



AGROMETEOROLOGICAL BULLETIN

June 2017
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



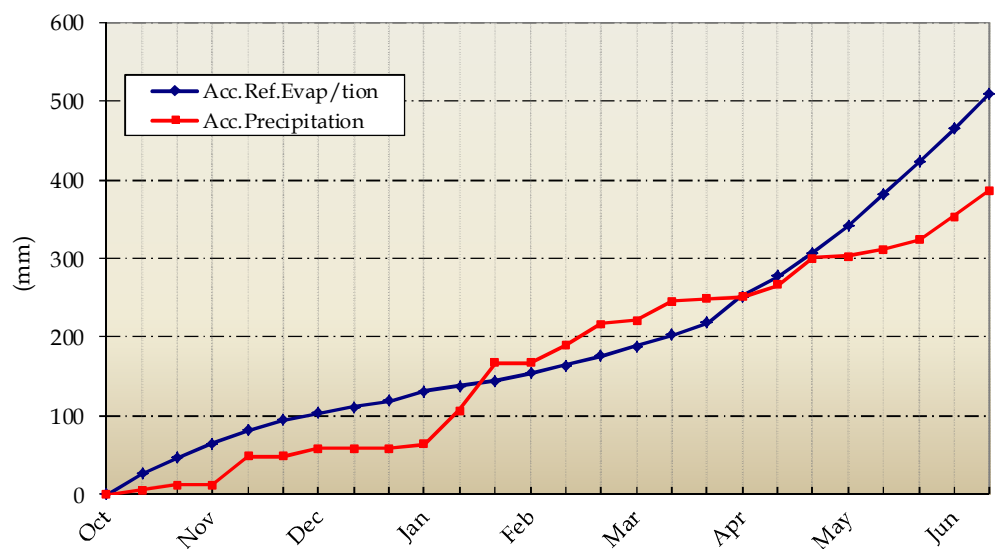
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1st 10-day period (1-10/06/2017)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.6	29.2	31.2	26.4	27.4	27.4	27.0	26.0	23.8	26.0	27.1	26.8	25.8
	Min	14.0	16.4	16.4	12.0	15.0	15.6	15.4	18.4	14.8	15.0	15.3	15.3	14.0
Relative Humidity	Max	97	97	91	96	87	93	97	95	93	91	94	88	-
	Min	53	48	47	53	43	46	56	59	51	44	50	42	-
Soil Temperature at 10 cm	06 UTC	22.2	23.2	24.4	21.4	19.4	21.8	23.4	25.0	21.8	21.0	22.4	22.3	20.6
	12 UTC	30.4	31.8	31.8	26.4	26.0	30.8	32.0	27.4	26.6	28.8	29.2	27.5	25.3
Sunshine Duration		12.2	8.8	11.2	6.3	12.7	13.5	12.8	1.8	9.4	9.3	9.8	10.6	9.7
Precipitation					28.7				0.4	3.9		33.0	9.1	10.6
Evaporation		6.2	8.3	5.8	8.7	8.7	7.1	7.5	5.0	5.1	5.4	67.8	64.5	72.8
Growing Degrees	5	15.3	17.8	18.8	14.2	16.2	16.5	16.2	17.2	14.3	15.5	162.0	160.6	148.7
	10	10.3	12.8	13.8	9.2	11.2	11.5	11.2	12.2	9.3	10.5	112.0	110.6	98.7

1st 10-day period (1-10/06/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	45.5	48.0	48.0
Precipitation - Reference Evapotranspiration	-12.5	-38.9	-37.4
Number of Rainy Days	3.0	3.0	2.2
Number of Dry Days	6.0	6.0	-

