



# AGROMETEOROLOGICAL BULLETIN

*April 2022*  
*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



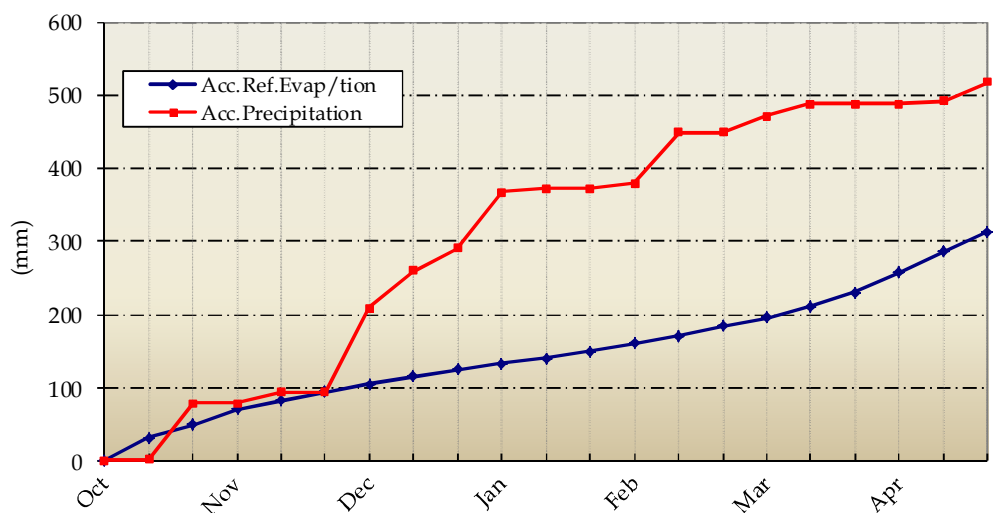
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2nd 10-day period (11-20/04/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.2	15.4	15.6	18.0	21.2	21.2	16.4	8.4	10.4	14.6	15.6	15.7	17.9
	Min	8.6	3.4	2.6	1.0	3.8	7.6	8.0	4.8	4.8	1.6	4.6	6.2	8.2
Relative Humidity	Max	83	91	90	84	87	86	92	91	94	96	89	87	88
	Min	40	37	37	38	36	40	55	46	58	55	44	53	50
Soil Temperature at 10 cm	06 UTC	13.8	10.2	10.4	11.0	11.6	13.2	14.6	9.5	8.6	8.8	11.2	11.2	12.8
	12 UTC	14.6	12.6	13.6	13.2	16.0	16.6	13.6	10.0	11.4	13.4	13.5	13.7	15.9
Sunshine Duration		4.9	12.1	11.0	11.5	10.6	5.7	0.0	0.0	2.7	11.3	7.0	6.2	7.4
Precipitation		1.2						20.5	3.7	0.0		25.4	3.0	11.7
Evaporation		2.5	4.5	7.5	5.2	5.3	2.0	2.2	5.2	2.8	1.6	38.8	36.8	40.2
Growing Degrees	5	6.9	4.4	4.1	4.5	7.5	9.4	7.2	1.6	2.6	3.1	51.3	59.6	72.5
	10	1.9	0.0	0.0	0.0	2.5	4.4	2.2	0.0	0.0	0.0	11.0	13.2	29.3

2nd 10-day period (11-20/04/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	27.2	25.7	27.6
Precipitation - Reference Evapotranspiration	-1.8	-22.7	-15.9
Number of Rainy Days	3.0	2.0	2.2
Number of Dry Days	5.0	6.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

