



AGROMETEOROLOGICAL BULLETIN

February 2023
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



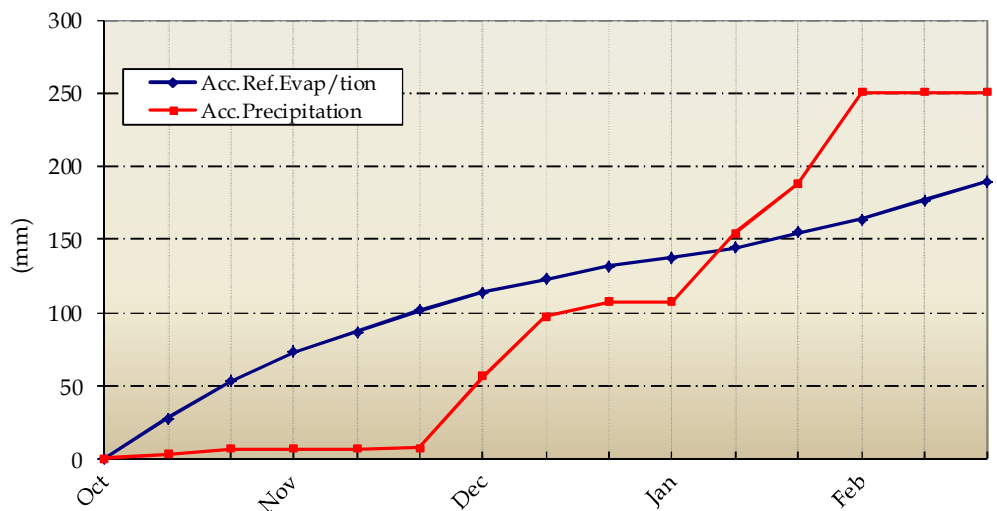
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2nd 10-day period (11-20/02/2023)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	8.6	10.2	10.6	10.8	10.8	11.4	14.0	14.6	16.6	16.2	12.4	13.4	10.2
	Min	-3.6	-6.4	2.0	-4.4	-2.4	-3.0	5.0	3.2	8.6	9.0	0.8	2.7	2.1
Relative Humidity	Max	83	90	83	95	89	96	91	97	97	95	92	93	89
	Min	21	50	32	39	39	56	57	69	74	54	49	53	57
Soil Temperature at 10 cm	06 UTC	2.6	2.6	3.8	3.8	4.4	4.2	6.4	7.4	8.4	10.2	5.4	6.4	5.9
	12 UTC	5.0	5.0	6.4	6.6	6.4	7.0	8.2	10.2	11.6	12.6	7.9	9.2	7.4
Sunshine Duration		9.3	5.7	9.7	8.8	7.7	8.5	8.4	5.7	8.4	8.0	8.0	7.0	4.4
Precipitation														15.6
Evaporation		0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.3	2.0	3.0	8.0	15.6	30.9
Growing Degrees	5	0.0	0.0	1.3	0.0	0.0	0.0	4.5	3.9	7.6	7.6	24.9	30.8	21.6
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	5.2	3.4	3.4

2nd 10-day period (11-20/02/2023)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	13.2	13.1	8.3
Precipitation - Reference Evapotranspiration	-13.2	-13.1	7.3
Number of Rainy Days	0.0	0.0	2.1
Number of Dry Days	20.0	12.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

