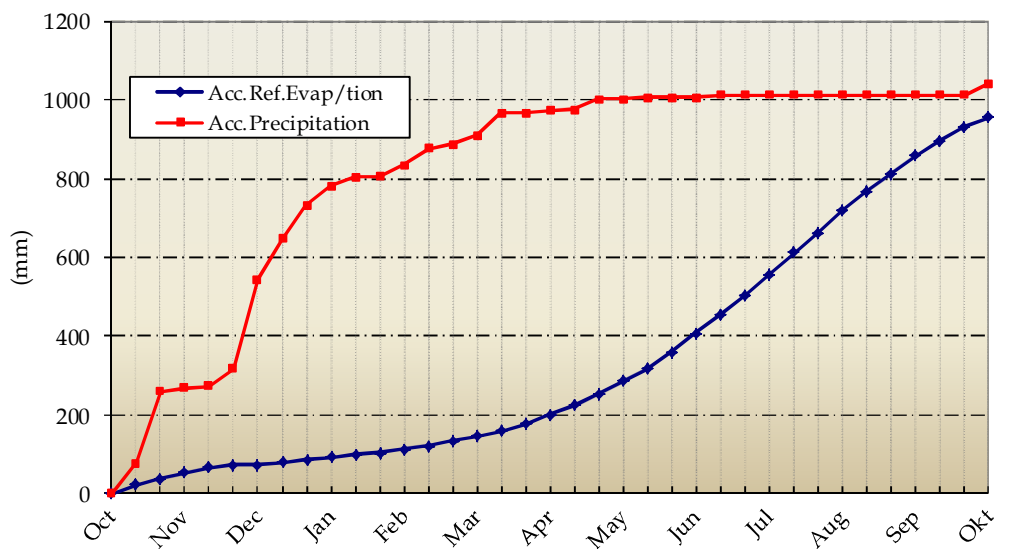


3rd 10-day period (21-30/09/2022)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	27.2	24.3	25.4	25.6	24.7	26.9	26.0	27.4	27.6	28.5	26.4	28.3	26.5
	Min	15.3	11.8	13.3	10.9	14.0	14.1	17.6	19.7	19.1	17.0	15.3	15.7	16.1
Relative Humidity	Max	96	88	76	80	77	80	96	96	98	93	88	91	90
	Min	38	35	28	32	48	43	65	61	55	47	45	39	42
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	24.3	22.2
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	27.5	26.5
Sunshine Duration		10.4	9.9	9.2	10.5	10.7	8.9	3.2	8.6	8.4	9.6	8.9	9.7	7.8
Precipitation								3.6	3.0	21.5		28.1		16.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	60.1	54.0
Growing Degrees	5	16.3	13.1	14.4	13.3	14.4	15.5	16.8	18.6	18.4	17.8	158.2	170.2	135.8
	10	11.3	8.1	9.4	8.3	9.4	10.5	11.8	13.6	13.4	12.8	108.2	120.2	94.1

3rd 10-day period (21-30/09/2022)	Previous Year Value	Past Years Mean Value	
Reference Evapotranspiration	26.0	27.7	28.8
Precipitation - Reference Evapotranspiration	2.1	-27.7	-12.7
Number of Rainy Days	3.0	0.0	1.8
Number of Dry Days	108.0	17.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



