



AGROMETEOROLOGICAL BULLETIN

July 2021
2nd 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



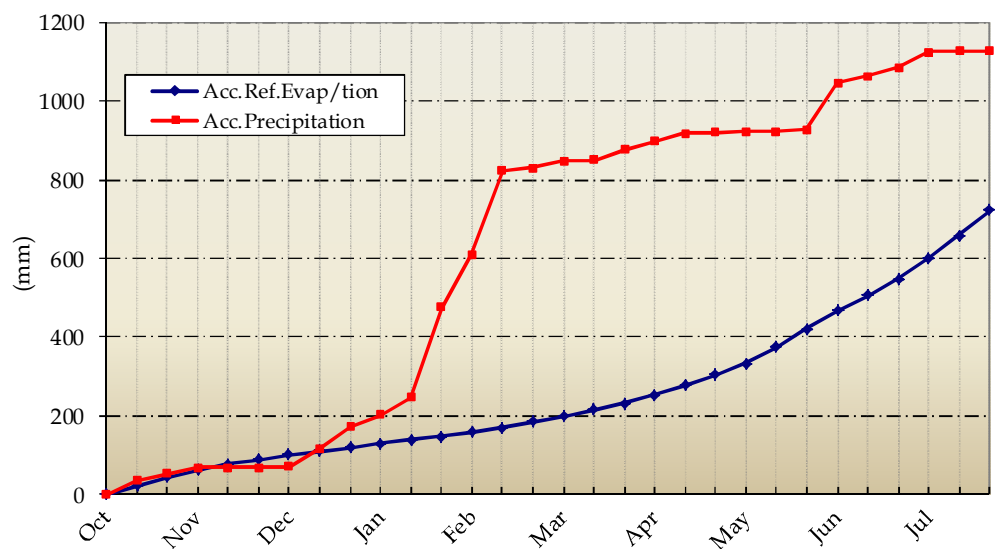
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2nd 10-day period (11-20/07/2021)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.6	32.8	34.4	35.8	36.0	35.6	35.0	34.4	31.2	31.2	34.0	31.6	30.5
	Min	18.6	18.8	20.4	20.0	19.8	22.0	20.0	23.8	24.2	21.8	20.9	18.7	17.5
Relative Humidity	Max	68	80	69	63	85	55	70	68	80	86	72	70	-
	Min	26	36	27	33	29	27	28	33	54	59	35	31	-
Soil Temperature at 10 cm	06 UTC	25.4	26.0	25.6	26.0	26.6	27.0	26.6	28.4	29.4	28.4	26.9	23.5	24.2
	12 UTC	29.2	29.4	28.8	29.6	30.4	30.4	30.6	31.0	31.8	31.2	30.2	26.9	28.8
Sunshine Duration		12.8	12.9	13.5	12.8	13.3	13.5	13.5	12.9	11.9	13.0	13.0	13.0	11.2
Precipitation														5.1
Evaporation		10.8	8.7	9.3	7.5	12.7	11.0	12.4	11.4	9.2	5.3	98.3	102.2	98.7
Growing Degrees	5	21.1	20.8	22.4	22.9	22.9	23.8	22.5	24.1	22.7	21.5	224.7	201.6	190.1
	10	16.1	15.8	17.4	17.9	17.9	18.8	17.5	19.1	17.7	16.5	174.7	151.6	140.1

2nd 10-day period (11-20/07/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	62.7	62.9
Precipitation - Reference Evapotranspiration	-62.7	-62.9
Number of Rainy Days	0.0	0.0
Number of Dry Days	17.0	29.0