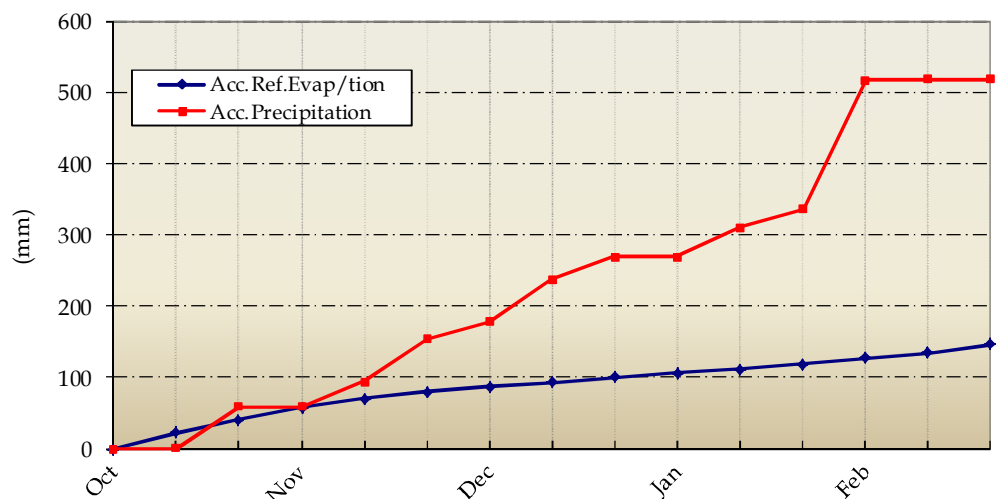


2nd 10-day period (11-20/02/2023)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	13.0	13.0	14.2	13.3	14.6	15.4	15.8	15.7	16.5	16.5	14.8	16.5	14.5
	Min	-1.3	1.3	2.6	-1.2	-0.8	0.2	4.4	5.6	6.8	6.8	2.4	5.6	5.6
Relative Humidity	Max	91	86	90	90	90	93	92	95	93	95	92	95	90
	Min	38	55	40	34	38	45	55	52	56	60	47	59	50
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	10.4	9.3
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	11.5	11.5
Sunshine Duration		9.7	8.8	9.9	9.2	9.7	8.8	8.2	6.0	4.1	7.9	8.2	6.9	5.4
Precipitation													9.6	18.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	8.3	32.3
Growing Degrees	5	0.9	2.2	3.4	1.1	1.9	2.8	5.1	5.7	6.7	6.7	36.2	60.5	43.0
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	1.7	1.7	4.1	12.8	11.0

2nd 10-day period (11-20/02/2023)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	11.4	12.3	10.1
Precipitation - Reference Evapotranspiration	-11.4	-2.7	8.5
Number of Rainy Days	0.0	2.0	3.7
Number of Dry Days	15.0	7.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



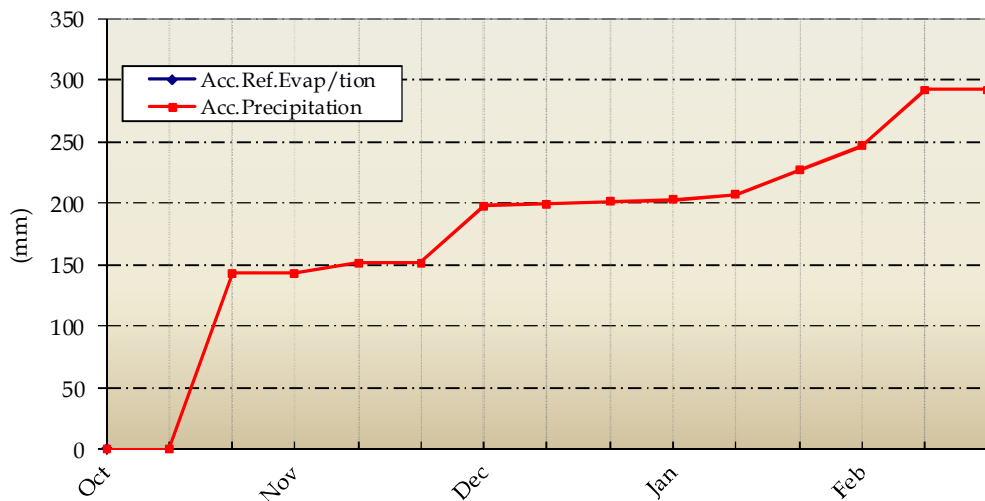
Iraklio

2nd 10-day period (11-20/02/2023)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	11.2	12.0	13.2	14.2	13.6	13.2	15.2	16.6	16.2	17.2	14.3	15.8	15.6
	Min	9.6	8.2	7.6	10.4	11.2	10.0	5.8	8.0	8.0	8.4	8.7	9.7	8.9
Relative Humidity	Max	81	70	73	71	73	85	89	94	94	91	82	88	84
	Min	58	56	59	52	58	61	57	68	69	63	60	53	54
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		0.3	6.6	6.5	8.2	2.9	8.6	9.3	9.2	9.7	7.2	6.8	7.1	4.9
Precipitation		0.2										0.2	15.1	26.9
Evaporation		2.6	1.9	1.8	5.4	3.3	2.9	1.4	1.8	2.2	2.8	26.1	15.8	32.3
Growing Degrees	5	5.4	5.1	5.4	7.3	7.4	6.6	5.5	7.3	7.1	7.8	64.9	77.4	65.9
	10	0.4	0.1	0.4	2.3	2.4	1.6	0.5	2.3	2.1	2.8	14.9	27.4	23.7

