



AGROMETEOROLOGICAL BULLETIN

*January 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



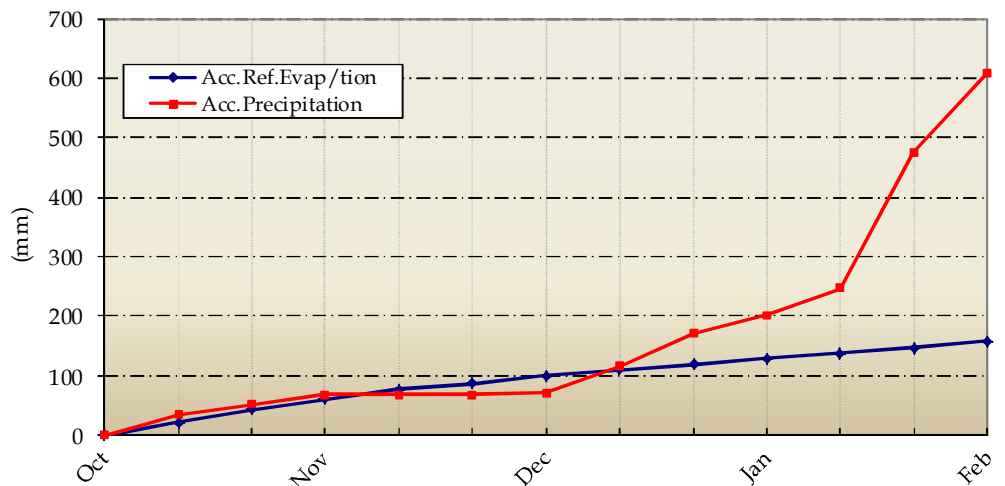
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3rd 10-day period (21-31/01/2021)		21	22	23	24	25	26	27	28	29	30	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	12.8	15.0	14.4	15.6	15.2	14.6	13.2	6.6	12.2	11.6	15.2	13.3	12.3	8.8
	Min	-0.4	5.4	9.0	12.0	12.0	8.2	2.2	-1.6	-1.2	2.8	3.4	4.7	1.7	1.4
Relative Humidity	Max	92	94	88	89	90	90	89	92	96	95	94	92	90	-
	Min	55	66	65	67	57	69	56	39	54	67	72	61	51	-
Soil Temperature at 10 cm	06 UTC	3.2	6.6	8.0	10.0	11.2	9.4	7.8	5.2	4.0	8.6	6.4	7.3	5.9	4.6
	12 UTC	5.4	8.4	9.4	11.6	12.0	10.0	7.2	7.2	6.8	9.6	9.2	8.8	8.3	5.8
Sunshine Duration		4.9	4.1	0.0	7.0	3.4	0.0	0.0	7.1	7.7	0.5	4.8	3.6	5.9	3.3
Precipitation				0.0	11.2	29.8	37.4	31.6			24.7		134.7	17.4	16.6
Evaporation		0.0	0.2	0.8	0.6	1.2	1.0	0.0	0.0	0.0	1.1	3.1	8.0	9.9	10.0
Growing Degrees	5	1.2	5.2	6.7	8.8	8.6	6.4	2.7	0.0	0.5	2.2	4.3	46.6	33.1	16.7
	10	0.0	0.2	1.7	3.8	3.6	1.4	0.0	0.0	0.0	0.0	0.0	10.7	3.0	2.2

3rd 10-day period (21-31/01/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.2	9.9	10.8
Precipitation - Reference Evapotranspiration	122.5	7.5	5.8
Number of Rainy Days	5.0	4.0	2.7
Number of Dry Days	11.0	25.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

