



AGROMETEOROLOGICAL BULLETIN

*April 2021
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



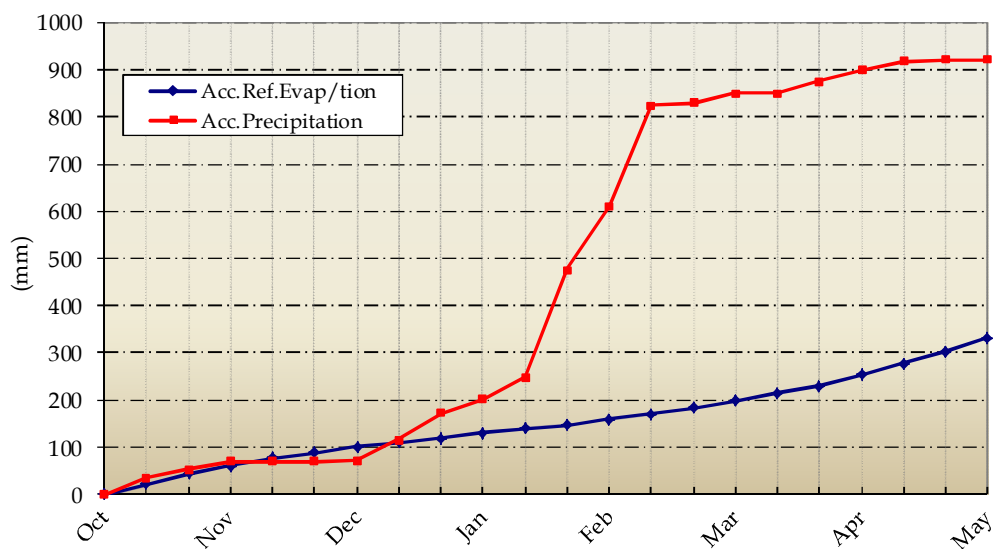
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www.hnms.gr
www.emy.gov.gr
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3rd 10-day period (21-30/04/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	17.8	17.4	17.2	16.4	17.0	17.0	17.6	22.2	25.2	23.0	19.1	19.3	18.4
	Min	7.0	4.4	8.4	9.6	10.2	3.6	5.6	7.2	9.4	12.0	7.7	9.0	7.8
Relative Humidity	Max	91	93	93	96	73	93	90	86	95	98	91	71	-
	Min	61	52	56	46	43	45	49	31	43	57	48	43	-
Soil Temperature at 10 cm	06 UTC	11.8	12.4	14.2	14.0	13.2	11.6	13.6	13.4	14.2	16.2	13.5	13.9	12.7
	12 UTC	16.3	16.2	16.6	14.6	14.6	15.4	16.0	17.5	18.6	18.6	16.4	18.0	16.6
Sunshine Duration		10.7	10.5	3.0	0.2	6.0	12.5	6.3	5.2	9.3	10.7	7.4	9.0	7.4
Precipitation					0.0	0.5		0.0				0.5	0.3	11.6
Evaporation		5.5	5.3	1.6	3.8	3.2	4.6	2.9	3.6	8.3	5.3	44.1	51.7	46.0
Growing Degrees	5	7.4	5.9	7.8	8.0	8.6	5.3	6.6	9.7	12.3	12.5	84.1	91.8	80.8
	10	2.4	0.9	2.8	3.0	3.6	0.3	1.6	4.7	7.3	7.5	34.1	42.3	32.3

3rd 10-day period (21-30/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	30.3	35.8	31.2
Precipitation - Reference Evapotranspiration	-29.8	-35.5	-19.6
Number of Rainy Days	1.0	1.0	2.2
Number of Dry Days	5.0	5.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