2nd 10-day period (11-20/02/2023)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	1.0	2.0	4.0
Number of Dry Days	2.0	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

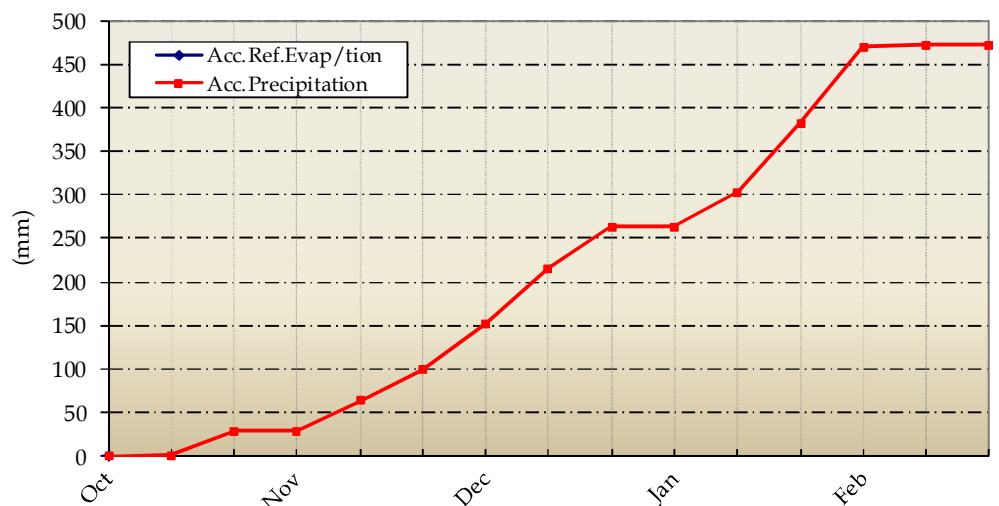


2nd 10-day period (11-20/02/2023)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	12.2	11.2	10.7	13.7	13.8	14.3	13.9	15.5	15.4	18.2	13.9	13.6	10.4
	Min	-7.7	-6.8	1.8	-7.3	-6.3	-5.0	-2.7	-2.9	-2.0	-0.2	-3.9	0.1	0.5
Relative Humidity	Max	97	99	90	95	99	100	100	100	100	100	98	99	93
	Min	30	31	36	31	37	37	44	37	48	40	37	56	55
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	4.2
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	4.6
Sunshine Duration		8.6	4.3	8.9	8.1	8.5	8.3	5.1	6.0	6.7	8.2	7.3	4.2	3.6
Precipitation													38.5	32.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	
Growing Degrees	5	0.0	0.0	1.3	0.0	0.0	0.0	0.6	1.3	1.7	4.0	8.9	19.4	12.5
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5

2nd 10-day period (11-20/02/2023)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	9.6
Precipitation - Reference Evapotranspiration	-	-	22.7
Number of Rainy Days	0.0	4.0	3.1
Number of Dry Days	15.0	4.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



