



AGROMETEOROLOGICAL BULLETIN

*October 2020
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



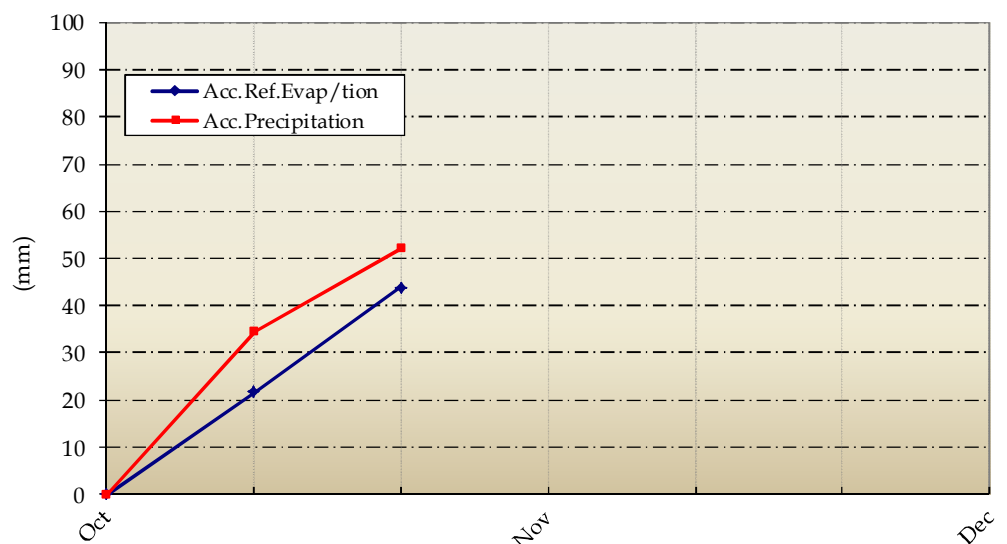
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2nd 10-day period (11-20/10/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.6	24.6	24.0	24.2	24.6	24.8	24.4	24.0	19.6	19.4	23.3	24.1	20.8
	Min	13.0	12.4	17.0	12.8	12.0	15.6	16.2	9.6	12.0	8.0	12.9	12.3	10.8
Relative Humidity	Max	98	98	92	95	95	92	95	93	63	65	89	93	-
	Min	66	63	54	46	70	64	56	43	34	44	54	50	-
Soil Temperature at 10 cm	06 UTC	18.4	18.2	20.2	18.2	17.6	19.4	20.0	19.2	17.4	15.8	18.4	17.0	15.2
	12 UTC	22.0	22.2	20.8	21.2	21.6	21.6	21.6	21.8	19.6	17.4	21.0	21.2	18.0
Sunshine Duration		9.5	9.1	5.4	9.7	8.5	9.4	3.3	7.9	8.8	4.2	7.6	7.7	5.9
Precipitation				17.7								17.7		15.0
Evaporation		3.1	2.7	4.5	3.1	2.5	4.5	3.1	4.0	4.8	4.1	36.4	31.0	42.1
Growing Degrees	5	13.3	13.5	15.5	13.5	13.3	15.2	15.3	11.8	10.8	8.7	130.9	132.2	107.7
	10	8.3	8.5	10.5	8.5	8.3	10.2	10.3	6.8	5.8	3.7	80.9	82.2	58.4

2nd 10-day period (11-20/10/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	22.3	21.4	22.7
Precipitation - Reference Evapotranspiration	-4.6	-21.4	-7.7
Number of Rainy Days	1.0	0.0	1.9
Number of Dry Days	4.0	12.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