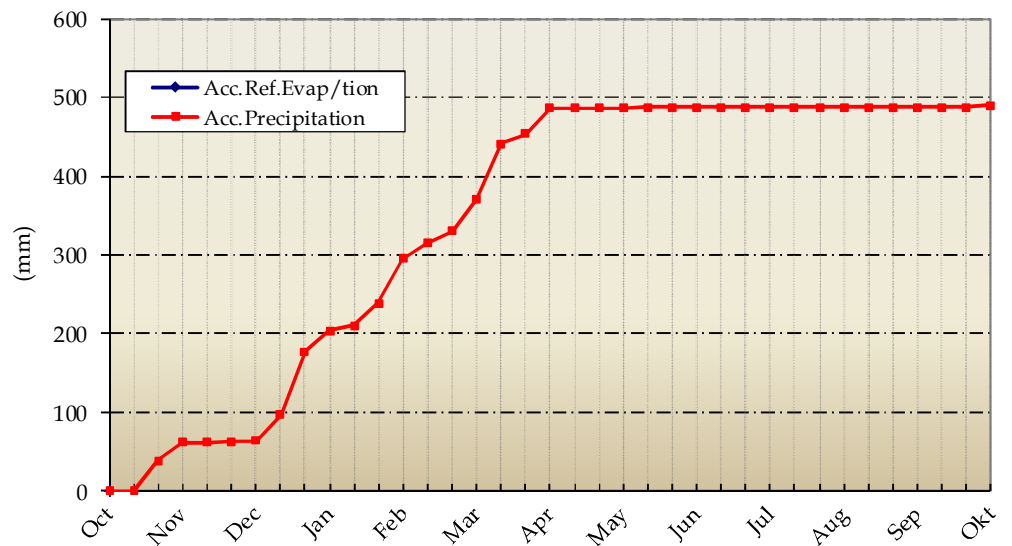
Iraklio

3rd 10-day period (21-30/09/2022)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.4	23.4	22.4	23.8	24.4	25.2	30.0	28.2	27.4	27.4	25.9	25.9	26.4
	Min	17.6	19.0	17.8	15.6	13.8	14.8	18.0	24.2	21.2	22.4	18.4	19.5	19.4
Relative Humidity	Max	92	81	85	74	79	83	75	88	95	95	85	92	84
	Min	60	56	51	43	50	57	41	33	69	80	54	73	57
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		10.1	1.6	2.3	10.8	11.0	10.7	10.4	8.1	9.3	9.0	8.3	9.2	8.0
Precipitation			0.0	1.2					0.0			1.2	3.1	4.1
Evaporation		2.8	3.1	0.0	6.4	3.3	5.9	7.2	1.9	4.7	2.0	37.3	47.6	46.0
Growing Degrees	5	17.0	16.2	15.1	14.7	14.1	15.0	19.0	21.2	19.3	19.9	171.5	177.0	173.8
	10	12.0	11.2	10.1	9.7	9.1	10.0	14.0	16.2	14.3	14.9	121.5	127.0	125.3

3rd 10-day period (21-30/09/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	-
Number of Rainy Days	1.0	1.0
Number of Dry Days	102.0	13.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

