



AGROMETEOROLOGICAL BULLETIN

June 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



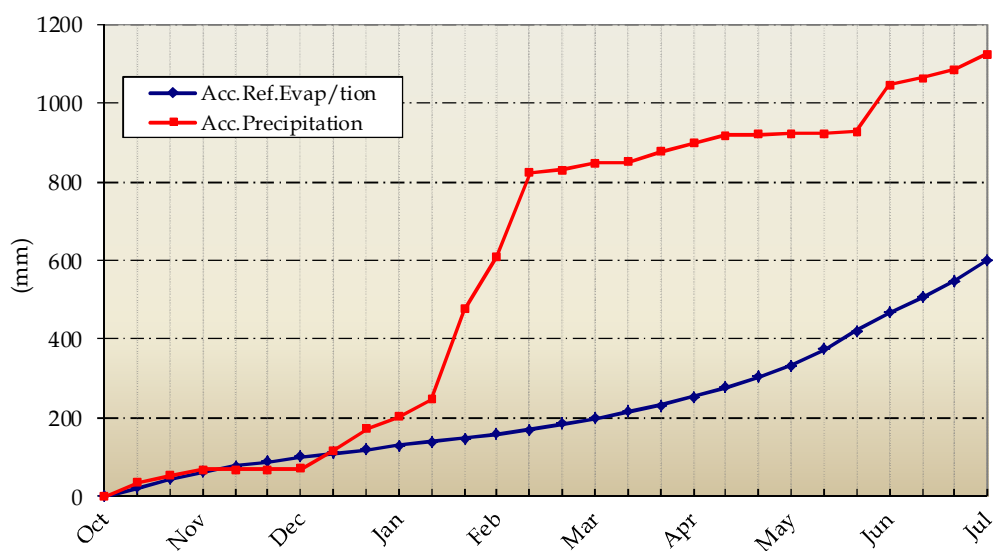
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3rd 10-day period (21-30/06/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.4	28.4	28.8	32.4	31.0	31.0	31.2	32.0	32.4	33.2	30.7	30.4	28.7
	Min	16.6	17.6	19.0	20.4	21.6	21.4	22.6	21.2	21.2	19.0	20.1	17.4	16.0
Relative Humidity	Max	94	94	94	98	91	92	75	89	84	83	89	83	-
	Min	57	59	63	47	63	56	45	46	42	34	51	41	-
Soil Temperature at 10 cm	06 UTC	22.0	22.4	24.0	24.0	24.8	25.6	24.0	25.0	25.2	25.2	24.2	22.9	23.1
	12 UTC	24.4	26.0	27.0	27.4	26.6	26.0	27.4	27.6	28.4	28.7	27.0	25.8	27.7
Sunshine Duration		10.9	12.6	9.1	11.6	9.8	11.7	12.8	12.5	12.0	13.0	11.6	11.2	10.9
Precipitation		0.8		39.5								40.3	2.6	4.4
Evaporation		5.2	7.5	4.0	7.5	5.5	7.4	7.0	8.4	9.6	9.1	71.2	88.1	85.9
Growing Degrees	5	16.5	18.0	18.9	21.4	21.3	21.2	21.9	21.6	21.8	21.1	203.7	189.1	173.3
	10	11.5	13.0	13.9	16.4	16.3	16.2	16.9	16.6	16.8	16.1	153.7	139.1	123.3

3rd 10-day period (21-30/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	53.3	55.0	55.0
Precipitation - Reference Evapotranspiration	-13.0	-52.4	-50.6
Number of Rainy Days	2.0	1.0	1.3
Number of Dry Days	0.0	19.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

