



# AGROMETEOROLOGICAL BULLETIN

*February 2024*  
*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



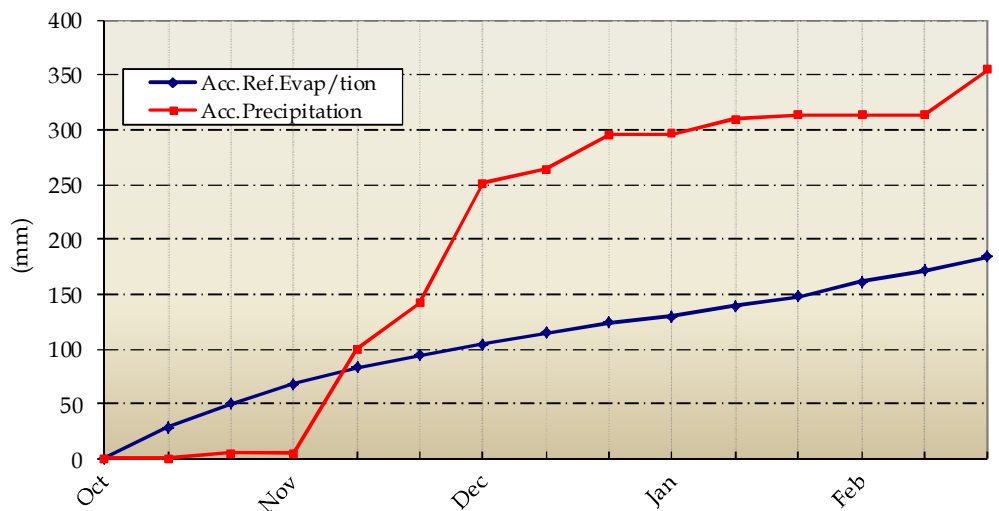
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2nd 10-day period (11-20/02/2024)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	17.4	16.6	12.4	11.8	13.2	10.6	8.8	11.8	11.6	11.4	12.6	12.4	10.2
	Min	15.2	10.8	9.6	8.8	6.6	6.8	5.4	1.4	5.8	4.6	7.5	0.8	2.1
Relative Humidity	Max	82	95	92	92	88	91	86	93	89	87	90	92	89
	Min	71	81	81	56	50	72	74	65	64	52	67	49	57
Soil Temperature at 10 cm	06 UTC	12.8	13.0	11.0	10.6	8.6	9.6	8.6	6.6	8.4	8.0	9.7	5.4	5.9
	12 UTC	12.8	12.2	11.8	10.6	10.4	10.0	9.2	9.2	10.0	9.8	10.6	7.9	7.4
Sunshine Duration		0.7	0.0	0.4	0.4	6.2	0.0	3.1	5.5	1.5	1.4	1.9	8.0	4.4
Precipitation			33.2	7.5	0.5							41.2		15.6
Evaporation		5.8	0.6	1.5	0.4	2.4	1.0	1.1	1.0	1.0	1.1	15.9	8.0	30.9
Growing Degrees	5	11.3	8.7	6.0	5.3	4.9	3.7	2.1	1.6	3.7	3.0	50.3	24.9	21.6
	10	6.3	3.7	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	11.3	5.2	3.4

2nd 10-day period (11-20/02/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.1	13.2	8.3
Precipitation - Reference Evapotranspiration	29.1	-13.2	7.3
Number of Rainy Days	3.0	0.0	2.1
Number of Dry Days	15.0	20.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

