



AGROMETEOROLOGICAL BULLETIN

*May 2020
1st 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



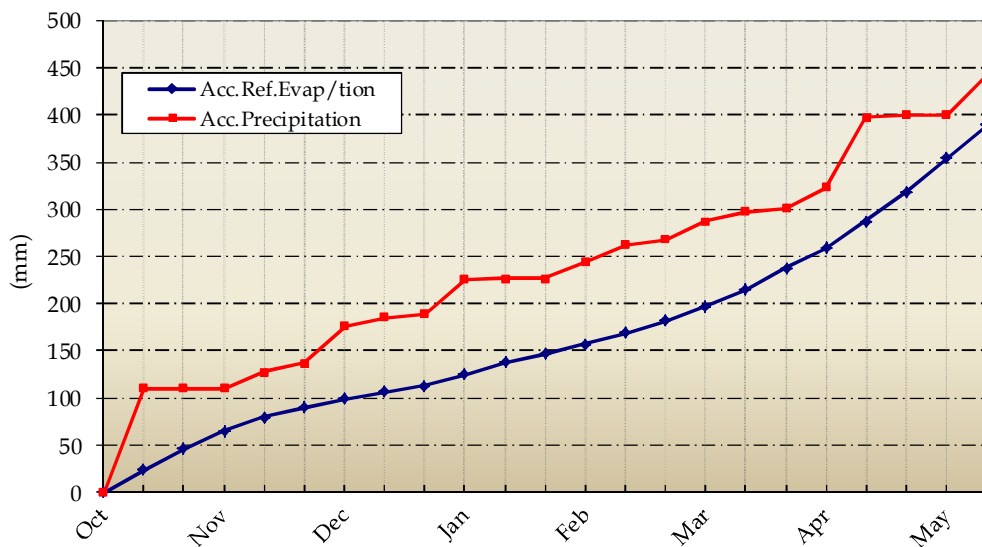
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1st 10-day period (1-10/05/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	22.6	21.6	17.4	17.6	20.0	21.4	18.4	20.8	20.6	22.2	20.3	19.8	20.6
	Min	9.8	10.8	14.0	11.2	12.4	13.0	9.2	7.0	14.4	9.0	11.1	11.2	9.7
Relative Humidity	Max	85	80	96	93	77	88	81	97	74	79	85	93	-
	Min	66	60	89	58	51	47	48	37	30	47	53	53	-
Soil Temperature at 10 cm	06 UTC	17.6	18.2	18.2	15.4	15.4	15.2	14.6	14.2	14.4	15.6	15.9	16.1	15.1
	12 UTC	22.2	22.0	18.4	18.6	18.2	19.0	18.2	18.0	17.4	20.2	19.2	19.0	19.2
Sunshine Duration		11.3	10.7	0.0	0.6	11.2	8.5	10.8	11.2	12.3	9.9	8.6	6.5	8.0
Precipitation			0.1	18.7	7.2		1.4	13.9				41.3	14.4	9.3
Evaporation		6.5	4.2	3.7	5.0	4.0	5.3	6.4	2.1	7.8	6.5	51.5	36.7	55.4
Growing Degrees	5	11.2	11.2	10.7	9.4	11.2	12.2	8.8	8.9	12.5	10.6	106.7	105.0	101.5
	10	6.2	6.2	5.7	4.4	6.2	7.2	3.8	3.9	7.5	5.6	56.7	55.0	51.6

1st 10-day period (1-10/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	34.4	31.4	37.0
Precipitation - Reference Evapotranspiration	6.9	-17.0	-27.7
Number of Rainy Days	5.0	6.0	2.2
Number of Dry Days	10.0	11.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