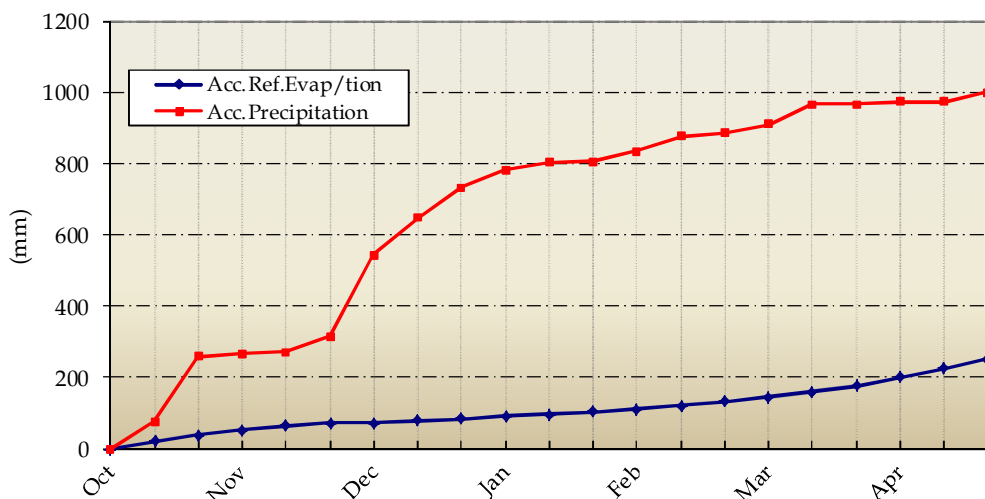


2nd 10-day period (11-20/04/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	16.3	18.4	19.6	21.6	25.0	24.8	18.6	17.0	16.8	18.0	19.6	19.8	19.8
	Min	10.0	6.3	7.8	6.7	7.5	8.8	13.5	10.6	9.1	7.9	8.8	8.0	9.7
Relative Humidity	Max	86	93	96	95	95	93	92	98	92	93	93	92	91
	Min	43	54	57	47	32	33	57	63	54	50	49	41	46
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	15.2	14.8
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	16.9	18.5
Sunshine Duration		11.6	11.6	11.8	11.5	6.9	5.4	0.5	1.2	11.8	11.1	8.3	8.7	8.1
Precipitation								0.7	15.4	10.2		26.3	1.9	8.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	46.6	39.1
Growing Degrees	5	8.2	7.4	8.7	9.2	11.3	11.8	11.1	8.8	8.0	8.0	92.2	88.9	80.8
	10	3.2	2.4	3.7	4.2	6.3	6.8	6.1	3.8	3.0	3.0	42.2	38.9	39.3

2nd 10-day period (11-20/04/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	27.8	28.2	32.3
Precipitation - Reference Evapotranspiration	-1.5	-26.3	-23.6
Number of Rainy Days	3.0	1.0	1.6
Number of Dry Days	9.0	14.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