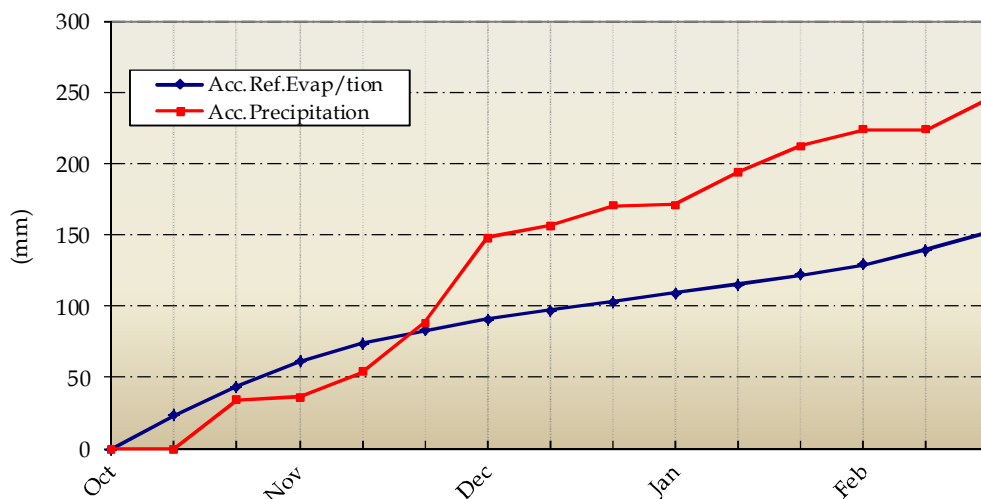


2nd 10-day period (11-20/02/2024)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.2	16.6	15.8	16.4	15.4	16.1	16.2	16.8	15.4	17.2	16.5	14.8	14.5
	Min	16.2	9.1	7.4	5.0	1.4	1.0	2.7	2.5	5.8	7.4	5.8	2.4	5.6
Relative Humidity	Max	86	98	98	98	94	92	97	98	98	96	96	92	90
	Min	47	61	68	48	47	47	52	60	47	58	54	47	50
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	9.3
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	11.5
Sunshine Duration		1.7	5.4	8.0	8.0	10.3	9.6	10.6	11.3	1.6	5.7	7.2	8.2	5.4
Precipitation			15.2	6.6							0.3	22.1		18.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	32.3
Growing Degrees	5	12.7	7.9	6.6	5.7	3.4	3.6	4.5	4.7	5.6	7.3	61.8	36.2	43.0
	10	7.7	2.9	1.6	0.7	0.0	0.0	0.0	0.0	0.6	2.3	15.8	4.1	11.0

2nd 10-day period (11-20/02/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.2	11.4	10.1
Precipitation - Reference Evapotranspiration	9.9	-11.4	8.5
Number of Rainy Days	3.0	0.0	3.7
Number of Dry Days	21.0	15.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



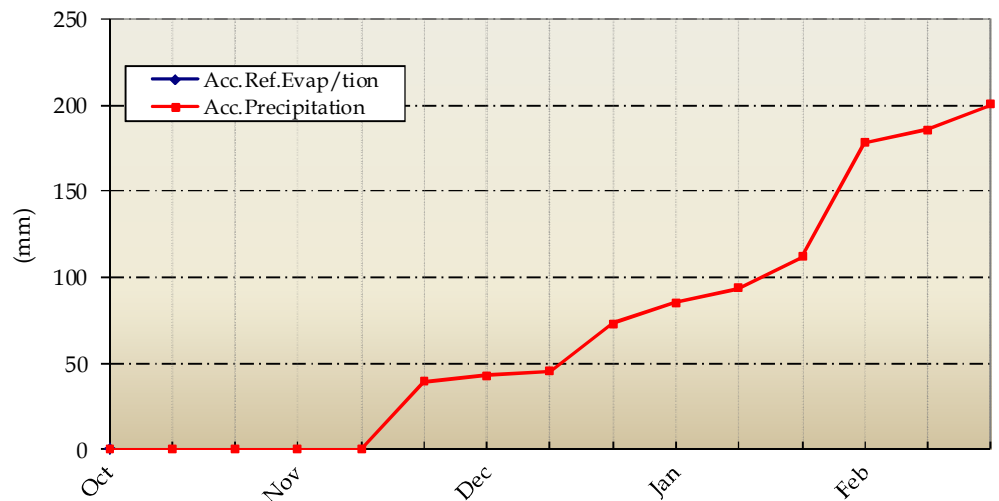
Iraklio

2nd 10-day period (11-20/02/2024)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.2	19.2	17.0	16.4	14.4	14.0	13.8	15.4	16.8	15.4	16.2	14.3	15.6
	Min	14.2	16.6	8.6	10.2	12.0	12.0	13.0	12.2	11.2	9.2	11.9	8.7	8.9
Relative Humidity	Max	77	88	87	87	85	79	79	81	82	86	83	82	84
	Min	52	62	48	60	62	62	64	58	60	62	59	60	54
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		1.9	0.5	9.1	6.2	2.6	1.2	0.0	5.2	9.0	2.8	3.8	6.8	4.9
Precipitation			0.2		1.8	12.4	0.1	0.0	0.2			14.7	0.2	26.9
Evaporation		3.8	7.3	2.6	2.4	0.0	3.2	1.1	1.4	1.9	1.2	24.9	26.1	32.3
Growing Degrees	5	11.7	12.9	7.8	8.3	8.2	8.0	8.4	8.8	9.0	7.3	90.4	64.9	65.9
	10	6.7	7.9	2.8	3.3	3.2	3.0	3.4	3.8	4.0	2.3	40.4	14.9	23.7