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

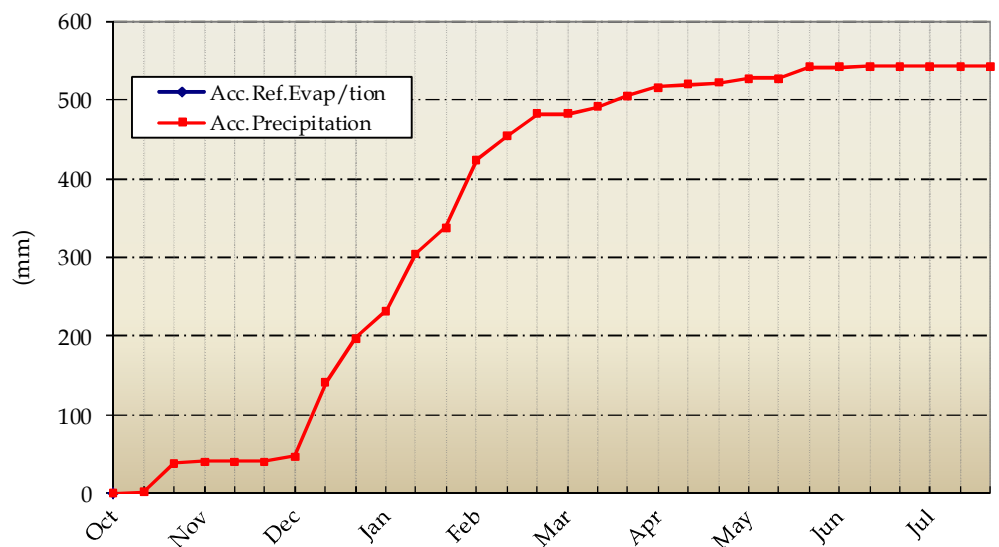


2nd 10-day period (11-20/07/2021)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.9	33.3	33.8	34.6	32.7	32.5	30.1	30.9	31.2	30.3	32.3	30.7	30.4
	Min	20.8	21.8	21.0	20.4	21.0	20.4	21.4	19.6	20.1	20.8	20.7	19.4	18.1
Relative Humidity	Max	92	92	88	93	93	92	90	93	94	92	92	92	-
	Min	34	34	33	28	36	43	47	48	42	46	39	45	-
Soil Temperature at 10 cm	06 UTC	30.8	30.6	30.6	30.6	30.6	30.6	30.4	30.4	30.2	30.4	30.5	28.9	27.1
	12 UTC	33.2	33.4	33.0	32.8	33.0	32.8	33.0	32.4	32.8	32.8	32.9	31.5	31.8
Sunshine Duration		13.1	12.8	13.0	12.7	12.2	13.1	12.7	12.4	12.9	13.1	12.8	13.2	12.3
Precipitation														0.8
Evaporation		8.0	8.4	12.2	11.8	2.2	12.4	10.2	8.8	8.6	10.4	93.0	101.2	77.4
Growing Degrees	5	22.4	22.6	22.4	22.5	21.9	21.5	20.8	20.3	20.7	20.6	215.3	200.7	192.4
	10	17.4	17.6	17.4	17.5	16.9	16.5	15.8	15.3	15.7	15.6	165.3	150.7	142.4

2nd 10-day period (11-20/07/2021)	Previous Year Value	Past Years Mean Value	
Reference Evapotranspiration	52.8	-	55.3
Precipitation - Reference Evapotranspiration	-52.8	-	-54.5
Number of Rainy Days	0.0	0.0	0.1
Number of Dry Days	40.0	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

