



AGROMETEOROLOGICAL BULLETIN

*April 2021
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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Division of Climatology-Applications
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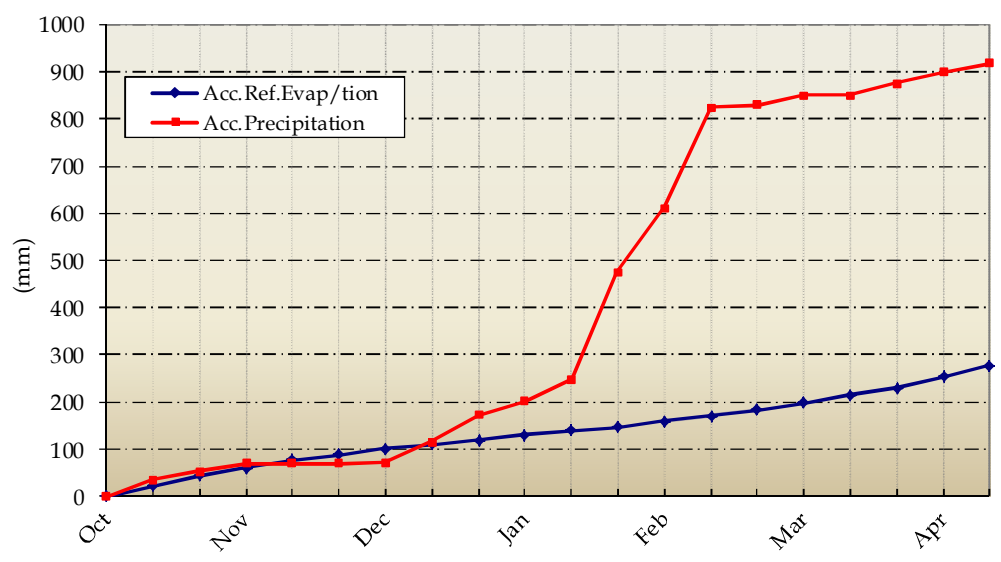
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Alexandroupoli

1st 10-day period (1-10/04/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.4	15.4	17.2	15.4	12.6	15.2	18.6	15.0	12.4	13.0	14.9	13.7	16.7
	Min	1.0	1.4	9.2	9.2	6.2	6.6	12.2	4.4	-0.8	-1.0	4.8	5.7	6.5
Relative Humidity	Max	84	92	93	92	95	95	95	84	82	81	89	73	-
	Min	37	46	64	71	61	66	59	60	27	27	52	50	-
Soil Temperature at 10 cm	06 UTC	8.0	8.0	11.2	13.0	10.5	10.4	12.4	11.0	7.5	7.2	9.9	8.3	10.4
	12 UTC	11.6	12.6	13.8	13.2	11.4	12.4	15.6	10.2	10.4	10.6	12.2	11.2	13.5
Sunshine Duration		10.2	9.0	8.9	2.8	3.6	3.9	10.2	0.0	9.9	11.6	7.0	5.6	6.1
Precipitation		0.4			1.8	14.4	0.9		2.1			19.6	74.9	11.5
Evaporation		2.3	4.4	2.9	3.7	2.4	0.8	5.8	1.0	1.1	4.6	29.0	38.3	34.0
Growing Degrees	5	2.7	3.4	8.2	7.3	4.4	5.9	10.4	4.7	0.8	1.0	48.8	46.8	66.0
	10	0.0	0.0	3.2	2.3	0.0	0.9	5.4	0.0	0.0	0.0	11.8	10.3	21.0

1st 10-day period (1-10/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	24.7	27.9	24.4
Precipitation - Reference Evapotranspiration	-5.1	47.0	-12.9
Number of Rainy Days	5.0	4.0	2.6
Number of Dry Days	8.0	3.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