2nd 10-day period (11-20/02/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	5.0	1.0	4.0
Number of Dry Days	10.0	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

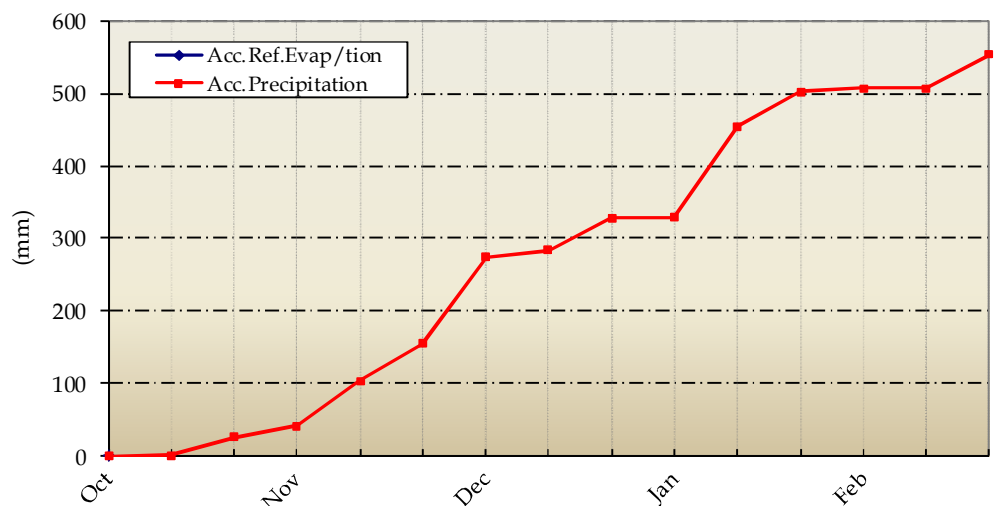


2nd 10-day period (11-20/02/2024)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	13.3	9.9	14.3	14.3	13.4	15.9	17.0	18.1	15.4	14.2	14.6	13.9	10.4
	Min	9.8	6.0	3.0	3.7	-2.2	-2.3	-3.4	-3.0	-1.6	6.0	1.6	-3.9	0.5
Relative Humidity	Max	100	100	100	92	95	100	100	100	100	100	99	98	93
	Min	69	85	68	39	31	29	24	25	49	55	47	37	55
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	4.2
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	4.6
Sunshine Duration		0.1	0.1	4.9	8.3	9.3	9.3	8.5	8.8	6.2	2.3	5.8	7.3	3.6
Precipitation		7.6	33.6	0.8						1.9	3.8	47.7		32.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	
Growing Degrees	5	6.6	3.0	3.7	4.0	0.6	1.8	1.8	2.6	1.9	5.1	30.9	8.9	12.5
	10	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.7	0.0	0.5

2nd 10-day period (11-20/02/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	9.6
Precipitation - Reference Evapotranspiration	-	-	22.7
Number of Rainy Days	5.0	0.0	3.1
Number of Dry Days	20.0	15.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