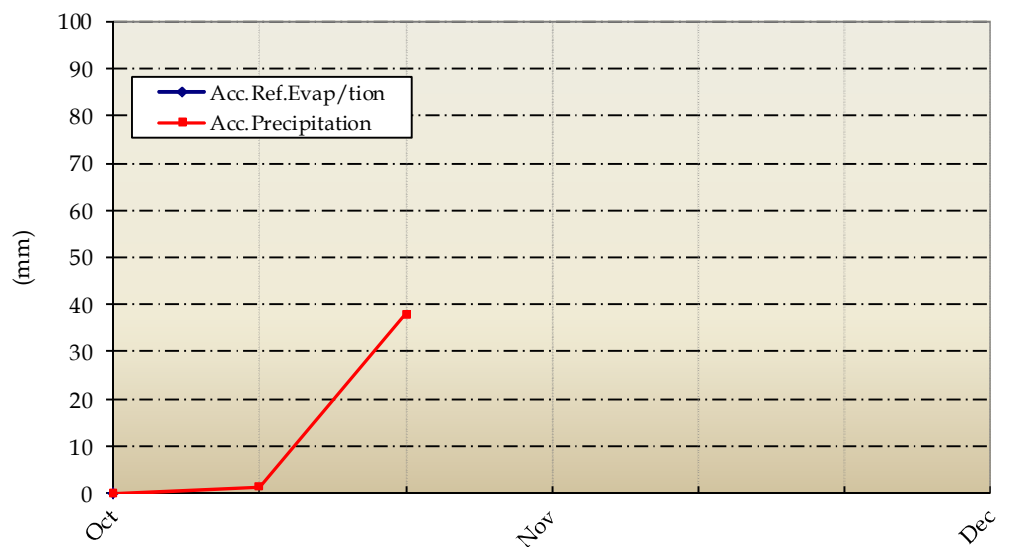


2nd 10-day period (11-20/10/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.3	25.0	24.0	22.9	24.2	27.2	23.8	22.7	23.2	23.4	24.2	26.1	24.1
	Min	15.1	15.9	14.6	11.0	14.6	14.0	16.1	10.4	9.5	9.6	13.1	14.7	13.2
Relative Humidity	Max	91	99	95	94	92	94	90	97	97	96	94	100	-
	Min	44	58	49	48	57	51	41	48	46	41	48	55	-
Soil Temperature at 10 cm	06 UTC	19.4	21.2	21.2	20.8	19.0	20.2	21.2	20.6	19.4	18.8	20.2	21.2	18.6
	12 UTC	23.6	22.4	22.2	22.2	22.8	21.8	22.2	20.8	20.8	20.4	21.9	23.0	21.5
Sunshine Duration		8.7	6.3	5.8	7.9	8.7	6.9	5.4	7.6	7.4	8.5	7.3	8.5	7.1
Precipitation			1.9	32.9	1.6							36.4		23.9
Evaporation		3.4	0.2	5.4	1.6	4.8	3.2	3.3	2.8	2.8	4.6	32.1	25.7	36.4
Growing Degrees	5	15.2	15.5	14.3	12.0	14.4	15.6	15.0	11.6	11.4	11.5	136.3	153.8	136.6
	10	10.2	10.5	9.3	7.0	9.4	10.6	10.0	6.6	6.4	6.5	86.3	103.8	86.6

2nd 10-day period (11-20/10/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	22.5
Precipitation - Reference Evapotranspiration	-	-	1.4
Number of Rainy Days	3.0	0.0	2.6
Number of Dry Days	3.0	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