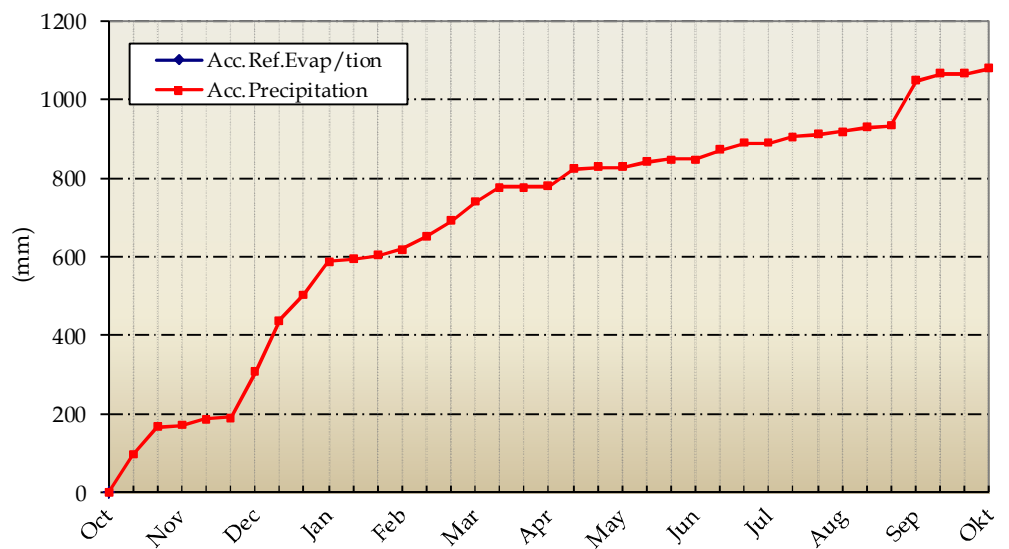


3rd 10-day period (21-30/09/2022)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.2	22.7	22.0	23.6	25.2	19.7	22.4	20.7	24.6	27.2	23.1	27.2	24.0
	Min	6.8	9.5	4.3	3.5	3.3	13.4	15.0	14.1	11.2	11.7	9.3	9.4	11.3
Relative Humidity	Max	100	88	91	100	100	97	100	100	100	100	98	96	95
	Min	26	21	21	33	23	57	72	67	47	37	40	28	47
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	17.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	18.7
Sunshine Duration		5.3	10.4	10.2	10.5	10.2	0.0	1.4	2.1	7.2	9.3	6.7	7.4	5.8
Precipitation							0.0	13.7	1.4			15.1	40.8	28.0
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	
Growing Degrees	5	10.0	11.1	8.2	8.6	9.3	11.6	13.7	12.4	12.9	14.5	112.1	133.0	103.9
	10	5.0	6.1	3.2	3.6	4.3	6.6	8.7	7.4	7.9	9.5	62.1	83.0	62.6

3rd 10-day period (21-30/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	29.4
Precipitation - Reference Evapotranspiration	-	-	-1.4
Number of Rainy Days	2.0	4.0	2.4
Number of Dry Days	23.0	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

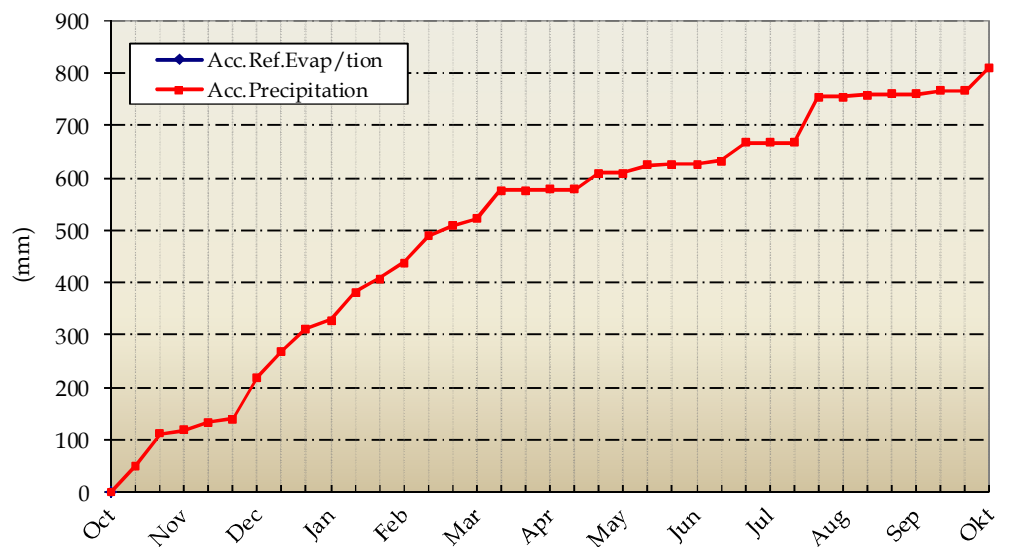


3rd 10-day period (21-30/09/2022)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.1	27.2	22.5	26.0	26.1	25.7	23.4	28.6	27.8	31.2	26.9	29.3	27.3
	Min	16.6	12.5	14.7	12.1	10.7	10.2	13.0	17.1	16.0	15.0	13.8	16.0	15.6
Relative Humidity	Max	95	84	82	86	89	95	99	99	97	93	92	83	90
	Min	29	23	46	27	28	40	60	49	51	27	38	33	42
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	23.5	21.8
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	27.4	24.0
Sunshine Duration		10.5	8.9	2.6	10.9	10.7	9.1	1.3	10.1	10.0	10.1	8.4	8.8	8.0
Precipitation				0.3				45.8				46.1	2.7	17.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	50.4
Growing Degrees	5	18.4	14.9	13.6	14.1	13.4	13.0	13.2	17.9	16.9	18.1	153.3	176.4	148.9
	10	13.4	9.9	8.6	9.1	8.4	8.0	8.2	12.9	11.9	13.1	103.3	126.4	103.5

3rd 10-day period (21-30/09/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	27.7
Precipitation - Reference Evapotranspiration	-	-10.6
Number of Rainy Days	2.0	2.1
Number of Dry Days	17.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