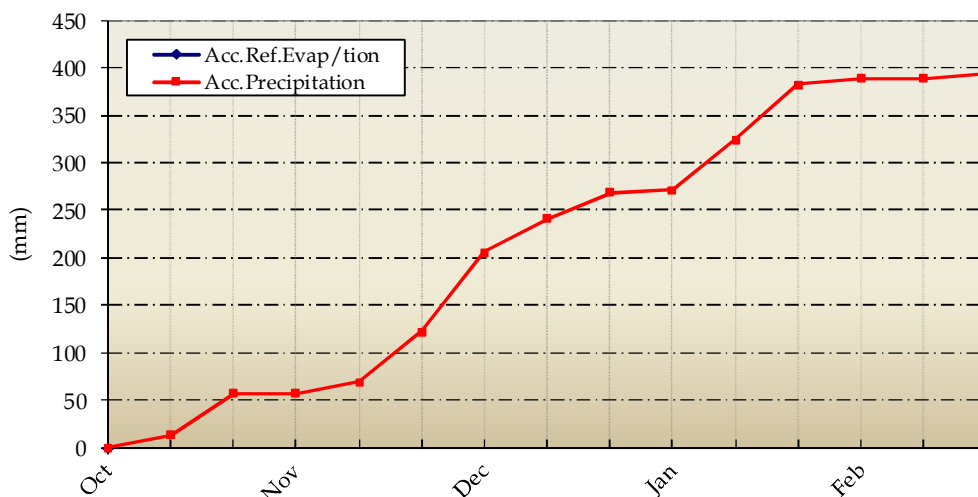
Kalamata

2nd 10-day period (11-20/02/2024)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	18.9	18.6	19.4	19.2	17.6	19.2	18.9	19.4	17.6	16.7	18.6	17.2	15.1
	Min	14.6	8.6	5.6	6.4	3.6	4.3	3.5	4.7	4.0	6.2	6.2	3.1	5.4
Relative Humidity	Max	86	95	97	93	84	90	93	95	96	96	92	88	90
	Min	50	50	45	46	37	30	49	46	59	63	48	38	49
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	9.8
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	11.0
Sunshine Duration		0.0	4.7	8.7	1.0	3.6	2.0	4.1	9.6	5.6	1.1	4.0	8.5	5.1
Precipitation		2.0	2.2	0.6							0.0	4.8		27.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	31.4
Growing Degrees	5	11.8	8.6	7.5	7.8	5.6	6.8	6.2	7.1	5.8	6.5	73.5	51.3	47.7
	10	6.8	3.6	2.5	2.8	0.6	1.8	1.2	2.1	0.8	1.5	23.5	8.5	11.1

2nd 10-day period (11-20/02/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	14.0
Precipitation - Reference Evapotranspiration	-	-	13.3
Number of Rainy Days	3.0	0.0	4.3
Number of Dry Days	19.0	15.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

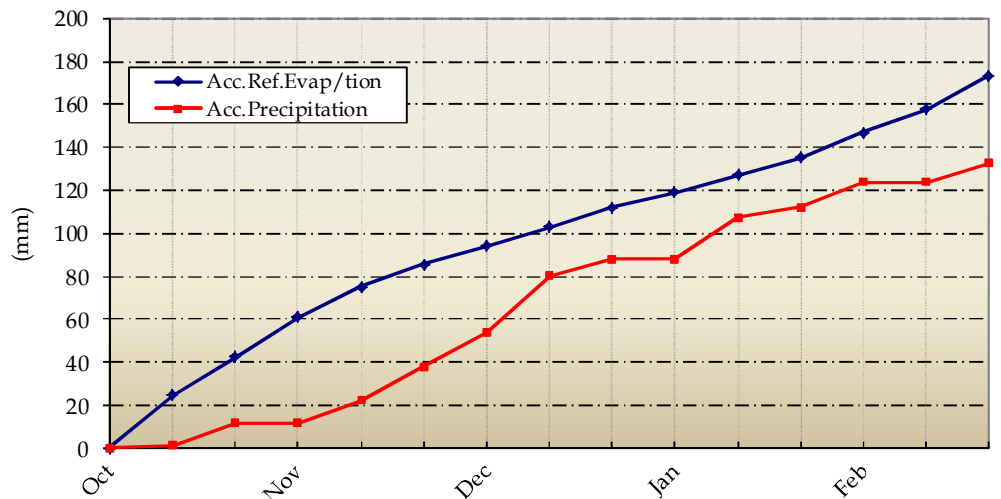


Larisa

2nd 10-day period (11-20/02/2024)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	21.3	21.2	18.4	18.4	15.2	14.8	16.4	16.6	16.6	15.8	17.5	14.2	12.4
	Min	8.0	6.6	0.0	1.6	2.2	0.0	-1.6	0.0	4.2	7.0	2.8	-2.5	1.7
Relative Humidity	Max	100	100	100	100	97	100	100	100	100	100	100	99	94
	Min	41	47	46	43	36	39	42	45	52	48	44	40	50
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	6.4	6.9
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	7.0	7.5
Sunshine Duration		2.8	6.0	8.1	6.4	7.1	9.2	8.0	7.0	7.6	2.1	6.4	7.3	4.4
Precipitation		0.0	8.9									8.9		9.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	6.0	14.1
Growing Degrees	5	9.7	8.9	4.2	5.0	3.7	2.4	2.4	3.3	5.4	6.4	51.4	16.6	24.5
	10	4.7	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.4	10.4	1.2	3.0

2nd 10-day period (11-20/02/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	16.0	13.4	13.8
Precipitation - Reference Evapotranspiration	-7.1	-13.4	-3.9
Number of Rainy Days	1.0	0.0	3.0
Number of Dry Days	12.0	15.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