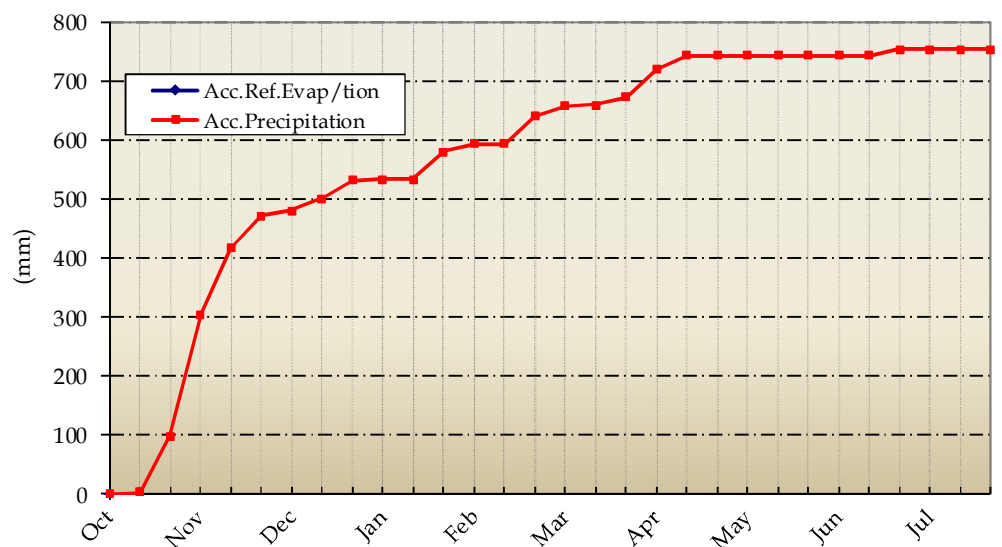


2nd 10-day period (11-20/07/2021)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.0	30.2	30.6	31.2	30.6	31.6	30.0	30.0	30.0	29.8	30.4	28.3	28.5
	Min	25.0	24.4	25.6	26.4	27.0	22.4	21.0	20.4	22.0	21.6	23.6	22.3	22.1
Relative Humidity	Max	74	67	72	69	93	91	88	93	95	93	84	82	-
	Min	47	49	46	45	56	69	72	73	72	75	60	52	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.8	12.9	12.8	12.8	12.9	12.9	12.6	12.0	12.7	12.1	12.6	12.8	12.1
Precipitation														0.0
Evaporation		10.0	10.5	10.7	8.8	7.9	8.5	6.2	6.0	4.5	5.7	78.8	70.8	93.8
Growing Degrees	5	22.5	22.3	23.1	23.8	23.8	22.0	20.5	20.2	21.0	20.7	219.9	203.1	203.0
	10	17.5	17.3	18.1	18.8	18.8	17.0	15.5	15.2	16.0	15.7	169.9	153.1	153.0

2nd 10-day period (11-20/07/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	0.0
Number of Rainy Days	0.0	0.0
Number of Dry Days	34.0	48.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

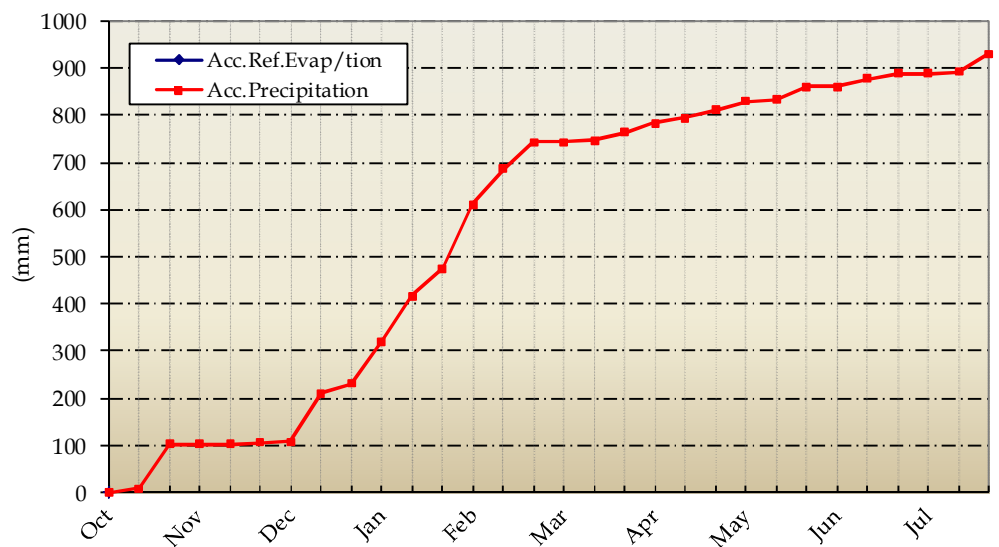


2nd 10-day period (11-20/07/2021)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	34.0	33.9	36.0	37.3	36.4	33.6	32.8	28.8	30.3	31.1	33.4	30.3	31.4
	Min	16.4	15.5	15.6	15.5	16.3	15.8	13.9	15.6	14.4	15.9	15.5	14.1	15.3
Relative Humidity	Max	100	100	91	87	74	95	92	98	100	100	94	94	-
	Min	39	33	25	23	24	34	28	44	40	38	33	40	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	23.4
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	27.8
Sunshine Duration		9.4	9.1	12.0	11.4	12.4	12.1	12.6	6.7	7.7	9.0	10.2	11.3	10.3
Precipitation		1.5	1.5						0.4	30.1	4.3	37.8	3.6	13.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	83.3
Growing Degrees	5	20.2	19.7	20.8	21.4	21.4	19.7	18.4	17.2	17.4	18.5	194.6	171.7	178.2
	10	15.2	14.7	15.8	16.4	16.4	14.7	13.4	12.2	12.4	13.5	144.6	121.7	129.5

