



# AGROMETEOROLOGICAL BULLETIN

*August 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



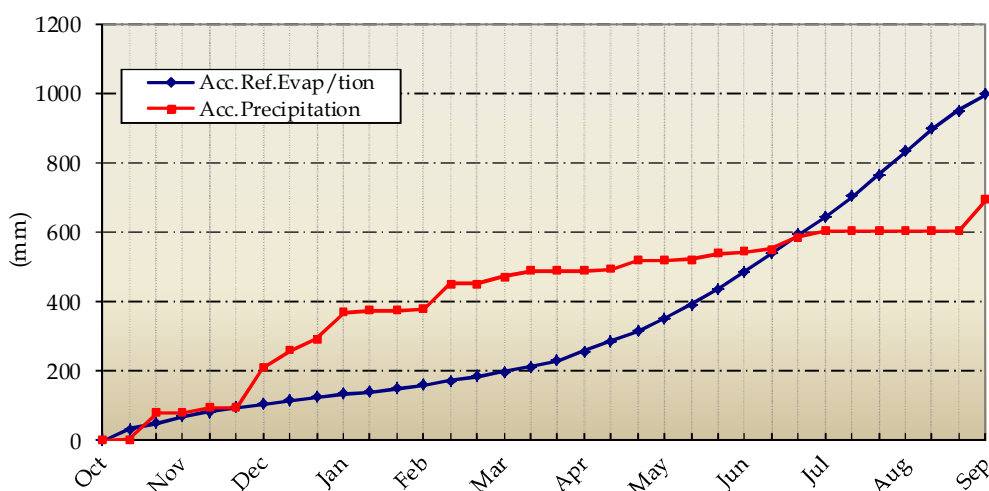
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*Web addresses of HNMS*  
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3rd 10-day period (21-31/08/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.4	33.4	34.0	33.4	29.8	24.4	31.8	32.4	35.0	34.4	32.4	32.2	32.2	31.1
	Min	21.0	22.6	23.2	20.8	19.6	19.8	20.2	19.2	19.4	18.4	21.0	20.5	20.3	18.6
Relative Humidity	Max	86	91	84	93	91	94	93	90	87	87	91	90	78	77
	Min	33	40	41	42	57	80	39	43	27	32	44	43	34	34
Soil Temperature at 10 cm	06 UTC	29.4	29.6	26.8	29.6	25.7	25.0	24.0	24.4	24.8	24.5	25.4	26.3	27.0	25.7
	12 UTC	33.0	33.6	32.0	32.2	27.8	24.6	27.6	27.2	28.0	28.0	28.0	29.3	30.9	29.3
Sunshine Duration		11.5	11.9	8.2	6.8	5.0	0.0	10.7	11.8	11.5	10.9	7.3	8.7	11.5	11.5
Precipitation					7.4	40.2	32.1					9.3	89.0	0.2	2.8
Evaporation		13.3	9.8	6.0	16.2	5.4	2.5	8.7	7.4	7.8	7.1	5.2	89.4	88.6	99.8
Growing Degrees	5	22.2	23.0	23.6	22.1	19.7	17.1	21.0	20.8	22.2	21.4	21.7	234.8	233.5	202.4
	10	17.2	18.0	18.6	17.1	14.7	12.1	16.0	15.8	17.2	16.4	16.7	179.8	178.5	151.3

3rd 10-day period (21-31/08/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	49.0	57.3	49.5
Precipitation - Reference Evapotranspiration	40.0	-57.1	-46.7
Number of Rainy Days	4.0	1.0	0.6
Number of Dry Days	58.0	20.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