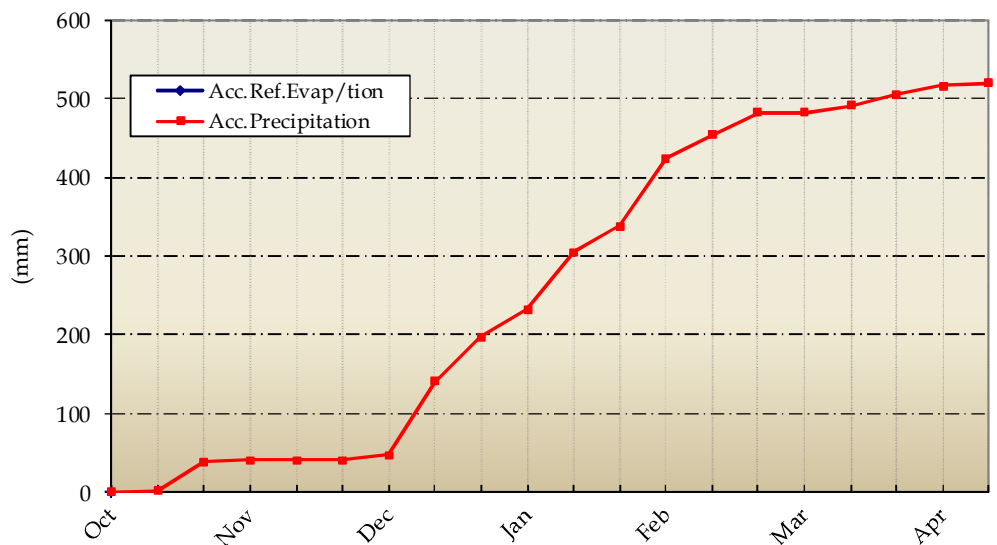


1st 10-day period (1-10/04/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.2	19.4	20.0	23.2	18.7	17.4	20.4	20.6	12.6	16.9	18.8	18.1	18.6
	Min	2.2	7.2	10.1	10.7	11.3	10.5	8.8	10.4	0.8	2.4	7.4	7.7	8.6
Relative Humidity	Max	91	94	95	96	97	97	96	87	86	87	93	84	-
	Min	33	54	40	44	60	60	49	41	30	33	44	43	-
Soil Temperature at 10 cm	06 UTC	12.4	13.8	15.0	15.4	15.2	16.0	14.8	15.8	13.4	13.0	14.5	13.6	12.9
	12 UTC	15.2	16.2	16.4	16.4	16.6	16.6	16.2	16.2	16.4	14.8	16.1	14.9	15.7
Sunshine Duration		11.5	11.2	8.9	5.3	2.4	7.8	9.7	10.5	11.8	11.9	9.1	6.4	6.9
Precipitation					0.1	3.5						3.6	4.0	14.7
Evaporation		4.4	4.6	4.9	4.1	2.4	2.8	5.2	4.2	5.0	5.2	42.8	42.8	34.4
Growing Degrees	5	5.7	8.3	10.1	12.0	10.0	9.0	9.6	10.5	1.7	4.7	81.4	78.7	86.1
	10	0.7	3.3	5.1	7.0	5.0	4.0	4.6	5.5	0.0	0.0	35.1	28.7	36.7

1st 10-day period (1-10/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	26.4	-	26.7
Precipitation - Reference Evapotranspiration	-22.8	-	-12.0
Number of Rainy Days	2.0	4.0	2.8
Number of Dry Days	11.0	2.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