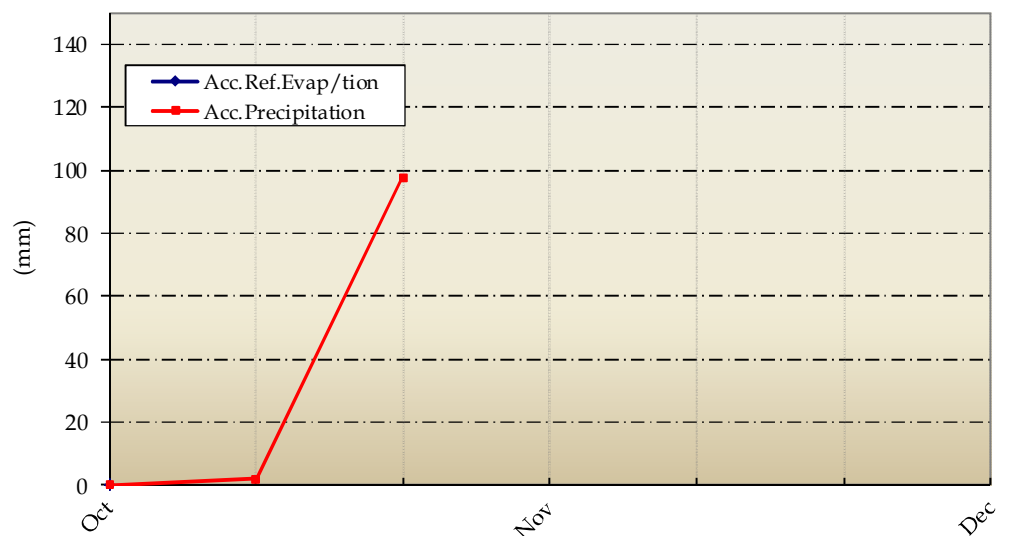
Iraklio

2nd 10-day period (11-20/10/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.0	26.8	29.6	26.0	25.2	32.6	28.4	26.4	25.0	20.0	26.5	24.8	24.0
	Min	16.8	17.8	22.4	18.0	16.8	17.4	24.4	19.4	20.0	12.4	18.5	18.0	17.1
Relative Humidity	Max	84	86	79	84	83	78	92	92	100	98	88	91	-
	Min	67	60	57	59	65	35	49	70	67	76	60	66	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		10.0	9.4	6.9	6.9	9.8	9.0	3.4	6.1	5.8	1.5	6.9	7.2	6.5
Precipitation									0.0	0.6	95.3	95.9	3.1	12.5
Evaporation		2.4	5.3	4.8	2.4	4.9	8.5	1.8	3.4	-	-	-	24.8	49.3
Growing Degrees	5	15.9	17.3	21.0	17.0	16.0	20.0	21.4	17.9	17.5	11.2	175.2	163.9	155.9
	10	10.9	12.3	16.0	12.0	11.0	15.0	16.4	12.9	12.5	6.2	125.2	113.9	105.9

2nd 10-day period (11-20/10/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	-
Precipitation - Reference Evapotranspiration	-	-	12.5
Number of Rainy Days	2.0	2.0	1.7
Number of Dry Days	9.0	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

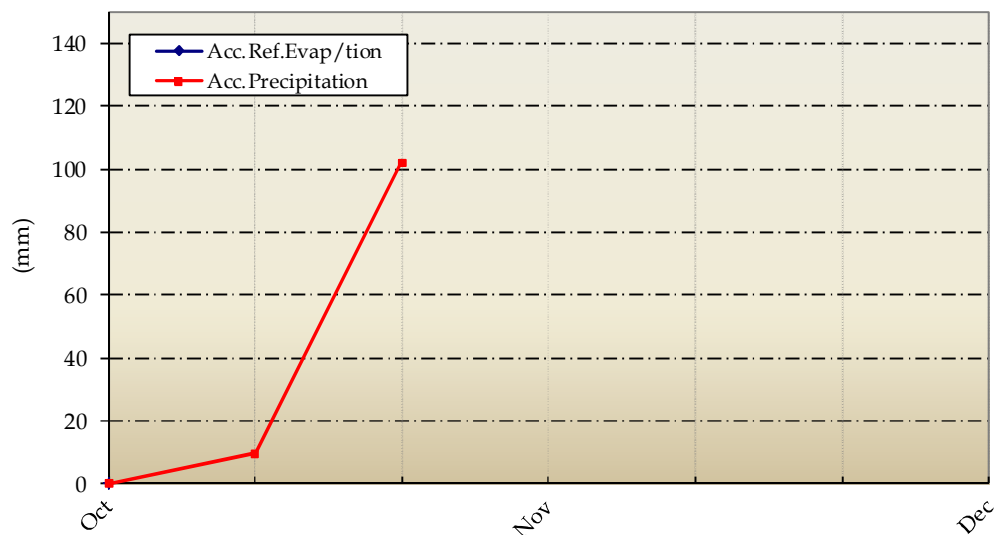


2nd 10-day period (11-20/10/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.5	20.6	16.4	20.1	19.2	19.4	19.5	19.2	20.3	20.2	19.7	24.8	20.6
	Min	9.0	8.0	11.0	8.9	7.9	12.9	6.9	2.5	5.1	3.9	7.6	10.0	8.9
Relative Humidity	Max	100	95	97	99	99	99	100	99	99	100	99	100	-
	Min	52	64	66	43	71	72	44	41	38	43	53	52	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	14.0
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	16.3
Sunshine Duration		7.9	2.3	1.4	7.9	2.2	0.0	6.3	6.9	4.9	6.0	4.6	5.8	5.3
Precipitation			12.4	34.5	6.7	0.7	38.4					92.7	0.6	37.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	30.1
Growing Degrees	5	10.8	9.3	8.7	9.5	8.6	11.2	8.2	5.9	7.7	7.1	86.8	124.0	98.7
	10	5.8	4.3	3.7	4.5	3.6	6.2	3.2	0.9	2.7	2.1	36.8	74.0	49.1