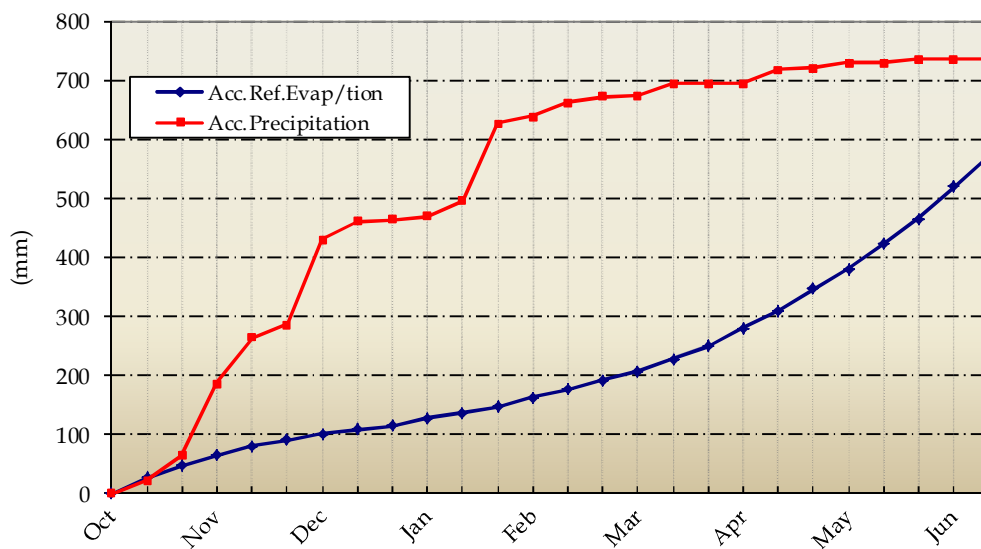
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2017)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.9	28.6	28.4	27.1	28.8	29.9	29.0	30.8	28.0	28.2	28.6	27.0	26.9
	Min	14.6	13.6	15.6	16.2	17.0	17.2	19.5	19.4	17.7	16.6	16.7	16.1	15.3
Relative Humidity	Max	89	87	88	87	88	86	84	88	89	99	88	87	-
	Min	35	27	26	50	39	43	44	32	46	30	37	40	-
Soil Temperature at 10 cm	06 UTC	24.0	24.6	25.0	25.2	25.5	26.2	26.6	25.2	26.2	25.0	25.4	-	23.0
	12 UTC	27.0	29.0	33.0	28.2	29.0	29.4	27.0	28.2	27.6	28.0	28.6	-	27.7
Sunshine Duration		12.9	12.0	10.9	13.2	13.3	9.3	2.9	7.2	12.8	13.0	10.8	10.9	11.1
Precipitation								0.8				0.8	0.5	2.3
Evaporation		10.0	5.0	8.0	10.0	8.0	2.4	1.4	8.2	9.8	8.0	70.8	59.7	67.5
Growing Degrees	5	15.8	16.1	17.0	16.7	17.9	18.6	19.3	20.1	17.9	17.4	176.6	165.3	160.7
	10	10.8	11.1	12.0	11.7	12.9	13.6	14.3	15.1	12.9	12.4	126.6	115.3	110.7

1st 10-day period (1-10/06/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	50.7	50.1	48.5
Precipitation - Reference Evapotranspiration	-49.9	-49.6	-46.2
Number of Rainy Days	1.0	2.0	0.7
Number of Dry Days	20.0	17.0	-

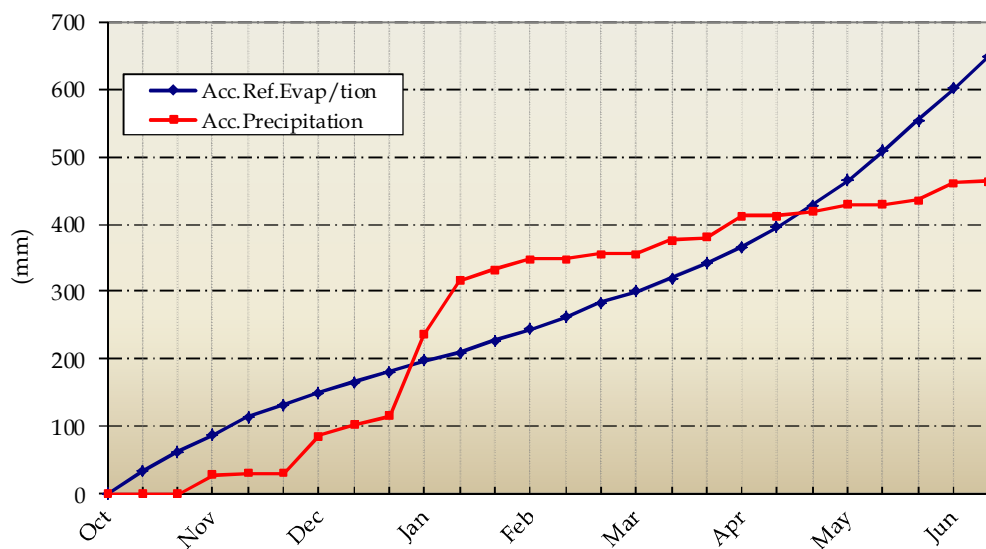
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2017)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.6	26.6	27.2	26.6	25.0	25.8	25.4	24.6	26.0	26.0	25.9	26.2	25.7
	Min	16.2	17.2	18.0	18.8	17.6	18.8	18.6	20.4	19.0	18.0	18.3	19.2	17.9
Relative Humidity	Max	93	95	90	89	94	92	92	85	90	91	91	89	-
	Min	53	50	53	50	71	70	70	72	63	37	59	63	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.8	12.9	8.3	12.7	12.6	10.2	7.0	6.2	13.0	12.6	10.8	11.2	11.2
Precipitation								0.1	2.4			2.5	3.7	3.5
Evaporation		6.2	1.8	7.2	2.6	4.0	4.0	3.4	2.1	4.8	5.4	41.5	61.3	76.6
Growing Degrees	5	15.9	16.9	17.6	17.7	16.3	17.3	17.0	17.5	17.5	17.0	170.7	177.2	167.8
	10	10.9	11.9	12.6	12.7	11.3	12.3	12.0	12.5	12.5	12.0	120.7	127.2	117.8