2nd 10-day period (11-20/07/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	50.5
Precipitation - Reference Evapotranspiration	-	-	-37.2
Number of Rainy Days	5.0	2.0	1.6
Number of Dry Days	0.0	7.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

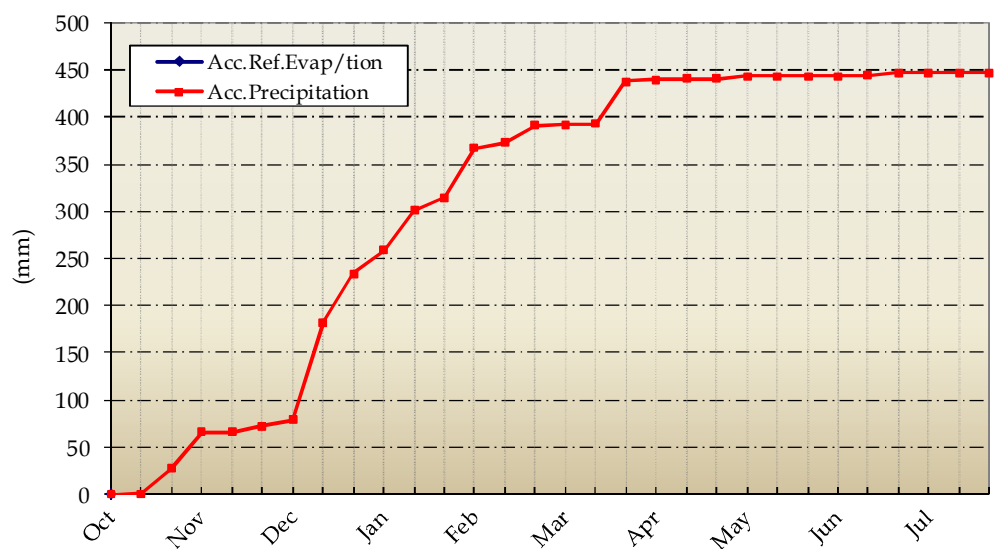


2nd 10-day period (11-20/07/2021)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.2	32.8	33.3	33.8	33.7	35.2	33.7	33.4	29.1	31.2	32.7	31.0	31.2
	Min	20.5	20.7	19.7	21.0	20.4	23.7	20.9	20.2	17.9	20.1	20.5	19.6	17.8
Relative Humidity	Max	95	93	90	82	91	70	71	88	91	95	87	90	-
	Min	49	35	39	39	36	34	27	36	52	44	39	37	-
Soil Temperature at 10 cm	06 UTC	29.0	29.0	29.0	29.0	29.2	29.4	27.4	28.0	28.4	28.2	28.7	26.9	25.6
	12 UTC	33.6	33.6	33.6	35.0	33.6	34.0	33.0	33.0	32.6	28.2	33.0	30.8	30.0
Sunshine Duration		12.6	10.6	12.2	12.6	12.5	12.7	12.8	12.0	10.3	12.5	12.1	11.5	11.5
Precipitation													10.7	3.4
Evaporation		10.0	8.0	7.0	10.0	4.0	0.0	5.0	8.0	-	-	-	104.8	87.7
Growing Degrees	5	20.9	21.8	21.5	22.4	22.1	24.5	22.3	21.8	18.5	20.7	216.3	202.7	195.0
	10	15.9	16.8	16.5	17.4	17.1	19.5	17.3	16.8	13.5	15.7	166.3	152.7	145.0

2nd 10-day period (11-20/07/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	57.1
Precipitation - Reference Evapotranspiration	-	-	-53.7
Number of Rainy Days	0.0	1.0	0.4
Number of Dry Days	35.0	6.0	-

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Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