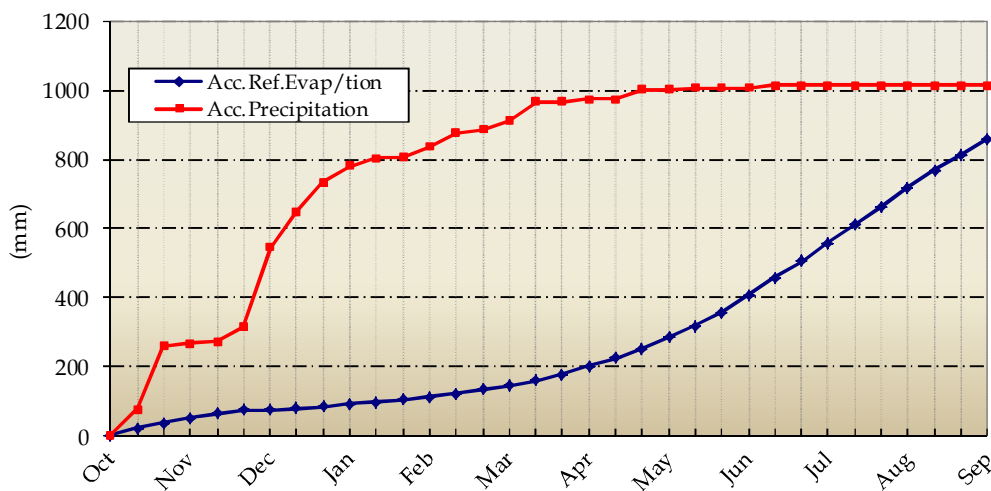


3rd 10-day period (21-31/08/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.5	30.0	29.3	29.6	28.7	30.3	31.2	30.2	31.0	30.2	30.3	30.1	32.3	31.5
	Min	25.2	22.6	20.9	18.8	20.0	18.7	21.0	21.0	20.2	20.3	18.8	20.7	20.1	19.2
Relative Humidity	Max	81	88	91	89	92	91	92	94	96	93	90	91	90	86
	Min	53	53	52	51	53	46	46	56	48	53	46	51	37	34
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	29.4	28.1
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	31.6	33.5
Sunshine Duration		11.9	12.7	10.0	10.9	4.4	11.6	11.3	11.4	11.6	12.1	11.5	10.9	11.7	11.0
Precipitation														11.3	3.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	93.3	83.8
Growing Degrees	5	22.9	21.3	20.1	19.2	19.4	19.5	21.1	20.6	20.6	20.3	19.6	224.4	233.1	186.3
	10	17.9	16.3	15.1	14.2	14.4	14.5	16.1	15.6	15.6	15.3	14.6	169.4	178.1	140.7

3rd 10-day period (21-31/08/2022)	Previous Year Value	Past Years Mean Value	
Reference Evapotranspiration	46.1	47.7	37.0
Precipitation - Reference Evapotranspiration	-46.1	-36.4	-33.1
Number of Rainy Days	0.0	1.0	0.3
Number of Dry Days	82.0	77.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



