



AGROMETEOROLOGICAL BULLETIN

May 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



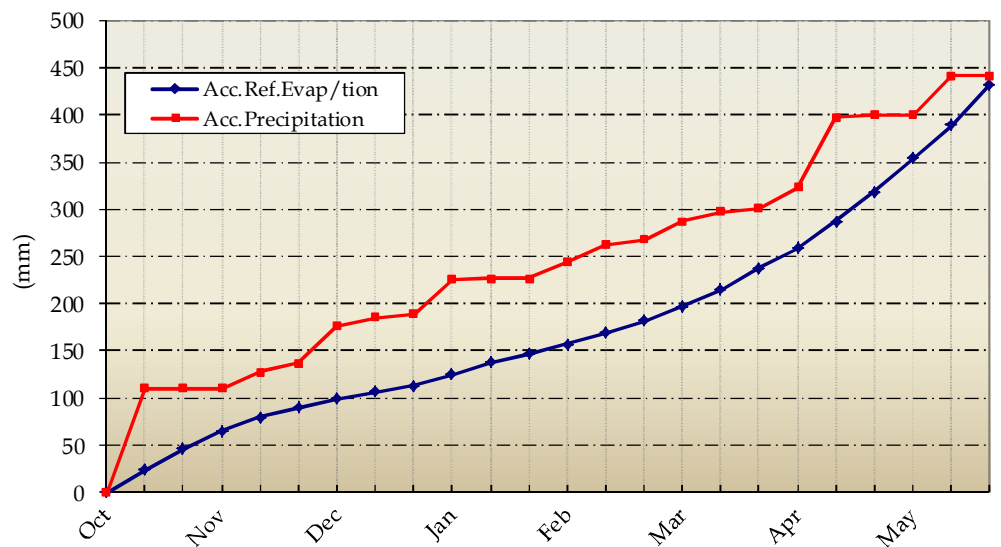
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2nd 10-day period (11-20/05/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.8	28.0	26.6	22.2	24.6	32.0	29.2	29.4	28.2	27.2	27.2	23.2	22.5
	Min	15.6	20.2	13.2	11.2	18.0	19.2	17.0	23.0	18.2	14.4	17.0	12.9	11.3
Relative Humidity	Max	70	68	85	92	92	94	79	81	75	75	81	88	-
	Min	35	33	41	67	57	34	46	33	39	45	43	51	-
Soil Temperature at 10 cm	06 UTC	17.8	18.6	19.4	19.6	20.6	20.6	20.0	20.2	18.8	18.4	19.4	17.9	17.0
	12 UTC	21.6	23.0	24.6	23.6	23.0	25.4	23.0	22.6	21.6	22.0	23.0	21.8	21.2
Sunshine Duration		12.0	12.0	12.9	10.3	2.5	7.2	0.8	9.1	4.7	7.8	7.9	8.5	8.2
Precipitation													3.8	10.7
Evaporation		4.7	6.5	7.2	5.2	3.9	8.2	8.3	7.0	7.3	4.2	62.5	46.9	57.1
Growing Degrees	5	15.2	19.1	14.9	11.7	16.3	20.6	18.1	21.2	18.2	15.8	171.1	130.5	118.8
	10	10.2	14.1	9.9	6.7	11.3	15.6	13.1	16.2	13.2	10.8	121.1	80.5	68.8

2nd 10-day period (11-20/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	43.5	38.4	40.4
Precipitation - Reference Evapotranspiration	-43.5	-34.6	-29.7
Number of Rainy Days	0.0	4.0	2.3
Number of Dry Days	13.0	0.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