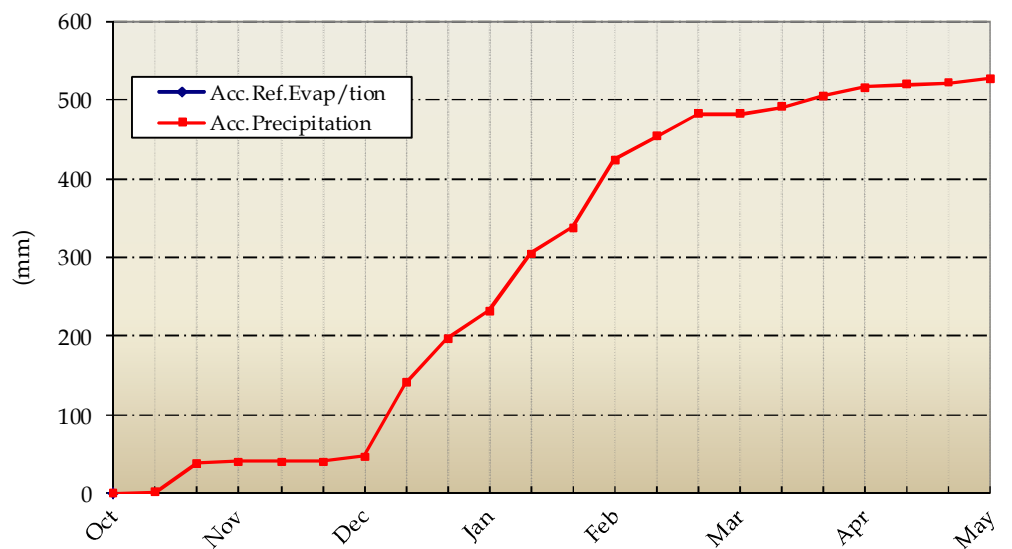


3rd 10-day period (21-30/04/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.5	20.2	23.4	20.0	22.8	22.7	24.9	27.5	25.6	31.5	23.8	21.8	20.2
	Min	8.0	7.7	8.1	13.5	11.6	7.6	10.4	11.1	11.2	10.7	10.0	10.4	9.8
Relative Humidity	Max	92	94	96	92	88	95	93	84	96	96	93	95	-
	Min	45	35	32	63	39	44	37	36	42	19	39	44	-
Soil Temperature at 10 cm	06 UTC	15.2	16.0	16.2	15.6	16.0	16.2	17.6	17.2	17.8	17.6	16.5	17.3	15.0
	12 UTC	18.0	18.4	17.4	17.0	17.2	18.2	19.2	18.8	19.0	20.2	18.3	20.1	18.4
Sunshine Duration		11.6	6.6	5.9	2.6	12.8	11.8	9.7	3.3	5.0	11.7	8.1	8.4	8.8
Precipitation			0.3		5.2							5.5	2.9	8.8
Evaporation		5.0	3.5	3.5	1.4	7.8	6.4	6.0	6.4	5.6	5.4	51.0	-	43.9
Growing Degrees	5	8.8	9.0	10.8	11.8	12.2	10.2	12.7	14.3	13.4	16.1	119.0	111.1	100.1
	10	3.8	4.0	5.8	6.8	7.2	5.2	7.7	9.3	8.4	11.1	69.0	61.1	50.1

3rd 10-day period (21-30/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	31.1	-	33.2
Precipitation - Reference Evapotranspiration	-25.6	-	-24.4
Number of Rainy Days	2.0	2.0	1.8
Number of Dry Days	1.0	16.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