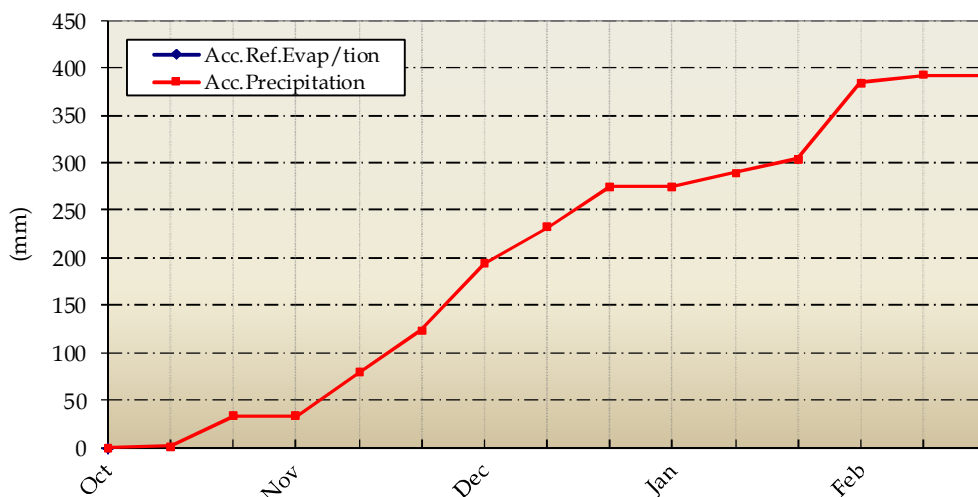
Kalamata

2nd 10-day period (11-20/02/2023)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.8	16.2	15.8	14.6	16.5	18.4	17.9	18.7	18.3	20.3	17.2	17.0	15.1
	Min	1.5	0.2	5.9	1.8	-0.1	2.2	3.1	3.8	4.9	7.7	3.1	4.2	5.4
Relative Humidity	Max	90	92	70	77	86	93	93	94	94	95	88	96	90
	Min	28	32	32	37	31	36	43	43	47	48	38	59	49
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	10.4	9.8
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	11.4	11.0
Sunshine Duration		9.2	8.3	8.3	8.9	7.0	8.7	8.4	8.8	9.0	8.4	8.5	7.2	5.1
Precipitation													20.0	27.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	31.4
Growing Degrees	5	3.2	3.2	5.9	3.2	3.2	5.3	5.5	6.3	6.6	9.0	51.3	56.1	47.7
	10	0.0	0.0	0.9	0.0	0.0	0.3	0.5	1.3	1.6	4.0	8.5	8.3	11.1

2nd 10-day period (11-20/02/2023)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	14.0
Precipitation - Reference Evapotranspiration	-	-	13.3
Number of Rainy Days	0.0	3.0	4.3
Number of Dry Days	15.0	5.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

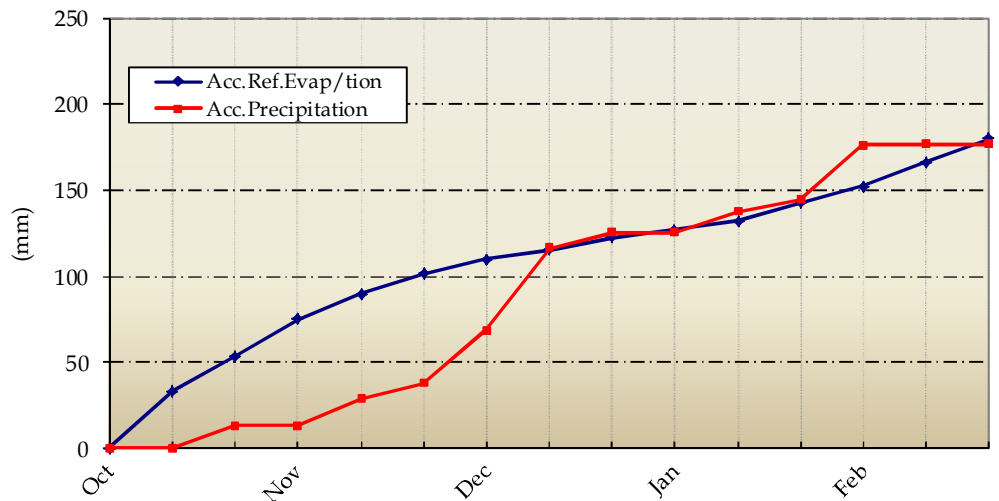


Larisa

2nd 10-day period (11-20/02/2023)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	9.6	10.8	10.2	11.2	11.8	14.8	15.6	17.8	20.6	19.3	14.2	15.0	12.4
	Min	-7.0	-6.4	1.6	-4.6	-2.2	-3.8	-2.4	-3.0	0.4	2.0	-2.5	1.5	1.7
Relative Humidity	Max	100	96	100	100	100	100	100	100	100	97	99	99	94
	Min	39	40	58	40	45	39	41	36	32	29	40	50	50
Soil Temperature at 10 cm	06 UTC	5.0	4.6	6.6	5.0	6.4	6.4	6.8	6.8	7.8	8.8	6.4	7.5	6.9
	12 UTC	6.4	6.4	6.8	6.0	6.4	6.6	6.8	7.0	8.4	9.0	7.0	8.2	7.5
Sunshine Duration		6.5	6.1	3.9	7.0	6.9	8.5	7.9	8.1	9.4	8.7	7.3	5.5	4.4
Precipitation													1.7	9.9
Evaporation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	1.5	6.0	12.8	14.1
Growing Degrees	5	0.0	0.0	0.9	0.0	0.0	0.5	1.6	2.4	5.5	5.7	16.6	32.6	24.5
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.7	1.2	0.5	3.0

2nd 10-day period (11-20/02/2023)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	13.4	12.4	13.8
Precipitation - Reference Evapotranspiration	-13.4	-10.7	-3.9
Number of Rainy Days	0.0	2.0	3.0
Number of Dry Days	15.0	4.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