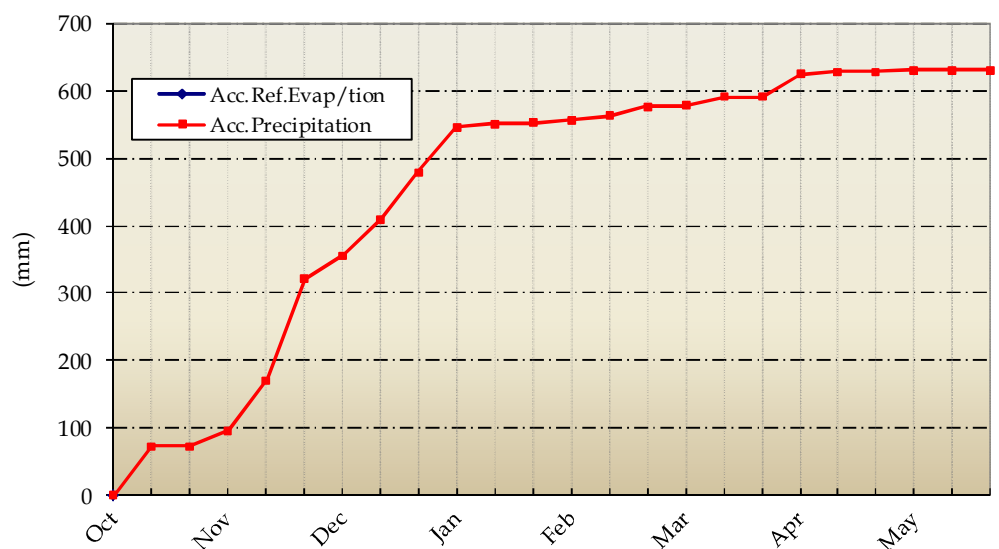


2nd 10-day period (11-20/05/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.2	27.6	27.9	32.6	35.7	34.3	37.8	37.7	37.3	26.8	32.9	23.4	23.9
	Min	11.0	17.7	10.4	13.5	14.0	13.5	15.2	16.2	16.7	17.9	14.6	12.2	12.7
Relative Humidity	Max	92	98	98	89	78	76	78	78	86	91	86	97	-
	Min	13	46	30	19	10	16	16	23	17	59	25	40	-
Soil Temperature at 10 cm	06 UTC	20.4	22.2	21.4	22.2	22.8	23.2	23.8	24.0	23.6	25.2	22.9	18.3	19.3
	12 UTC	24.0	25.2	24.8	25.8	26.6	26.6	27.2	27.0	27.8	27.0	26.2	20.9	23.6
Sunshine Duration		11.5	12.4	11.3	10.8	10.5	10.9	10.8	11.5	7.7	10.5	10.8	8.2	9.4
Precipitation													6.9	8.3
Evaporation		11.7	7.6	8.1	9.2	8.1	8.3	9.4	10.6	9.5	7.0	89.5	54.8	54.3
Growing Degrees	5	16.1	17.7	14.2	18.1	19.9	18.9	21.5	22.0	22.0	17.4	187.5	128.5	133.2
	10	11.1	12.7	9.2	13.1	14.9	13.9	16.5	17.0	17.0	12.4	137.5	78.5	83.2

2nd 10-day period (11-20/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	38.3	39.7
Precipitation - Reference Evapotranspiration	-	-31.4	-31.4
Number of Rainy Days	0.0	2.0	1.6
Number of Dry Days	27.0	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

