



AGROMETEOROLOGICAL BULLETIN

July 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



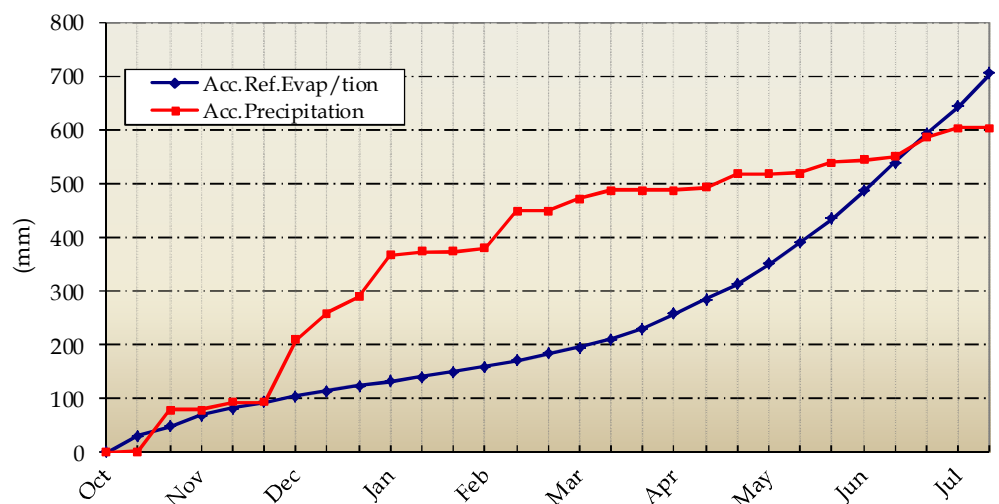
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1st 10-day period (1-10/07/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.0	34.0	33.0	32.0	32.6	33.0	30.6	31.8	28.6	29.0	31.7	31.1	31.1
	Min	18.0	20.0	21.8	16.8	19.6	18.0	19.8	20.6	20.8	20.4	19.6	20.4	18.7
Relative Humidity	Max	84	75	77	77	74	78	91	82	87	84	81	79	78
	Min	44	26	26	24	29	26	41	40	42	38	34	41	37
Soil Temperature at 10 cm	06 UTC	25.6	27.0	27.0	26.0	26.6	26.4	27.6	28.0	27.6	25.6	26.7	25.2	25.6
	12 UTC	28.4	30.0	30.6	29.8	29.8	30.6	30.6	30.6	28.4	28.6	29.7	28.1	29.3
Sunshine Duration		13.3	13.8	13.9	13.8	13.5	12.5	12.1	6.9	1.8	8.9	11.0	12.0	11.3
Precipitation										0.0		0.0	3.4	6.8
Evaporation		8.7	7.0	13.3	11.2	9.2	12.5	9.5	9.5	3.3	8.5	92.7	85.9	90.5
Growing Degrees	5	20.0	22.0	22.4	19.4	21.1	20.5	20.2	21.2	19.7	19.7	206.2	207.5	178.9
	10	15.0	17.0	17.4	14.4	16.1	15.5	15.2	16.2	14.7	14.7	156.2	157.5	133.7

1st 10-day period (1-10/07/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	60.3	57.9	46.4
Precipitation - Reference Evapotranspiration	-60.3	-54.5	-39.6
Number of Rainy Days	0.0	1.0	1.0
Number of Dry Days	14.0	9.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