2nd 10-day period (11-20/10/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	17.6
Precipitation - Reference Evapotranspiration	-	-	19.5
Number of Rainy Days	5.0	1.0	3.4
Number of Dry Days	3.0	0.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

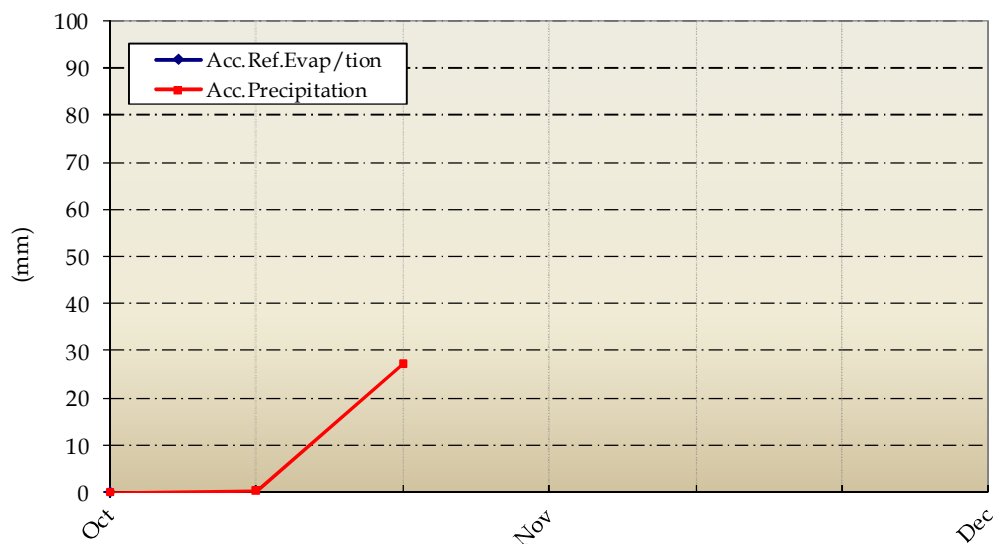


2nd 10-day period (11-20/10/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	27.0	26.2	24.0	23.8	24.4	26.2	24.6	24.0	24.0	23.0	24.7	27.0	24.7
	Min	12.6	13.0	16.0	13.6	11.2	14.4	19.4	12.4	11.2	14.6	13.8	15.1	13.1
Relative Humidity	Max	96	100	100	97	95	95	96	85	93	100	96	89	-
	Min	42	62	51	51	53	61	58	36	49	53	52	45	-
Soil Temperature at 10 cm	06 UTC	21.0	21.0	21.6	20.4	19.0	19.0	21.8	19.0	18.0	19.2	20.0	21.5	18.6
	12 UTC	24.0	23.5	23.0	23.0	22.0	21.4	22.0	20.5	21.0	21.0	22.1	23.7	20.9
Sunshine Duration		9.5	7.8	7.7	6.2	9.2	7.4	3.2	8.8	6.2	5.5	7.2	8.8	6.8
Precipitation				25.7	0.5			0.0			0.5	26.7		24.4
Evaporation		1.8	6.9	3.5	4.0	3.8	0.8	3.6	4.0	4.0	1.9	34.3	45.0	39.0
Growing Degrees	5	14.8	14.6	15.0	13.7	12.8	15.3	17.0	13.2	12.6	13.8	142.8	160.6	138.6
	10	9.8	9.6	10.0	8.7	7.8	10.3	12.0	8.2	7.6	8.8	92.8	110.6	88.6

2nd 10-day period (11-20/10/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	29.9	24.3
Precipitation - Reference Evapotranspiration	-	-29.9	0.1
Number of Rainy Days	3.0	0.0	2.7
Number of Dry Days	4.0	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