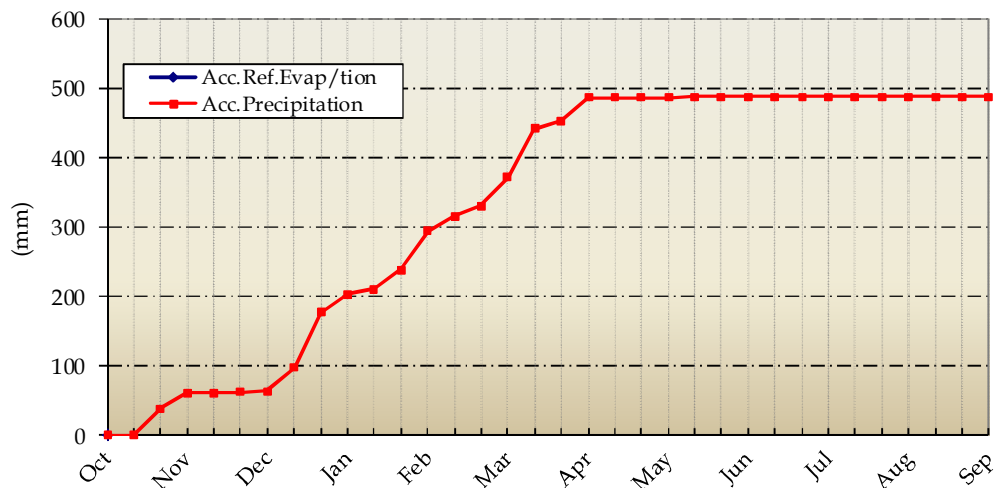
Iraklio

3rd 10-day period (21-31/08/2022)		21	22	23	24	25	26	27	28	29	30	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.2	29.6	29.4	27.0	28.4	28.2	28.4	30.2	30.0	30.0	29.6	29.2	29.7	29.1
	Min	23.4	22.4	22.6	21.2	20.6	20.8	21.0	21.2	21.8	22.0	22.6	21.8	23.0	22.4
Relative Humidity	Max	90	84	91	91	87	89	91	89	86	92	93	89	91	79
	Min	61	65	63	65	66	64	64	60	60	64	70	64	70	55
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		10.9	11.8	11.5	7.0	7.4	8.4	11.9	12.8	11.7	11.6	7.8	10.3	11.4	11.3
Precipitation					0.0								0.0		0.8
Evaporation		5.1	4.3	5.2	1.8	7.5	1.9	3.9	4.0	6.0	4.0	3.7	47.4	70.3	70.3
Growing Degrees	5	21.8	21.0	21.0	19.1	19.5	19.5	19.7	20.7	20.9	21.0	21.1	225.3	234.9	220.9
	10	16.8	16.0	16.0	14.1	14.5	14.5	14.7	15.7	15.9	16.0	16.1	170.3	179.9	167.8

3rd 10-day period (21-31/08/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	-
Number of Rainy Days	0.0	0.0
Number of Dry Days	80.0	76.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

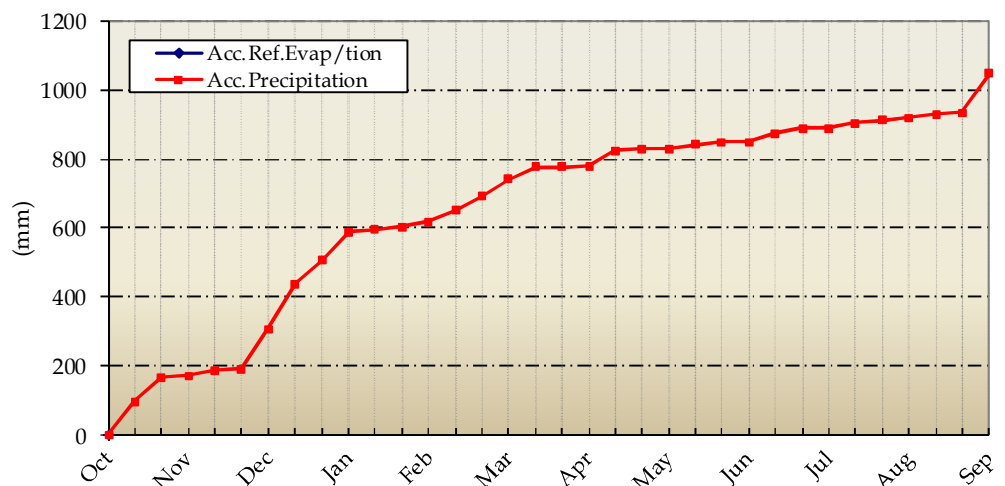


3rd 10-day period (21-31/08/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.4	28.5	29.1	29.8	29.0	31.2	31.8	31.8	30.6	30.0	30.3	30.4	31.9	31.1
	Min	15.9	16.3	14.1	15.0	17.4	18.1	14.3	15.2	13.9	13.7	14.5	15.3	14.5	15.4
Relative Humidity	Max	96	100	100	100	100	100	100	100	100	98	100	99	92	87
	Min	27	48	41	34	40	34	33	41	50	40	41	39	30	31
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	22.4
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	23.8
Sunshine Duration		11.9	6.0	7.4	4.6	4.7	7.9	8.0	8.7	7.4	6.4	8.0	7.4	9.8	9.3
Precipitation			23.2	31.3	0.8	1.1	10.8		35.3	1.5	9.1		113.1	31.3	9.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	19.2	17.4	16.6	17.4	18.2	19.7	18.1	18.5	17.3	16.9	17.4	196.5	200.0	150.5
	10	14.2	12.4	11.6	12.4	13.2	14.7	13.1	13.5	12.3	11.9	12.4	141.5	145.0	109.5