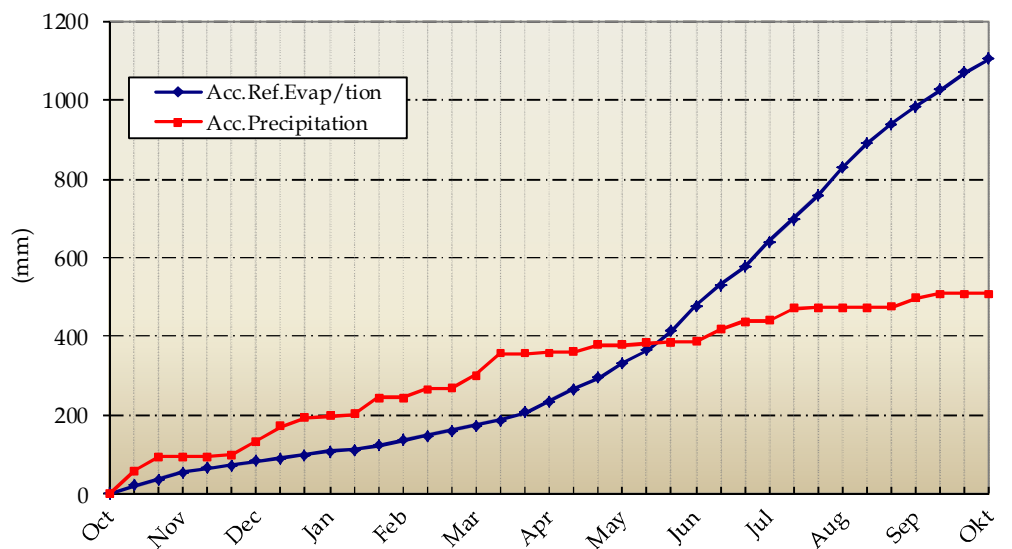
Larisa

3rd 10-day period (21-30/09/2022)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.0	22.8	23.4	26.8	27.4	28.7	30.6	30.8	30.0	32.4	27.5	26.8	26.6
	Min	15.0	13.6	5.4	6.4	7.6	9.8	17.8	15.2	14.8	13.8	11.9	13.6	13.5
Relative Humidity	Max	58	65	78	82	90	93	69	86	76	78	78	90	90
	Min	35	26	21	20	28	34	39	26	31	27	29	37	40
Soil Temperature at 10 cm	06 UTC	24.0	22.6	21.6	21.0	21.4	22.0	23.2	23.2	23.6	22.4	22.5	21.2	21.5
	12 UTC	24.6	24.2	23.4	23.0	22.2	23.8	24.4	25.0	25.4	25.2	24.1	26.2	22.8
Sunshine Duration		4.1	10.2	11.2	10.3	9.7	5.8	4.6	8.9	8.6	9.8	8.3	7.8	5.3
Precipitation													16.2	15.6
Evaporation		5.6	6.2	5.8	6.4	5.2	5.9	3.5	9.9	6.9	10.4	65.8	43.1	52.5
Growing Degrees	5	13.5	13.2	9.4	11.6	12.5	14.3	19.2	18.0	17.4	18.1	147.2	151.6	135.5
	10	8.5	8.2	4.4	6.6	7.5	9.3	14.2	13.0	12.4	13.1	97.2	101.6	90.3

3rd 10-day period (21-30/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	34.9	33.1	31.5
Precipitation - Reference Evapotranspiration	-34.9	-16.9	-15.9
Number of Rainy Days	0.0	4.0	2.4
Number of Dry Days	24.0	12.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