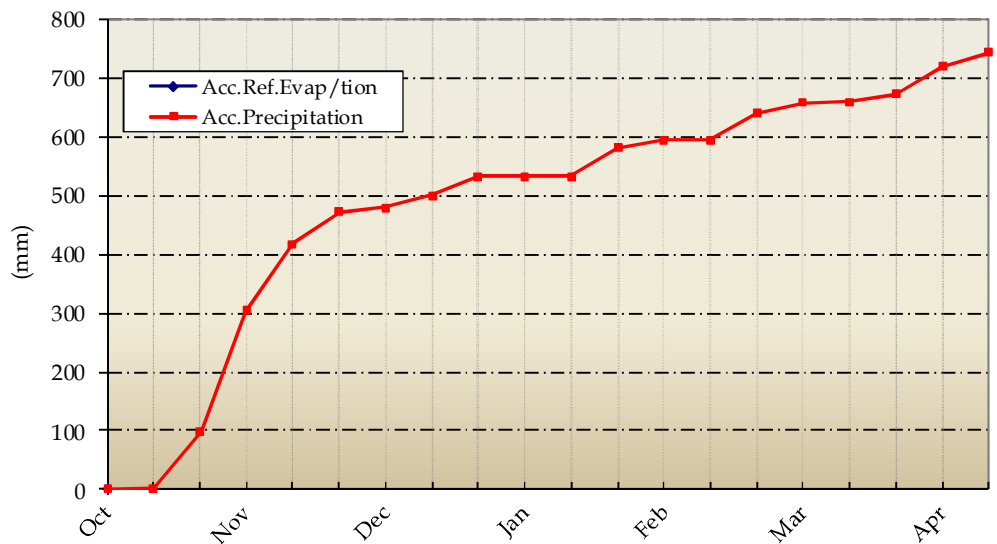


1st 10-day period (1-10/04/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.4	17.6	21.0	25.4	24.4	24.0	19.6	19.8	15.2	15.0	19.6	17.0	19.4
	Min	8.2	8.8	12.0	13.0	22.6	19.0	11.2	13.6	11.2	11.2	13.1	11.9	11.6
Relative Humidity	Max	95	86	83	73	55	91	91	82	83	82	82	85	-
	Min	57	61	60	33	27	34	62	56	53	47	49	58	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		3.2	12.3	11.4	3.0	0.0	9.3	11.6	10.6	10.3	11.5	8.3	5.0	7.0
Precipitation		23.7								0.4		24.1	10.0	8.6
Evaporation		4.1	2.2	4.9	8.4	8.3	5.0	5.6	3.8	7.5	6.3	56.1	38.9	45.2
Growing Degrees	5	6.3	8.2	11.5	14.2	18.5	16.5	10.4	11.7	8.2	8.1	113.6	94.5	105.0
	10	1.3	3.2	6.5	9.2	13.5	11.5	5.4	6.7	3.2	3.1	63.6	44.5	55.0

1st 10-day period (1-10/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	8.6
Number of Rainy Days	2.0	3.0	1.8
Number of Dry Days	0.0	2.0	-

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Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

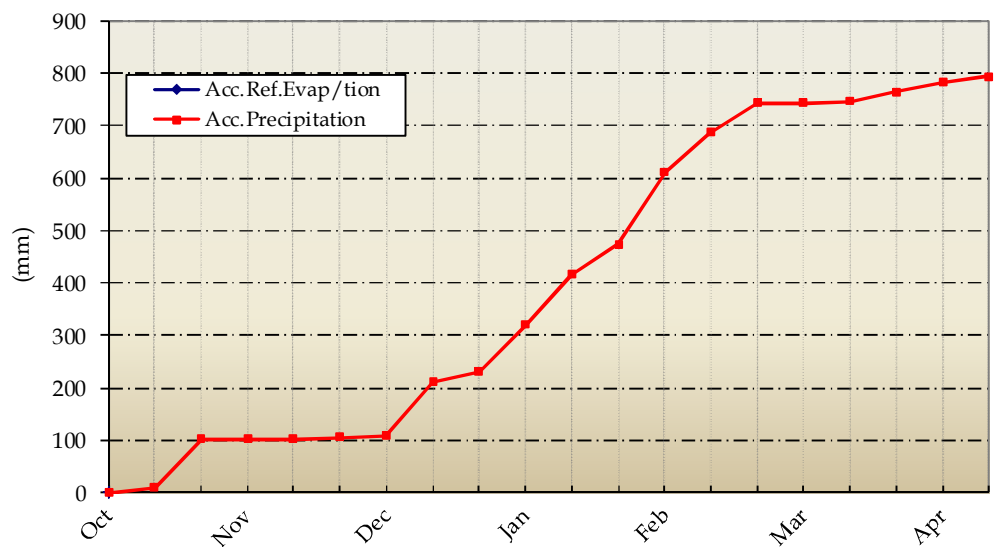


1st 10-day period (1-10/04/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.7	21.2	19.5	18.6	-	17.0	15.8	11.9	14.5	16.6	17.2	14.7	16.8
	Min	-0.3	4.2	1.6	6.6	3.4	9.0	8.2	4.1	2.0	-2.9	3.6	4.2	5.4
Relative Humidity	Max	100	99	99	100	100	96	98	85	80	80	94	77	-
	Min	16	22	38	48	40	42	46	30	20	27	33	42	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	9.2
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	12.3
Sunshine Duration		10.5	8.7	3.9	5.0	2.2	9.5	3.6	10.2	11.4	11.5	7.6	4.7	5.1
Precipitation					1.4		6.6	0.1	2.6			10.7	33.8	25.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	24.5
Growing Degrees	5	4.7	7.7	5.6	7.6	-	8.0	7.0	3.0	3.3	1.9	-	44.9	60.9
	10	0.0	2.7	0.6	2.6	-	3.0	2.0	0.0	0.0	0.0	-	7.0	17.6