1st 10-day period (1-10/06/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	48.0	50.2	-
Precipitation - Reference Evapotranspiration	-45.5	-46.5	3.5
Number of Rainy Days	2.0	1.0	0.5
Number of Dry Days	7.0	17.0	-

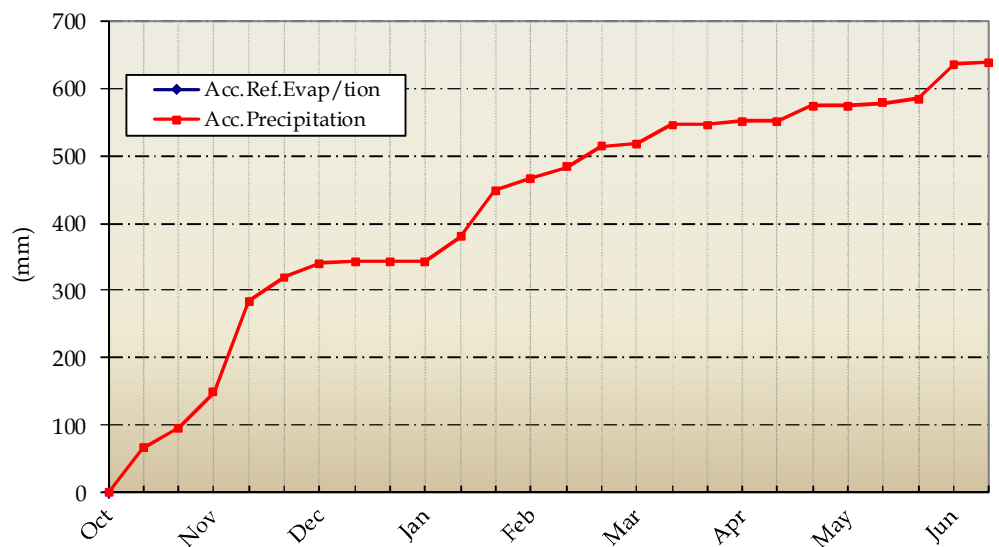
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2017)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	28.0	29.2	26.2	-	28.4	27.8	29.4	30.0	28.4	28.2	28.4	26.2	26.3
	Min	12.5	13.0	15.6	11.2	19.8	-	14.8	17.5	14.4	19.2	15.3	10.2	12.0
Relative Humidity	Max	98	96	84	95	-	99	85	98	92	85	92	100	-
	Min	43	37	49	40	-	47	35	43	32	44	41	35	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	18.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	22.9
Sunshine Duration		9.7	11.8	5.8	11.5	-	8.3	6.7	8.2	12.4	10.2	9.4	9.5	9.1
Precipitation				0.5	0.0	1.9		0.0				2.4	7.5	14.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	46.7
Growing Degrees	5	15.3	16.1	15.9	-	19.1	-	17.1	18.8	16.4	18.7	-	132.0	141.5
	10	10.3	11.1	10.9	-	14.1	-	12.1	13.8	11.4	13.7	-	82.0	91.5