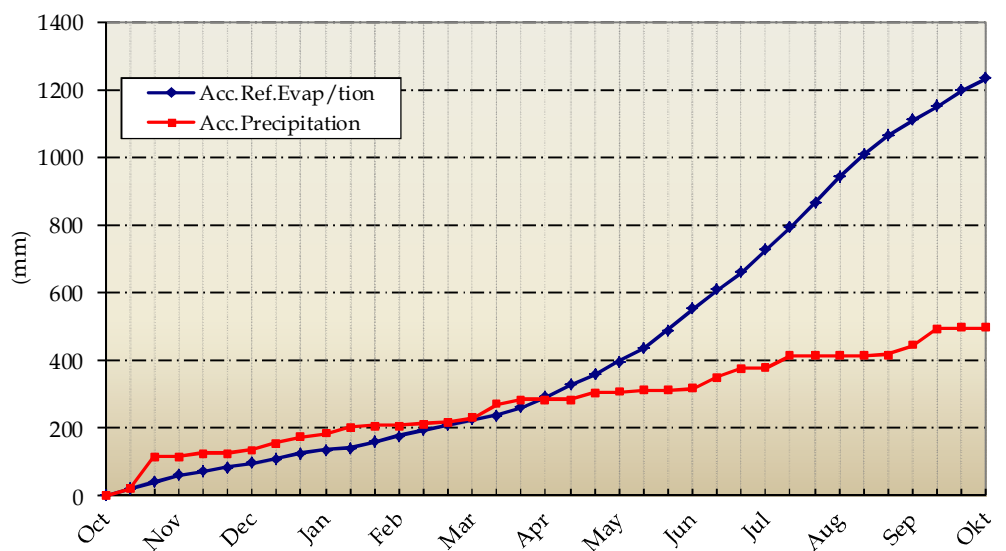
Mikra

3rd 10-day period (21-30/09/2022)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.0	21.7	22.6	23.4	25.2	26.1	27.6	28.2	29.0	28.8	25.5	25.7	25.4
	Min	17.1	13.4	7.7	8.2	11.7	13.2	19.6	15.2	15.4	16.2	13.8	15.5	15.3
Relative Humidity	Max	60	75	89	90	89	89	90	95	98	88	86	81	81
	Min	37	32	27	32	41	41	46	31	34	36	36	40	41
Soil Temperature at 10 cm	06 UTC	21.4	19.4	20.0	17.6	19.2	19.0	21.8	21.8	21.4	21.8	20.3	22.5	20.9
	12 UTC	21.8	21.0	20.8	22.2	21.4	25.0	27.2	23.2	23.4	23.4	22.9	24.1	24.4
Sunshine Duration		4.2	11.7	11.1	11.6	10.2	7.7	6.1	7.0	10.0	10.7	9.0	6.8	6.9
Precipitation													7.9	17.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	57.5
Growing Degrees	5	14.6	12.6	10.2	10.8	13.5	14.7	18.6	16.7	17.2	17.5	146.2	155.7	144.9
	10	9.6	7.6	5.2	5.8	8.5	9.7	13.6	11.7	12.2	12.5	96.2	105.7	97.7

3rd 10-day period (21-30/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	35.8	35.0	26.9
Precipitation - Reference Evapotranspiration	-35.8	-27.1	-9.8
Number of Rainy Days	0.0	3.0	1.6
Number of Dry Days	18.0	2.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