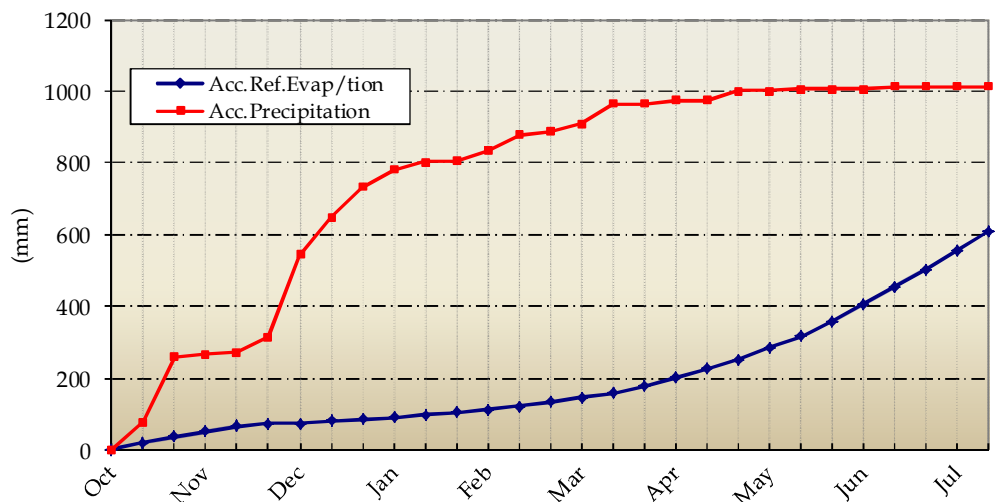


1st 10-day period (1-10/07/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	34.0	34.3	36.2	33.5	34.0	33.3	34.2	33.8	30.0	29.9	33.3	33.8	30.4
	Min	21.8	20.5	22.5	17.2	18.4	20.5	20.1	21.3	20.8	18.9	20.2	20.1	18.8
Relative Humidity	Max	88	91	72	74	87	83	94	93	78	80	84	93	90
	Min	41	40	26	25	26	38	36	36	44	37	35	36	40
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	29.7	28.2
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	32.6	33.8
Sunshine Duration		13.2	13.2	13.4	13.4	13.4	12.7	12.7	10.2	11.4	13.6	12.7	13.3	12.6
Precipitation														0.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	97.7	84.0
Growing Degrees	5	22.9	22.4	24.4	20.4	21.2	21.9	22.2	22.6	20.4	19.4	217.6	219.6	158.6
	10	17.9	17.4	19.4	15.4	16.2	16.9	17.2	17.6	15.4	14.4	167.6	169.6	117.9

1st 10-day period (1-10/07/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	53.1	55.0	43.0
Precipitation - Reference Evapotranspiration	-53.1	-55.0	-42.7
Number of Rainy Days	0.0	0.0	0.2
Number of Dry Days	30.0	30.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