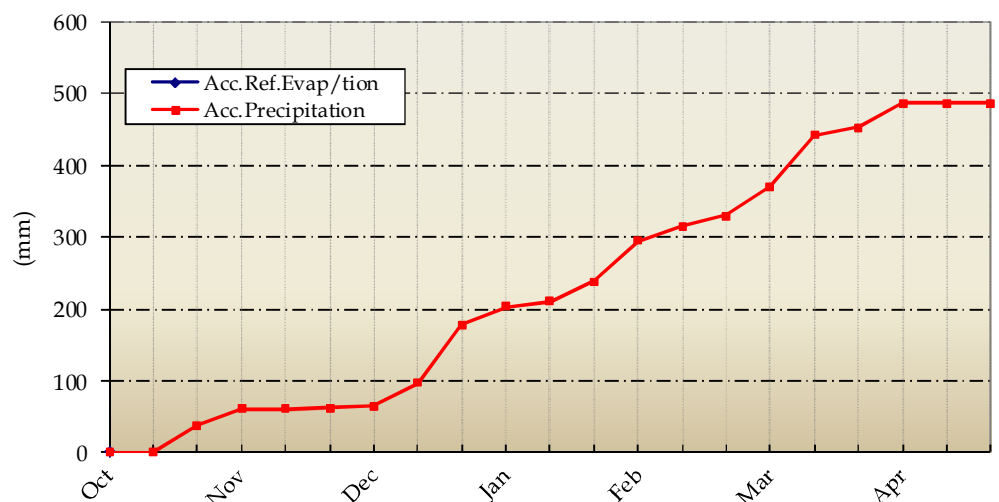


2nd 10-day period (11-20/04/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	17.0	16.8	17.2	18.6	18.4	21.6	28.4	19.6	18.4	18.2	19.4	20.9	21.0
	Min	13.4	9.6	7.0	8.2	9.2	10.4	19.0	13.8	10.4	8.2	10.9	12.8	12.8
Relative Humidity	Max	68	92	87	89	87	85	83	87	88	90	86	87	84
	Min	42	43	49	44	61	7	19	62	53	47	43	52	49
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		10.0	12.1	12.0	11.1	5.0	6.6	3.1	8.9	8.5	12.0	8.9	8.7	8.6
Precipitation								0.0	0.0			0.0	0.0	7.1
Evaporation		4.8	5.2	1.8	3.7	3.3	4.5	4.5	4.9	3.6	2.3	38.6	43.4	40.1
Growing Degrees	5	10.2	8.2	7.1	8.4	8.8	11.0	18.7	11.7	9.4	8.2	101.7	118.5	106.8
	10	5.2	3.2	2.1	3.4	3.8	6.0	13.7	6.7	4.4	3.2	51.7	68.5	61.8

2nd 10-day period (11-20/04/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	
Number of Rainy Days	0.0	0.0	1.5
Number of Dry Days	27.0	11.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

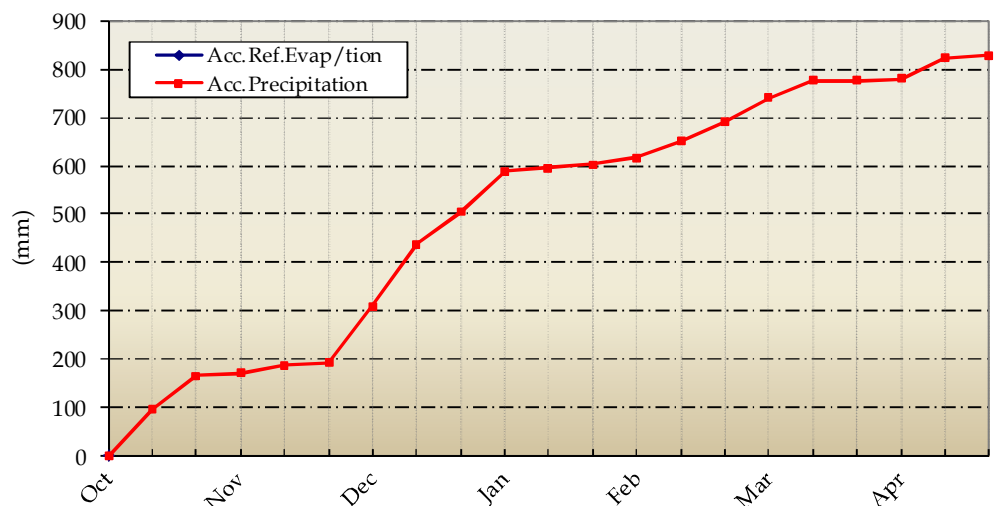


2nd 10-day period (11-20/04/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	16.1	18.9	21.4	22.7	25.6	22.1	16.6	10.9	12.5	14.4	18.1	16.5	17.9
	Min	1.5	-0.8	1.1	2.3	3.3	6.8	13.8	9.4	2.9	0.4	4.1	3.6	6.3
Relative Humidity	Max	62	98	96	94	96	94	58	97	100	98	89	97	93
	Min	27	34	42	29	25	23	43	52	51	59	38	46	46
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	10.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	12.4
Sunshine Duration		11.5	11.5	10.7	11.3	9.7	2.1	0.3	0.0	5.8	2.6	6.6	5.5	5.8
Precipitation							0.0	0.0	5.0	0.8	0.0	5.8	17.4	24.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	3.8	4.1	6.3	7.5	9.5	9.5	10.2	5.2	2.7	2.4	61.0	50.2	57.3
	10	0.0	0.0	1.3	2.5	4.5	4.5	5.2	0.2	0.0	0.0	18.0	7.2	19.9