1st 10-day period (1-10/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	22.5
Precipitation - Reference Evapotranspiration	-	-	3.2
Number of Rainy Days	4.0	3.0	4.1
Number of Dry Days	12.0	4.0	-

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Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

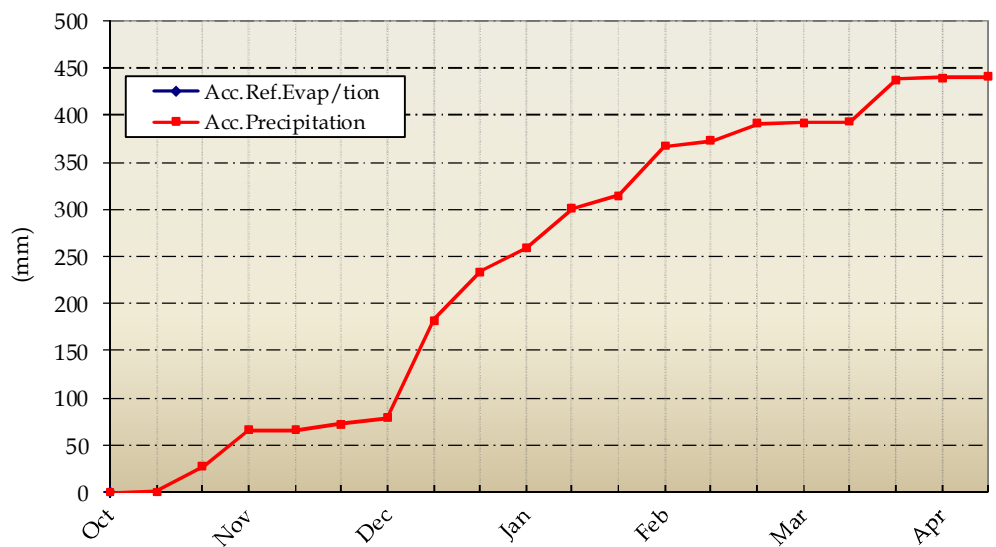


1st 10-day period (1-10/04/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	18.6	20.1	20.0	21.4	21.4	23.8	21.3	18.4	17.2	18.4	20.1	18.0	19.3
	Min	4.8	6.2	7.1	11.0	13.8	12.5	5.1	8.8	5.5	3.9	7.9	7.3	8.0
Relative Humidity	Max	69	95	100	94	100	78	97	100	60	84	88	85	-
	Min	28	48	51	53	57	38	50	29	24	17	40	43	-
Soil Temperature at 10 cm	06 UTC	11.6	13.0	13.6	14.6	15.5	15.0	14.0	15.0	13.2	13.0	13.8	13.2	12.9
	12 UTC	14.6	16.0	16.4	16.0	16.5	17.0	16.4	17.5	17.6	17.4	16.5	15.4	15.8
Sunshine Duration		8.2	11.0	9.8	0.4	1.3	9.6	9.6	10.7	11.6	9.6	8.2	4.8	6.7
Precipitation						0.5		0.0				0.5	21.0	16.3
Evaporation		5.0	6.2	4.6	2.4	2.8	5.2	5.2	8.0	7.4	6.0	52.8	24.8	37.8
Growing Degrees	5	6.7	8.2	8.6	11.2	12.6	13.2	8.2	8.6	6.4	6.2	89.7	76.6	86.4
	10	1.7	3.2	3.6	6.2	7.6	8.2	3.2	3.6	1.4	1.2	39.7	26.6	36.8

1st 10-day period (1-10/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	28.1	28.3
Precipitation - Reference Evapotranspiration	-	-7.1	-12.0
Number of Rainy Days	1.0	6.0	2.8
Number of Dry Days	4.0	2.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