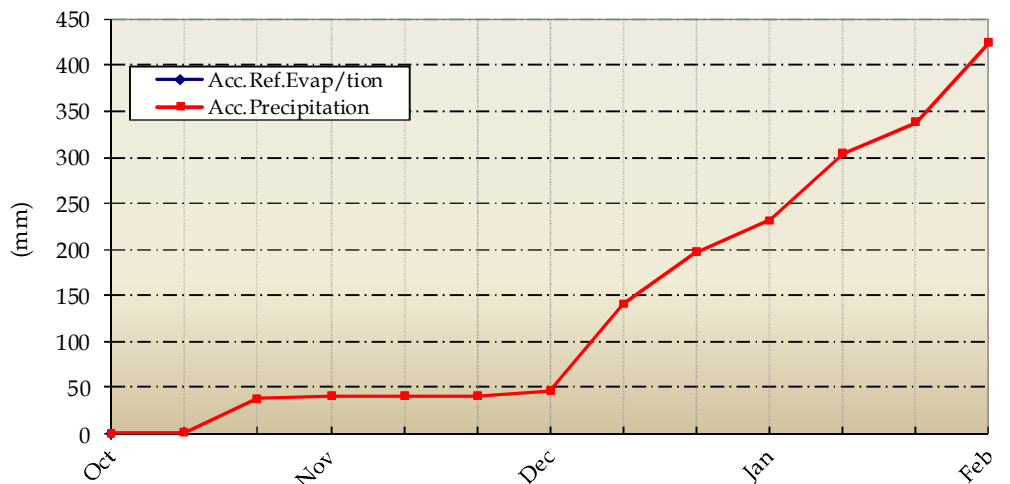


3rd 10-day period (21-31/01/2021)		21	22	23	24	25	26	27	28	29	30	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.3	13.7	15.8	16.1	16.2	16.0	12.0	10.4	15.0	17.7	19.3	15.2	15.6	14.0
	Min	7.4	9.4	10.1	7.4	10.8	9.7	4.9	2.6	3.5	12.3	8.6	7.9	5.7	5.3
Relative Humidity	Max	91	95	98	96	94	98	82	95	93	90	97	94	96	-
	Min	57	83	63	56	50	47	41	39	70	61	53	56	59	-
Soil Temperature at 10 cm	06 UTC	9.4	10.4	11.4	10.8	12.0	12.2	10.0	8.6	8.4	11.2	10.6	10.5	10.1	8.6
	12 UTC	9.4	11.0	11.2	11.4	12.5	12.4	9.4	9.0	9.2	13.6	11.6	11.0	11.5	10.2
Sunshine Duration		2.5	0.2	0.4	2.3	6.3	0.0	7.7	7.6	2.2	7.0	8.0	4.0	4.6	4.8
Precipitation		1.2	4.0	17.0	25.9	13.1	16.5	2.6	5.4	0.1			85.8	4.2	33.1
Evaporation		0.4	3.7	0.2	1.0	0.4	0.2	0.4	3.8	0.5	1.6	1.4	13.6	23.3	18.6
Growing Degrees	5	6.4	6.6	8.0	6.8	8.5	7.9	3.5	1.5	4.3	10.0	9.0	72.1	61.7	51.2
	10	1.4	1.6	3.0	1.8	3.5	2.9	0.0	0.0	0.0	5.0	4.0	22.9	16.5	9.9

3rd 10-day period (21-31/01/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	11.9
Precipitation - Reference Evapotranspiration	-	21.2
Number of Rainy Days	9.0	4.6
Number of Dry Days	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