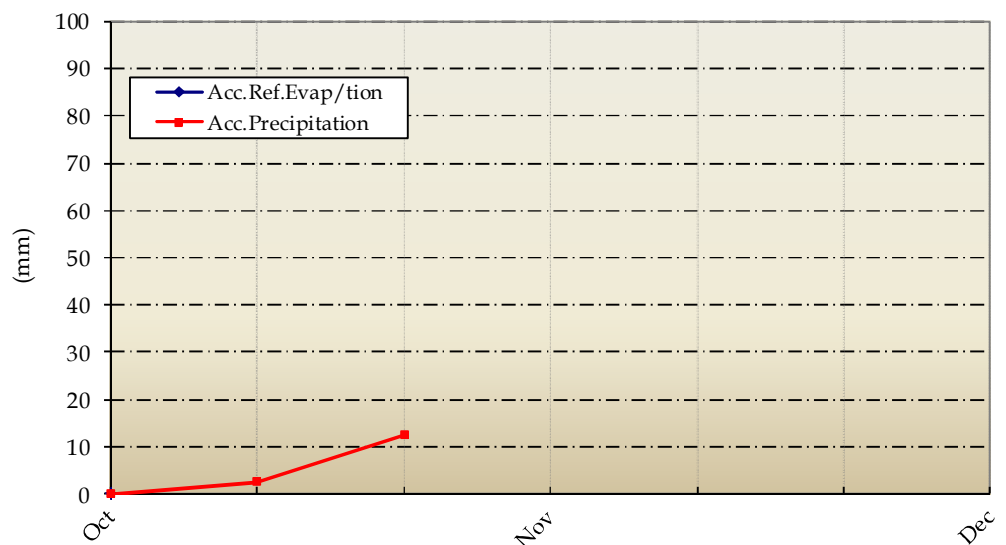
Larisa

2nd 10-day period (11-20/10/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.4	27.0	23.0	24.3	23.9	27.8	25.0	24.0	18.0	20.2	24.0	26.6	23.0
	Min	10.5	12.7	14.4	10.0	8.5	15.1	12.6	6.8	10.0	9.2	11.0	12.4	10.1
Relative Humidity	Max	94	97	95	92	91	93	93	89	86	88	92	98	-
	Min	42	42	35	35	40	43	31	32	38	51	39	44	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	17.2
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	18.6
Sunshine Duration		-	-	-	-	-	-	-	-	-	-	-	6.8	5.6
Precipitation				9.8								9.8		14.1
Evaporation		4.0	8.2	2.8	3.6	3.7	4.7	6.7	3.6	1.5	3.7	42.5	36.1	31.3
Growing Degrees	5	13.5	14.9	13.7	12.2	11.2	16.5	13.8	10.4	9.0	9.7	124.7	145.2	115.6
	10	8.5	9.9	8.7	7.2	6.2	11.5	8.8	5.4	4.0	4.7	74.7	95.2	65.8

2nd 10-day period (11-20/10/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	23.0	20.6
Precipitation - Reference Evapotranspiration	-	-23.0	-6.5
Number of Rainy Days	1.0	0.0	2.4
Number of Dry Days	4.0	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