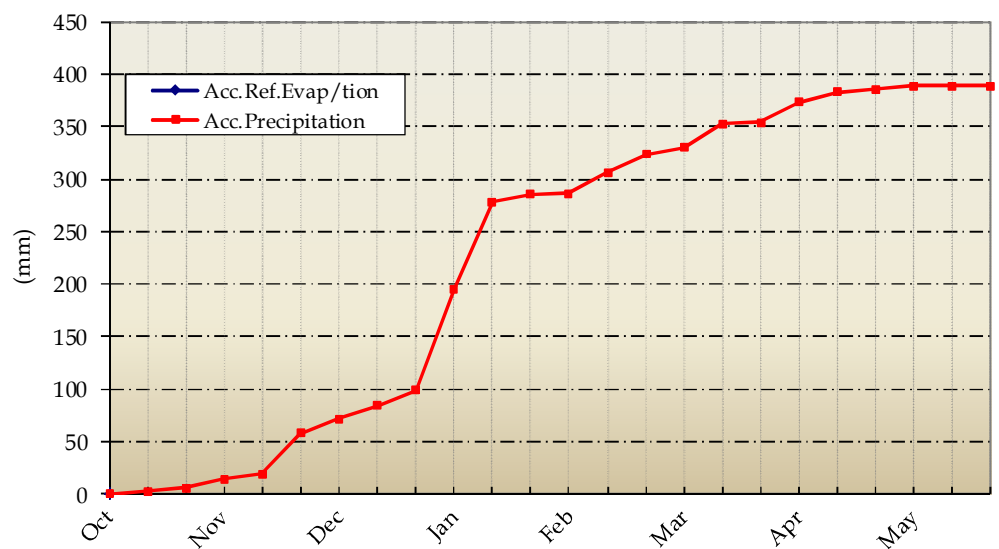


2nd 10-day period (11-20/05/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.0	37.0	25.8	28.6	31.8	32.6	32.0	30.2	28.4	37.8	31.5	24.0	23.1
	Min	13.8	20.0	17.4	15.2	19.0	21.4	21.0	20.0	19.2	19.4	18.6	15.4	15.3
Relative Humidity	Max	74	42	91	75	52	61	78	86	86	88	73	92	-
	Min	14	12	46	36	29	26	23	48	57	16	31	51	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		10.2	11.7	12.0	12.0	11.1	11.2	11.5	11.2	11.6	9.6	11.2	9.7	9.7
Precipitation													0.1	3.5
Evaporation		7.3	12.2	4.1	6.0	5.2	6.8	5.6	6.1	4.8	7.0	65.1	49.4	61.2
Growing Degrees	5	17.4	23.5	16.6	16.9	20.4	22.0	21.5	20.1	18.8	23.6	200.8	147.1	142.0
	10	12.4	18.5	11.6	11.9	15.4	17.0	16.5	15.1	13.8	18.6	150.8	97.1	92.0

2nd 10-day period (11-20/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	44.4	-
Precipitation - Reference Evapotranspiration	-	-44.3	3.5
Number of Rainy Days	0.0	1.0	0.9
Number of Dry Days	16.0	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

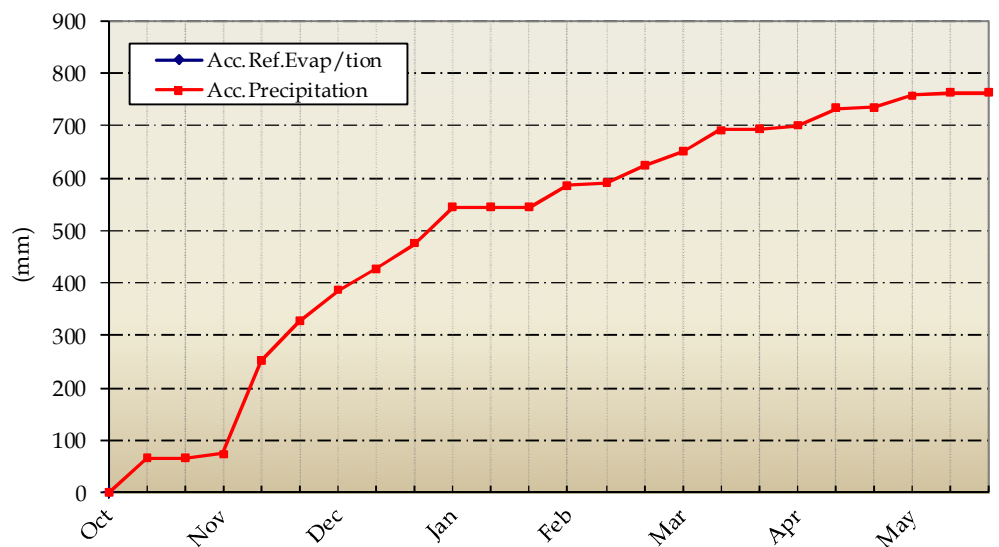


2nd 10-day period (11-20/05/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	28.8	27.2	28.8	32.5	34.5	34.6	37.3	36.0	33.8	28.0	32.2	21.7	22.8
	Min	6.6	8.8	7.2	9.8	13.0	12.0	14.0	13.0	14.5	18.5	11.7	9.7	10.0
Relative Humidity	Max	98	93	98	82	62	83	86	90	86	100	88	98	-
	Min	18	23	25	23	16	19	18	18	21	41	22	48	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	15.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	19.5
Sunshine Duration		11.7	12.3	11.9	7.5	8.8	6.9	10.4	11.2	7.0	10.0	9.8	5.4	7.2
Precipitation											0.0	0.0	54.0	19.6
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	40.9
Growing Degrees	5	12.7	13.0	13.0	16.2	18.8	18.3	20.7	19.5	19.2	18.3	169.5	107.1	113.3
	10	7.7	8.0	8.0	11.2	13.8	13.3	15.7	14.5	14.2	13.3	119.5	57.1	63.4