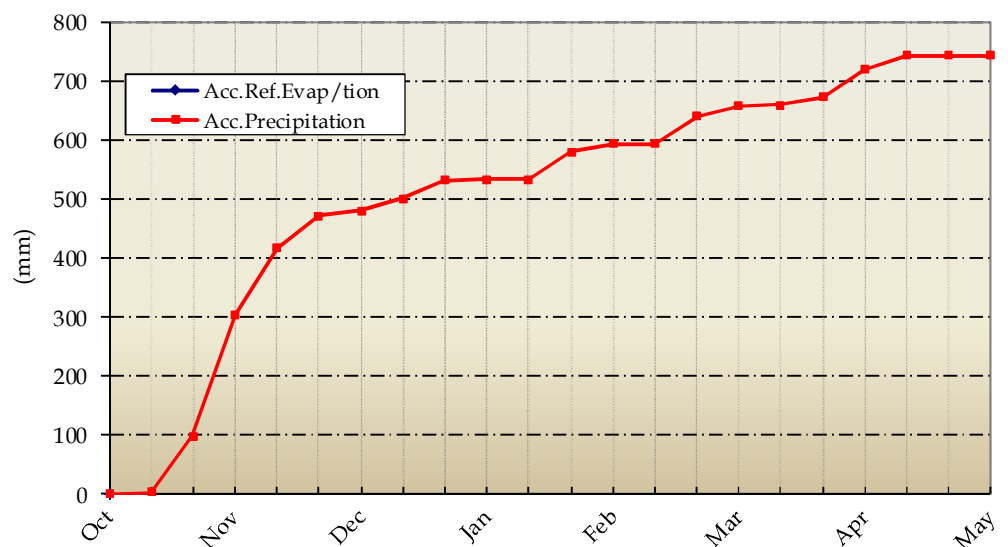


3rd 10-day period (21-30/04/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	18.2	20.0	20.6	21.2	17.4	19.0	19.6	32.0	32.0	25.8	22.6	19.4	20.6
	Min	10.6	10.0	10.0	13.0	16.4	13.6	9.0	13.0	26.0	22.0	14.4	12.5	12.6
Relative Humidity	Max	84	89	93	92	88	81	89	71	58	77	82	88	-
	Min	59	59	53	69	68	57	39	31	20	21	48	56	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.3	12.4	12.0	4.6	0.6	11.7	11.4	3.8	0.2	12.0	8.1	9.4	8.9
Precipitation													2.6	5.6
Evaporation		4.2	3.2	4.5	1.9	1.5	4.5	8.6	12.6	8.8	6.8	56.6	31.2	52.8
Growing Degrees	5	9.4	10.0	10.3	12.1	11.9	11.3	9.3	17.5	24.0	18.9	134.7	109.1	115.8
	10	4.4	5.0	5.3	7.1	6.9	6.3	4.3	12.5	19.0	13.9	84.7	59.1	65.8

3rd 10-day period (21-30/04/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	5.6
Number of Rainy Days	0.0	1.3
Number of Dry Days	21.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

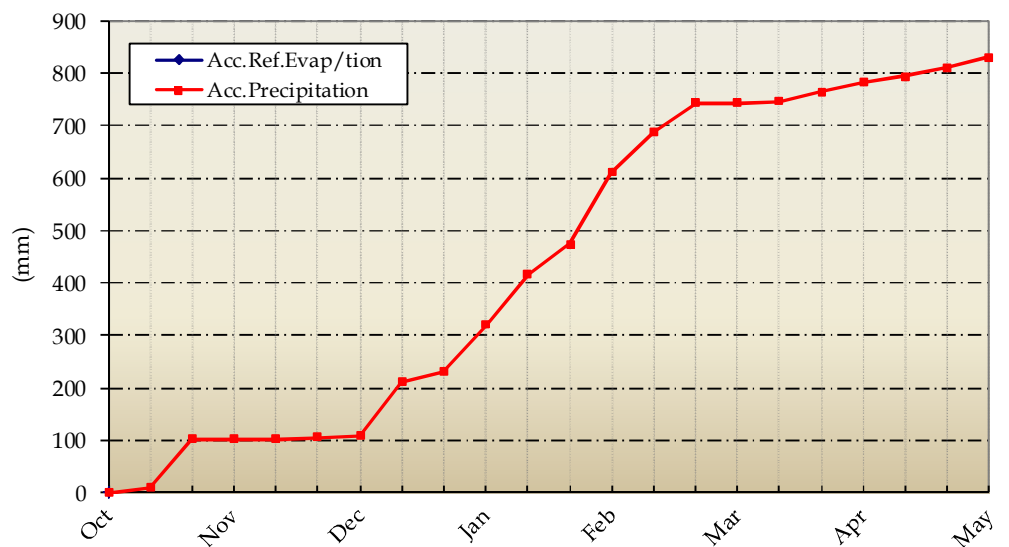


3rd 10-day period (21-30/04/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.5	16.2	13.3	14.2	21.2	22.6	21.9	25.1	26.6	29.2	20.6	19.9	18.6
	Min	0.7	1.5	8.8	8.8	6.4	5.0	6.8	12.7	7.9	6.1	6.5	7.9	6.5
Relative Humidity	Max	96	99	99	98	97	99	96	81	97	100	96	96	-
	Min	48	41	76	71	38	36	31	36	30	30	44	45	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	11.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	14.9
Sunshine Duration		7.8	2.7	0.0	0.0	11.9	9.6	10.2	9.1	11.3	11.0	7.4	6.6	6.6
Precipitation			0.8	4.4	13.2	0.3						18.7	24.3	15.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	36.5
Growing Degrees	5	3.1	3.9	6.1	6.5	8.8	8.8	9.4	13.9	12.3	12.7	85.3	89.3	75.1
	10	0.0	0.0	1.1	1.5	3.8	3.8	4.4	8.9	7.3	7.7	38.3	39.3	27.7