2nd 10-day period (11-20/04/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	30.0
Precipitation - Reference Evapotranspiration	-	-	-5.4
Number of Rainy Days	2.0	3.0	3.3
Number of Dry Days	7.0	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

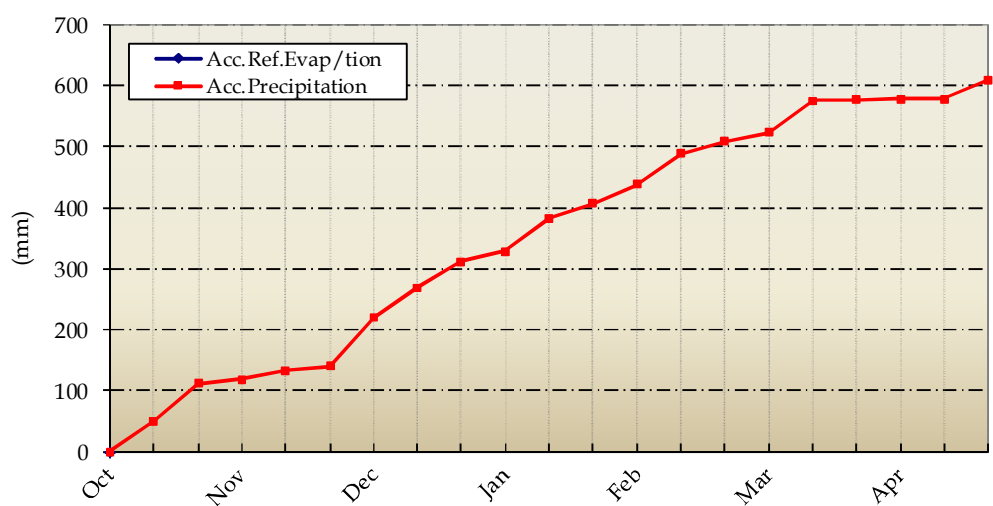


2nd 10-day period (11-20/04/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.8	18.0	19.8	20.8	21.7	24.0	20.2	16.9	19.3	19.7	20.0	21.3	20.7
	Min	10.3	5.2	6.0	6.0	5.0	12.0	12.5	9.1	10.5	5.1	8.2	7.9	9.1
Relative Humidity	Max	83	92	96	96	96	87	90	98	97	95	93	84	91
	Min	34	47	45	46	46	26	21	63	34	43	40	33	44
Soil Temperature at 10 cm	06 UTC	15.8	14.0	15.6	15.8	16.6	16.6	17.6	15.6	15.0	14.4	15.7	15.1	14.7
	12 UTC	17.6	17.0	17.4	18.0	18.0	19.0	16.4	14.6	16.0	16.6	17.1	18.7	17.0
Sunshine Duration		12.1	11.4	11.7	11.1	8.0	8.7	0.0	4.7	11.3	11.6	9.1	8.5	8.3
Precipitation		0.0		0.0				0.1	25.2	6.3		31.6	0.2	10.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	63.4	41.9
Growing Degrees	5	10.1	6.6	7.9	8.4	8.4	13.0	11.4	8.0	9.9	7.4	91.0	96.2	90.3
	10	5.1	1.6	2.9	3.4	3.4	8.0	6.4	3.0	4.9	2.4	41.0	46.2	44.4

2nd 10-day period (11-20/04/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	30.7
Precipitation - Reference Evapotranspiration	-	-	-20.4
Number of Rainy Days	3.0	2.0	2.5
Number of Dry Days	17.0	13.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration





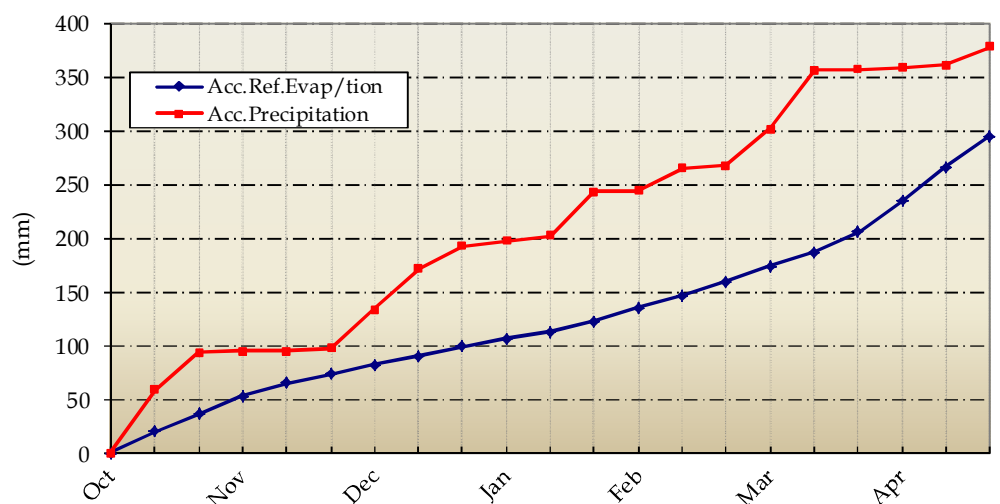
Larisa

2nd 10-day period (11-20/04/2022)		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	19.0	20.4	21.0	22.4	21.3	15.6	11.2	13.4	19.4	18.1	18.7	20.5
	Min	9.6	0.6	2.8	3.8	4.0	6.2	11.2	8.2	7.2	1.4	5.5	5.0	7.2
Relative Humidity	Max	62	83	92	97	96	89	98	100	98	100	92	91	93
	Min	28	29	39	41	36	33	66	71	61	40	44	41	40
Soil Temperature at 10 cm	06 UTC	10.2	13.2	13.4	13.4	14.0	14.2	15.6	14.0	12.8	12.0	13.3	-	13.4
	12 UTC	16.6	14.2	14.6	15.4	16.0	17.6	15.4	14.0	14.0	13.8	15.2	-	14.8
Sunshine Duration		10.7	11.4	10.4	9.4	9.3	5.4	0.0	0.0	3.3	8.7	6.9	6.9	7.3
Precipitation		5.2						5.8	2.1	3.8		16.9	0.6	9.9
Evaporation		4.9	5.1	5.0	4.7	2.4	6.7	0.0	1.1	3.1	2.8	35.8	38.6	43.9
Growing Degrees	5	8.5	4.8	6.6	7.4	8.2	8.8	8.4	4.7	5.3	5.4	68.1	68.3	83.0
	10	3.5	0.0	1.6	2.4	3.2	3.8	3.4	0.0	0.3	0.4	18.6	20.3	37.0

2nd 10-day period (11-20/04/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	28.8	29.8	53.8
Precipitation - Reference Evapotranspiration	-11.9	-29.2	-43.9
Number of Rainy Days	4.0	2.0	2.5
Number of Dry Days	3.0	4.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