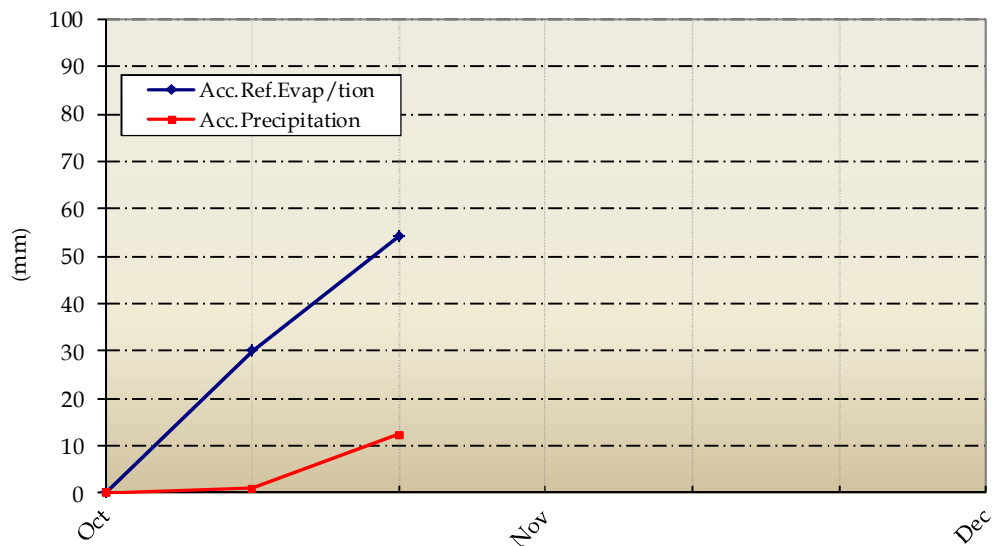
Mikra

2nd 10-day period (11-20/10/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.3	26.4	24.4	23.8	24.2	26.7	24.8	22.7	20.2	20.4	23.8	24.7	21.6
	Min	13.0	14.6	19.4	12.4	11.3	17.0	16.1	10.3	10.3	13.1	13.8	14.3	11.6
Relative Humidity	Max	92	97	85	84	92	96	98	89	69	82	88	94	-
	Min	54	50	34	34	40	54	27	45	37	49	42	58	-
Soil Temperature at 10 cm	06 UTC	25.0	21.0	21.2	19.4	19.0	20.0	20.2	17.4	16.0	17.8	19.7	19.5	16.5
	12 UTC	22.4	23.2	22.0	21.2	20.5	21.4	22.2	22.2	18.4	19.2	21.3	21.8	19.4
Sunshine Duration		9.4	5.9	8.6	9.4	6.4	3.4	9.5	8.5	6.0	9.4	7.6	8.0	5.3
Precipitation				10.4	0.2		0.9					11.5		13.0
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	31.8
Growing Degrees	5	13.7	15.5	16.9	13.1	12.8	16.9	15.5	11.5	10.3	11.8	137.7	145.2	116.2
	10	8.7	10.5	11.9	8.1	7.8	11.9	10.5	6.5	5.3	6.8	87.7	95.2	66.2

2nd 10-day period (11-20/10/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	24.2	20.8	20.4
Precipitation - Reference Evapotranspiration	-12.7	-20.8	-7.4
Number of Rainy Days	3.0	0.0	2.0
Number of Dry Days	4.0	12.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