3rd 10-day period (21-30/04/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	29.4
Precipitation - Reference Evapotranspiration	-	-14.2
Number of Rainy Days	4.0	3.6
Number of Dry Days	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

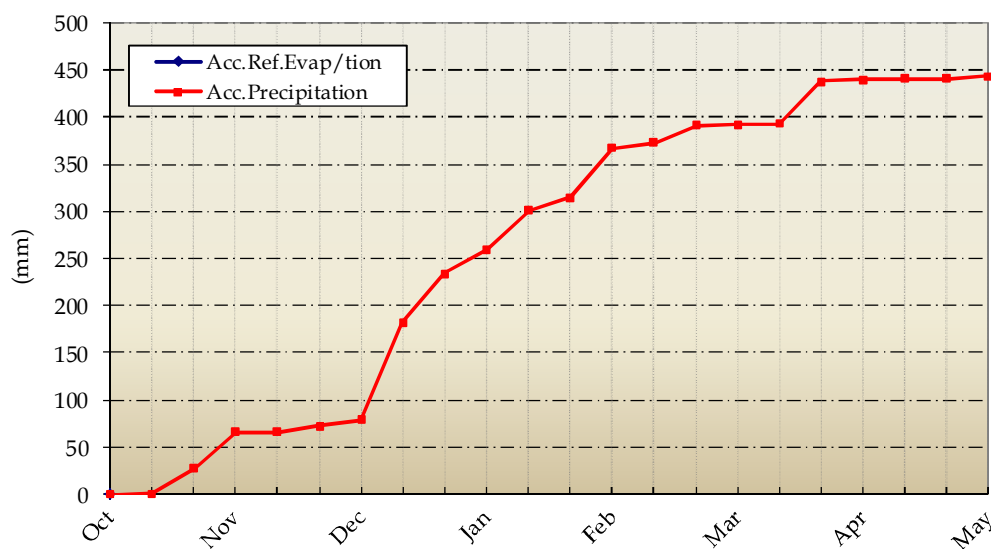


3rd 10-day period (21-30/04/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	21.7	21.0	23.5	19.8	22.6	21.0	23.7	24.0	25.7	28.8	23.2	23.0	20.8
	Min	6.7	6.0	7.9	14.7	11.4	7.8	10.4	12.1	12.0	12.5	10.2	10.3	9.1
Relative Humidity	Max	91	87	80	85	98	97	100	96	86	94	91	85	-
	Min	22	17	25	59	38	53	38	46	42	19	36	34	-
Soil Temperature at 10 cm	06 UTC	14.6	15.0	15.6	17.2	15.5	16.0	17.0	18.0	17.0	17.4	16.3	17.7	15.1
	12 UTC	18.8	19.0	20.0	17.2	19.5	20.2	20.8	19.5	20.5	21.8	19.7	21.1	18.5
Sunshine Duration		11.4	7.5	9.4	0.4	11.9	11.4	10.6	2.0	6.4	11.6	8.3	8.3	8.3
Precipitation			0.0		1.5	0.0			0.9	0.0		2.4	0.3	12.2
Evaporation		7.0	6.0	6.2	3.9	6.0	7.0	5.6	3.3	5.2	8.0	58.2	62.7	46.5
Growing Degrees	5	9.2	8.5	10.7	12.3	12.0	9.4	12.1	13.1	13.9	15.7	116.7	116.4	99.4
	10	4.2	3.5	5.7	7.3	7.0	4.4	7.1	8.1	8.9	10.7	66.7	66.4	49.4

3rd 10-day period (21-30/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	41.6	34.1
Precipitation - Reference Evapotranspiration	-	-41.3	-21.9
Number of Rainy Days	2.0	1.0	2.6
Number of Dry Days	3.0	16.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