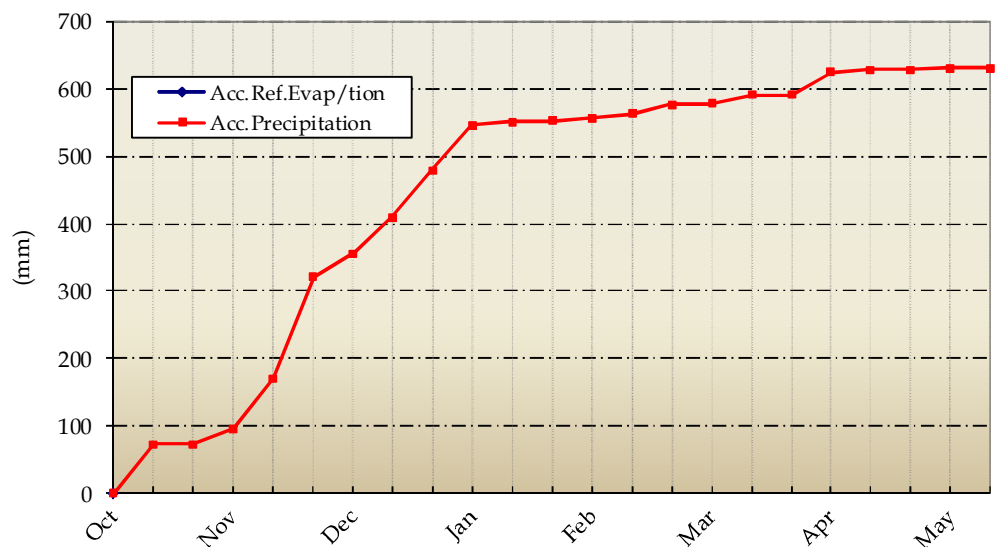


1st 10-day period (1-10/05/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.3	23.5	22.7	22.6	23.8	23.1	25.1	23.9	24.8	23.9	23.7	20.1	22.2
	Min	10.9	11.9	12.1	12.6	9.6	9.5	13.8	6.7	9.9	10.2	10.7	10.5	11.6
Relative Humidity	Max	94	93	96	92	94	93	93	94	92	92	93	94	-
	Min	42	49	50	35	29	42	39	25	32	47	39	47	-
Soil Temperature at 10 cm	06 UTC	19.2	20.0	20.2	20.4	19.6	19.8	21.4	19.8	20.0	20.6	20.1	16.7	17.3
	12 UTC	22.6	22.8	22.2	23.0	22.8	23.4	23.4	23.2	23.4	23.4	23.0	18.7	21.1
Sunshine Duration		11.7	10.2	12.3	12.0	12.7	11.7	11.1	12.8	12.8	5.5	11.3	7.6	8.8
Precipitation													0.1	8.6
Evaporation		-	-	-	-	-	-	-	7.3	8.3	4.6	-	53.8	49.3
Growing Degrees	5	12.1	12.7	12.4	12.6	11.7	11.3	14.5	10.3	12.4	12.1	122.0	102.9	119.0
	10	7.1	7.7	7.4	7.6	6.7	6.3	9.5	5.3	7.4	7.1	72.0	52.9	69.0

1st 10-day period (1-10/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	33.6	35.8
Precipitation - Reference Evapotranspiration	-	-33.5	-27.2
Number of Rainy Days	0.0	1.0	2.0
Number of Dry Days	17.0	18.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