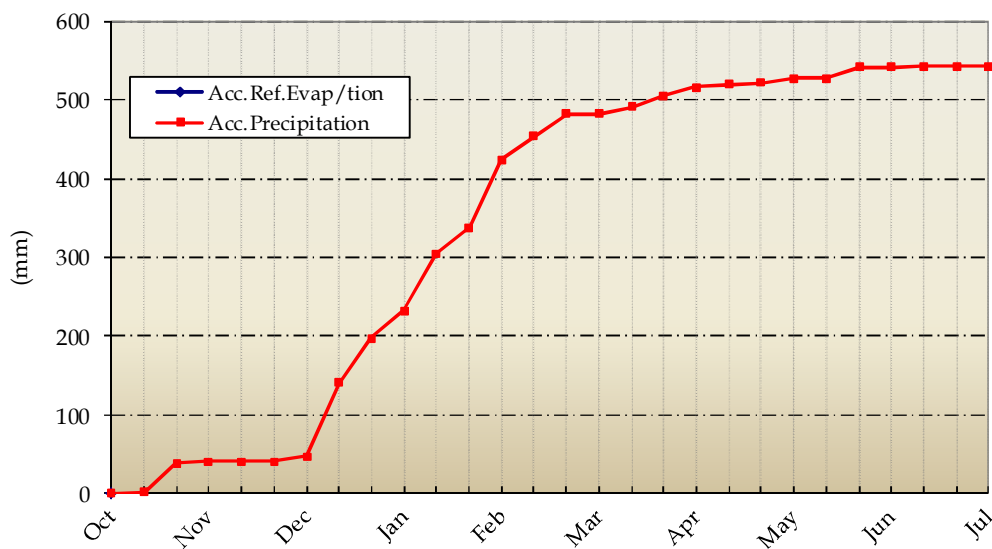


3rd 10-day period (21-30/06/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.2	35.1	34.8	34.9	36.6	36.4	35.5	34.7	34.7	35.8	35.0	29.6	28.9
	Min	18.6	18.8	18.1	19.2	19.7	19.6	19.8	17.8	19.9	18.8	19.0	18.0	17.0
Relative Humidity	Max	92	94	93	94	91	88	82	86	94	92	91	91	-
	Min	50	27	31	37	25	28	30	31	32	33	32	46	-
Soil Temperature at 10 cm	06 UTC	27.6	28.2	27.8	28.8	29.2	29.8	29.6	29.6	29.4	29.6	29.0	26.8	25.9
	12 UTC	30.6	31.8	31.0	32.0	32.8	32.2	32.6	32.4	32.0	32.8	32.0	29.4	30.7
Sunshine Duration		12.4	9.3	11.1	12.3	12.0	12.8	13.2	12.8	13.2	11.3	12.0	13.0	12.3
Precipitation														1.3
Evaporation		10.4	10.2	5.4	10.3	10.2	9.0	9.4	9.6	9.0	5.0	88.5	93.6	74.3
Growing Degrees	5	19.9	22.0	21.5	22.1	23.2	23.0	22.7	21.3	22.3	22.3	220.0	188.0	179.7
	10	14.9	17.0	16.5	17.1	18.2	18.0	17.7	16.3	17.3	17.3	170.0	138.0	129.7

3rd 10-day period (21-30/06/2021)	Previous Year Value	Past Years Mean Value	
Reference Evapotranspiration	51.5	-	53.3
Precipitation - Reference Evapotranspiration	-51.5	-	-52.0
Number of Rainy Days	0.0	0.0	0.2
Number of Dry Days	20.0	23.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