1st 10-day period (1-10/06/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	43.4
Precipitation - Reference Evapotranspiration	-	-	-29.0
Number of Rainy Days	2.0	4.0	2.5
Number of Dry Days	3.0	10.0	-

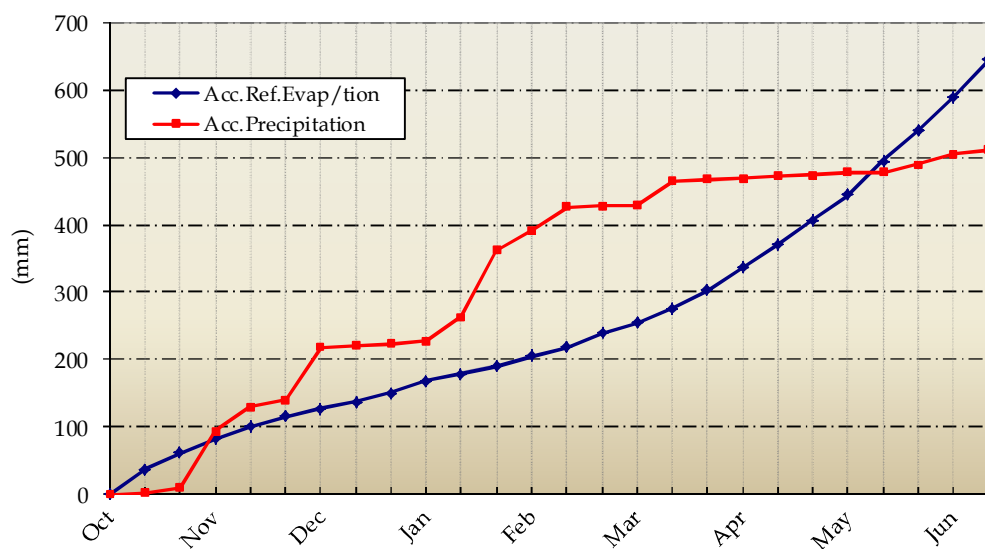
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2017)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	27.7	29.6	31.7	27.7	26.6	28.4	32.4	30.4	30.0	28.1	29.3	29.5	27.6
	Min	14.4	15.7	16.8	15.3	15.1	15.8	16.4	18.0	15.6	16.0	15.9	15.9	14.5
Relative Humidity	Max	89	84	82	89	90	91	89	89	89	90	88	85	-
	Min	41	24	24	40	48	49	30	38	30	43	37	33	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	22.5	21.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	24.2	25.8
Sunshine Duration		12.9	12.8	9.0	9.7	10.7	11.5	7.4	5.4	12.6	12.8	10.5	9.7	10.5
Precipitation					1.5			0.3	4.2			6.0	9.7	2.7
Evaporation		6.4	8.2	10.4	3.7	7.8	4.7	4.7	6.6	10.8	6.2	69.5	74.4	75.1
Growing Degrees	5	16.1	17.7	19.3	16.5	15.9	17.1	19.4	19.2	17.8	17.1	175.9	177.2	160.6
	10	11.1	12.7	14.3	11.5	10.9	12.1	14.4	14.2	12.8	12.1	125.9	127.2	110.6

1st 10-day period (1-10/06/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	55.2	56.5	50.2
Precipitation - Reference Evapotranspiration	-49.2	-46.8	-47.5
Number of Rainy Days	3.0	1.0	0.9
Number of Dry Days	5.0	16.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