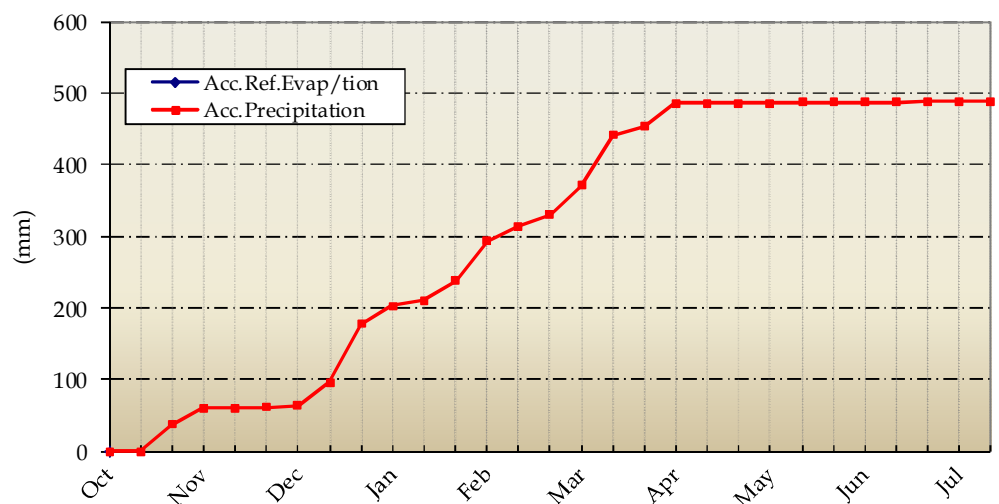


1st 10-day period (1-10/07/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	28.4	30.0	28.2	27.0	27.2	29.6	30.2	29.6	29.0	26.6	28.6	30.5	29.3
	Min	25.2	25.8	25.0	24.2	22.6	20.6	24.0	22.8	22.0	22.8	23.5	24.2	22.1
Relative Humidity	Max	68	69	72	71	70	79	76	72	79	79	74	79	79
	Min	57	51	57	55	53	38	42	51	59	57	52	56	54
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.0	13.0	12.8	12.9	12.9	12.8	12.8	12.7	9.6	8.4	12.1	12.6	12.6
Precipitation											0.0	0.0		0.1
Evaporation		8.4	9.9	6.8	8.4	5.2	10.1	9.8	4.8	5.2	6.7	75.3	76.7	69.0
Growing Degrees	5	21.8	22.9	21.6	20.6	19.9	20.1	22.1	21.2	20.5	19.7	210.4	223.6	191.9
	10	16.8	17.9	16.6	15.6	14.9	15.1	17.1	16.2	15.5	14.7	160.4	173.6	145.6

1st 10-day period (1-10/07/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	0.0	0.0	0.0
Number of Dry Days	28.0	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

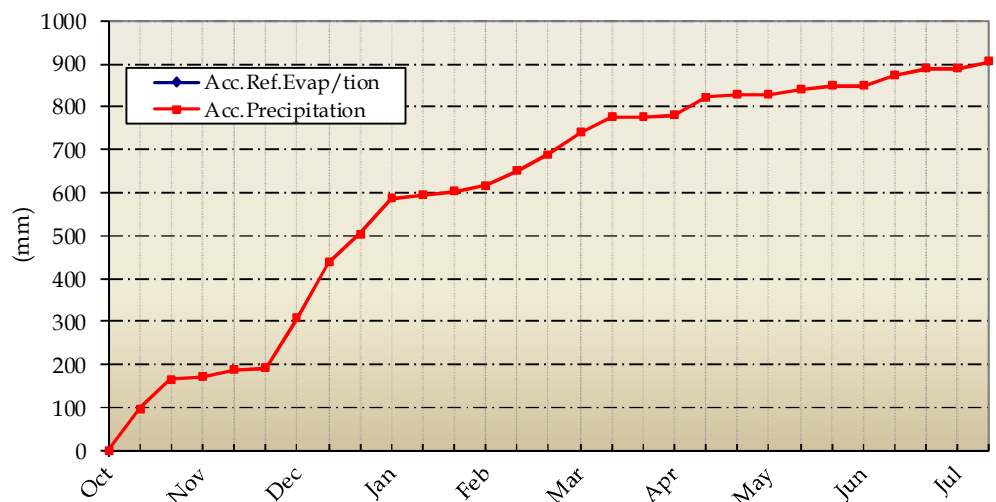


1st 10-day period (1-10/07/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	35.1	36.2	33.0	34.1	36.1	34.4	33.0	29.6	26.4	30.0	32.8	34.3	31.3
	Min	14.4	13.0	18.8	17.6	15.8	16.5	17.4	14.3	14.3	14.8	15.7	15.0	15.5
Relative Humidity	Max	98	97	71	82	100	100	89	93	91	84	90	86	90
	Min	26	26	33	30	28	24	25	34	38	31	30	28	45
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	22.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	24.8
Sunshine Duration		10.5	8.2	12.8	11.5	10.7	12.5	13.0	9.2	6.2	12.4	10.7	11.5	10.8
Precipitation						15.3			0.1	0.0		15.4	3.7	5.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	19.8	19.6	20.9	20.9	21.0	20.5	20.2	17.0	15.4	17.4	192.4	196.6	152.6
	10	14.8	14.6	15.9	15.9	16.0	15.5	15.2	12.0	10.4	12.4	142.4	146.6	110.9