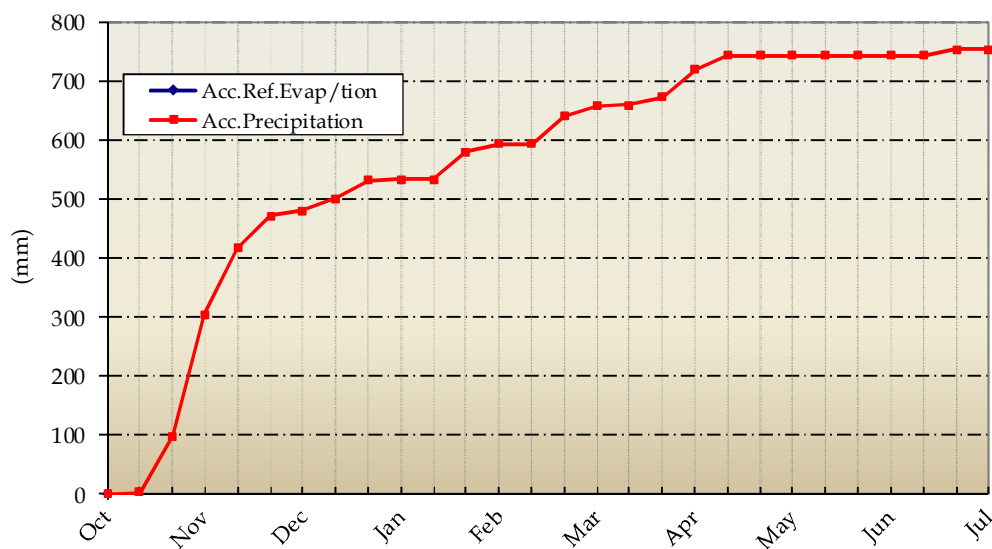


3rd 10-day period (21-30/06/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	28.8	29.8	30.6	31.2	32.0	34.4	33.2	31.6	31.6	32.8	31.6	27.2	28.2
	Min	20.2	21.8	23.0	23.0	26.6	24.6	24.0	23.2	26.8	27.2	24.0	20.7	20.4
Relative Humidity	Max	87	81	84	77	77	73	85	88	78	76	81	79	-
	Min	63	61	63	53	51	32	48	54	46	38	51	50	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.0	10.7	12.0	12.8	13.0	12.2	13.0	13.2	11.0	13.0	12.4	12.7	12.3
Precipitation														0.0
Evaporation		6.7	4.2	5.6	6.8	10.0	6.0	6.5	9.7	8.4	9.2	73.1	72.0	89.0
Growing Degrees	5	19.5	20.8	21.8	22.1	24.3	24.5	23.6	22.4	24.2	25.0	228.2	189.6	193.1
	10	14.5	15.8	16.8	17.1	19.3	19.5	18.6	17.4	19.2	20.0	178.2	139.6	143.1

3rd 10-day period (21-30/06/2021)	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	14.0	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

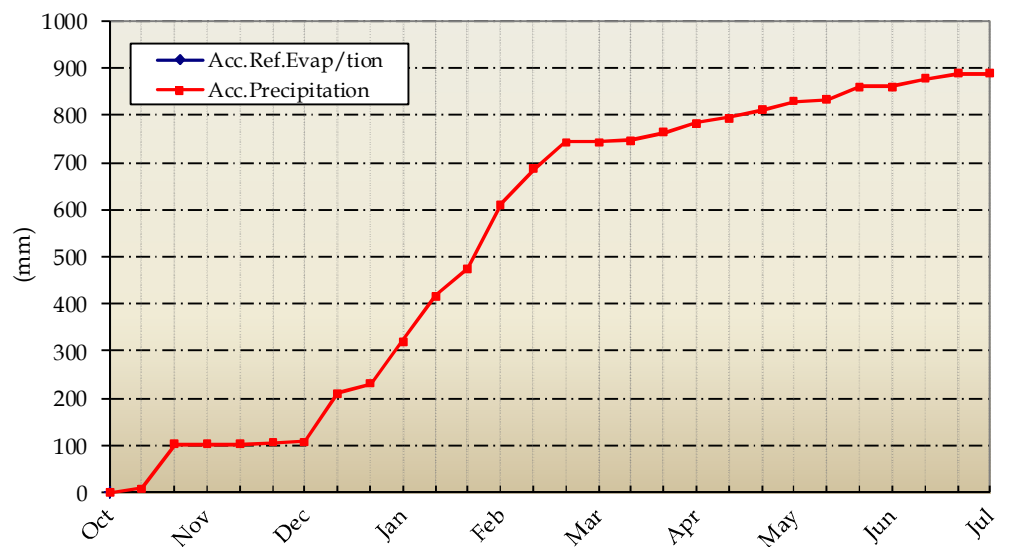


3rd 10-day period (21-30/06/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.5	34.8	38.1	38.5	38.7	36.4	35.5	35.8	36.0	38.0	36.4	30.1	29.4
	Min	15.5	16.9	16.1	16.0	16.2	16.0	18.0	12.7	13.4	15.5	15.6	14.1	13.7
Relative Humidity	Max	96	94	93	95	82	63	60	62	59	92	80	100	-
	Min	34	28	17	22	18	20	25	15	21	18	22	41	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	21.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	25.9
Sunshine Duration		9.3	8.4	10.8	10.6	12.0	12.6	13.2	12.9	12.8	9.7	11.2	8.9	10.8
Precipitation													14.7	6.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	67.3
Growing Degrees	5	19.0	20.9	22.1	22.3	22.5	21.2	21.8	19.3	19.7	21.8	210.3	171.3	166.2
	10	14.0	15.9	17.1	17.3	17.5	16.2	16.8	14.3	14.7	16.8	160.3	121.3	116.2