3rd 10-day period (21-31/08/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	26.4
Precipitation - Reference Evapotranspiration	-	-16.8
Number of Rainy Days	8.0	2.0
Number of Dry Days	7.0	6.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



# Agrometeorological Data

## August 2022

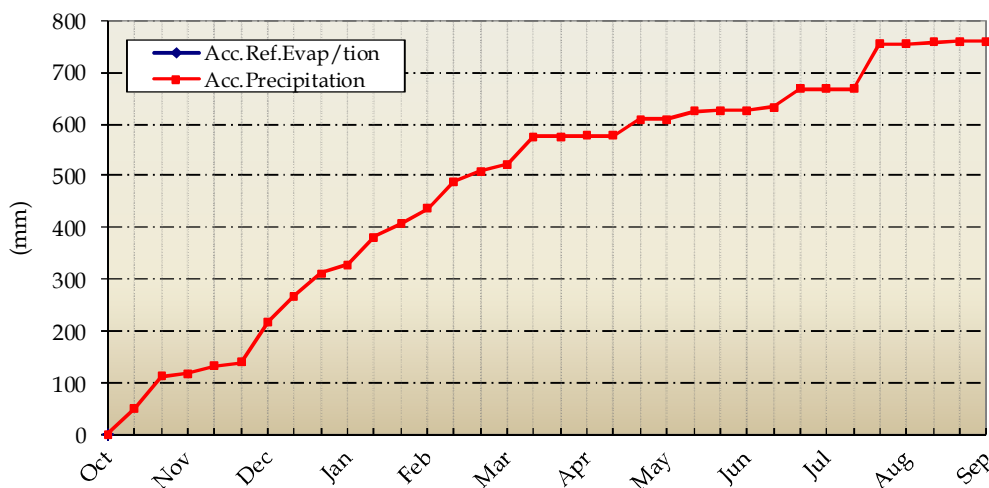
Kalamata

3rd 10-day period (21-31/08/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.9	31.9	30.5	29.2	27.7	29.1	31.1	31.7	32.6	32.1	31.4	31.0	33.4	31.9
	Min	22.4	20.8	19.8	18.0	17.8	17.1	18.6	19.8	21.0	20.3	19.6	19.6	19.9	18.8
Relative Humidity	Max	86	91	93	93	96	96	96	93	92	93	90	93	86	84
	Min	41	44	49	41	52	47	48	47	39	38	40	44	37	32
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	28.4	25.9
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	32.5	28.7
Sunshine Duration		12.2	10.6	8.0	8.9	6.3	8.3	10.4	11.9	12.8	11.4	10.1	10.1	11.1	10.6
Precipitation					0.3	0.0	0.0	0.0			0.0		0.3		3.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	81.0
Growing Degrees	5	23.2	21.4	20.2	18.6	17.8	18.1	19.9	20.8	21.8	21.2	20.5	223.2	237.7	201.6
	10	18.2	16.4	15.2	13.6	12.8	13.1	14.9	15.8	16.8	16.2	15.5	168.2	182.7	152.1

3rd 10-day period (21-31/08/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	43.9
Precipitation - Reference Evapotranspiration	-	-	-40.4
Number of Rainy Days	1.0	0.0	0.7
Number of Dry Days	10.0	77.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration





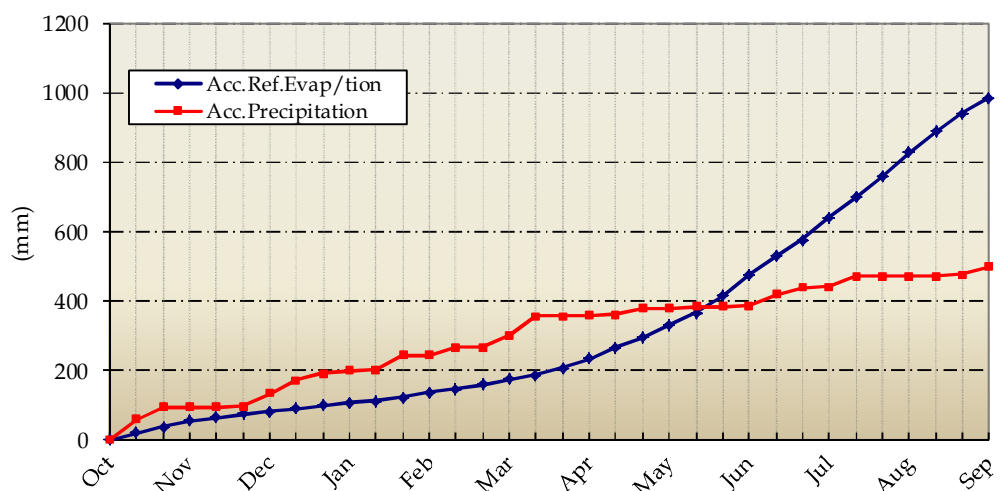
Larisa

3rd 10-day period (21-31/08/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.2	31.4	30.8	29.0	25.6	31.2	33.4	34.6	34.4	33.4	33.0	31.7	33.5	32.8
	Min	22.4	19.0	17.6	17.0	18.6	19.0	18.0	18.0	17.8	18.4	19.4	18.7	17.3	18.0
Relative Humidity	Max	83	100	100	100	100	100	100	95	95	91	88	96	87	78
	Min	43	45	47	42	61	46	33	31	30	30	31	40	32	28
Soil Temperature at 10 cm	06 UTC	29.2	28.6	27.2	27.0	26.2	25.4	25.6	25.4	25.8	26.2	26.0	26.6	-	26.9
	12 UTC	30.6	30.2	28.8	27.6	26.8	27.0	27.2	27.4	27.6	27.8	27.4	28.0	-	28.8
Sunshine Duration		6.7	7.2	6.7	3.2	1.3	8.1	9.9	9.1	9.0	8.0	10.5	7.2	9.2	10.5
Precipitation			1.5	0.1		12.4	7.3				0.0		21.3	3.5	3.1
Evaporation		8.5	5.5	7.1	3.5	1.5	6.7	5.0	10.5	8.0	7.0	5.4	68.7	89.0	106.3
Growing Degrees	5	22.3	20.2	19.2	18.0	17.1	20.1	20.7	21.3	21.1	20.9	21.2	222.1	224.4	202.3
	10	17.3	15.2	14.2	13.0	12.1	15.1	15.7	16.3	16.1	15.9	16.2	167.1	169.4	152.8

3rd 10-day period (21-31/08/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	44.8	54.5	59.6
Precipitation - Reference Evapotranspiration	-23.5	-51.0	-56.5
Number of Rainy Days	4.0	1.0	1.2
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