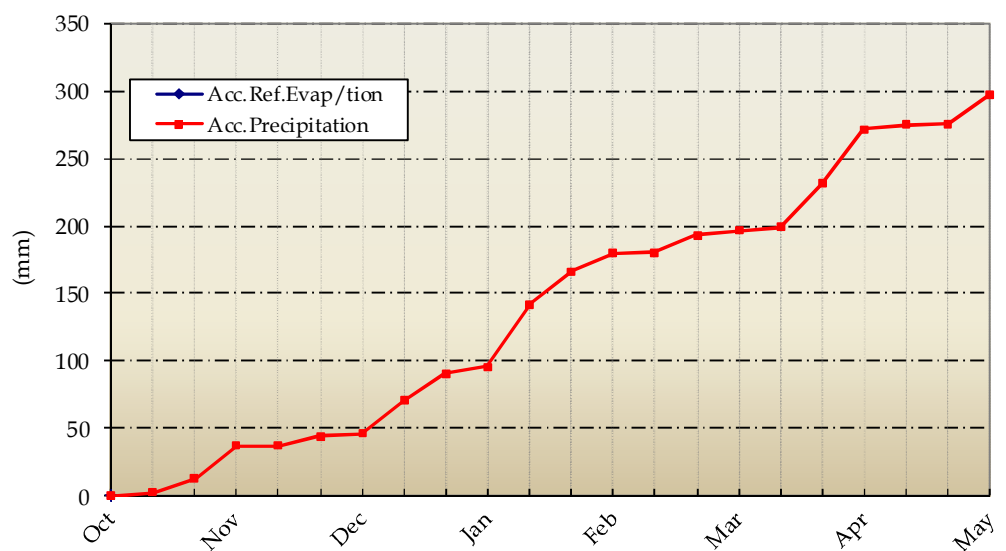


3rd 10-day period (21-30/04/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	21.2	22.2	17.7	13.4	18.6	22.0	22.4	22.2	24.6	29.6	21.4	21.3	21.1
	Min	1.2	2.0	9.6	11.7	10.4	6.4	9.6	9.2	8.6	10.2	7.9	7.6	7.3
Relative Humidity	Max	95	95	98	99	99	98	95	98	98	97	97	92	-
	Min	30	32	62	85	51	47	44	58	56	33	50	44	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	14.2
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	16.2
Sunshine Duration		10.2	7.8	0.1	0.0	5.8	11.4	10.0	8.5	10.6	11.0	7.5	7.6	7.9
Precipitation		1.0	0.0	1.4	18.1	1.4						21.9	3.8	10.7
Evaporation		3.8	5.0	3.1	1.0	1.3	4.2	13.7	3.6	6.2	6.2	48.1	47.5	43.9
Growing Degrees	5	6.2	7.1	8.7	7.6	9.5	9.2	11.0	10.7	11.6	14.9	96.4	94.6	91.9
	10	1.2	2.1	3.7	2.6	4.5	4.2	6.0	5.7	6.6	9.9	46.4	44.6	42.7

3rd 10-day period (21-30/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	32.2	33.2	34.0
Precipitation - Reference Evapotranspiration	-10.3	-29.4	-23.3
Number of Rainy Days	4.0	3.0	2.7
Number of Dry Days	4.0	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