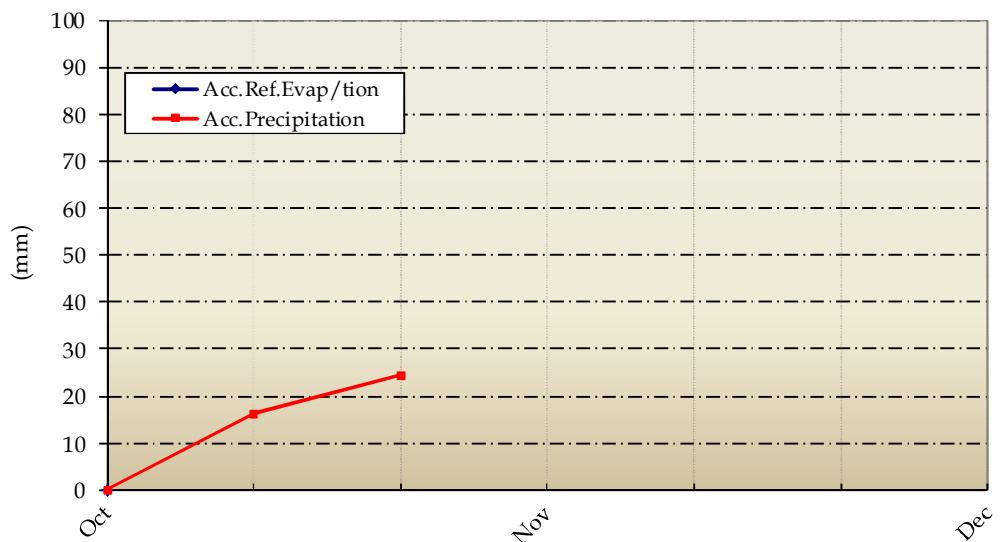
Tanagra

2nd 10-day period (11-20/10/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.7	28.2	24.1	24.8	26.6	26.6	24.8	23.7	18.0	20.2	24.3	26.4	22.8
	Min	12.4	13.3	16.4	12.8	9.5	13.2	18.2	11.0	11.7	12.9	13.1	13.5	12.0
Relative Humidity	Max	99	100	99	82	93	95	95	92	95	99	95	95	-
	Min	39	33	35	30	28	44	30	33	62	44	38	35	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		8.7	9.0	8.8	8.2	8.5	9.0	3.4	7.7	1.0	5.2	7.0	7.9	
Precipitation				7.9				0.2			0.0	8.1		11.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	35.3	
Growing Degrees	5	14.1	15.8	15.3	13.8	13.1	14.9	16.5	12.4	9.9	11.6	137.1	149.6	
	10	9.1	10.8	10.3	8.8	8.1	9.9	11.5	7.4	4.9	6.6	87.1	99.6	

2nd 10-day period (11-20/10/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	
Precipitation - Reference Evapotranspiration	-	-	11.3
Number of Rainy Days	2.0	0.0	2.5
Number of Dry Days	3.0	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



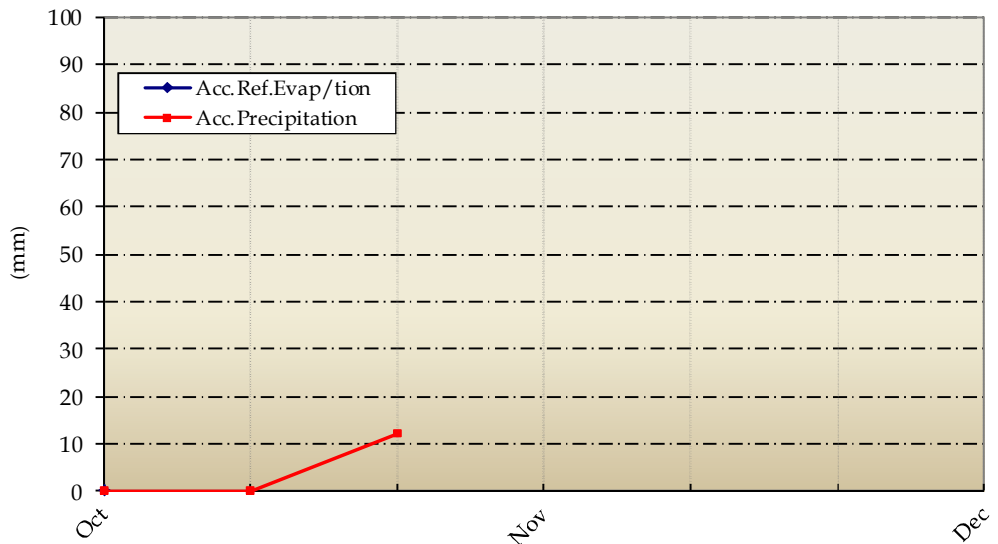
Tripoli

2nd 10-day period (11-20/10/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.5	24.3	18.2	19.8	21.8	24.0	23.1	21.8	19.7	17.8	21.4	25.6	21.3
	Min	6.9	7.1	13.0	11.3	4.5	8.0	15.8	4.1	5.8	11.5	8.8	7.9	8.2
Relative Humidity	Max	97	97	98	93	96	97	93	95	95	91	95	98	-
	Min	28	42	56	42	40	49	40	20	41	51	41	26	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	15.3	15.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	20.1	17.2
Sunshine Duration		9.0	7.9	7.8	9.4	9.0	8.5	4.2	8.9	6.6	3.6	7.5	7.3	6.8
Precipitation		0.0	0.0	8.8	0.3	0.0	0.0	1.8		1.1	0.1	12.1	0.1	15.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	28.1
Growing Degrees	5	10.2	10.7	10.6	10.6	8.2	11.0	14.5	8.0	7.8	9.7	101.0	-	97.5
	10	5.2	5.7	5.6	5.6	3.2	6.0	9.5	3.0	2.8	4.7	51.0	-	48.2

2nd 10-day period (11-20/10/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	21.4
Precipitation - Reference Evapotranspiration	-	-	-5.5
Number of Rainy Days	5.0	1.0	2.7
Number of Dry Days	14.0	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





◆ **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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Issue Editors :

Papakrivou Anastasia

The present bulletin was designed and implemented under the support of Water Resources Management Division of Agriculture University of Athens