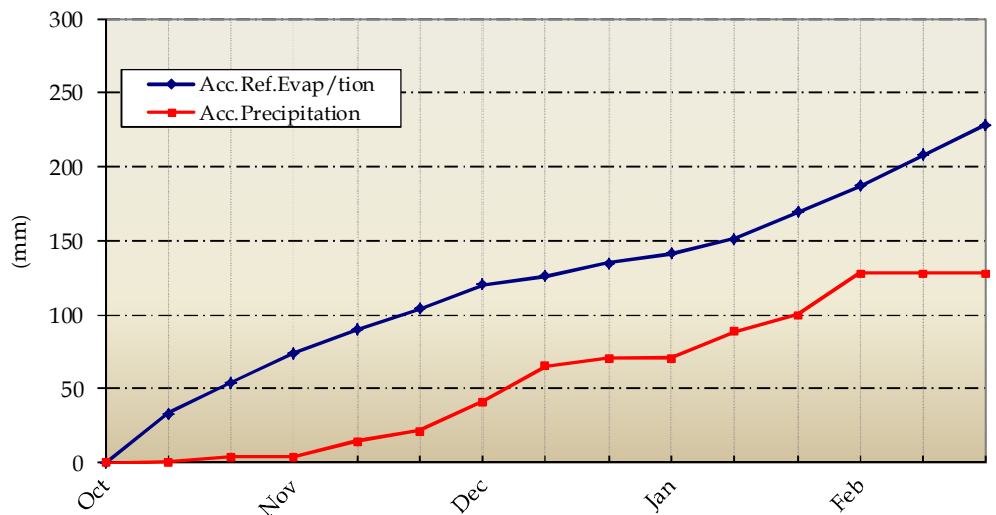
Mikra

2nd 10-day period (11-20/02/2023)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	9.4	10.4	11.6	12.3	12.2	12.1	13.0	17.4	19.2	17.3	13.5	14.0	11.0
	Min	-4.7	-4.2	3.6	-1.2	-1.5	-0.4	0.3	0.2	1.2	4.7	-0.2	4.9	3.1
Relative Humidity	Max	81	81	85	85	83	100	100	97	81	85	88	97	86
	Min	30	38	42	43	44	48	56	33	30	38	40	58	52
Soil Temperature at 10 cm	06 UTC	3.4	3.4	5.4	5.4	5.8	5.7	6.2	6.4	7.2	8.4	5.7	8.4	6.4
	12 UTC	5.0	4.9	6.3	6.8	6.8	7.2	7.6	8.0	8.8	10.0	7.1	9.3	8.6
Sunshine Duration		9.2	5.1	7.1	8.3	8.3	9.2	8.4	8.3	8.9	8.9	8.2	5.3	4.6
Precipitation													4.9	10.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	15.5
Growing Degrees	5	0.0	0.0	2.6	0.6	0.4	0.9	1.7	3.8	5.2	6.0	21.0	44.2	24.8
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	1.2	4.3	3.0

2nd 10-day period (11-20/02/2023)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	20.2	14.0	9.7
Precipitation - Reference Evapotranspiration	-20.2	-9.1	0.5
Number of Rainy Days	0.0	2.0	2.6
Number of Dry Days	17.0	6.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