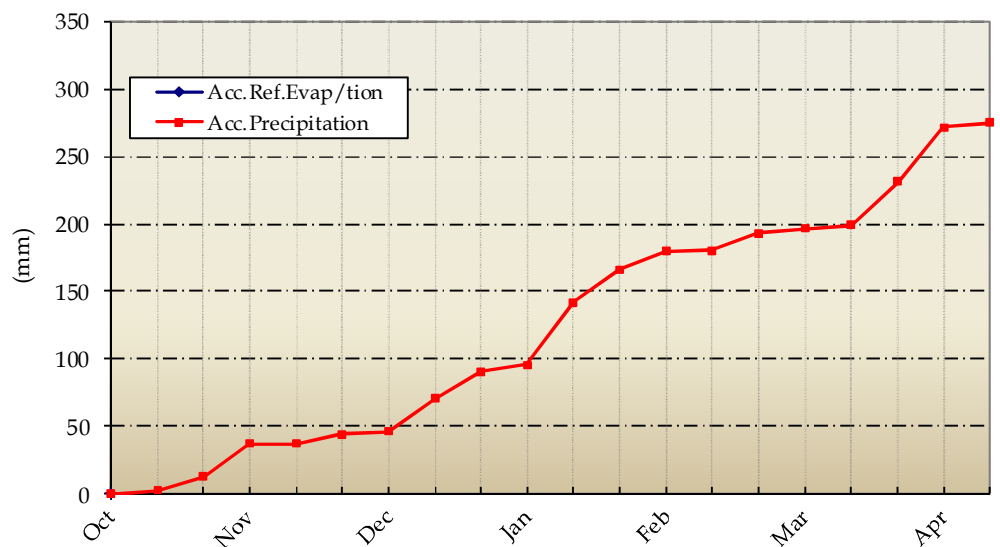


1st 10-day period (1-10/04/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	16.4	22.5	23.7	20.6	13.6	15.6	22.2	16.4	14.0	17.2	18.2	14.6	19.4
	Min	3.6	2.2	6.0	9.2	8.6	9.6	4.0	5.2	-2.4	-2.6	4.3	5.0	5.6
Relative Humidity	Max	92	96	89	88	78	93	85	95	94	89	90	92	-
	Min	52	44	34	49	48	69	29	43	26	27	42	53	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	11.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	13.1
Sunshine Duration		7.1	8.7	10.6	9.4	0.0	1.6	10.9	2.8	10.9	10.9	7.3	5.5	6.6
Precipitation					0.3		0.0		2.4			2.7	53.7	12.2
Evaporation		3.3	2.8	2.9	4.4	2.8	1.5	6.7	1.3	2.8	5.1	33.6	27.6	32.3
Growing Degrees	5	5.0	7.4	9.9	9.9	6.1	7.6	8.1	5.8	0.8	2.3	62.8	47.9	75.0
	10	0.0	2.4	4.9	4.9	1.1	2.6	3.1	0.8	0.0	0.0	19.7	5.5	27.5

1st 10-day period (1-10/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	28.4	23.0	26.4
Precipitation - Reference Evapotranspiration	-25.7	30.7	-14.2
Number of Rainy Days	2.0	6.0	2.6
Number of Dry Days	4.0	3.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