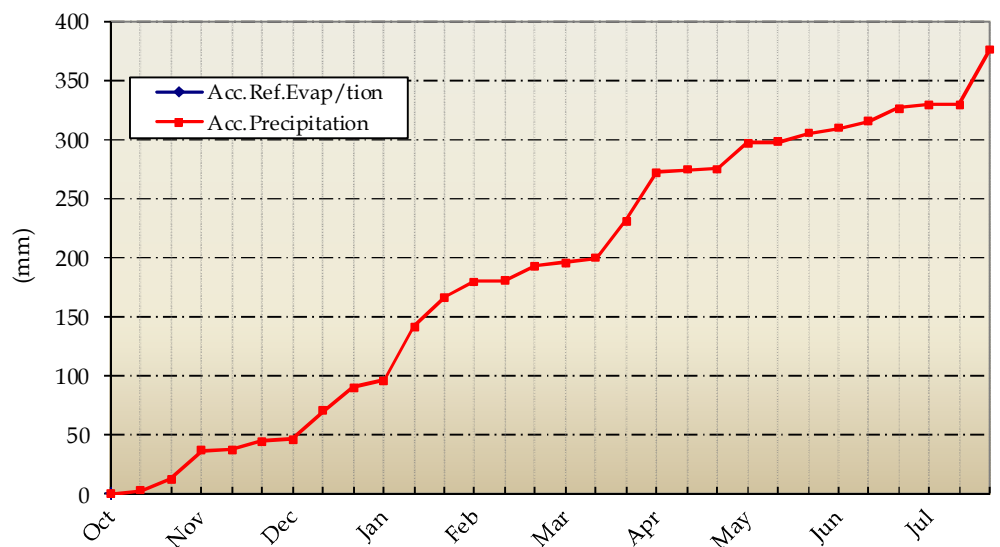


2nd 10-day period (11-20/07/2021)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.6	35.4	37.0	37.6	36.4	36.6	35.0	32.6	32.2	34.0	35.0	31.9	33.3
	Min	20.0	18.2	19.6	20.6	21.4	21.0	20.0	19.2	19.2	20.6	20.0	18.3	17.9
Relative Humidity	Max	67	66	73	71	70	67	68	100	99	97	78	82	-
	Min	26	25	23	24	27	23	24	46	43	33	29	34	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	26.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	29.2
Sunshine Duration		10.8	11.3	11.9	10.9	11.5	11.9	11.9	5.6	9.8	11.4	10.7	10.3	11.0
Precipitation									43.3	3.3	0.7	47.3	1.0	9.9
Evaporation		13.1	10.3	14.6	14.2	15.1	13.1	9.6	5.4	7.8	7.3	110.5	99.4	96.3
Growing Degrees	5	21.8	21.8	23.3	24.1	23.9	23.8	22.5	20.9	20.7	22.3	225.1	201.0	205.9
	10	16.8	16.8	18.3	19.1	18.9	18.8	17.5	15.9	15.7	17.3	175.1	151.0	155.9

2nd 10-day period (11-20/07/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	66.3	58.5	62.2
Precipitation - Reference Evapotranspiration	-19.0	-57.5	-52.3
Number of Rainy Days	3.0	2.0	1.2
Number of Dry Days	21.0	7.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