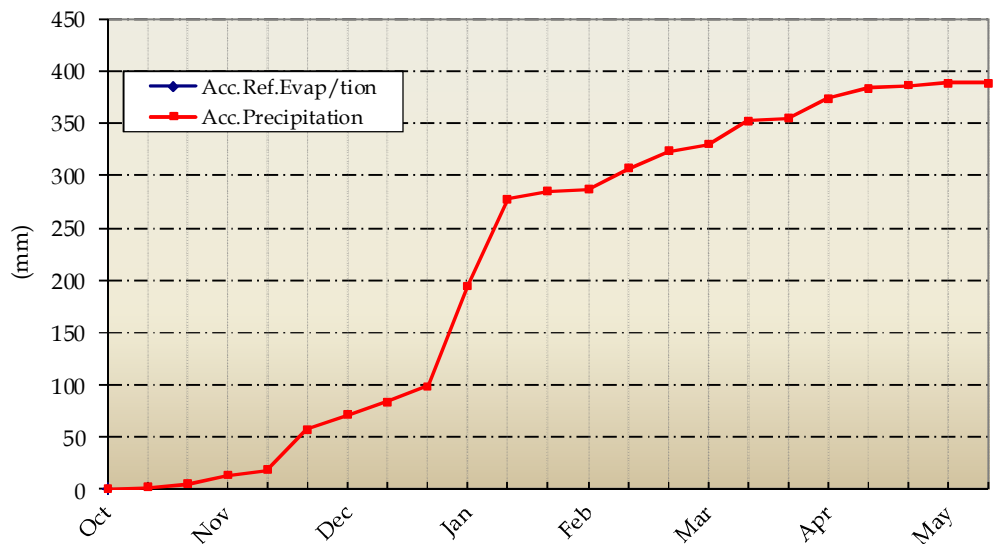


1st 10-day period (1-10/05/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	21.0	21.4	22.2	21.2	19.8	22.0	23.2	20.2	21.6	24.4	21.7	21.5	22.0
	Min	12.6	13.6	16.0	15.0	14.2	11.4	16.0	15.8	14.2	12.0	14.1	12.9	14.0
Relative Humidity	Max	87	83	89	89	75	80	77	70	71	81	80	91	-
	Min	56	53	47	61	55	41	48	55	43	31	49	53	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		11.9	10.9	10.5	9.8	12.5	12.6	9.3	10.9	12.7	10.7	11.2	9.4	9.1
Precipitation					0.5							0.5	0.9	5.2
Evaporation		4.0	3.6	4.7	2.8	6.1	4.0	6.2	5.9	5.9	3.8	47.0	42.2	59.2
Growing Degrees	5	11.8	12.5	14.1	13.1	12.0	11.7	14.6	13.0	12.9	13.2	128.9	121.9	130.2
	10	6.8	7.5	9.1	8.1	7.0	6.7	9.6	8.0	7.9	8.2	78.9	71.9	80.2

1st 10-day period (1-10/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	40.2	-
Precipitation - Reference Evapotranspiration	-	-39.3	5.2
Number of Rainy Days	1.0	2.0	1.4
Number of Dry Days	9.0	14.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

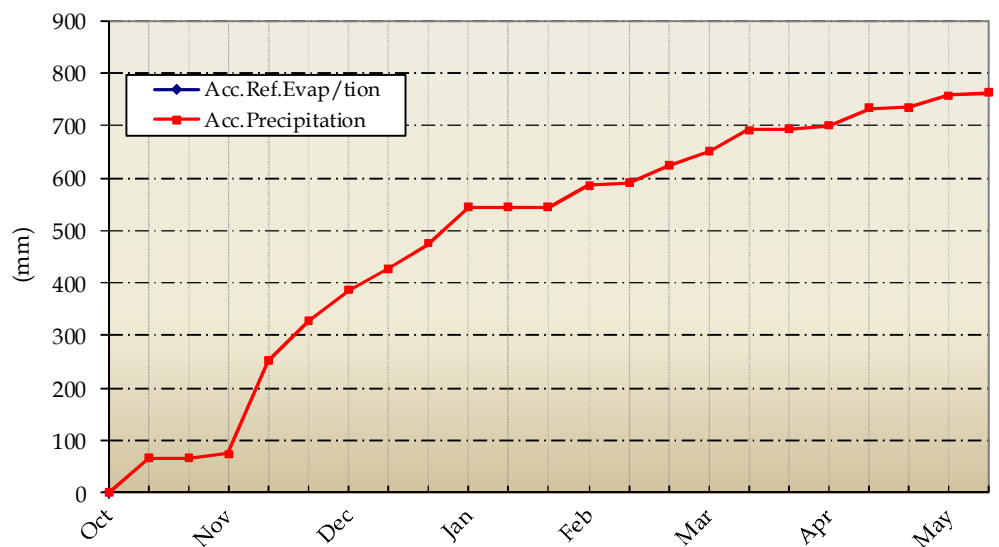


1st 10-day period (1-10/05/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	21.2	19.4	22.0	22.0	23.0	21.8	21.4	23.8	25.6	25.0	22.5	17.7	21.2
	Min	4.8	7.0	8.1	5.2	3.0	5.0	11.0	4.2	4.6	5.4	5.8	7.6	8.6
Relative Humidity	Max	99	99	100	100	100	100	100	100	98	98	99	98	-
	Min	40	47	52	27	30	36	26	28	31	31	35	55	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	13.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	17.5
Sunshine Duration		9.7	-	10.4	11.7	11.8	4.7	10.5	12.2	12.0	4.3	9.7	5.4	6.7
Precipitation			2.6	0.0			0.5	0.6				3.7	22.5	22.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	36.0
Growing Degrees	5	8.0	8.2	10.1	8.6	8.0	8.4	11.2	9.0	10.1	10.2	91.8	76.3	99.4
	10	3.0	3.2	5.1	3.6	3.0	3.4	6.2	4.0	5.1	5.2	41.8	26.9	49.6