1st 10-day period (1-10/07/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	38.1
Precipitation - Reference Evapotranspiration	-	-	-32.4
Number of Rainy Days	2.0	2.0	1.1
Number of Dry Days	20.0	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

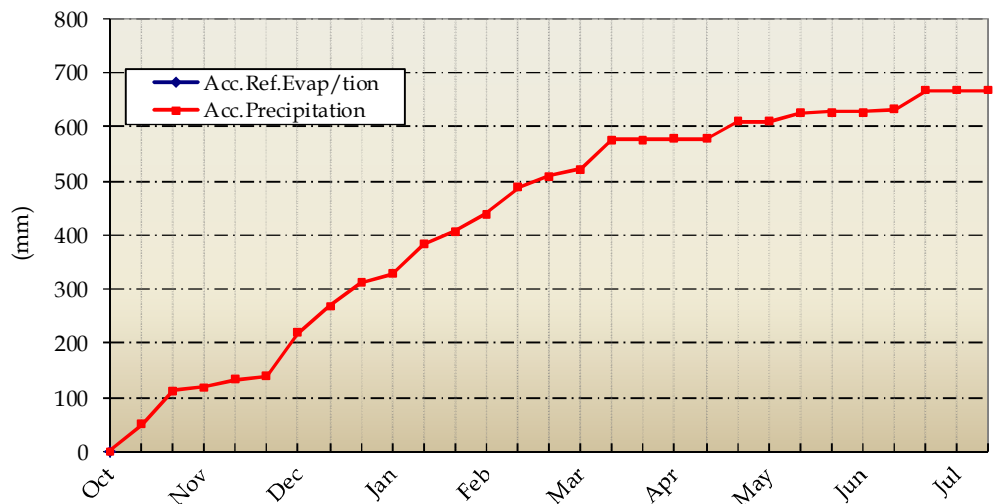


1st 10-day period (1-10/07/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.2	35.8	37.7	33.0	32.8	31.7	32.4	33.1	29.8	30.2	33.0	34.0	31.7
	Min	20.5	19.7	20.1	17.4	14.2	17.6	20.3	18.4	21.4	19.0	18.9	20.7	18.7
Relative Humidity	Max	96	95	93	92	92	95	95	91	89	86	92	85	86
	Min	35	26	17	34	20	46	36	30	39	34	32	31	36
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	28.3	25.3
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	33.4	28.5
Sunshine Duration		13.2	13.0	13.4	13.3	12.3	13.1	13.5	12.8	10.2	11.5	12.6	12.3	11.9
Precipitation			0.0						0.0			0.0		1.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	101.0	73.2
Growing Degrees	5	21.9	22.8	23.9	20.2	18.5	19.7	21.4	20.8	20.6	19.6	209.2	223.2	177.4
	10	16.9	17.8	18.9	15.2	13.5	14.7	16.4	15.8	15.6	14.6	159.2	173.2	133.6

1st 10-day period (1-10/07/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	39.7
Precipitation - Reference Evapotranspiration	-	-	-38.4
Number of Rainy Days	0.0	0.0	0.3
Number of Dry Days	20.0	25.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