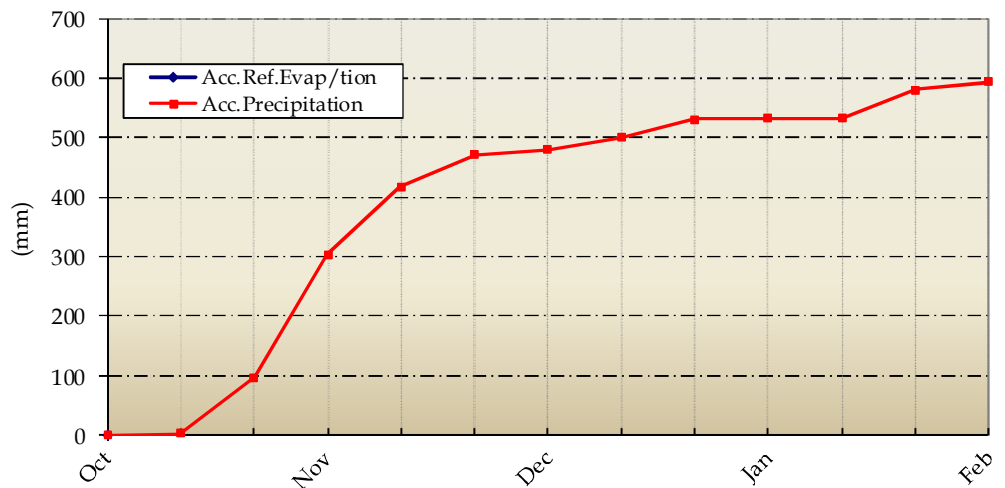


3rd 10-day period (21-31/01/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	16.8	16.4	16.4	18.0	20.6	17.4	12.4	12.8	16.2	20.0	21.2	17.1	15.7	15.0
	Min	7.2	8.2	10.0	13.4	14.6	14.8	10.2	7.2	4.2	12.4	9.2	10.1	9.0	8.9
Relative Humidity	Max	83	87	78	79	79	82	88	84	90	74	89	83	83	-
	Min	53	58	53	58	51	56	52	54	58	45	51	54	54	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		7.4	5.4	5.4	7.8	9.0	0.0	7.4	3.7	7.1	6.0	8.7	6.2	6.4	4.0
Precipitation								12.3	1.0				13.3	1.2	25.2
Evaporation		2.8	1.0	2.4	3.3	2.8	2.0	5.4	2.3	2.1	2.3	2.2	28.6	26.2	29.5
Growing Degrees	5	7.0	7.3	8.2	10.7	12.6	11.1	6.3	5.0	5.2	11.2	10.2	94.8	80.8	76.7
	10	2.0	2.3	3.2	5.7	7.6	6.1	1.3	0.0	0.2	6.2	5.2	39.8	26.6	23.4

3rd 10-day period (21-31/01/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	25.2
Number of Rainy Days	2.0	4.4
Number of Dry Days	6.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

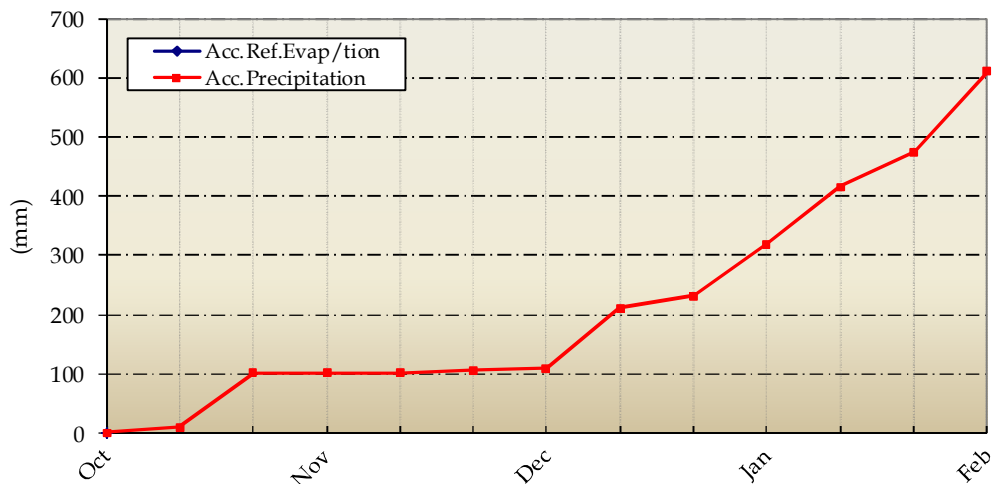


3rd 10-day period (21-31/01/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	8.2	11.5	10.2	12.1	11.0	8.3	5.6	6.9	8.4	14.2	12.1	9.9	11.3	9.3
	Min	2.2	5.5	6.9	3.9	6.5	3.4	-0.8	-5.9	-2.8	6.1	-0.2	2.3	-0.7	0.7
Relative Humidity	Max	100	100	100	97	94	99	84	93	95	99	99	96	99	-
	Min	93	74	81	75	46	94	37	33	77	61	75	68	58	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	3.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6
Sunshine Duration		0.0	1.9	0.0	2.2	4.2	0.0	7.2	8.0	0.0	5.6	0.0	2.6	3.2	3.1
Precipitation		13.0	6.5	26.3	13.4	30.2	33.2			1.9	10.8	1.8	137.1	41.4	37.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	8.0
Growing Degrees	5	0.2	3.5	3.6	3.0	3.8	0.9	0.0	0.0	0.0	5.2	1.0	21.0	16.8	13.3
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.4