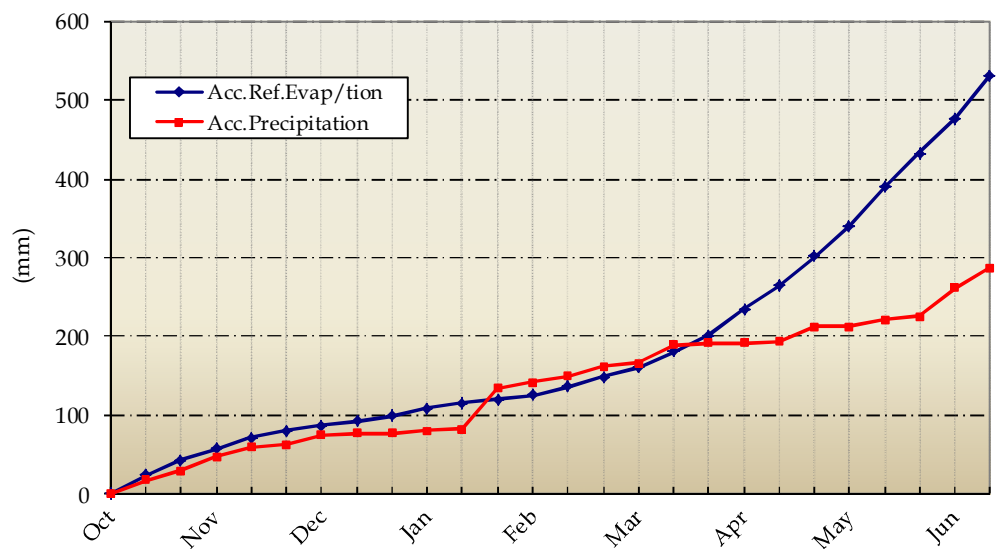


Larisa

1st 10-day period (1-10/06/2017)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	34.2	33.4	31.6	28.7	30.2	32.0	31.3	30.1	30.6	30.5	31.3	29.8	29.7
	Min	15.0	16.2	16.7	14.7	15.8	14.7	18.1	18.4	17.8	14.6	16.2	15.2	14.1
Relative Humidity	Max	97	96	100	100	100	97	100	100	68	91	95	87	-
	Min	20	28	28	40	22	24	30	39	20	26	28	26	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	22.9	21.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	23.5	24.3
Sunshine Duration		11.9	11.4	9.0	12.1	11.5	12.1	5.9	4.2	11.1	11.3	10.0	9.5	10.4
Precipitation				23.5					1.7	0.7		25.9	1.1	9.2
Evaporation		10.8	12.7	13.8	10.0	10.3	9.7	7.7	4.0	9.9	8.3	97.2	90.1	79.0
Growing Degrees	5	19.6	19.8	19.2	16.7	18.0	18.4	19.7	19.3	19.2	17.6	187.3	175.4	169.0
	10	14.6	14.8	14.2	11.7	13.0	13.4	14.7	14.3	14.2	12.6	137.3	125.4	119.0

1st 10-day period (1-10/06/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	54.8	54.2	54.0
Precipitation - Reference Evapotranspiration	-28.9	-53.1	-44.8
Number of Rainy Days	3.0	3.0	2.3
Number of Dry Days	5.0	5.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