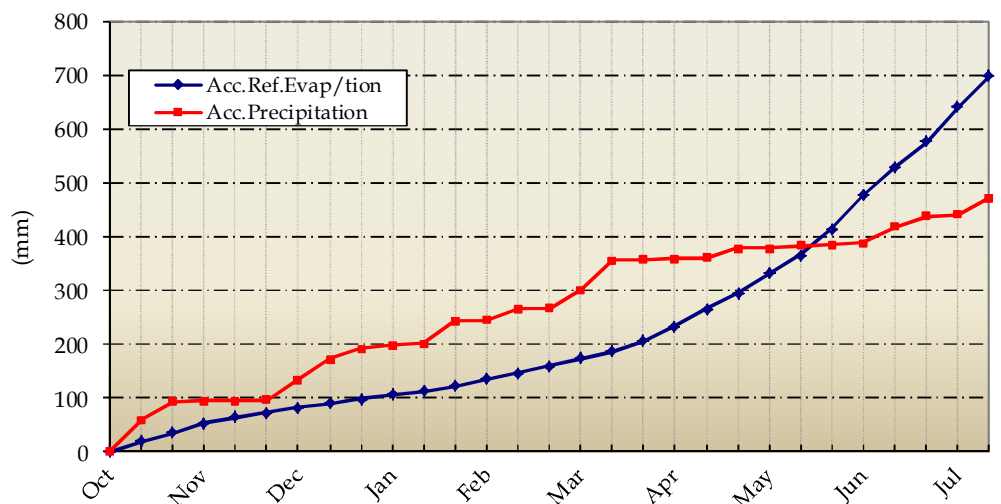


1st 10-day period (1-10/07/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	34.6	35.6	33.6	34.0	34.8	34.6	35.2	31.4	24.0	30.0	32.8	35.7	33.7
	Min	18.6	17.6	22.8	20.0	17.3	19.0	22.4	20.8	17.6	15.6	19.2	20.9	18.9
Relative Humidity	Max	90	95	71	71	70	77	76	100	98	99	85	68	79
	Min	32	32	23	27	23	30	23	43	62	33	33	25	27
Soil Temperature at 10 cm	06 UTC	28.0	27.2	28.4	27.8	27.8	28.2	27.8	28.8	25.8	24.0	27.4	-	26.8
	12 UTC	29.0	28.0	29.8	31.2	29.2	29.6	30.0	30.0	25.8	25.2	28.8	-	28.8
Sunshine Duration		8.2	10.8	11.8	10.8	10.9	9.4	10.8	5.1	0.4	9.4	8.8	10.4	10.8
Precipitation								0.0	2.5	24.8	3.6	30.9	0.0	5.2
Evaporation		8.8	13.2	21.9	5.8	10.0	12.9	10.0	1.3	8.3	8.8	101.0	132.6	109.2
Growing Degrees	5	21.6	21.6	23.2	22.0	21.1	21.8	23.8	21.1	15.8	17.8	209.8	233.3	188.0
	10	16.6	16.6	18.2	17.0	16.1	16.8	18.8	16.1	10.8	12.8	159.8	183.3	143.8

1st 10-day period (1-10/07/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	57.7	68.0	58.2
Precipitation - Reference Evapotranspiration	-26.8	-68.0	-53.0
Number of Rainy Days	3.0	0.0	1.1
Number of Dry Days	8.0	14.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