3rd 10-day period (21-30/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	50.2
Precipitation - Reference Evapotranspiration	-	-	-43.7
Number of Rainy Days	0.0	5.0	1.3
Number of Dry Days	11.0	9.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

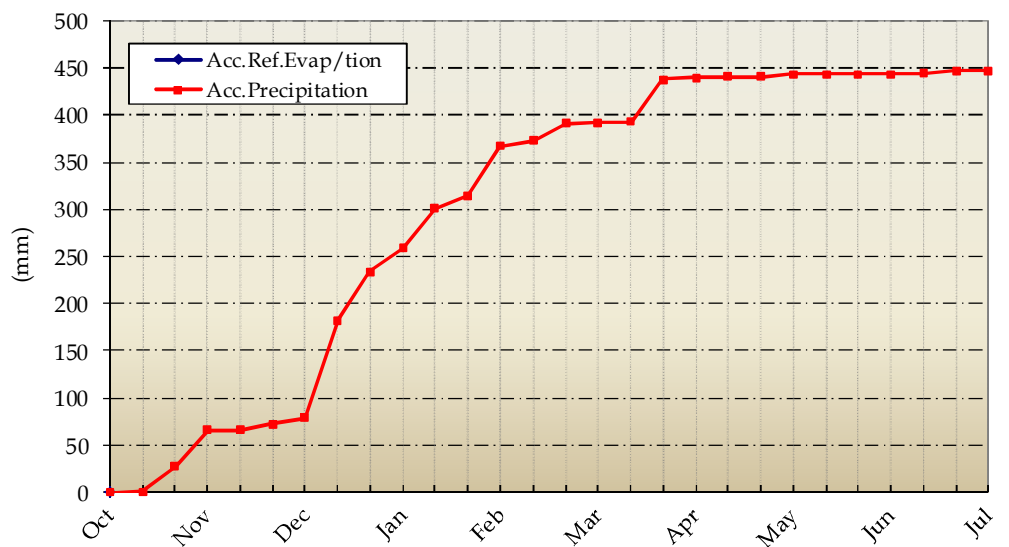


3rd 10-day period (21-30/06/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.8	32.5	35.2	37.7	35.2	38.9	39.4	32.5	32.8	32.5	34.6	30.0	30.4
	Min	22.0	19.3	21.6	20.2	19.1	19.9	26.0	19.0	19.0	17.5	20.4	16.7	16.7
Relative Humidity	Max	71	77	77	92	84	82	53	66	90	96	79	94	-
	Min	43	31	23	25	33	20	21	38	38	29	30	39	-
Soil Temperature at 10 cm	06 UTC	25.6	27.0	27.0	26.4	27.6	29.0	28.6	28.4	28.0	27.6	27.5	26.0	24.2
	12 UTC	31.0	32.0	32.4	33.8	33.2	33.6	38.0	33.6	33.2	33.0	33.4	29.1	28.7
Sunshine Duration		12.5	11.7	12.6	12.8	13.0	12.8	13.1	12.4	11.4	11.5	12.4	11.1	11.8
Precipitation														0.4
Evaporation		3.8	11.2	3.0	9.0	2.0	11.5	11.4	10.0	10.0	8.8	80.7	85.8	88.4
Growing Degrees	5	20.9	20.9	23.4	24.0	22.2	24.4	27.7	20.8	20.9	20.0	225.1	183.9	185.7
	10	15.9	15.9	18.4	19.0	17.2	19.4	22.7	15.8	15.9	15.0	175.1	133.9	135.7

3rd 10-day period (21-30/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	58.1
Precipitation - Reference Evapotranspiration	-	-	-57.7
Number of Rainy Days	0.0	0.0	0.3
Number of Dry Days	15.0	30.0	-

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Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