3rd 10-day period (21-31/01/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	8.6
Precipitation - Reference Evapotranspiration	-	-	28.6
Number of Rainy Days	9.0	4.0	4.3
Number of Dry Days	4.0	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

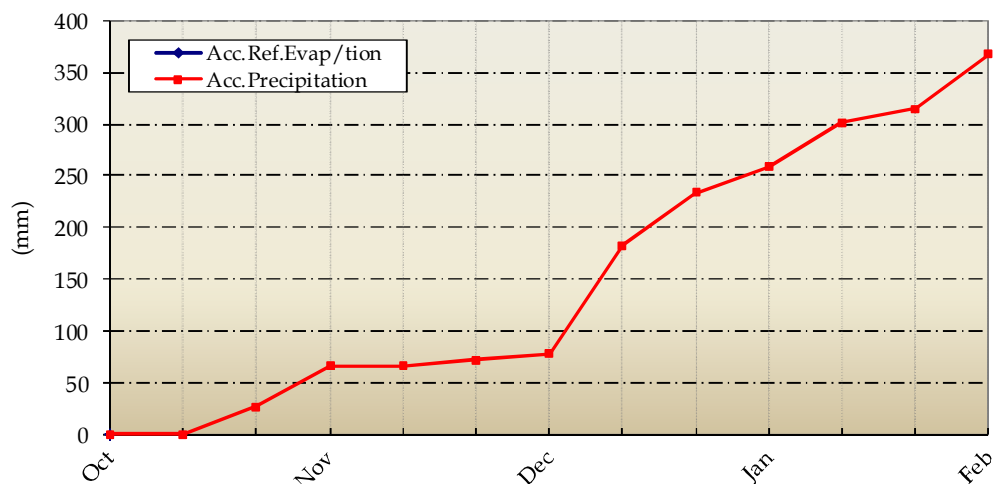


3rd 10-day period (21-31/01/2021)		21	22	23	24	25	26	27	28	29	30	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.4	13.6	15.2	17.7	18.3	16.2	10.8	12.3	11.5	19.6	18.0	15.2	16.9	14.8
	Min	3.1	9.0	8.9	4.8	10.7	9.5	4.3	0.4	1.8	8.0	2.7	5.7	4.5	5.3
Relative Humidity	Max	95	100	100	100	100	100	80	90	92	100	99	96	89	-
	Min	69	90	66	53	50	68	42	27	75	43	49	57	43	-
Soil Temperature at 10 cm	06 UTC	7.8	10.0	10.8	10.8	12.0	11.4	10.4	8.0	6.2	9.4	9.0	9.6	9.5	9.0
	12 UTC	9.4	10.8	11.5	11.4	12.5	12.4	10.4	9.0	7.6	11.2	10.5	10.6	10.6	10.3
Sunshine Duration		1.4	0.0	0.5	5.5	6.0	0.0	4.4	8.6	0.6	7.1	4.5	3.5	6.1	4.4
Precipitation		0.6	7.6	10.9	5.7	13.1	10.9	3.4	0.1	0.1	0.5		52.9	14.2	36.5
Evaporation		0.4	0.1	0.5	0.1	4.0	0.1	0.2	2.4	0.4	2.2	0.7	11.1	16.6	21.4
Growing Degrees	5	3.8	6.3	7.1	6.3	9.5	7.9	2.6	1.4	1.7	8.8	5.4	60.4	62.6	55.6
	10	0.0	1.3	2.1	1.3	4.5	2.9	0.0	0.0	0.0	3.8	0.4	16.1	10.6	9.3

3rd 10-day period (21-31/01/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	17.2	13.4
Precipitation - Reference Evapotranspiration	-	-3.0	23.1
Number of Rainy Days	10.0	4.0	4.7
Number of Dry Days	2.0	14.0	-