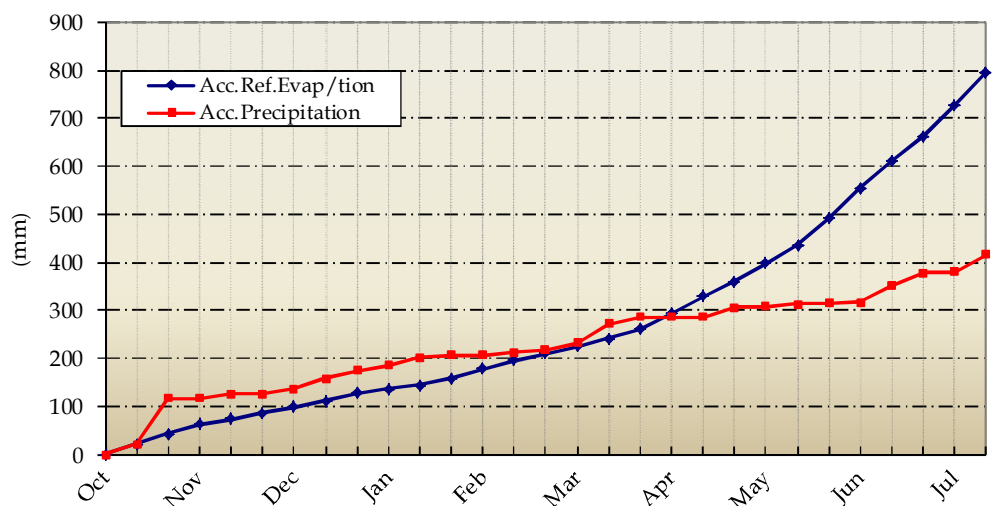
Mikra

1st 10-day period (1-10/07/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.2	34.6	33.2	32.7	33.5	34.4	33.2	30.6	21.8	29.6	31.7	34.0	32.1
	Min	21.7	22.2	24.0	24.6	20.5	24.4	24.0	21.8	17.9	20.5	22.2	22.5	20.4
Relative Humidity	Max	83	86	78	63	63	76	61	100	100	70	78	72	76
	Min	40	39	32	40	32	32	33	48	72	40	41	33	34
Soil Temperature at 10 cm	06 UTC	27.2	27.6	28.2	27.2	28.2	28.4	25.8	28.4	24.4	22.2	26.8	28.9	27.5
	12 UTC	29.0	31.2	29.8	30.0	30.8	30.8	31.0	30.0	24.0	23.0	29.0	31.7	32.6
Sunshine Duration		11.0	12.9	12.6	13.3	13.4	13.0	13.5	7.5	0.0	12.7	11.0	12.0	11.5
Precipitation									5.7	31.0		36.7	2.2	4.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	94.3
Growing Degrees	5	22.5	23.4	23.6	23.7	22.0	24.4	23.6	21.2	14.9	20.1	219.2	232.2	187.8
	10	17.5	18.4	18.6	18.7	17.0	19.4	18.6	16.2	9.9	15.1	169.2	182.2	143.5

1st 10-day period (1-10/07/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	67.9	75.7	54.3
Precipitation - Reference Evapotranspiration	-31.2	-73.5	-49.4
Number of Rainy Days	2.0	1.0	1.2
Number of Dry Days	8.0	10.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