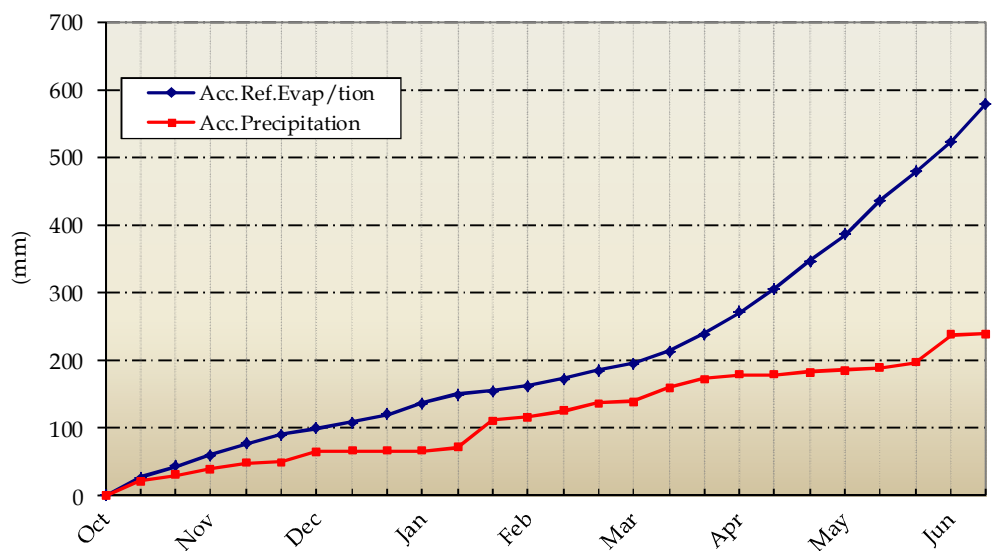


Mikra

1st 10-day period (1-10/06/2017)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.6	31.8	29.4	27.7	28.6	30.0	30.6	26.6	28.2	28.2	29.4	27.8	27.9
	Min	15.8	18.2	19.5	18.0	16.6	16.8	17.7	18.4	20.3	15.4	17.7	16.7	15.4
Relative Humidity	Max	80	87	88	90	90	80	79	74	60	80	81	84	-
	Min	28	28	37	46	33	32	31	42	30	38	34	33	-
Soil Temperature at 10 cm	06 UTC	23.6	25.2	25.1	25.0	24.5	25.1	25.8	26.2	23.6	24.8	24.9	23.8	22.3
	12 UTC	28.8	29.9	29.0	27.6	28.0	30.2	30.8	27.1	28.6	30.4	29.0	28.2	27.3
Sunshine Duration		13.4	10.3	9.4	8.0	12.1	13.2	10.3	2.7	13.7	11.6	10.5	10.3	10.0
Precipitation				0.3	1.0				0.1			1.4	10.0	11.2
Evaporation		10.5	7.8	7.9	8.5	7.1	8.5	6.5	7.2	8.7	8.5	81.2	83.7	74.4
Growing Degrees	5	19.2	20.0	19.5	17.9	17.6	18.4	19.2	17.5	19.3	16.8	185.2	172.4	166.4
	10	14.2	15.0	14.5	12.9	12.6	13.4	14.2	12.5	14.3	11.8	135.2	122.4	116.4

1st 10-day period (1-10/06/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	56.3	56.2	52.1
Precipitation - Reference Evapotranspiration	-54.9	-46.2	-40.9
Number of Rainy Days	3.0	4.0	2.7
Number of Dry Days	4.0	12.0	-

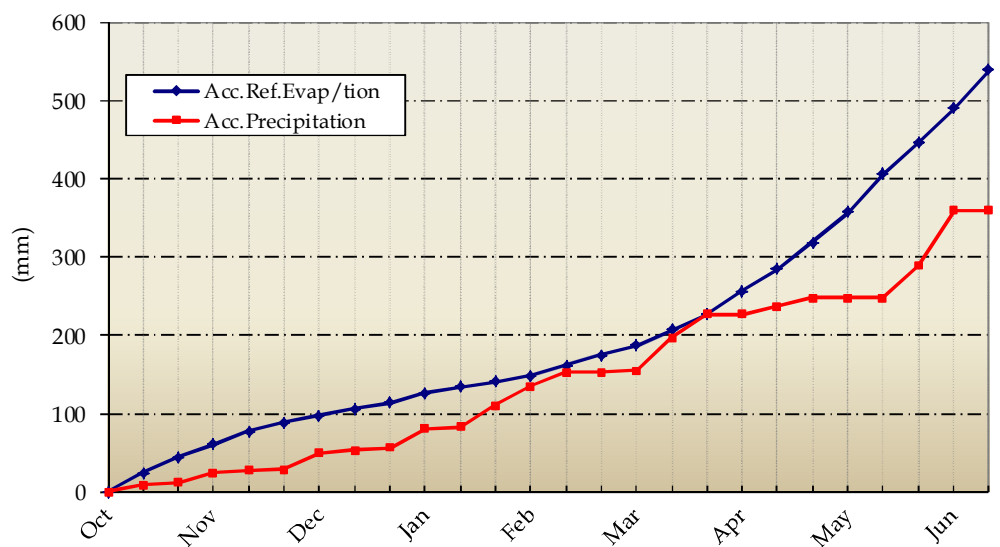
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2017)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.7	31.4	29.7	27.4	27.6	28.5	29.0	27.6	27.4	28.3	28.9	29.0	28.3
	Min	16.4	18.8	17.2	16.7	16.3	14.4	15.4	19.2	17.1	15.8	16.7	16.6	14.2
Relative Humidity	Max	81	80	82	92	86	80	94	80	94	79	85	68	-
	Min	28	30	35	45	32	38	32	42	30	31	34	26	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		13.2	12.9	7.8	11.3	12.7	12.9	7.2	0.5	11.5	12.9	10.3	9.9	
Precipitation								0.1				0.1	1.0	6.3
Evaporation		-	-	-	-	-	-	-	-	-	-	-	90.2	
Growing Degrees	5	19.1	20.1	18.5	17.1	17.0	16.5	17.2	18.4	17.3	17.1	178.0	178.2	
	10	14.1	15.1	13.5	12.1	12.0	11.5	12.2	13.4	12.3	12.1	128.0	128.2	