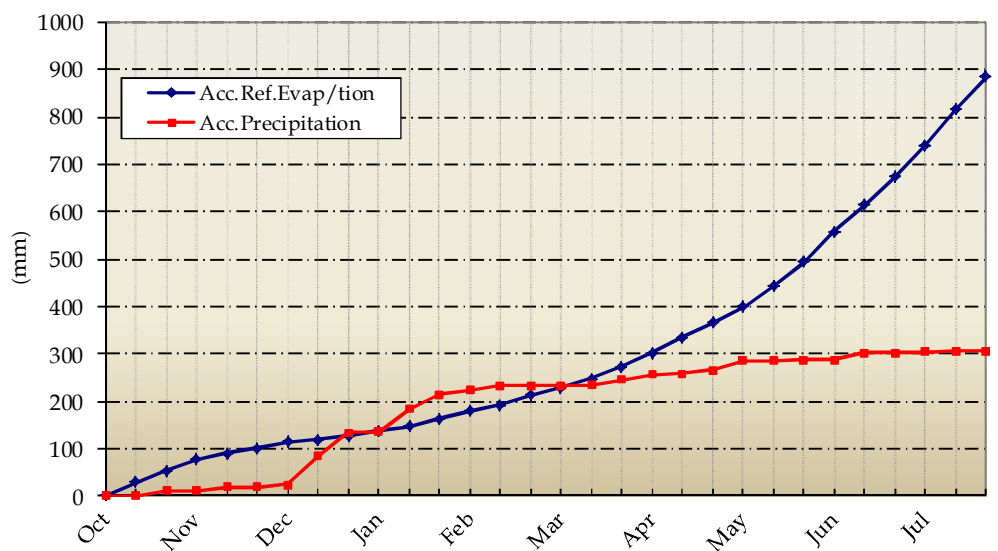
Mikra

2nd 10-day period (11-20/07/2021)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.4	34.2	35.0	35.6	34.4	35.8	34.4	31.2	31.9	34.2	34.0	30.6	31.7
	Min	23.7	21.2	22.2	23.0	23.2	22.0	21.7	22.8	20.2	24.3	22.4	20.2	18.9
Relative Humidity	Max	69	71	74	73	73	77	77	89	91	83	78	82	-
	Min	28	35	31	30	38	31	31	50	53	39	37	40	-
Soil Temperature at 10 cm	06 UTC	28.6	29.4	29.8	30.4	30.6	30.4	30.0	30.4	29.4	30.2	29.9	26.9	26.6
	12 UTC	32.6	33.0	32.6	33.0	33.4	33.8	32.6	31.4	32.2	32.4	32.7	29.3	31.5
Sunshine Duration		11.5	13.1	12.8	12.5	11.1	12.9	12.8	6.9	9.7	11.7	11.5	11.0	10.8
Precipitation									0.0	0.0		0.0	0.1	4.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	94.9
Growing Degrees	5	23.6	22.7	23.6	24.3	23.8	23.9	23.1	22.0	21.1	24.3	232.2	204.0	203.4
	10	18.6	17.7	18.6	19.3	18.8	18.9	18.1	17.0	16.1	19.3	182.2	154.0	153.4

2nd 10-day period (11-20/07/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	69.3	59.6	60.5
Precipitation - Reference Evapotranspiration	-69.3	-59.5	-56.2
Number of Rainy Days	0.0	1.0	1.4
Number of Dry Days	17.0	12.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