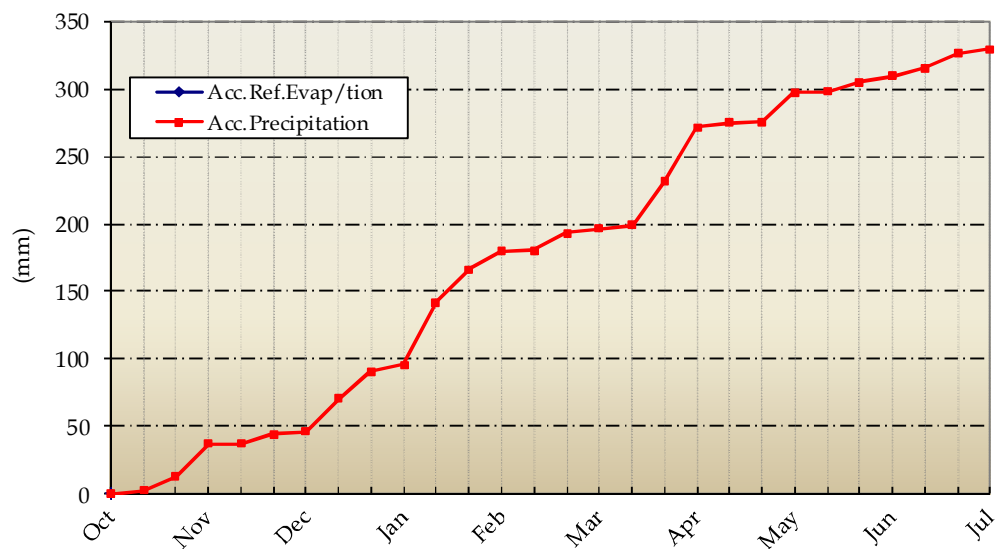
Larisa

3rd 10-day period (21-30/06/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	34.4	35.8	39.6	39.8	41.2	40.8	36.6	36.6	37.0	38.2	38.0	31.9	32.8
	Min	10.8	19.6	20.2	21.2	21.0	20.0	21.2	20.0	20.4	20.2	19.5	17.4	16.5
Relative Humidity	Max	94	96	94	92	83	80	87	85	86	91	89	85	-
	Min	36	37	23	24	19	16	28	30	31	28	27	33	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	25.0
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	27.7
Sunshine Duration		7.0	3.3	8.7	10.8	8.0	8.2	9.3	11.2	11.8	8.7	8.7	9.0	11.1
Precipitation		0.0	2.1				1.0					3.1	2.2	6.4
Evaporation		7.6	10.8	10.5	11.7	10.2	6.7	14.9	12.7	11.6	6.7	103.4	92.6	93.9
Growing Degrees	5	17.6	22.7	24.9	25.5	26.1	25.4	23.9	23.3	23.7	24.2	237.3	196.2	196.6
	10	12.6	17.7	19.9	20.5	21.1	20.4	18.9	18.3	18.7	19.2	187.3	146.2	146.6

3rd 10-day period (21-30/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	62.2	54.6	61.9
Precipitation - Reference Evapotranspiration	-59.1	-52.4	-55.5
Number of Rainy Days	2.0	3.0	0.9
Number of Dry Days	2.0	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