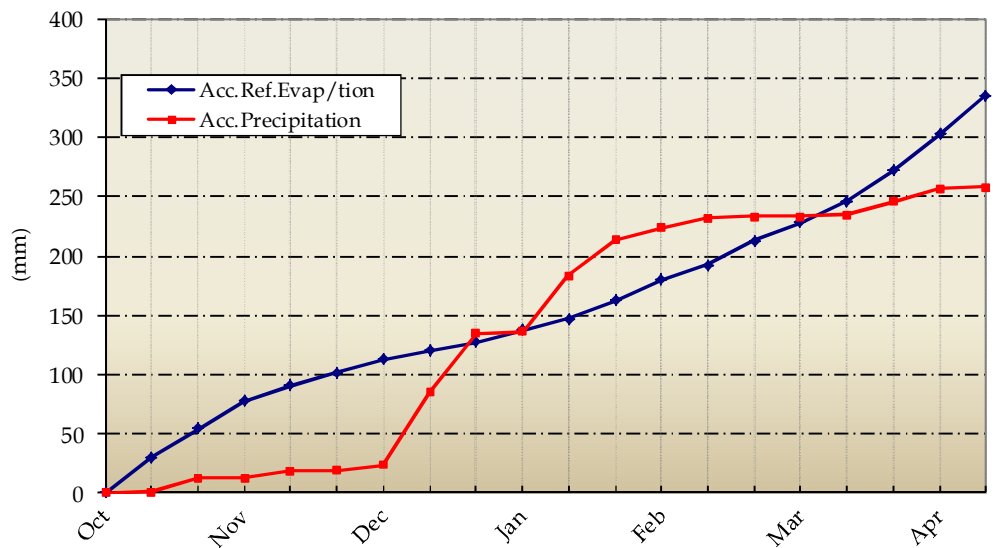
Mikra

1st 10-day period (1-10/04/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	16.8	17.4	23.4	19.2	14.3	14.7	20.2	13.2	15.0	16.7	17.1	15.3	18.4
	Min	5.2	4.4	6.7	11.2	8.4	9.8	8.6	6.6	-0.9	2.4	6.2	6.0	7.0
Relative Humidity	Max	89	90	90	89	75	94	89	85	89	78	87	91	-
	Min	49	59	38	57	33	71	41	35	18	26	43	53	-
Soil Temperature at 10 cm	06 UTC	11.8	11.4	12.6	14.0	10.0	13.0	12.6	11.8	9.4	10.6	11.7	10.1	11.4
	12 UTC	14.4	14.6	15.4	16.2	13.4	13.2	13.0	12.4	12.4	18.6	14.4	11.3	15.3
Sunshine Duration		8.9	9.1	8.7	7.2	1.4	2.7	6.8	5.6	9.3	11.2	7.1	4.8	6.4
Precipitation					0.6		0.6					1.2	104.2	12.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	39.9
Growing Degrees	5	6.0	5.9	10.1	10.2	6.4	7.3	9.4	4.9	2.1	4.6	66.7	56.1	77.2
	10	1.0	0.9	5.1	5.2	1.4	2.3	4.4	0.0	0.0	0.0	20.2	11.3	28.9

1st 10-day period (1-10/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	32.7	23.8	26.8
Precipitation - Reference Evapotranspiration	-31.5	80.4	-14.1
Number of Rainy Days	2.0	5.0	2.5
Number of Dry Days	12.0	2.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