2nd 10-day period (11-20/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	34.9
Precipitation - Reference Evapotranspiration	-	-	-15.3
Number of Rainy Days	0.0	6.0	3.4
Number of Dry Days	13.0	1.0	-

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

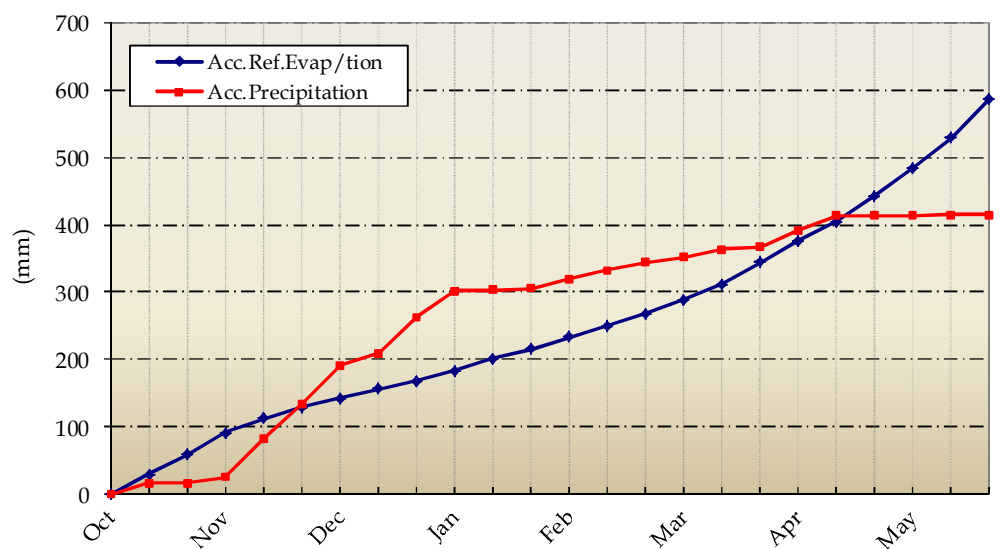
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



2nd 10-day period (11-20/05/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.2	26.2	28.0	31.8	37.4	38.6	39.9	36.6	37.6	27.6	32.9	22.9	24.3
	Min	9.1	10.6	12.4	12.2	14.0	14.2	17.0	15.8	18.3	17.0	14.1	11.0	12.1
Relative Humidity	Max	89	89	85	82	69	74	73	85	68	91	80	90	-
	Min	25	46	31	17	11	12	12	10	17	48	23	44	-
Soil Temperature at 10 cm	06 UTC	19.6	20.6	21.0	21.5	22.2	22.0	23.8	24.4	25.0	25.0	22.5	18.3	18.7
	12 UTC	23.5	24.5	25.6	26.0	26.6	27.0	28.5	28.5	29.0	25.5	26.5	21.2	22.5
Sunshine Duration		10.6	11.0	11.8	11.9	10.2	10.3	8.7	11.4	11.1	11.4	10.8	8.9	9.1
Precipitation													5.2	9.5
Evaporation		7.7	6.1	9.0	7.0	11.0	7.6	7.8	8.4	9.0	8.5	82.1	53.1	57.5
Growing Degrees	5	12.2	13.4	15.2	17.0	20.7	21.4	23.5	21.2	23.0	17.3	184.8	120.0	132.1
	10	7.2	8.4	10.2	12.0	15.7	16.4	18.5	16.2	18.0	12.3	134.8	70.0	82.1

2nd 10-day period (11-20/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	57.2	41.7	39.6
Precipitation - Reference Evapotranspiration	-57.2	-36.5	-30.1
Number of Rainy Days	0.0	2.0	1.8
Number of Dry Days	13.0	5.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