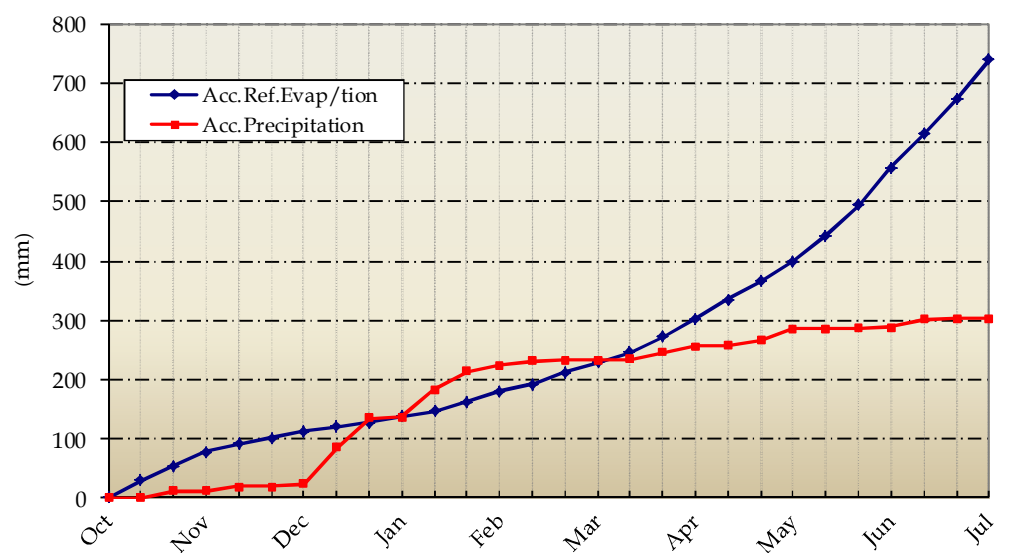
Mikra

3rd 10-day period (21-30/06/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.3	31.8	37.2	36.6	36.9	39.1	35.2	34.2	34.8	35.0	35.1	30.6	30.8
	Min	18.6	20.0	21.0	21.8	22.4	21.2	21.7	22.7	22.1	22.2	21.4	19.8	17.9
Relative Humidity	Max	93	90	91	90	87	76	84	87	81	82	86	81	-
	Min	48	44	36	39	37	30	34	38	38	35	38	40	-
Soil Temperature at 10 cm	06 UTC	26.0	26.2	26.4	27.0	28.4	28.4	29.2	29.4	29.4	29.6	28.0	25.3	25.3
	12 UTC	28.0	28.2	29.4	29.8	29.6	31.6	31.8	32.2	32.4	32.6	30.6	28.0	30.2
Sunshine Duration		11.2	10.4	11.9	9.9	10.7	12.4	13.4	13.3	12.4	11.6	11.7	10.9	11.0
Precipitation			1.1									1.1	14.2	4.8
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	93.3
Growing Degrees	5	19.5	20.9	24.1	24.2	24.7	25.2	23.5	23.5	23.5	23.6	232.4	202.2	193.2
	10	14.5	15.9	19.1	19.2	19.7	20.2	18.5	18.5	18.5	18.6	182.4	152.2	143.2

3rd 10-day period (21-30/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	67.5	57.3	61.4
Precipitation - Reference Evapotranspiration	-66.4	-43.1	-56.6
Number of Rainy Days	1.0	3.0	1.1
Number of Dry Days	1.0	5.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