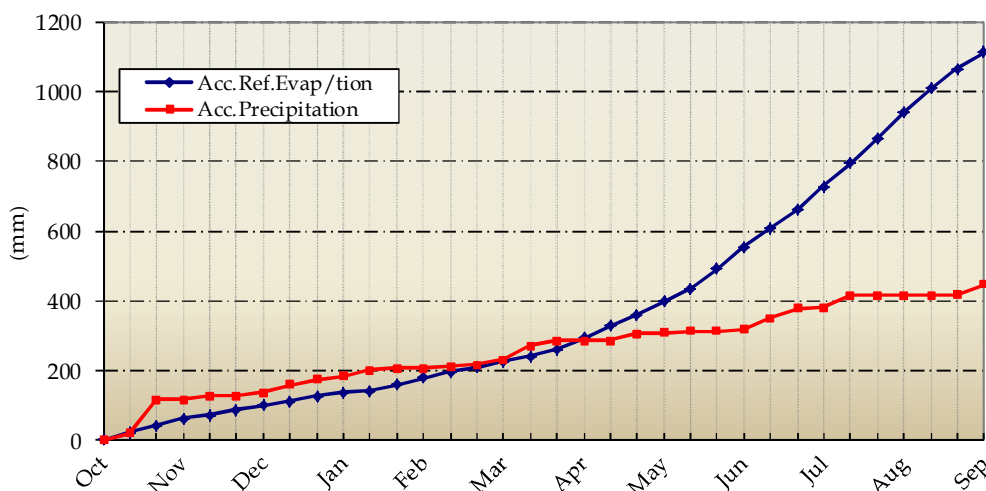
Mikra

3rd 10-day period (21-31/08/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.2	30.4	29.3	23.9	28.6	32.0	32.0	32.6	33.0	31.4	31.4	30.4	31.8	31.7
	Min	23.8	21.6	21.3	18.4	18.4	19.8	19.9	19.3	20.6	20.2	19.2	20.2	20.3	20.1
Relative Humidity	Max	89	94	100	100	100	100	100	97	89	95	98	97	80	72
	Min	50	43	57	79	59	37	35	35	37	40	39	46	41	32
Soil Temperature at 10 cm	06 UTC	29.0	27.8	27.8	26.2	24.2	24.6	24.6	25.2	25.4	25.4	25.4	26.0	26.8	27.2
	12 UTC	28.0	29.2	28.2	29.2	24.8	26.0	26.2	26.6	27.0	26.8	26.8	27.2	29.1	31.7
Sunshine Duration		6.4	5.8	8.7	0.0	3.5	8.3	11.6	11.4	10.9	10.8	10.8	8.0	9.3	10.7
Precipitation		0.1	0.0	13.1	1.6	12.5	1.2						28.5	6.0	4.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	97.8
Growing Degrees	5	22.0	21.0	20.3	16.2	18.5	20.9	21.0	21.0	21.8	20.8	20.3	223.7	231.6	212.7
	10	17.0	16.0	15.3	11.2	13.5	15.9	16.0	16.0	16.8	15.8	15.3	168.7	176.6	161.9

3rd 10-day period (21-31/08/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	47.4	58.0	47.5
Precipitation - Reference Evapotranspiration	-18.9	-52.0	-43.0
Number of Rainy Days	5.0	3.0	0.9
Number of Dry Days	4.0	1.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration





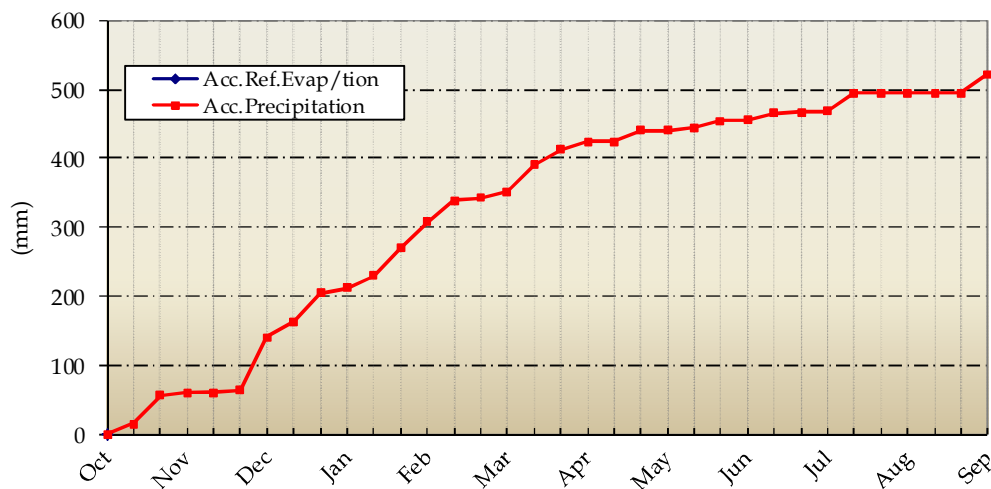
Tanagra

3rd 10-day period (21-31/08/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.9	30.9	28.4	27.6	26.8	30.2	31.6	32.9	34.0	33.1	32.2	31.0	32.9	31.6
	Min	21.0	20.9	19.8	18.1	19.0	20.0	19.5	18.4	19.1	20.3	20.7	19.7	19.8	19.2
Relative Humidity	Max	71	94	98	97	96	93	96	95	77	70	75	87	64	69
	Min	32	40	46	50	48	36	31	28	24	22	25	35	23	29
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		11.3	8.1	1.4	6.4	3.5	9.6	10.6	11.2	11.7	11.3	9.4	8.6	11.5	11.4
Precipitation			1.1	24.8		2.0							27.9		2.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	97.9
Growing Degrees	5	22.0	20.9	19.1	17.9	17.9	20.1	20.6	20.7	21.6	21.7	21.5	223.7	234.6	191.5
	10	17.0	15.9	14.1	12.9	12.9	15.1	15.6	15.7	16.6	16.7	16.5	168.7	179.6	144.7