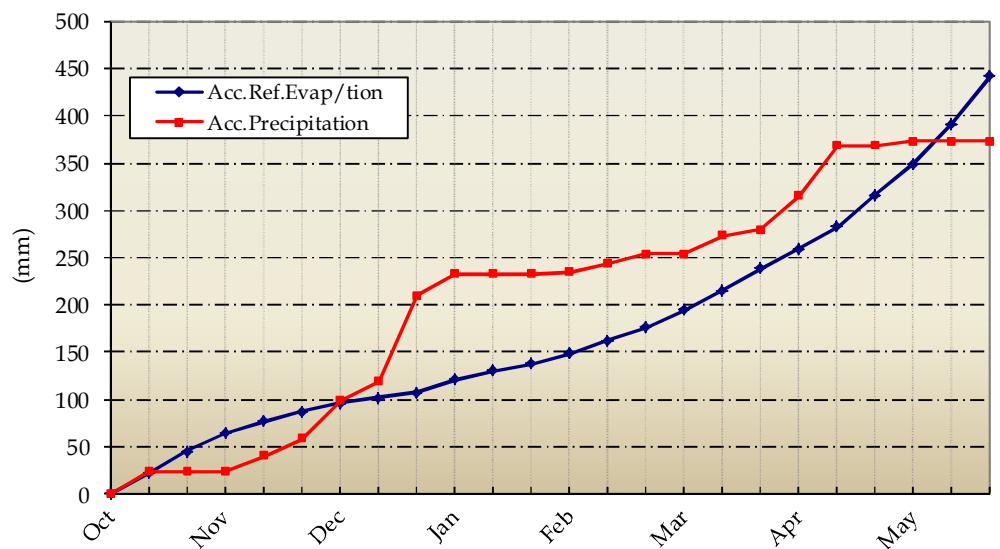


2nd 10-day period (11-20/05/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.0	33.0	30.2	32.2	36.7	35.0	34.0	31.4	30.0	30.0	32.2	25.7	25.6
	Min	11.8	11.0	12.0	12.0	15.6	15.4	16.9	18.0	16.6	14.8	14.4	11.8	11.0
Relative Humidity	Max	92	95	80	88	90	80	80	80	83	88	86	94	-
	Min	32	20	22	28	20	20	28	33	40	43	29	38	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	18.1
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	20.4
Sunshine Duration		9.9	11.4	9.5	8.1	5.9	5.1	7.1	8.3	8.3	9.2	8.3	8.6	8.3
Precipitation													14.2	11.8
Evaporation		6.0	11.2	9.6	9.3	7.8	8.1	6.6	16.5	9.6	5.3	90.0	67.1	55.6
Growing Degrees	5	15.9	17.0	16.1	17.1	21.2	20.2	20.5	19.7	18.3	17.4	183.3	137.6	133.1
	10	10.9	12.0	11.1	12.1	16.2	15.2	15.5	14.7	13.3	12.4	133.3	87.6	83.1

2nd 10-day period (11-20/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	50.2	45.4	42.0
Precipitation - Reference Evapotranspiration	-50.2	-31.2	-30.2
Number of Rainy Days	0.0	4.0	2.4
Number of Dry Days	16.0	7.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