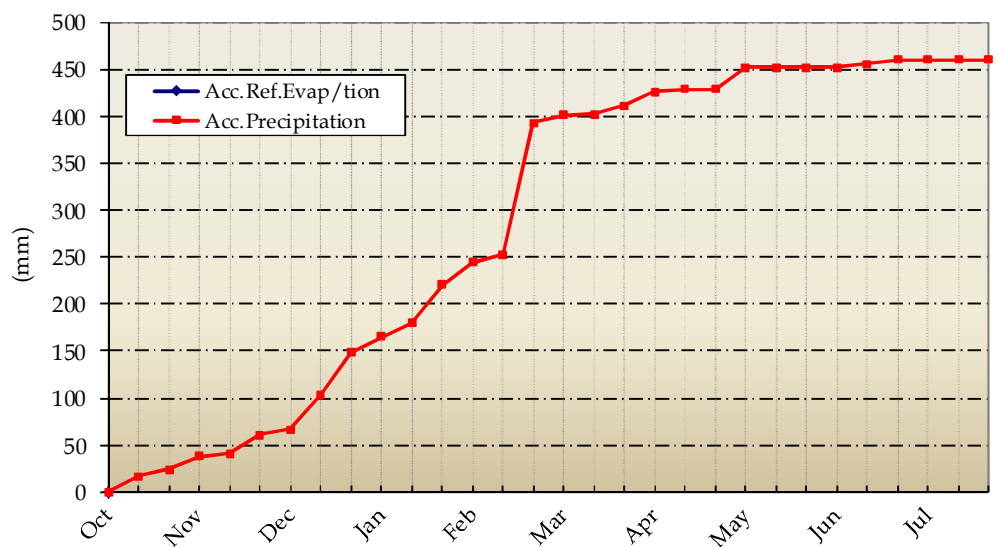


2nd 10-day period (11-20/07/2021)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.2	33.9	34.0	35.6	35.3	36.7	34.8	33.2	32.0	32.8	34.0	30.7	32.1
	Min	20.8	19.6	19.0	20.5	22.5	21.2	20.8	20.4	21.3	21.1	20.7	18.3	18.3
Relative Humidity	Max	54	52	59	53	51	55	64	72	75	71	61	64	-
	Min	22	20	22	21	17	16	24	21	35	36	23	26	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.1	13.2	13.3	13.1	12.7	13.0	13.0	13.1	9.3	12.0	12.6	12.8	
Precipitation														2.0
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	21.0	21.8	21.5	23.1	23.9	24.0	22.8	21.8	21.7	22.0	223.4	195.1	
	10	16.0	16.8	16.5	18.1	18.9	19.0	17.8	16.8	16.7	17.0	173.4	145.1	

2nd 10-day period (11-20/07/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	2.0
Number of Rainy Days	0.0	0.4
Number of Dry Days	35.0	28.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

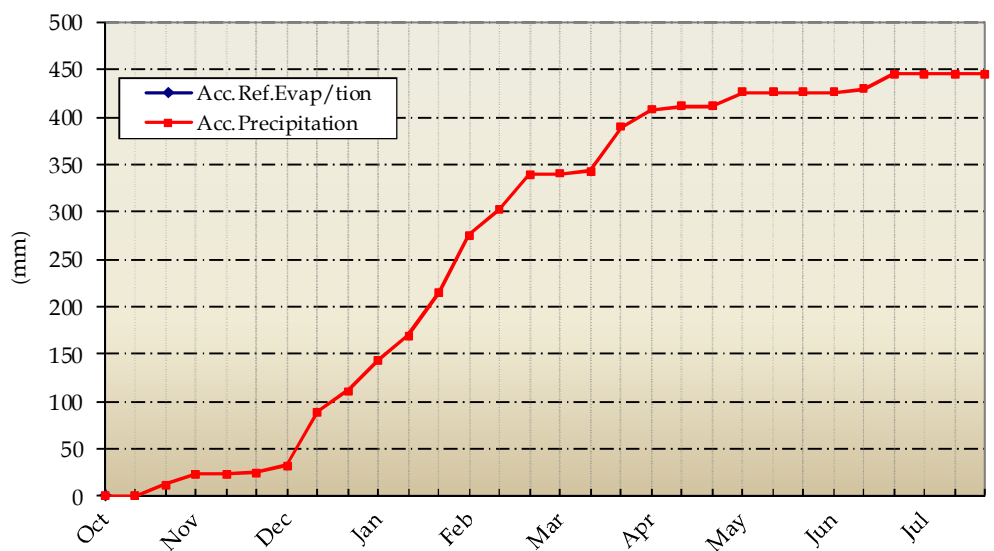


2nd 10-day period (11-20/07/2021)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.9	33.0	33.9	35.1	35.5	35.7	32.3	30.4	30.5	30.2	32.8	29.4	30.6
	Min	17.0	14.9	15.2	15.4	17.2	17.5	13.7	15.4	14.3	16.3	15.7	13.7	14.1
Relative Humidity	Max	80	90	88	79	76	80	81	89	90	94	85	91	-
	Min	25	20	17	18	24	18	12	29	20	32	22	28	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	25.3
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	28.3
Sunshine Duration		10.9	9.2	13.1	13.0	11.8	12.8	13.0	12.9	12.3	9.6	11.9	9.1	10.5
Precipitation													11.4	9.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	63.7
Growing Degrees	5	19.5	19.0	19.6	20.3	21.4	21.6	18.0	17.9	17.4	18.3	192.7	165.4	173.2
	10	14.5	14.0	14.6	15.3	16.4	16.6	13.0	12.9	12.4	13.3	142.7	115.4	123.2

2nd 10-day period (11-20/07/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	54.2	44.0	53.3
Precipitation - Reference Evapotranspiration	-54.2	-32.6	-44.2
Number of Rainy Days	0.0	3.0	1.4
Number of Dry Days	30.0	8.0	-

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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ΥΠΗΡΕΣΙΑ**

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