3rd 10-day period (21-31/08/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	-
Number of Rainy Days	3.0	0.0	0.5
Number of Dry Days	42.0	19.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



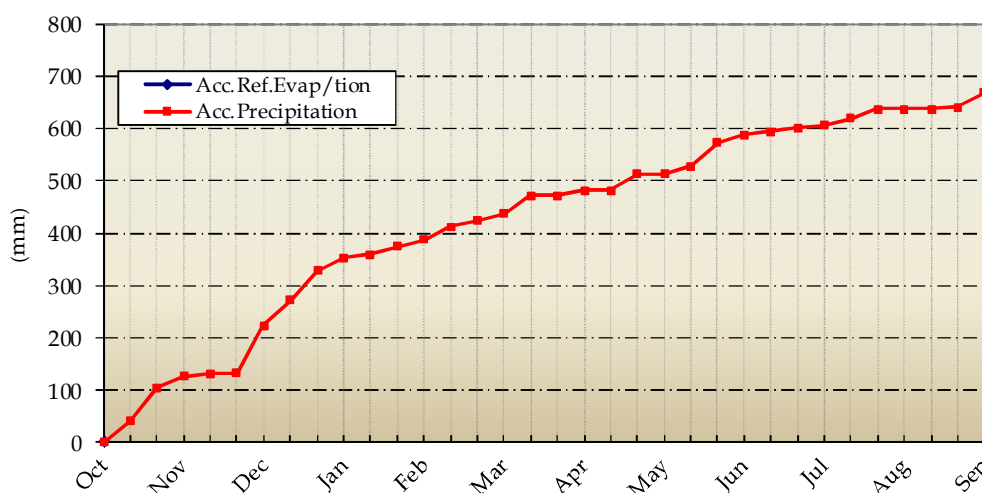
Tripoli

3rd 10-day period (21-31/08/2022)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.1	28.2	27.6	25.8	26.9	27.3	29.7	31.5	31.2	29.9	28.8	28.9	31.0	30.8
	Min	16.1	17.0	15.1	13.6	14.1	14.6	14.0	14.4	14.3	14.0	13.5	14.6	14.0	14.3
Relative Humidity	Max	94	92	96	98	99	99	98	99	98	99	98	97	90	73
	Min	29	44	45	50	41	38	31	26	26	30	29	35	23	24
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	24.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	28.4
Sunshine Duration		8.2	7.7	5.3	5.0	3.6	7.4	7.1	6.6	8.9	6.7	6.0	6.6	9.8	10.4
Precipitation		0.0	0.0	4.4	6.8	5.0		1.7	3.6	4.8	1.5	0.0	27.8	6.4	5.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	64.9
Growing Degrees	5	18.6	17.6	16.4	14.7	15.5	16.0	16.9	18.0	17.8	17.0	16.2	184.4	192.5	159.1
	10	13.6	12.6	11.4	9.7	10.5	11.0	11.9	13.0	12.8	12.0	11.2	129.4	137.5	113.8

3rd 10-day period (21-31/08/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	36.3	46.4	35.4
Precipitation - Reference Evapotranspiration	-8.5	-40.0	-30.2
Number of Rainy Days	7.0	1.0	1.1
Number of Dry Days	40.0	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<sub>n</sub> 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)

**UTC (Universal Time coordinates) in Greece**

- ◆ Winter : Time(UTC) = Local time - 2
- ◆ Summer : Time(UTC) = Local time - 3

**Mesurements Units**

- ◆ Temperature : °C
- ◆ Relative Humidity : %
- ◆ Soil Temperature : °C
- ◆ Sunshine Duration : Hours
- ◆ Precipitation : mm
- ◆ Evaporation (Pan) : mm
- ◆ Growing Degrees : °C

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ΥΠΗΡΕΣΙΑ**

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