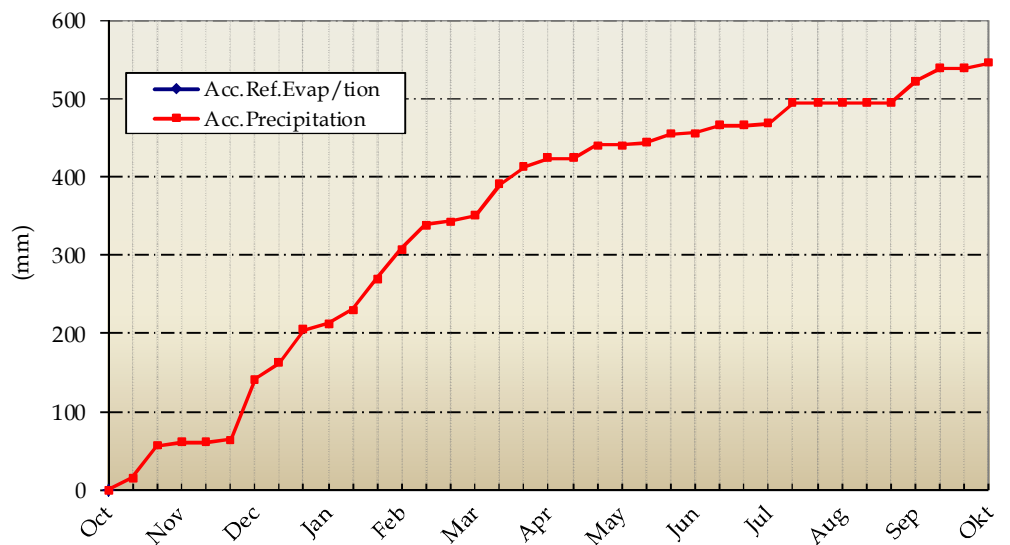
Tanagra

3rd 10-day period (21-30/09/2022)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.8	19.8	21.7	24.4	25.4	29.4	26.0	30.7	30.4	30.6	26.3	26.4	26.2
	Min	17.1	13.0	10.6	9.0	9.2	10.5	12.5	21.6	17.6	13.8	13.5	14.5	15.1
Relative Humidity	Max	95	95	85	100	92	94	74	60	72	81	85	79	85
	Min	40	39	33	24	23	20	34	24	27	21	28	30	38
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		7.1	5.7	9.7	10.9	10.9	8.7	3.0	10.5	10.3	10.2	8.7	8.7	7.1
Precipitation		1.0	5.0					0.2				6.2	3.3	10.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	52.6
Growing Degrees	5	16.0	11.4	11.2	11.7	12.3	15.0	14.3	21.2	19.0	17.2	149.1	154.4	135.9
	10	11.0	6.4	6.2	6.7	7.3	10.0	9.3	16.2	14.0	12.2	99.1	104.4	92.2

3rd 10-day period (21-30/09/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	-
Number of Rainy Days	3.0	1.6
Number of Dry Days	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

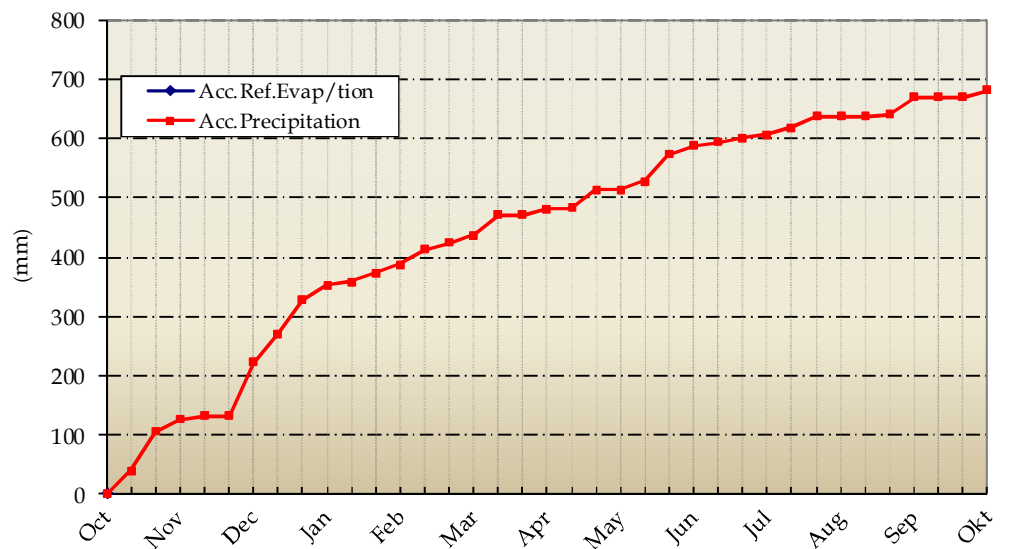


3rd 10-day period (21-30/09/2022)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.4	20.1	18.8	22.6	26.1	27.2	23.1	25.8	25.2	29.6	24.3	26.4	24.3
	Min	11.2	12.6	9.7	4.7	3.6	4.7	10.3	16.0	13.2	7.1	9.3	9.2	10.1
Relative Humidity	Max	95	94	93	97	97	95	97	92	93	96	95	90	92
	Min	35	42	39	24	13	11	19	33	36	12	26	26	40
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	18.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	21.6
Sunshine Duration		6.5	6.3	8.4	10.2	9.4	9.4	2.8	10.1	8.9	10.0	8.2	8.1	7.0
Precipitation			3.8	0.0				8.9				12.7	0.0	9.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	25.5
Growing Degrees	5	12.8	11.4	9.3	8.7	9.9	11.0	11.7	15.9	14.2	13.4	118.0	128.1	89.9
	10	7.8	6.4	4.3	3.7	4.9	6.0	6.7	10.9	9.2	8.4	68.0	78.1	52.8

3rd 10-day period (21-30/09/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	26.9	28.2	14.8
Precipitation - Reference Evapotranspiration	-14.2	-28.2	-5.3
Number of Rainy Days	2.0	0.0	1.7
Number of Dry Days	22.0	17.0	-

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)

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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