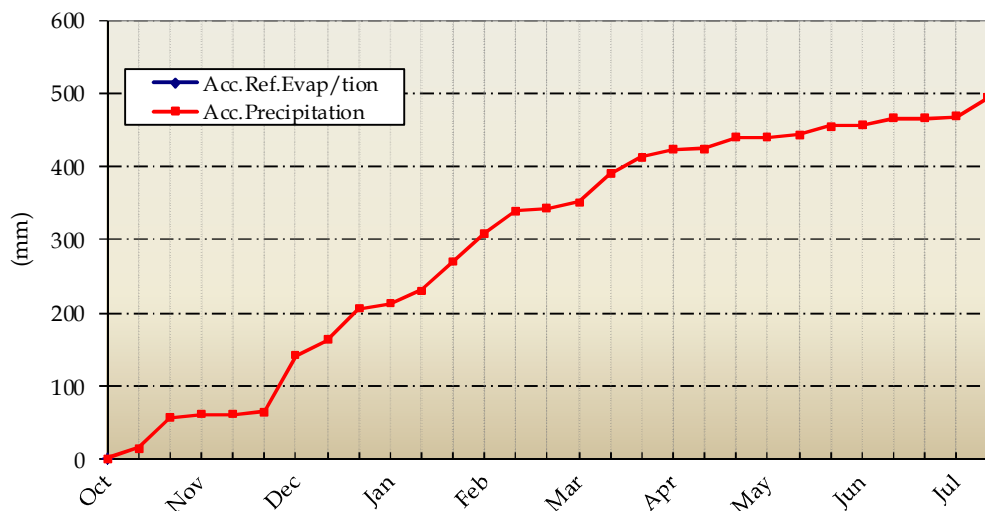
Tanagra

1st 10-day period (1-10/07/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	34.0	33.8	30.7	30.5	31.5	33.0	32.0	32.4	26.4	27.6	31.2	34.2	32.4
	Min	20.2	19.0	23.2	21.0	19.8	20.3	21.5	19.7	17.0	17.7	19.9	21.2	19.4
Relative Humidity	Max	59	67	50	47	45	51	57	75	100	97	65	64	70
	Min	18	27	25	10	18	22	22	25	40	34	24	20	27
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.4	13.3	13.8	13.7	13.7	13.1	12.6	11.9	6.4	12.9	12.5	12.7	11.9
Precipitation										17.7	9.1	26.8		3.0
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	85.5
Growing Degrees	5	22.1	21.4	22.0	20.8	20.7	21.7	21.8	21.1	16.7	17.7	205.7	226.9	176.4
	10	17.1	16.4	17.0	15.8	15.7	16.7	16.8	16.1	11.7	12.7	155.7	176.9	134.2

1st 10-day period (1-10/07/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	2.0	0.0	0.5
Number of Dry Days	12.0	25.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

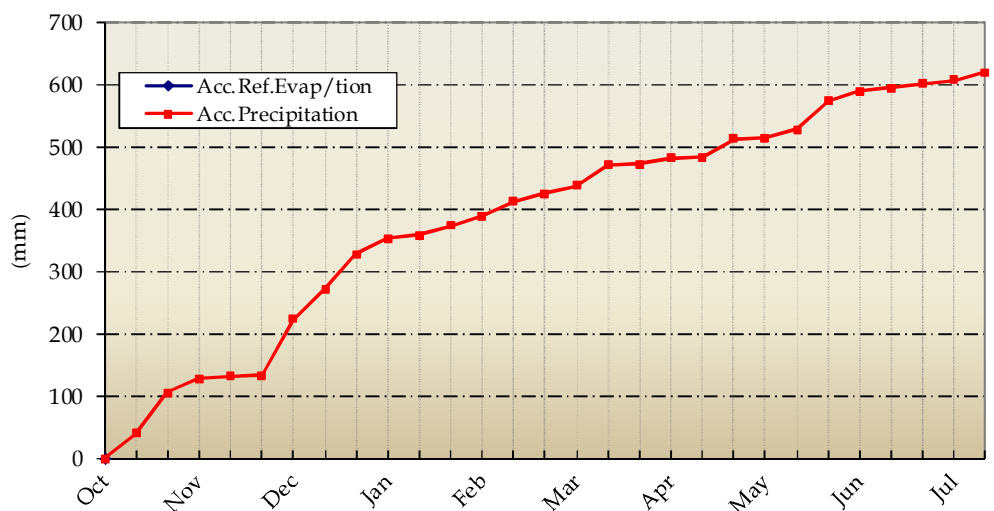


1st 10-day period (1-10/07/2022)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.9	34.0	32.0	32.4	32.4	33.8	31.0	32.6	24.3	26.6	31.2	32.9	31.2
	Min	14.3	15.3	21.3	17.7	10.1	14.2	15.2	14.5	14.8	13.7	15.1	15.8	14.2
Relative Humidity	Max	91	87	59	49	64	83	89	92	99	91	80	80	85
	Min	18	21	13	8	11	22	31	19	37	32	21	22	28
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	25.0
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	29.6
Sunshine Duration		11.0	13.2	13.3	13.3	13.3	8.9	9.1	11.7	6.2	6.1	10.6	11.8	10.8
Precipitation										12.2		12.2		7.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	53.0
Growing Degrees	5	18.6	19.7	21.7	20.1	16.3	19.0	18.1	18.6	14.6	15.2	181.6	193.6	140.9
	10	13.6	14.7	16.7	15.1	11.3	14.0	13.1	13.6	9.6	10.2	131.6	143.6	100.7

1st 10-day period (1-10/07/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	53.6	56.4	45.0
Precipitation - Reference Evapotranspiration	-41.4	-56.4	-37.1
Number of Rainy Days	1.0	0.0	1.1
Number of Dry Days	9.0	20.0	-

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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