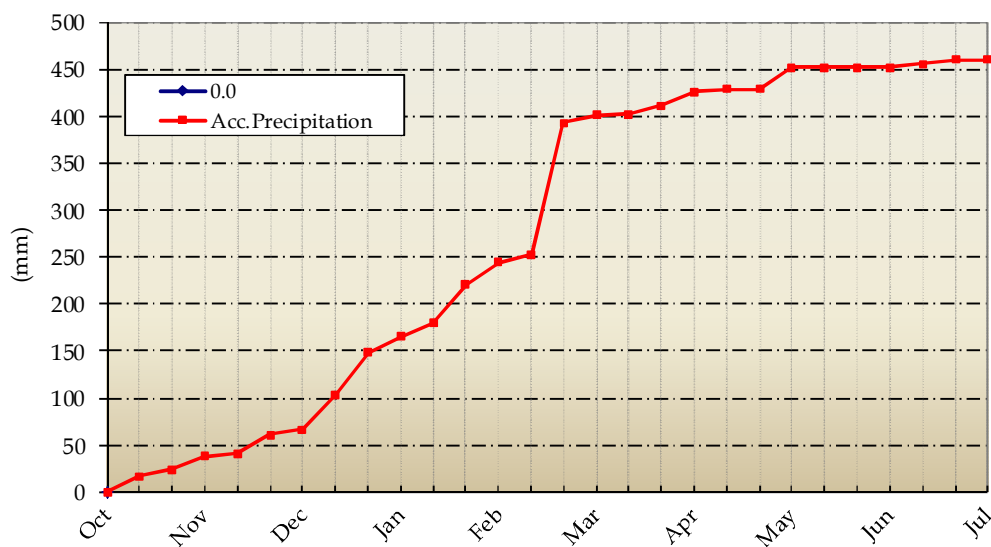
Tanagra

3rd 10-day period (21-30/06/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.4	33.8	37.7	37.1	38.2	40.0	35.5	35.2	35.6	36.4	36.2	30.5	31.5
	Min	18.2	19.1	20.8	20.6	22.4	22.4	21.0	19.6	20.8	21.0	20.6	17.7	17.1
Relative Humidity	Max	97	81	75	70	62	62	72	66	60	67	71	76	-
	Min	31	28	24	34	22	11	30	25	21	24	25	28	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		10.6	11.0	12.5	12.8	12.3	12.7	12.9	13.1	13.3	12.5	12.4	11.8	
Precipitation			0.0									0.0	0.4	2.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	20.3	21.5	24.3	23.9	25.3	26.2	23.3	22.4	23.2	23.7	233.9	191.1	
	10	15.3	16.5	19.3	18.9	20.3	21.2	18.3	17.4	18.2	18.7	183.9	141.1	

3rd 10-day period (21-30/06/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	2.6
Number of Rainy Days	0.0	1.0
Number of Dry Days	15.0	18.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

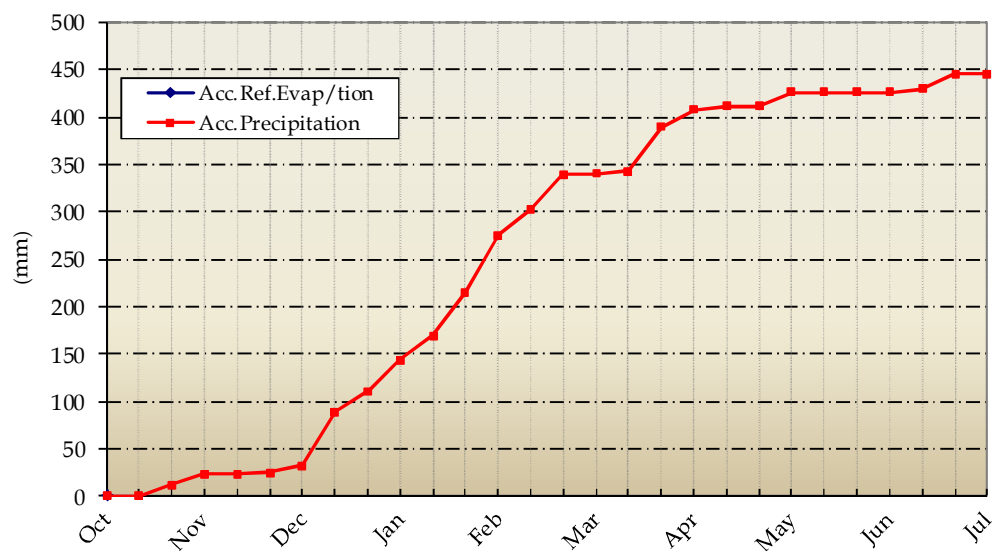


3rd 10-day period (21-30/06/2021)		21	22	23	24	25	26	27	28	29	30	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.5	35.1	36.4	38.1	36.2	37.1	35.6	34.0	35.7	37.6	35.7	28.6	29.8
	Min	14.2	16.1	16.0	16.0	17.2	17.5	15.0	15.2	15.3	15.7	15.8	12.3	12.5
Relative Humidity	Max	96	88	84	87	87	88	88	89	87	85	88	94	-
	Min	28	18	13	10	20	12	14	21	14	12	16	29	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	24.0
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	27.2
Sunshine Duration		11.5	10.2	12.0	12.5	11.3	9.2	13.0	13.1	13.1	12.1	11.8	10.2	11.1
Precipitation						0.0						0.0	10.4	5.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	65.6
Growing Degrees	5	17.9	20.6	21.2	22.1	21.7	22.3	20.3	19.6	20.5	21.7	207.8	154.4	161.5
	10	12.9	15.6	16.2	17.1	16.7	17.3	15.3	14.6	15.5	16.7	157.8	104.4	111.5

3rd 10-day period (21-30/06/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	54.8	46.0	53.9
Precipitation - Reference Evapotranspiration	-54.8	-35.6	-48.5
Number of Rainy Days	0.0	5.0	0.7
Number of Dry Days	10.0	18.0	-

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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