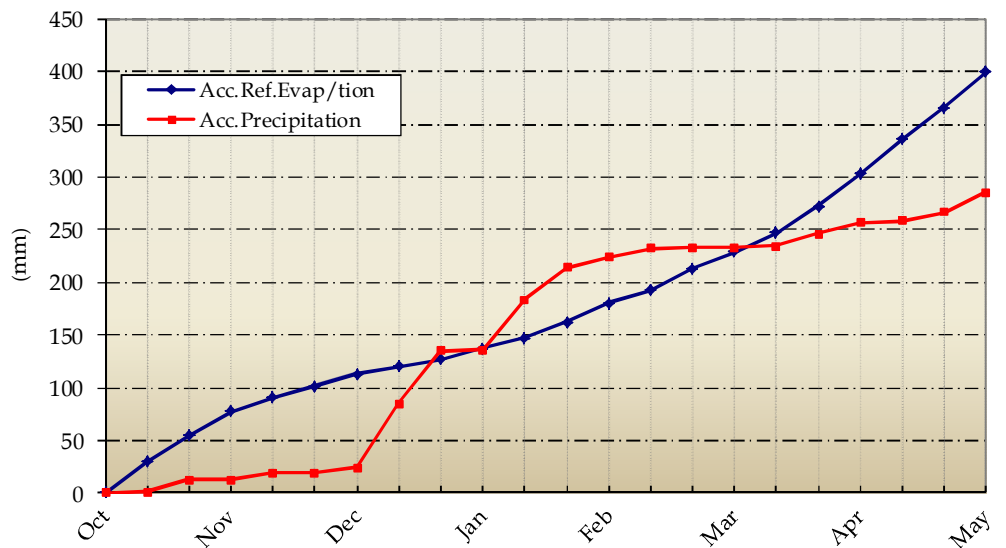
Mikra

3rd 10-day period (21-30/04/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.8	20.2	16.2	15.8	18.8	19.6	19.8	20.4	23.6	26.7	20.1	20.5	20.2
	Min	5.4	6.1	11.3	12.6	11.5	7.2	8.8	9.4	11.2	11.4	9.5	8.8	8.4
Relative Humidity	Max	93	85	95	96	95	94	94	92	94	94	93	89	-
	Min	28	54	78	72	50	58	49	61	52	52	55	45	-
Soil Temperature at 10 cm	06 UTC	13.2	13.6	15.0	14.6	14.2	14.2	15.0	14.6	15.8	16.8	14.7	14.7	14.2
	12 UTC	16.2	16.6	15.4	15.6	17.0	17.2	18.4	17.2	19.6	20.8	17.4	16.1	18.8
Sunshine Duration		12.2	8.0	0.0	0.0	9.4	12.3	8.8	9.3	12.1	12.1	8.4	8.0	7.6
Precipitation		3.2	0.0	9.3	4.3	2.3		0.0				19.1	4.1	11.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	45.8
Growing Degrees	5	7.6	8.2	8.8	9.2	10.2	8.4	9.3	9.9	12.4	14.1	97.9	96.8	93.3
	10	2.6	3.2	3.8	4.2	5.2	3.4	4.3	4.9	7.4	9.1	47.9	46.8	43.8

3rd 10-day period (21-30/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	33.6	32.9	33.7
Precipitation - Reference Evapotranspiration	-14.5	-28.8	-22.5
Number of Rainy Days	4.0	2.0	3.0
Number of Dry Days	0.0	5.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