1st 10-day period (1-10/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	33.0
Precipitation - Reference Evapotranspiration	-	-	-10.8
Number of Rainy Days	3.0	5.0	3.9
Number of Dry Days	8.0	7.0	-

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

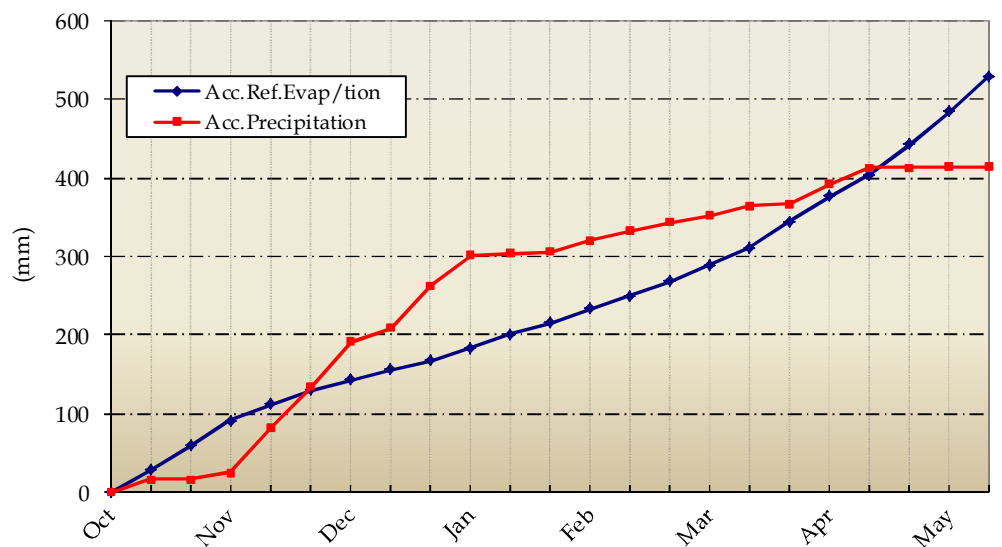
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/05/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.0	24.0	23.5	24.2	21.5	26.2	23.2	23.0	24.6	22.4	23.9	20.6	22.8
	Min	12.9	10.8	12.4	12.0	8.0	10.3	10.5	10.9	8.2	9.4	10.5	9.6	11.0
Relative Humidity	Max	84	95	91	91	85	92	100	82	90	98	91	90	-
	Min	24	20	35	28	41	26	56	26	32	45	33	42	-
Soil Temperature at 10 cm	06 UTC	19.0	19.4	20.6	19.6	18.8	19.5	20.4	18.8	19.0	20.0	19.5	16.6	16.9
	12 UTC	22.6	23.0	23.2	23.0	23.5	23.5	24.0	23.0	23.5	23.0	23.2	19.6	20.6
Sunshine Duration		11.5	10.9	8.5	10.1	11.4	11.0	6.7	12.7	12.3	3.7	9.9	8.8	8.6
Precipitation								0.9				0.9	8.4	9.1
Evaporation		9.8	4.9	3.6	8.5	5.3	5.6	6.1	9.5	3.3	6.8	63.4	40.9	52.2
Growing Degrees	5	14.5	12.4	13.0	13.1	9.8	13.3	11.9	12.0	11.4	10.9	122.0	101.1	119.0
	10	9.5	7.4	8.0	8.1	4.8	8.3	6.9	7.0	6.4	5.9	72.0	51.1	69.0

1st 10-day period (1-10/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	45.7	38.7	36.5
Precipitation - Reference Evapotranspiration	-44.8	-30.3	-27.4
Number of Rainy Days	1.0	3.0	2.3
Number of Dry Days	13.0	9.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