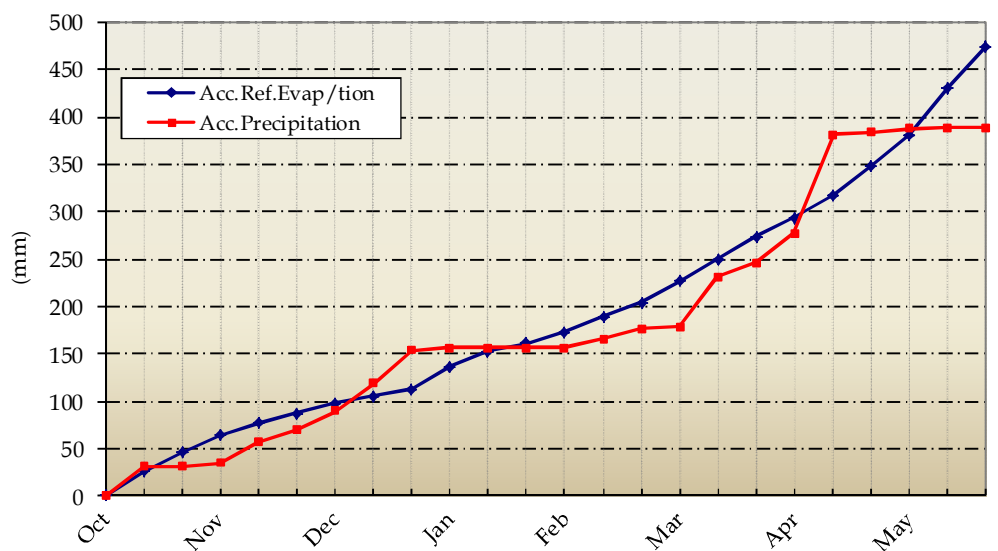
Mikra

2nd 10-day period (11-20/05/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.5	30.2	28.4	28.6	27.2	34.1	30.2	32.1	29.0	25.9	29.0	24.7	24.3
	Min	11.8	12.6	12.8	14.3	15.8	16.1	18.5	17.4	17.8	16.8	15.4	14.4	12.4
Relative Humidity	Max	92	92	89	93	93	89	88	84	91	92	90	84	-
	Min	54	34	40	35	50	32	38	36	42	56	42	37	-
Soil Temperature at 10 cm	06 UTC	18.6	19.4	20.6	21.2	21.6	21.8	23.2	23.0	23.6	23.2	21.6	18.9	18.8
	12 UTC	21.4	23.2	24.4	18.4	24.0	26.4	26.6	26.0	25.6	24.1	24.0	22.2	23.5
Sunshine Duration		10.4	12.5	11.8	8.1	7.0	9.0	3.6	8.2	3.5	6.3	8.0	8.9	8.1
Precipitation													1.1	11.8
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	56.4
Growing Degrees	5	13.2	16.4	15.6	16.5	16.5	20.1	19.4	19.8	18.4	16.4	172.1	145.7	133.6
	10	8.2	11.4	10.6	11.5	11.5	15.1	14.4	14.8	13.4	11.4	122.1	95.7	83.6

2nd 10-day period (11-20/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	44.0	46.8	40.9
Precipitation - Reference Evapotranspiration	-44.0	-45.7	-29.1
Number of Rainy Days	0.0	1.0	3.0
Number of Dry Days	13.0	6.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