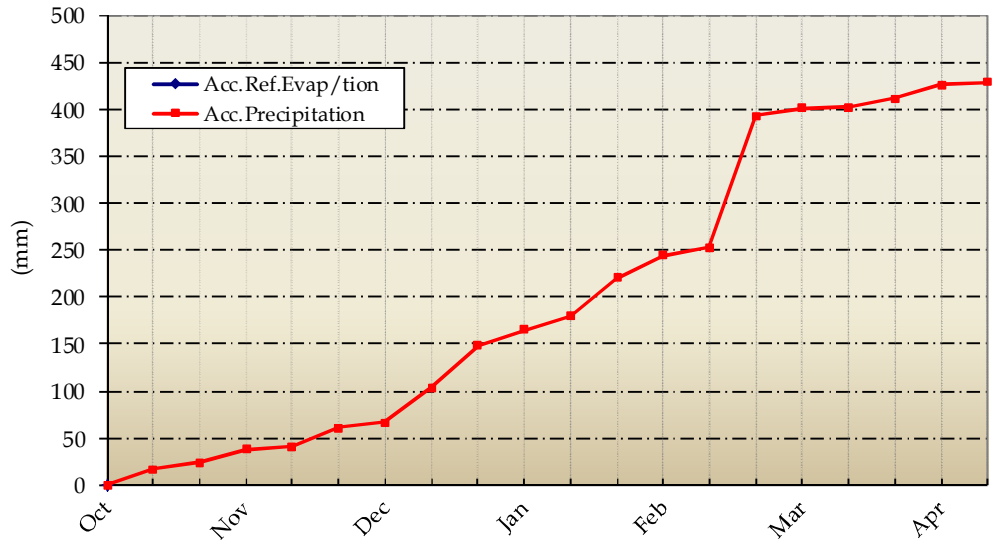
Tanagra

1st 10-day period (1-10/04/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	11.6	22.5	23.2	22.5	13.8	16.8	21.9	13.6	12.1	15.9	17.4	13.3	18.6
	Min	5.4	-0.4	9.4	11.1	11.2	10.2	3.6	11.3	2.2	-1.4	6.3	5.8	6.4
Relative Humidity	Max	88	94	92	89	97	97	83	95	95	87	92	88	-
	Min	57	26	29	32	56	35	30	44	29	25	36	54	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		3.7	10.6	10.0	8.1	0.0	3.1	10.5	2.0	9.5	10.7	6.8	4.7	
Precipitation						0.0	0.6		2.2	0.0		2.8	83.5	8.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	3.5	6.1	11.3	11.8	7.5	8.5	7.8	7.5	2.2	2.3	68.3	45.5	
	10	0.0	1.1	6.3	6.8	2.5	3.5	2.8	2.5	0.0	0.0	25.4	6.5	

1st 10-day period (1-10/04/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	8.6
Number of Rainy Days	2.0	6.0
Number of Dry Days	5.0	3.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

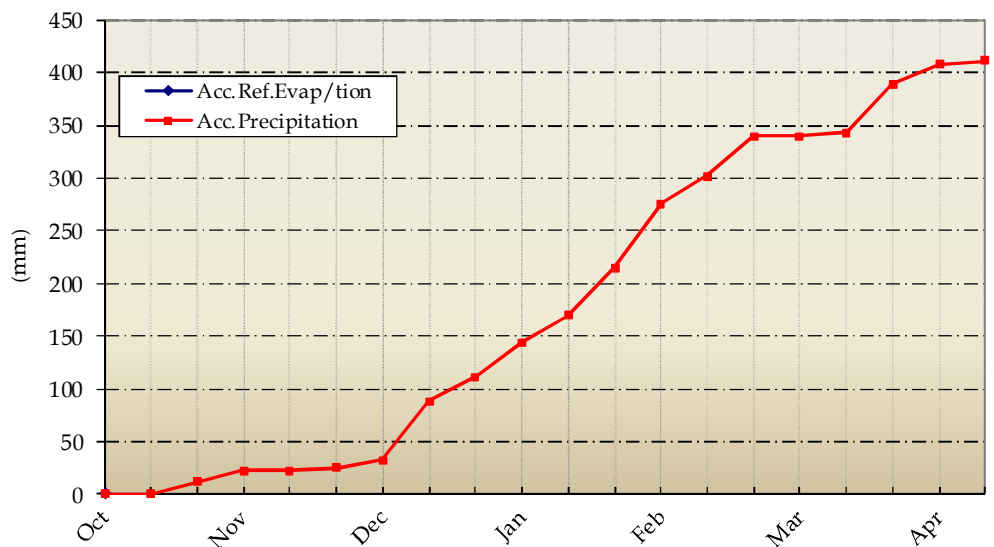


1st 10-day period (1-10/04/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.4	18.0	18.4	18.7	17.8	18.2	16.0	12.6	11.8	15.4	16.1	12.8	17.1
	Min	0.6	-2.6	2.1	7.1	10.0	8.0	6.5	9.1	-0.4	-4.4	3.6	4.5	4.3
Relative Humidity	Max	94	97	94	89	100	99	86	80	83	87	91	78	-
	Min	32	25	40	53	58	43	43	27	25	16	36	48	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	8.2	9.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	11.6	11.3
Sunshine Duration		7.6	1.3	9.5	1.3	1.2	9.1	10.8	8.4	10.8	11.2	7.1	5.3	6.6
Precipitation				0.0	0.3	2.6	0.2		0.4		0.0	3.5	11.9	17.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	26.4
Growing Degrees	5	2.5	2.7	5.3	7.9	8.9	8.1	6.3	5.9	0.7	0.5	48.7	-	57.4
	10	0.0	0.0	0.3	2.9	3.9	3.1	1.3	0.9	0.0	0.0	12.3	-	16.1

1st 10-day period (1-10/04/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	27.2	24.1	26.6
Precipitation - Reference Evapotranspiration	-23.7	-12.2	-9.3
Number of Rainy Days	4.0	4.0	3.3
Number of Dry Days	3.0	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.

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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