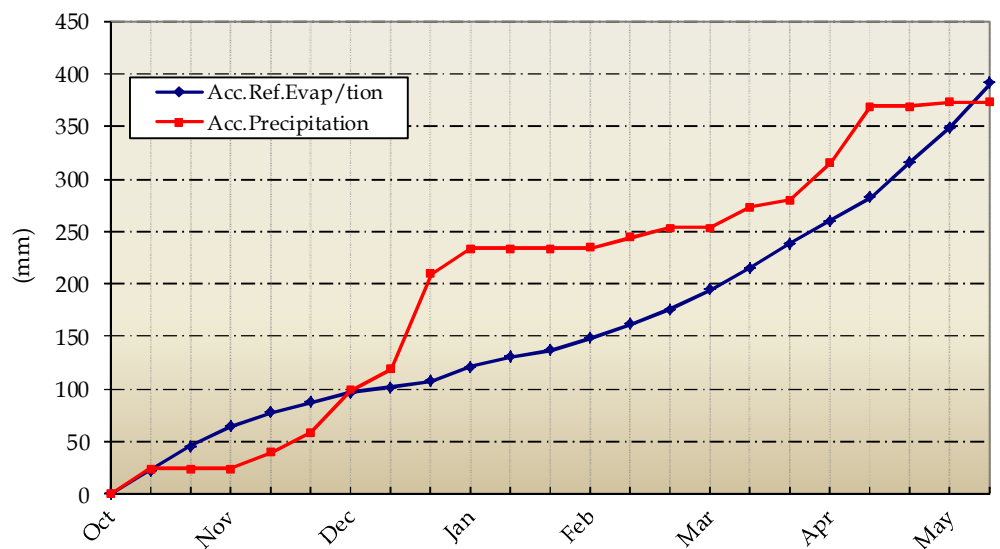


1st 10-day period (1-10/05/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	27.0	25.3	24.0	21.6	24.4	27.7	21.0	25.0	27.2	27.8	25.1	22.9	23.7
	Min	9.0	11.6	12.0	11.4	5.0	9.6	12.4	5.4	7.0	9.3	9.3	8.2	9.3
Relative Humidity	Max	91	90	81	74	86	84	71	87	90	92	85	87	-
	Min	22	38	31	32	25	31	33	28	30	35	30	32	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	16.2
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	18.4
Sunshine Duration		8.4	5.8	10.7	10.6	11.7	6.6	10.0	11.4	10.9	6.5	9.3	7.2	8.0
Precipitation			0.1		0.1		0.0					0.2	2.8	10.2
Evaporation		8.6	3.8	6.8	6.2	5.3	3.3	10.1	7.3	5.6	5.3	62.3	71.7	50.6
Growing Degrees	5	13.0	13.5	13.0	11.5	9.7	13.7	11.7	10.2	12.1	13.6	121.9	105.5	115.4
	10	8.0	8.5	8.0	6.5	4.7	8.7	6.7	5.2	7.1	8.6	71.9	55.5	65.4

1st 10-day period (1-10/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	42.0	38.5	38.0
Precipitation - Reference Evapotranspiration	-41.8	-35.7	-27.8
Number of Rainy Days	2.0	2.0	2.5
Number of Dry Days	8.0	5.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