1st 10-day period (1-10/06/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	49.1	51.8	
Precipitation - Reference Evapotranspiration	-49.0	-50.8	6.3
Number of Rainy Days	1.0	1.0	2.0
Number of Dry Days	8.0	16.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

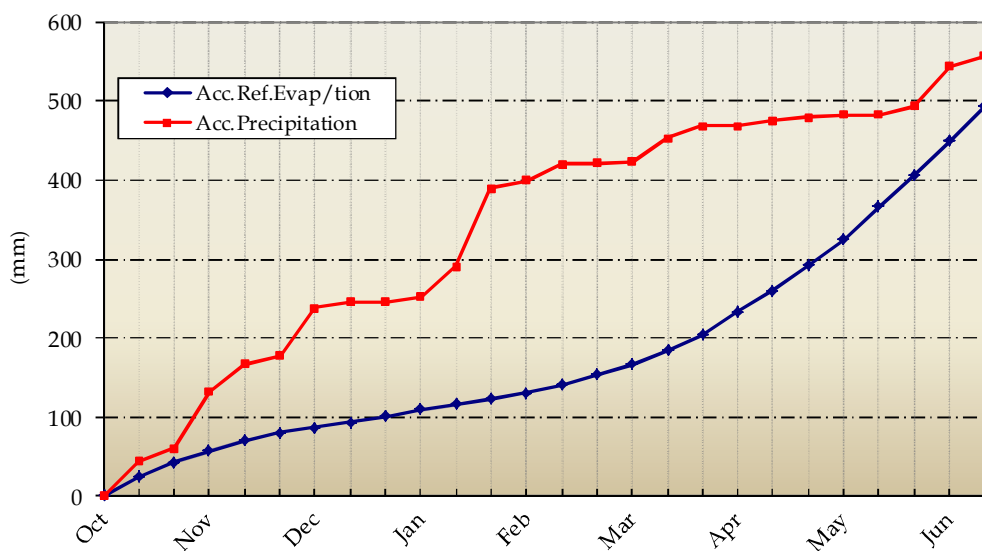


Tripoli

1st 10-day period (1-10/06/2017)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.9	29.0	28.0	25.9	27.3	27.4	26.2	25.9	26.6	27.6	27.4	27.2	26.4
	Min	9.5	10.9	11.3	10.2	10.7	11.8	11.9	14.4	11.9	11.5	11.4	10.5	10.7
Relative Humidity	Max	100	100	100	100	100	100	100	100	100	100	100	90	-
	Min	21	15	22	35	32	28	28	37	39	25	28	26	-
Soil Temperature at 10 cm	06 UTC	18.2	19.8	21.2	20.8	-	19.8	21.2	20.4	19.8	20.4	20.2	23.0	20.3
	12 UTC	27.4	28.4	-	-	-	27.4	25.2	25.4	27.6	-	26.9	28.8	23.4
Sunshine Duration		11.3	12.0	10.8	9.6	7.0	10.6	6.4	4.5	10.1	11.5	9.4	9.9	10.2
Precipitation					7.0	0.0		1.3	5.5			13.8	5.7	6.1
Evaporation		3.4	6.5	5.2	-	-	6.5	6.0	3.2	5.9	5.7	-	72.9	55.4
Growing Degrees	5	14.7	15.0	14.7	13.1	14.0	14.6	14.1	15.2	14.3	14.6	144.0	138.8	135.3
	10	9.7	10.0	9.7	8.1	9.0	9.6	9.1	10.2	9.3	9.6	94.0	88.8	85.3

1st 10-day period (1-10/06/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	44.5	46.4	48.9
Precipitation - Reference Evapotranspiration	-30.7	-40.7	-42.8
Number of Rainy Days	3.0	3.0	1.6
Number of Dry Days	3.0	15.0	-

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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Division of Climatology-Applications

Issue Editors :

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