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Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

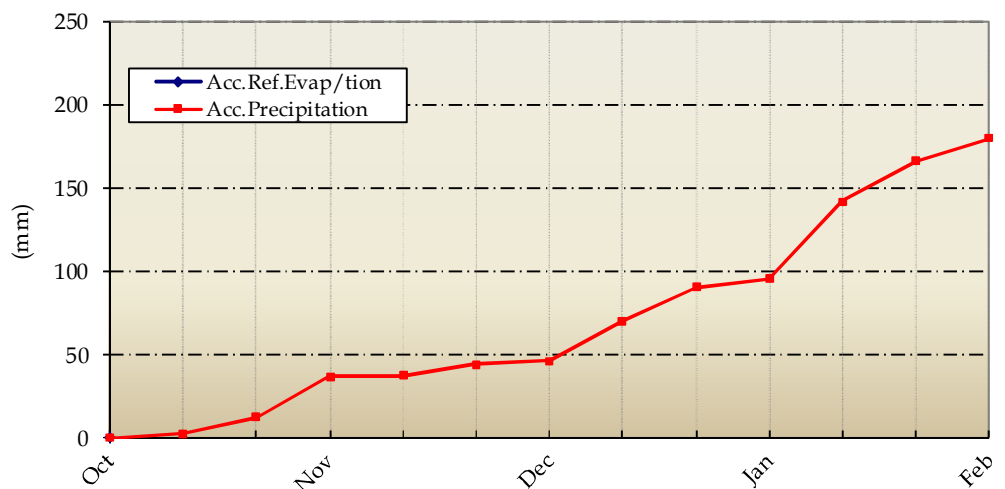


3rd 10-day period (21-31/01/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	11.2	14.4	12.7	15.0	16.0	13.4	7.7	8.5	13.4	15.8	13.0	12.8	14.0	10.7
	Min	-3.0	5.4	1.8	1.0	6.0	2.2	3.0	-1.4	-2.6	5.0	0.4	1.6	-1.1	1.2
Relative Humidity	Max	93	98	98	100	97	99	63	84	91	95	96	92	92	-
	Min	57	60	78	56	41	62	39	28	40	41	64	51	46	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	5.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2
Sunshine Duration		-	-	-	-	-	-	-	-	-	-	-	-	5.8	3.5
Precipitation				0.0	1.6	3.1	8.4	0.0			0.1		13.2	1.0	10.7
Evaporation		0.0	1.3	0.1	0.0	2.9	0.0	0.0	0.0	0.0	4.5	0.0	8.8	12.0	7.0
Growing Degrees	5	0.0	4.9	2.3	3.0	6.0	2.8	0.4	0.0	0.4	5.4	1.7	26.8	23.1	18.5
	10	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.4	0.0	1.4	1.9	1.5

3rd 10-day period (21-31/01/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	11.6	8.6
Precipitation - Reference Evapotranspiration	-	-10.6	2.1
Number of Rainy Days	4.0	1.0	3.0
Number of Dry Days	7.0	34.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