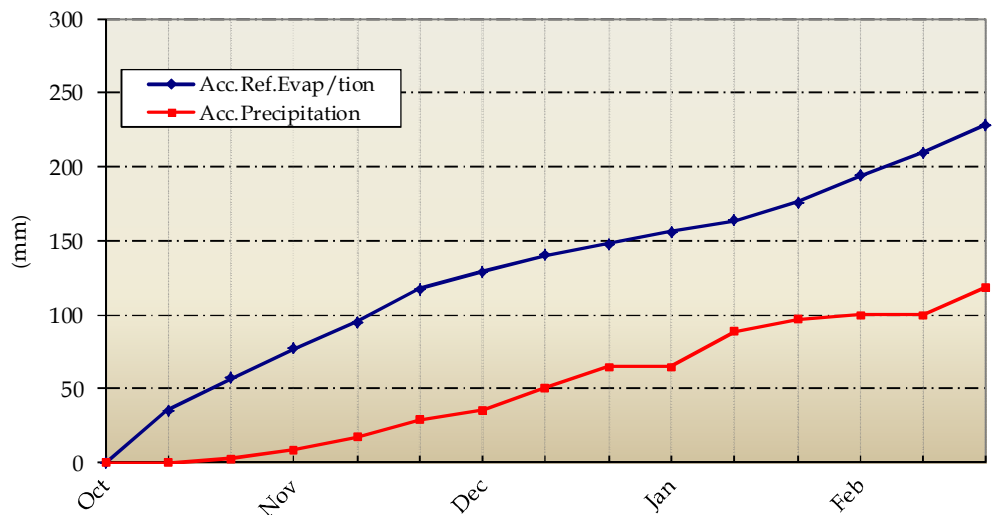
Mikra

2nd 10-day period (11-20/02/2024)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.2	17.6	16.0	14.8	14.2	14.8	14.8	16.8	14.4	11.0	15.4	13.5	11.0
	Min	14.9	9.7	4.8	10.5	7.8	2.0	3.4	6.0	7.2	8.0	7.4	-0.2	3.1
Relative Humidity	Max	83	100	100	63	73	100	100	100	99	100	92	88	86
	Min	52	53	43	44	45	41	62	44	64	80	53	40	52
Soil Temperature at 10 cm	06 UTC	11.0	11.0	8.8	10.0	9.2	8.4	8.4	9.0	9.8	10.4	9.6	5.7	6.4
	12 UTC	12.2	12.4	13.6	10.6	10.8	11.2	11.0	11.0	11.2	10.8	11.5	7.1	8.6
Sunshine Duration		0.1	6.1	8.5	6.5	8.7	9.2	8.2	7.9	5.1	0.8	6.1	8.2	4.6
Precipitation			10.1								8.5	18.6		10.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	15.5
Growing Degrees	5	12.1	8.7	5.4	7.7	6.0	3.4	4.1	6.4	5.8	4.5	64.0	21.0	24.8
	10	7.1	3.7	0.4	2.7	1.0	0.0	0.0	1.4	0.8	0.0	17.0	1.2	3.0

2nd 10-day period (11-20/02/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	19.0	20.2	9.7
Precipitation - Reference Evapotranspiration	-0.4	-20.2	0.5
Number of Rainy Days	2.0	0.0	2.6
Number of Dry Days	21.0	17.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration





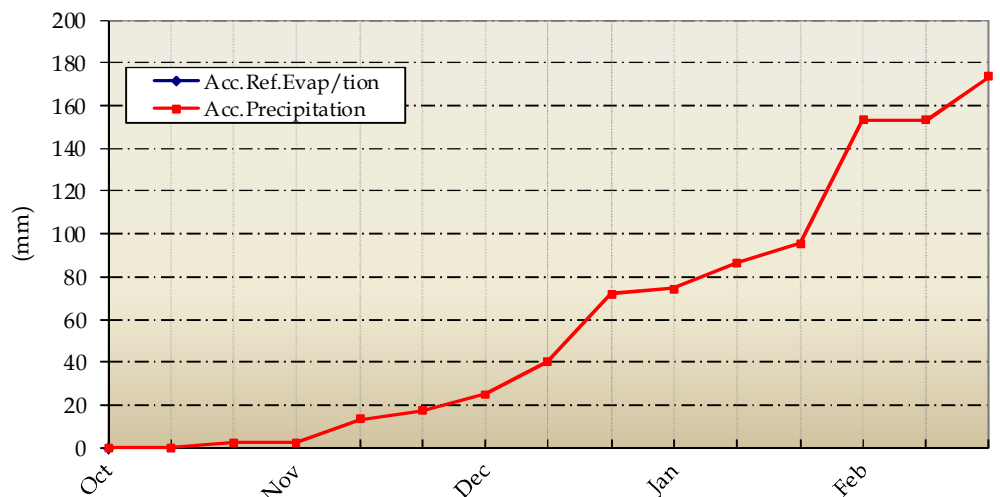
Tanagra

2nd 10-day period (11-20/02/2024)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.6	17.2	16.8	12.7	10.6	9.6	12.8	16.0	14.4	14.4	14.4	12.7	12.6
	Min	13.4	11.4	6.3	4.6	7.2	7.4	6.6	2.9	1.9	2.8	6.4	0.4	3.8
Relative Humidity	Max	68	79	81	94	96	95	96	98	97	98	90	90	92
	Min	39	38	42	51	62	68	57	44	55	49	50	43	49
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		-	-	-	-	-	-	-	-	-	-	-	2.6	4.2
Precipitation			0.8		1.5	15.2	2.9					20.4	0.0	16.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	23.4
Growing Degrees	5	11.5	9.3	6.6	3.7	3.9	3.5	4.7	4.5	3.2	3.6	54.3	21.7	31.9
	10	6.5	4.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	3.5	6.0

2nd 10-day period (11-20/02/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	-
Number of Rainy Days	4.0	0.0	3.2
Number of Dry Days	11.0	10.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



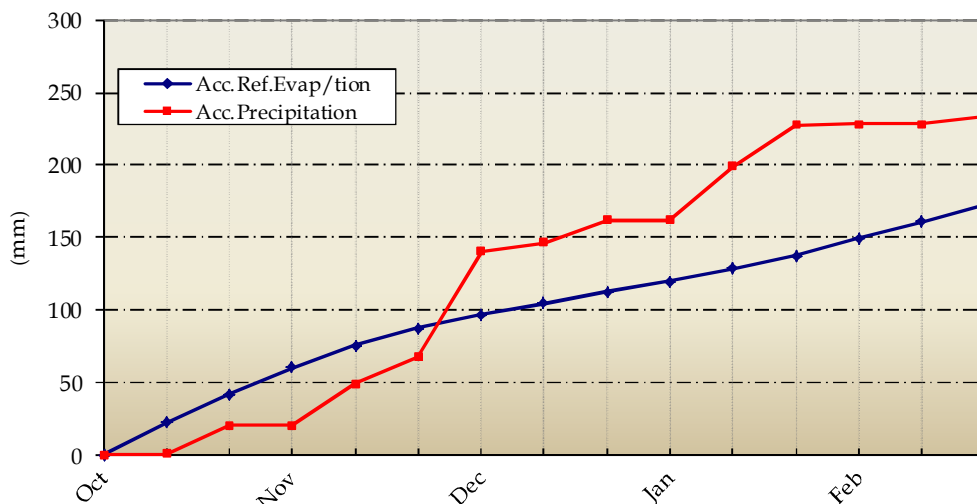
Tripoli

2nd 10-day period (11-20/02/2024)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.3	12.4	15.0	12.6	11.2	12.0	15.1	16.0	13.5	10.6	13.3	12.5	10.4
	Min	6.4	6.9	3.1	-0.9	-0.7	-1.6	-3.2	-2.9	-1.4	5.7	1.1	-5.0	0.3
Relative Humidity	Max	95	92	96	99	95	92	99	99	99	96	96	99	95
	Min	63	54	41	43	45	48	35	31	47	62	47	38	53
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	1.9	4.9
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	5.7	6.5
Sunshine Duration		0.6	6.1	8.1	7.8	4.3	4.6	8.4	7.7	4.3	0.6	5.2	8.2	5.0
Precipitation		0.0	0.0	5.0						0.0	0.0	5.0		26.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	3.8	134.0
Growing Degrees	5	5.4	4.7	4.1	0.9	0.3	0.2	1.0	1.6	1.1	3.2	22.1	5.2	12.7
	10	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.2

2nd 10-day period (11-20/02/2024)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.0	12.0	10.7
Precipitation - Reference Evapotranspiration	-7.0	-12.0	15.4
Number of Rainy Days	1.0	0.0	3.9
Number of Dry Days	13.0	13.0	-

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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