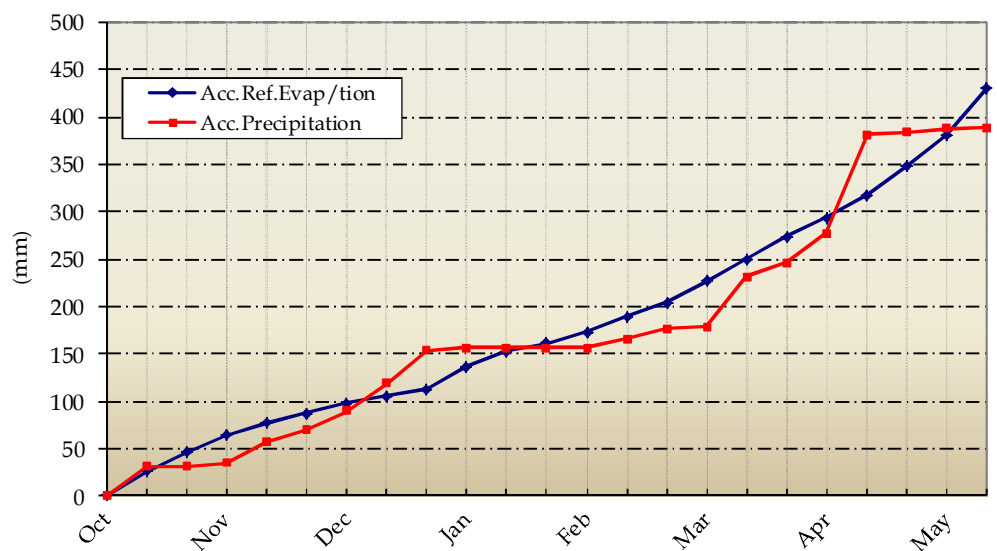
Mikra

1st 10-day period (1-10/05/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.8	22.8	21.8	20.8	24.4	22.2	20.1	24.8	24.0	24.0	23.0	21.7	22.7
	Min	10.5	10.6	13.7	13.9	10.7	9.2	11.4	7.7	9.0	10.0	10.7	11.1	10.7
Relative Humidity	Max	87	91	89	59	70	76	63	82	82	87	79	82	-
	Min	35	42	41	39	26	48	40	25	35	49	38	34	-
Soil Temperature at 10 cm	06 UTC	17.4	17.8	17.4	16.8	16.2	17.0	16.0	16.8	17.4	18.0	17.1	16.2	16.9
	12 UTC	22.0	21.0	19.0	18.8	19.0	18.6	18.8	20.0	20.2	21.0	19.8	19.1	21.5
Sunshine Duration		10.1	2.9	12.4	11.3	12.4	9.7	12.5	12.2	12.3	8.1	10.4	7.4	7.9
Precipitation			0.4	0.0				0.1				0.5	5.2	12.9
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	53.6
Growing Degrees	5	12.7	11.7	12.8	12.4	12.6	10.7	10.8	11.3	11.5	12.0	118.2	114.4	116.7
	10	7.7	6.7	7.8	7.4	7.6	5.7	5.8	6.3	6.5	7.0	68.2	64.4	66.7

1st 10-day period (1-10/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	49.2	43.2	38.0
Precipitation - Reference Evapotranspiration	-48.7	-38.0	-25.1
Number of Rainy Days	2.0	2.0	2.6
Number of Dry Days	9.0	7.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