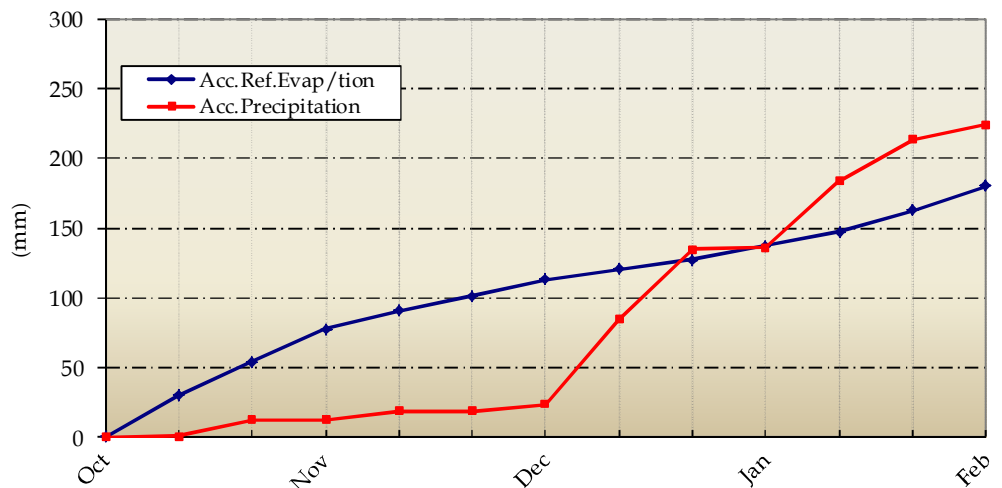
Mikra

3rd 10-day period (21-31/01/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	10.0	12.2	15.4	15.5	16.6	15.6	6.7	7.8	11.1	14.0	10.3	12.3	12.5	9.8
	Min	-1.3	3.6	7.0	4.7	10.2	5.4	4.3	0.7	-1.6	5.2	3.0	3.7	1.3	1.9
Relative Humidity	Max	92	96	98	92	86	94	75	76	85	94	96	89	89	-
	Min	64	71	58	47	36	54	45	37	50	50	65	52	49	-
Soil Temperature at 10 cm	06 UTC	3.6	5.6	7.6	8.6	10.0	9.2	6.8	0.5	4.4	6.2	6.6	6.3	6.4	5.1
	12 UTC	5.2	6.0	9.6	9.6	11.0	9.8	6.6	4.0	6.4	6.8	7.8	7.5	8.1	6.5
Sunshine Duration		6.9	4.8	0.3	4.0	4.8	0.0	1.0	9.0	6.7	5.8	0.5	4.0	6.5	3.5
Precipitation				0.3	0.0	0.7	5.4				4.0		10.4	0.6	11.8
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	12.6
Growing Degrees	5	0.0	2.9	6.2	5.1	8.4	5.5	0.5	0.0	0.0	4.6	1.7	34.9	25.0	18.0
	10	0.0	0.0	1.2	0.1	3.4	0.5	0.0	0.0	0.0	0.0	0.0	5.2	2.8	1.5

3rd 10-day period (21-31/01/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	17.6	11.9	9.9
Precipitation - Reference Evapotranspiration	-7.2	-11.3	1.9
Number of Rainy Days	4.0	1.0	3.3
Number of Dry Days	6.0	14.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