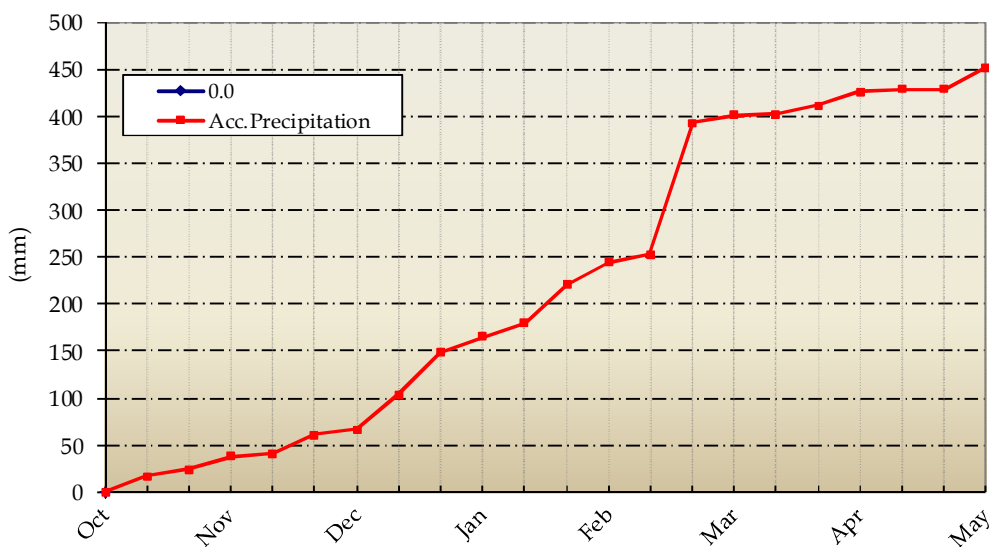
Tanagra

3rd 10-day period (21-30/04/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	21.4	22.2	23.0	14.4	15.2	20.7	25.0	23.4	24.2	27.2	21.7	20.2	20.7
	Min	4.9	7.2	9.0	12.6	12.2	4.3	8.2	9.4	10.4	10.0	8.8	8.8	7.9
Relative Humidity	Max	80	93	76	100	95	98	94	98	99	97	93	84	-
	Min	22	26	33	75	54	42	31	47	51	37	42	37	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.4	11.2	10.0	0.0	4.7	12.1	7.1	7.6	6.3	10.3	8.2	8.5	
Precipitation					22.9	0.4						23.3	8.2	7.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	8.2	9.7	11.0	8.5	8.7	7.5	11.6	11.4	12.3	13.6	102.5	94.8	
	10	3.2	4.7	6.0	3.5	3.7	2.5	6.6	6.4	7.3	8.6	52.5	44.8	

3rd 10-day period (21-30/04/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	7.9
Number of Rainy Days	2.0	2.8
Number of Dry Days	15.0	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



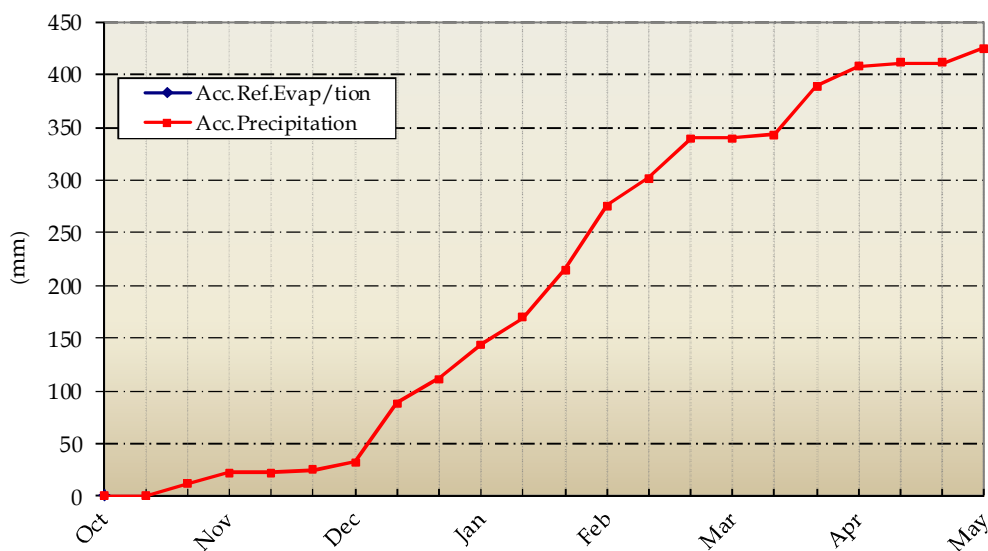
Tripoli

3rd 10-day period (21-30/04/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	16.8	20.5	23.8	12.0	16.7	21.3	24.0	24.7	-	-	20.0	19.0	18.7
	Min	0.7	0.0	4.0	8.4	5.1	2.8	7.0	11.6	9.3	-	5.4	5.7	5.4
Relative Humidity	Max	90	91	93	94	97	100	95	44	-	90	88	90	-
	Min	29	17	20	83	48	23	15	36	-	18	32	34	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	12.1
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	14.3
Sunshine Duration		11.9	8.0	9.6	0.0	9.6	7.9	9.3	3.4	7.3	11.9	7.9	6.9	8.0
Precipitation			0.5		13.5	0.0	0.0	0.0				14.0	2.1	14.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	35.0
Growing Degrees	5	3.8	5.3	8.9	5.2	5.9	7.1	10.5	13.2	-	-	-	-	70.7
	10	0.0	0.3	3.9	0.2	0.9	2.1	5.5	8.2	-	-	-	-	24.2

3rd 10-day period (21-30/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	30.8	32.9
Precipitation - Reference Evapotranspiration	-	-28.7	-18.4
Number of Rainy Days	2.0	3.0	2.7
Number of Dry Days	13.0	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.

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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