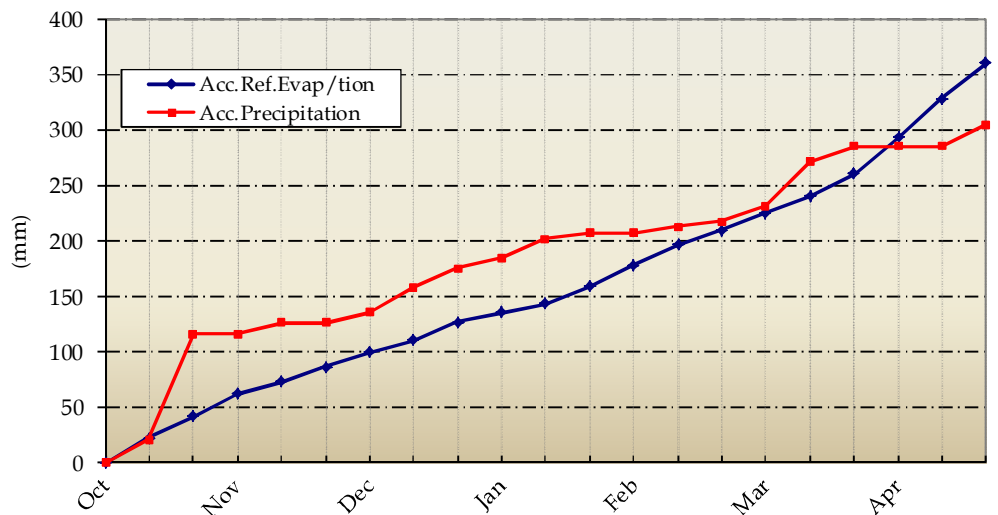
Mikra

2nd 10-day period (11-20/04/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	16.0	18.1	17.4	19.1	21.9	20.0	16.2	11.0	14.0	18.0	17.2	17.8	19.3
	Min	10.1	2.0	3.8	4.6	5.6	7.8	11.0	8.4	7.2	7.0	6.8	7.8	8.8
Relative Humidity	Max	66	80	89	95	98	84	100	100	100	99	91	88	87
	Min	33	27	49	39	30	37	57	80	47	44	44	48	43
Soil Temperature at 10 cm	06 UTC	11.4	11.0	11.8	12.0	13.2	13.6	14.2	12.2	11.4	12.4	12.3	13.1	13.6
	12 UTC	14.0	13.0	13.8	14.4	14.8	15.0	12.2	12.4	13.0	14.0	13.7	15.3	17.5
Sunshine Duration		11.3	12.5	11.9	11.8	11.2	0.4	0.0	0.0	8.6	9.1	7.7	6.7	7.1
Precipitation								9.2	4.7	5.8		19.7	8.3	11.0
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	45.1
Growing Degrees	5	8.1	5.1	5.6	6.9	8.8	8.9	8.6	4.7	5.6	7.5	69.6	77.9	80.5
	10	3.1	0.1	0.6	1.9	3.8	3.9	3.6	0.0	0.6	2.5	19.9	27.9	36.6

2nd 10-day period (11-20/04/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	31.9	30.8	25.3
Precipitation - Reference Evapotranspiration	-12.2	-22.5	-14.3
Number of Rainy Days	3.0	5.0	2.5
Number of Dry Days	16.0	6.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration





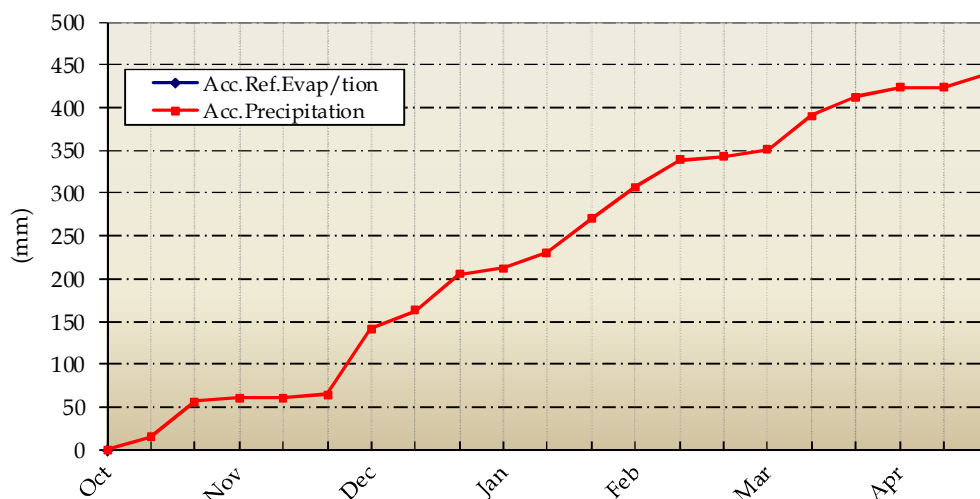
Tanagra

2nd 10-day period (11-20/04/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.2	18.5	18.9	19.1	21.1	20.7	13.7	11.4	13.0	20.0	17.2	18.7	19.9
	Min	9.4	2.6	3.2	4.7	3.8	5.1	10.6	9.4	7.4	2.2	5.8	5.9	8.4
Relative Humidity	Max	76	93	99	96	89	81	99	100	100	100	93	91	89
	Min	32	30	27	34	32	31	68	65	62	29	41	39	38
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.0	12.1	11.5	12.0	8.7	7.5	0.0	0.0	3.0	12.2	7.9	7.0	8.1
Precipitation							0.1	8.8	6.7	0.3		15.9		8.0
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	41.0
Growing Degrees	5	7.3	5.6	6.1	6.9	7.5	7.9	7.2	5.4	5.2	6.1	65.0	72.6	79.9
	10	2.3	0.6	1.1	1.9	2.5	2.9	2.2	0.4	0.2	1.1	15.0	23.7	36.6

2nd 10-day period (11-20/04/2022)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	-
Number of Rainy Days	4.0	0.0
Number of Dry Days	8.0	12.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



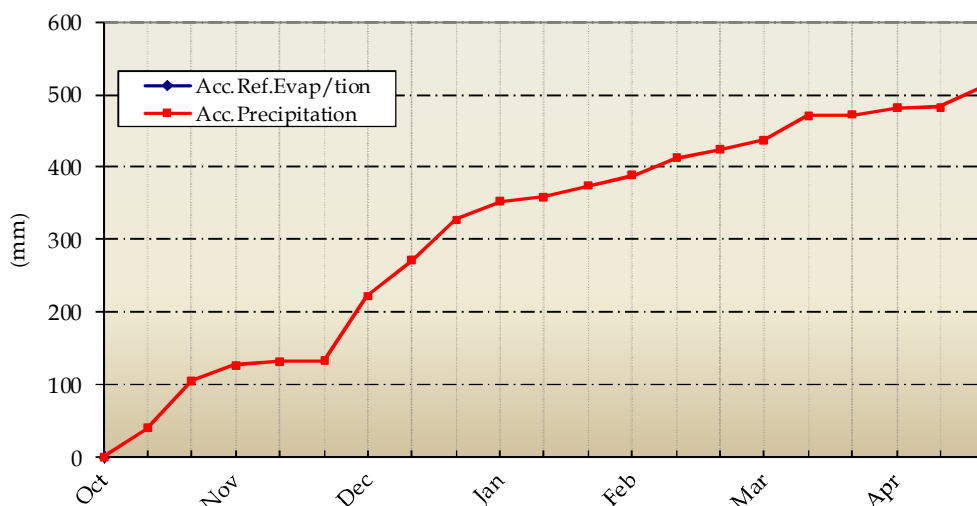
Tripoli

2nd 10-day period (11-20/04/2022)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	15.7	17.3	18.3	18.3	18.9	20.2	12.5	8.4	13.9	15.5	15.9	17.7	18.4
	Min	2.0	-0.5	1.6	1.3	3.9	4.8	10.7	4.7	5.8	-0.2	3.4	3.5	5.1
Relative Humidity	Max	88	98	99	97	82	84	96	98	97	96	94	89	89
	Min	26	37	32	31	25	21	25	88	44	38	37	34	36
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	11.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	14.9
Sunshine Duration		10.8	10.5	9.0	11.2	8.8	7.0	0.0	0.0	7.3	11.5	7.6	7.4	7.8
Precipitation							0.0	0.6	20.3	9.4	0.0	30.3	0.0	14.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	32.1
Growing Degrees	5	3.9	3.4	5.0	4.8	6.4	7.5	6.6	1.6	4.9	2.7	46.6	56.2	59.2
	10	0.0	0.0	0.0	0.0	1.4	2.5	1.6	0.0	0.0	0.0	5.5	10.8	21.0

2nd 10-day period (11-20/04/2022)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	26.7	28.8	29.1
Precipitation - Reference Evapotranspiration	3.6	-28.8	-14.6
Number of Rainy Days	3.0	0.0	2.6
Number of Dry Days	9.0	12.0	-

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 $ET_0$ (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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