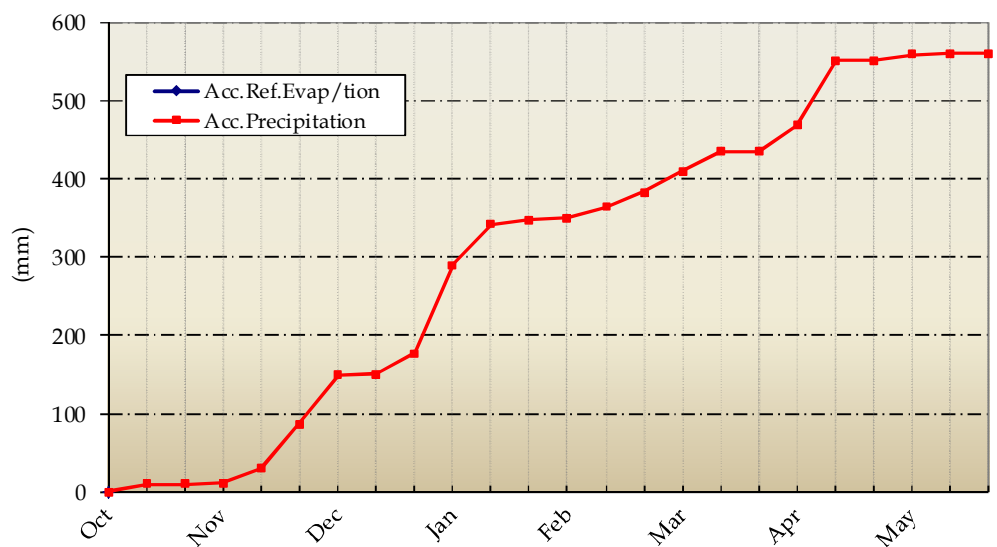


2nd 10-day period (11-20/05/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.3	32.3	30.9	31.5	35.2	35.8	32.9	32.6	31.7	29.8	32.2	24.8	24.8
	Min	11.5	18.4	13.8	12.2	14.7	15.5	15.2	14.8	16.2	13.7	14.6	10.8	11.2
Relative Humidity	Max	78	60	79	81	78	62	78	90	81	94	78	95	-
	Min	21	20	14	23	19	14	26	30	30	37	23	36	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		9.1	7.3	12.8	10.7	11.5	11.2	9.8	11.7	10.1	9.5	10.4	7.3	
Precipitation													0.0	8.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	15.4	20.4	17.4	16.9	20.0	20.7	19.1	18.7	19.0	16.8	184.0	128.0	
	10	10.4	15.4	12.4	11.9	15.0	15.7	14.1	13.7	14.0	11.8	134.0	78.0	

2nd 10-day period (11-20/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	35.9	
Precipitation - Reference Evapotranspiration	-	-35.9	8.2
Number of Rainy Days	0.0	0.0	2.2
Number of Dry Days	16.0	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

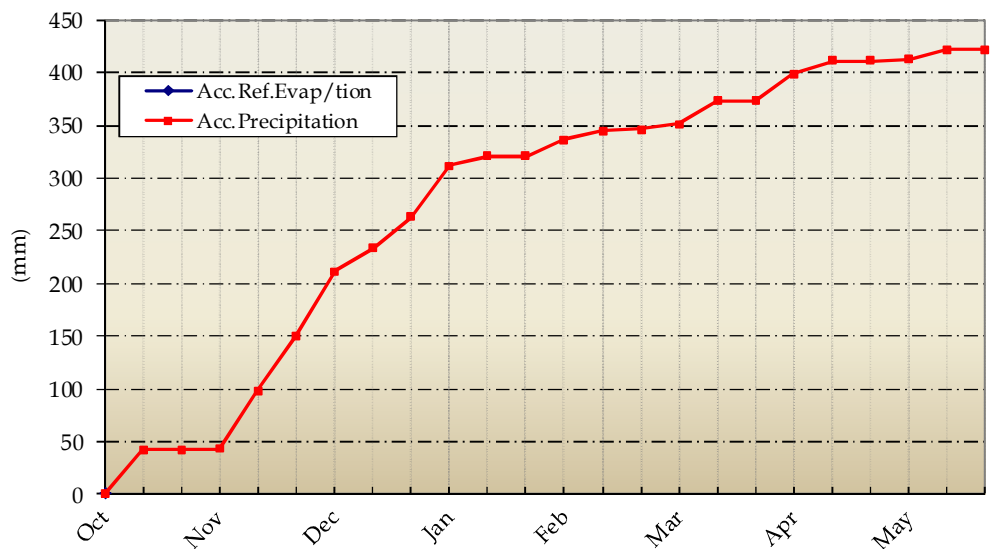


2nd 10-day period (11-20/05/2020)		11	12	13	14	15	16	17	18	19	20	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	27.5	29.1	31.8	34.4	36.4	38.0	37.4	36.8	33.4	30.8	33.6	21.7	22.9
	Min	8.8	15.1	5.8	10.4	13.0	11.5	16.0	11.2	13.2	11.5	11.6	6.6	8.3
Relative Humidity	Max	88	68	71	84	72	48	57	69	82	77	72	96	-
	Min	14	19	10	15	13	14	16	16	20	21	16	33	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	21.8	22.8	-	22.3	15.4	16.7
	12 UTC	-	-	-	-	-	-	-	-	31.8	31.6	31.7	22.6	19.4
Sunshine Duration		11.1	10.9	12.5	11.1	10.8	11.4	10.7	12.0	10.4	11.8	11.3	8.4	8.4
Precipitation													7.8	15.5
Evaporation		-	-	-	-	-	-	13.6	9.8	-	-	-	-	41.0
Growing Degrees	5	13.2	17.1	13.8	17.4	19.7	19.8	21.7	19.0	18.3	16.2	176.1	91.2	106.0
	10	8.2	12.1	8.8	12.4	14.7	14.8	16.7	14.0	13.3	11.2	126.1	41.2	56.0

2nd 10-day period (11-20/05/2020)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	50.9	36.3	39.8
Precipitation - Reference Evapotranspiration	-50.9	-28.5	-24.3
Number of Rainy Days	0.0	4.0	2.8
Number of Dry Days	13.0	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





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