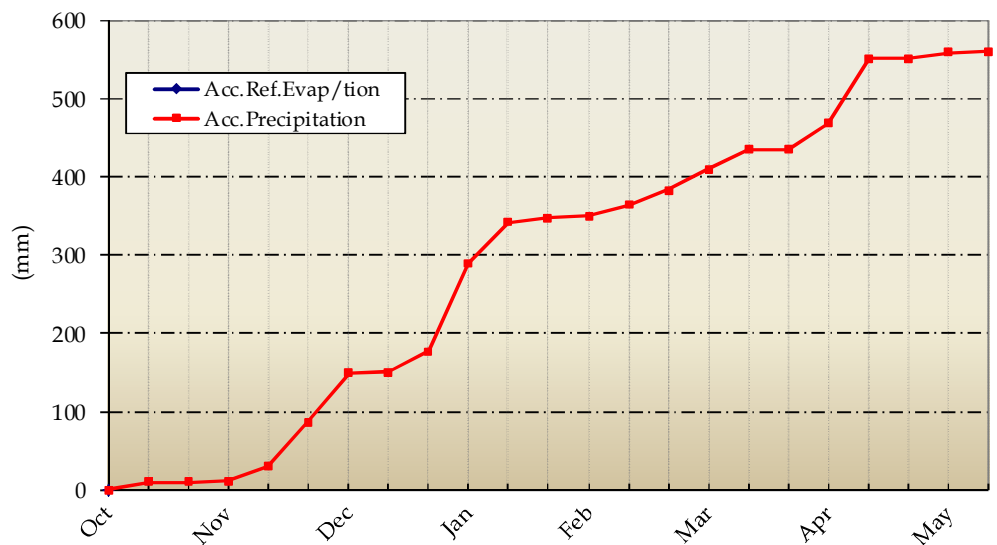


1st 10-day period (1-10/05/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.8	25.1	24.5	19.9	23.8	27.8	18.0	22.4	25.8	25.8	23.9	21.8	22.9
	Min	11.6	12.4	13.1	12.0	7.8	10.2	12.5	6.6	7.2	9.8	10.3	9.6	9.6
Relative Humidity	Max	81	81	96	95	80	70	76	81	79	78	82	92	-
	Min	21	28	29	34	24	21	31	24	23	30	26	34	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		10.7	6.2	11.7	10.1	12.9	11.5	5.7	13.1	13.1	9.9	10.5	8.7	
Precipitation					0.4							0.4	10.9	8.5
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	13.7	13.8	13.8	11.0	10.8	14.0	10.3	9.5	11.5	12.8	121.1	107.1	
	10	8.7	8.8	8.8	6.0	5.8	9.0	5.3	4.5	6.5	7.8	71.1	57.1	

1st 10-day period (1-10/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	37.6	
Precipitation - Reference Evapotranspiration	-	-26.7	8.5
Number of Rainy Days	1.0	2.0	2.7
Number of Dry Days	10.0	8.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



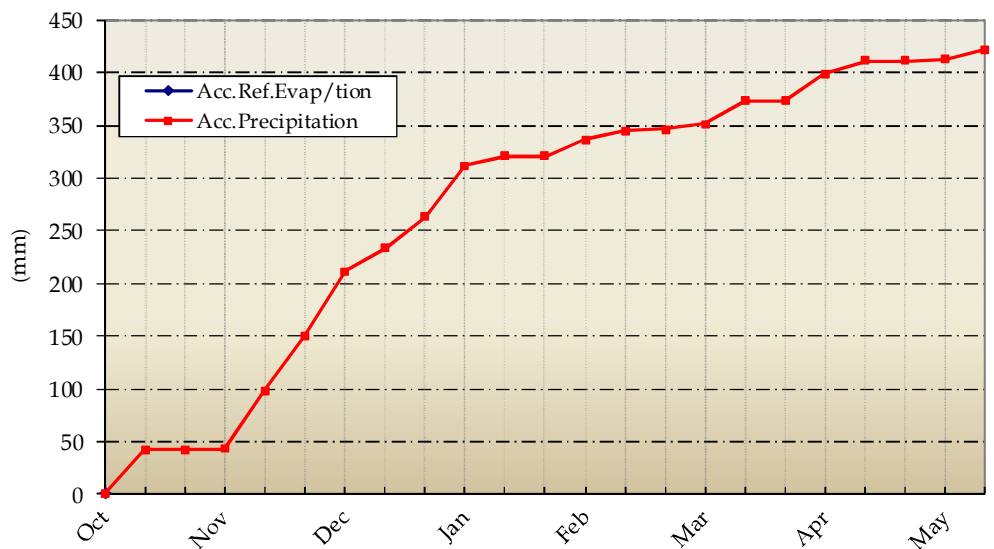
Tripoli

1st 10-day period (1-10/05/2020)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.3	21.7	21.4	18.0	21.6	25.7	17.5	21.6	24.8	25.7	22.1	18.0	21.0
	Min	4.2	7.9	10.5	4.9	1.8	4.4	7.7	4.0	10.0	3.9	5.9	5.3	7.0
Relative Humidity	Max	95	89	90	98	99	86	97	59	96	-	90	96	-
	Min	25	25	30	39	26	18	51	31	24	-	30	38	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	12.9	14.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	21.7	17.1
Sunshine Duration		11.9	11.3	11.8	7.7	11.3	11.7	3.8	12.4	12.0	6.1	10.0	9.1	8.1
Precipitation		0.0		0.0	1.9			7.4				9.3	3.5	10.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	39.1
Growing Degrees	5	8.8	9.8	11.0	6.5	6.7	10.1	7.6	7.8	12.4	9.8	90.3	66.8	89.7
	10	3.8	4.8	6.0	1.5	1.7	5.1	2.6	2.8	7.4	4.8	40.3	17.2	40.9

1st 10-day period (1-10/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	35.3	36.7
Precipitation - Reference Evapotranspiration	-	-31.8	-26.5
Number of Rainy Days	2.0	3.0	2.8
Number of Dry Days	6.0	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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