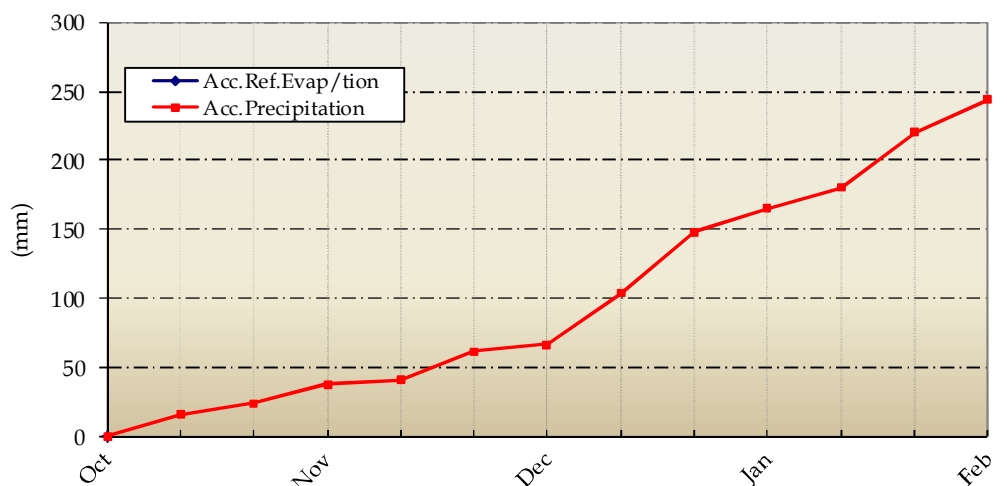
Tanagra

3rd 10-day period (21-31/01/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	16.2	16.2	14.4	15.0	17.4	16.6	6.2	7.8	15.8	18.2	17.3	14.6	14.1	11.7
	Min	0.2	0.2	2.0	7.2	11.3	7.5	4.3	-1.5	-4.0	10.2	1.6	3.5	2.6	3.1
Relative Humidity	Max	97	98	100	93	75	98	98	79	78	97	98	92	93	-
	Min	37	50	54	50	37	52	43	29	41	45	41	44	43	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		7.5	2.7	0.6	3.8	6.9	0.3	5.3	8.7	6.5	5.0	5.1	4.8	4.9	
Precipitation					2.9	1.1	4.8	9.2			5.9		23.9	2.7	24.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	3.2	3.2	3.2	6.1	9.4	7.1	0.3	0.0	0.9	9.2	4.5	46.9	37.1	
	10	0.0	0.0	0.0	1.1	4.4	2.1	0.0	0.0	0.0	4.2	0.0	11.7	4.0	

3rd 10-day period (21-31/01/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	24.3
Number of Rainy Days	5.0	1.0	5.1
Number of Dry Days	5.0	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



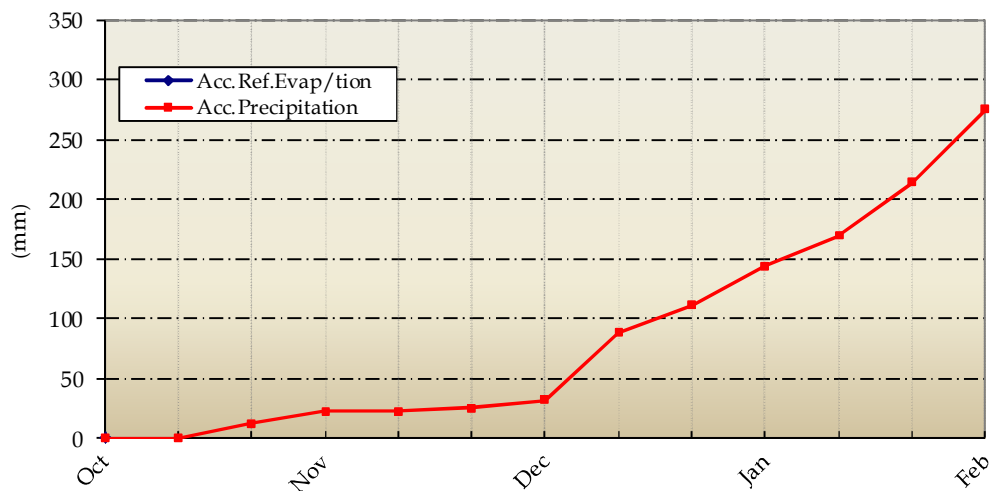
Tripoli

3rd 10-day period (21-31/01/2021)		21	22	23	24	25	26	27	28	29	20	31	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	11.3	10.2	8.9	11.8	9.7	12.5	5.2	7.8	9.0	13.4	15.1	10.4	12.9	9.8
	Min	0.3	5.8	5.9	4.4	6.9	8.0	-0.2	-4.3	-4.1	8.1	-1.8	2.6	-0.5	0.9
Relative Humidity	Max	98	97	99	94	94	95	97	86	92	74	99	93	95	-
	Min	58	80	78	53	53	61	30	16	63	41	49	53	42	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	3.9	4.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	5.9	5.4
Sunshine Duration		5.5	0.6	0.0	5.6	6.8	0.2	7.6	8.7	0.1	6.7	5.2	4.3	5.6	4.0
Precipitation		0.0	0.8	4.4	21.4	12.6	17.9	0.1		0.0	3.6		60.8	16.1	32.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-	8.6
Growing Degrees	5	0.8	3.0	2.4	3.1	3.3	5.3	0.0	0.0	0.0	5.8	1.7	25.3	-	14.3
	10	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.8	0.0	1.0	-	0.9

3rd 10-day period (21-31/01/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	11.0
Precipitation - Reference Evapotranspiration	-	21.5
Number of Rainy Days	7.0	4.6
Number of Dry Days	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





◆ **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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**ΕΘΝΙΚΗ
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ΥΠΗΡΕΣΙΑ**

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