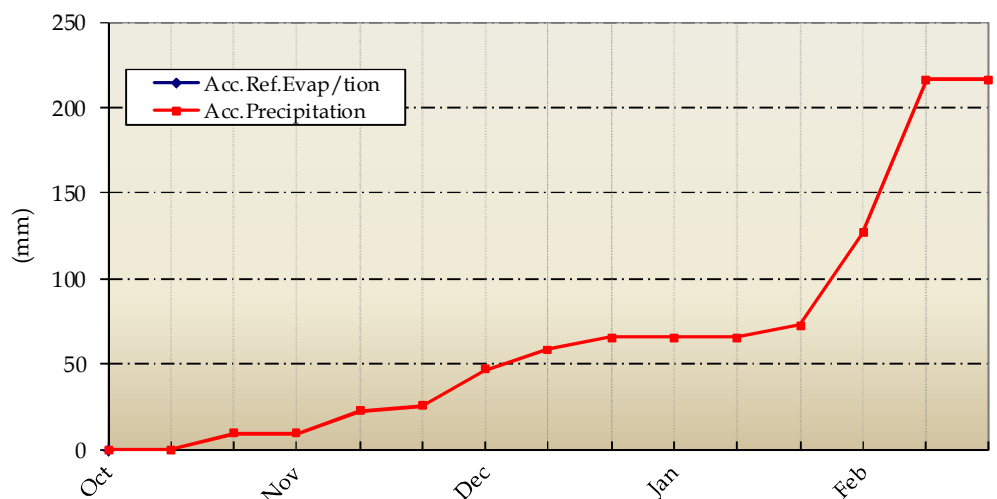
Tanagra

2nd 10-day period (11-20/02/2023)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	6.0	7.0	9.0	11.2	7.2	13.4	16.8	19.2	20.1	17.4	12.7	14.7	12.6
	Min	1.4	-3.1	0.7	0.2	-0.2	-2.6	-1.1	-0.8	3.2	6.3	0.4	2.8	3.8
Relative Humidity	Max	80	84	82	83	96	99	99	98	94	81	90	99	92
	Min	59	52	43	39	72	43	32	29	31	32	43	50	49
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		5.2	0.0	-	-	-	-	-	-	-	-	2.6	5.0	4.2
Precipitation						0.0						0.0	4.2	16.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	23.4
Growing Degrees	5	0.0	0.0	0.0	0.7	0.0	0.4	2.9	4.2	6.7	6.9	21.7	37.3	31.9
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.9	3.5	0.4	6.0

2nd 10-day period (11-20/02/2023)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	-
Number of Rainy Days	0.0	2.0	3.2
Number of Dry Days	10.0	4.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



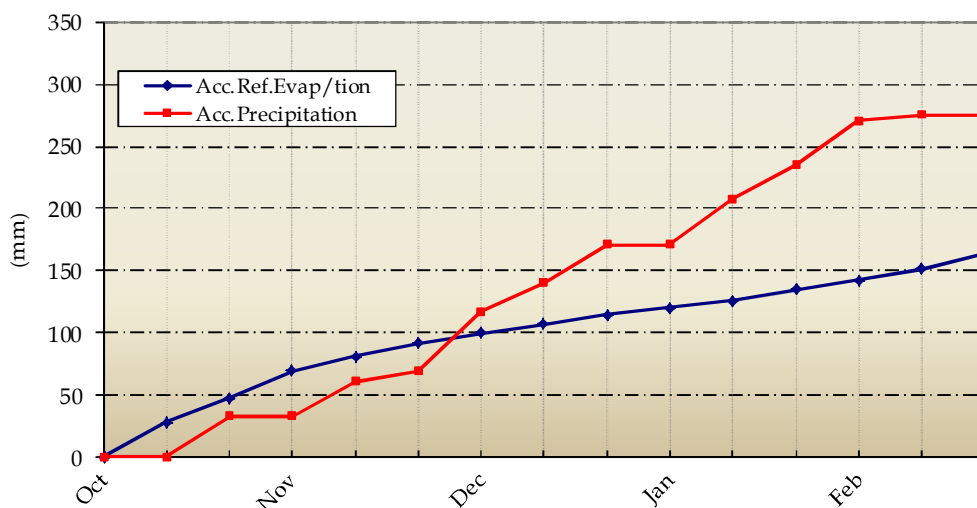
Tripoli

2nd 10-day period (11-20/02/2023)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	7.0	11.0	7.4	11.8	8.8	14.0	15.0	16.6	17.0	16.8	12.5	14.4	10.4
	Min	-0.6	-7.6	-7.0	-7.4	-6.6	-5.8	-4.6	-4.8	-3.8	-1.8	-5.0	-0.6	0.3
Relative Humidity	Max	100	95	99	95	100	100	100	100	100	100	99	99	95
	Min	53	28	49	17	52	21	40	43	43	29	38	41	53
Soil Temperature at 10 cm	06 UTC	2.0	1.0	2.8	1.2	1.2	1.0	1.6	2.0	2.4	3.4	1.9	-	4.9
	12 UTC	4.8	4.2	5.4	4.6	3.4	6.0	6.2	6.8	7.6	8.4	5.7	-	6.5
Sunshine Duration		9.2	7.4	6.4	8.9	6.6	8.5	8.3	8.5	8.9	9.3	8.2	5.6	5.0
Precipitation													12.0	26.1
Evaporation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.8	3.8	-	134.0
Growing Degrees	5	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.6	2.5	5.2	19.5	12.7
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2

2nd 10-day period (11-20/02/2023)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.0	10.8	10.7
Precipitation - Reference Evapotranspiration	-12.0	1.2	15.4
Number of Rainy Days	0.0	2.0	3.9
Number of Dry Days	13.0	4.0	-

The missing info in the tables 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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