



AGROMETEOROLOGICAL BULLETIN

June 2015
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



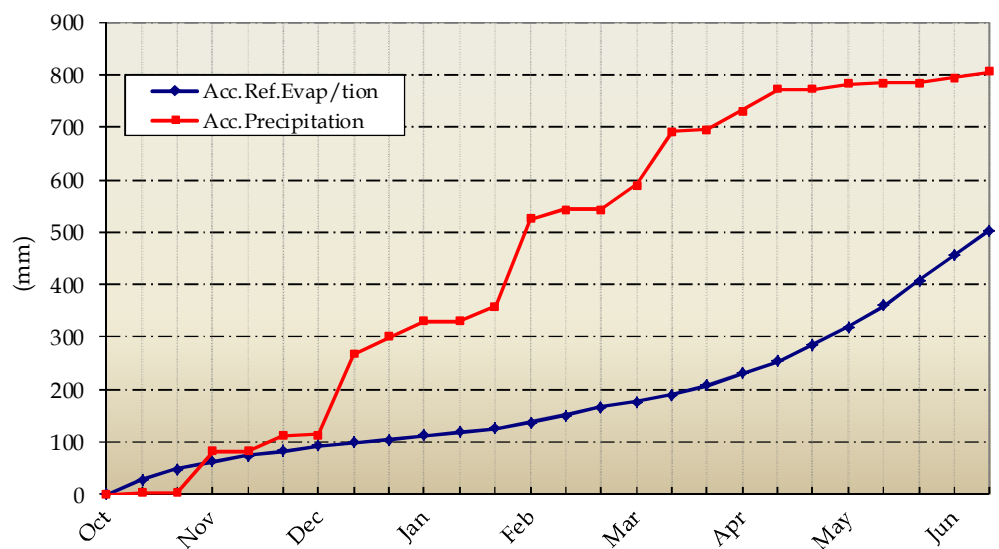
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1st 10-day period (1-10/06/2015)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	27.4	28.6	28.6	27.4	27.2	26.8	24.6	22.0	22.8	27.8	26.3	25.2	25.8
	Min	12.6	14.6	17.0	15.4	15.6	20.4	18.4	18.0	14.8	16.0	16.3	16.2	14.0
Relative Humidity	Max	85	69	79	94	93	80	86	96	94	94	87	88	-
	Min	28	33	32	42	40	40	42	53	65	39	41	48	-
Soil Temperature at 10 cm	06 UTC	20.2	21.4	22.6	22.8	21.8	22.4	22.8	21.4	19.6	20.4	21.5	20.2	20.6
	12 UTC	26.8	26.6	28.0	28.4	26.4	27.2	24.6	21.6	22.8	24.6	25.7	23.7	25.3
Sunshine Duration		13.5	13.8	12.3	9.9	11.1	13.2	3.0	0.0	3.6	8.4	8.9	7.3	9.7
Precipitation					4.0	1.5		0.2	3.6	1.8	0.7	11.8	18.1	10.6
Evaporation		10.8	9.3	9.6	6.4	7.7	13.9	4.9	1.1	4.2	7.0	74.9	57.2	72.8
Growing Degrees	5	15.0	16.6	17.8	16.4	16.4	18.6	16.5	15.0	13.8	16.9	163.0	156.8	148.7
	10	10.0	11.6	12.8	11.4	11.4	13.6	11.5	10.0	8.8	11.9	113.0	106.8	98.7

1st 10-day period (1-10/06/2015)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	48.0	41.4	48.0
Precipitation - Reference Evapotranspiration	-36.2	-23.3	-37.4
Number of Rainy Days	6.0	6.0	2.2
Number of Dry Days	5.0	0.0	-

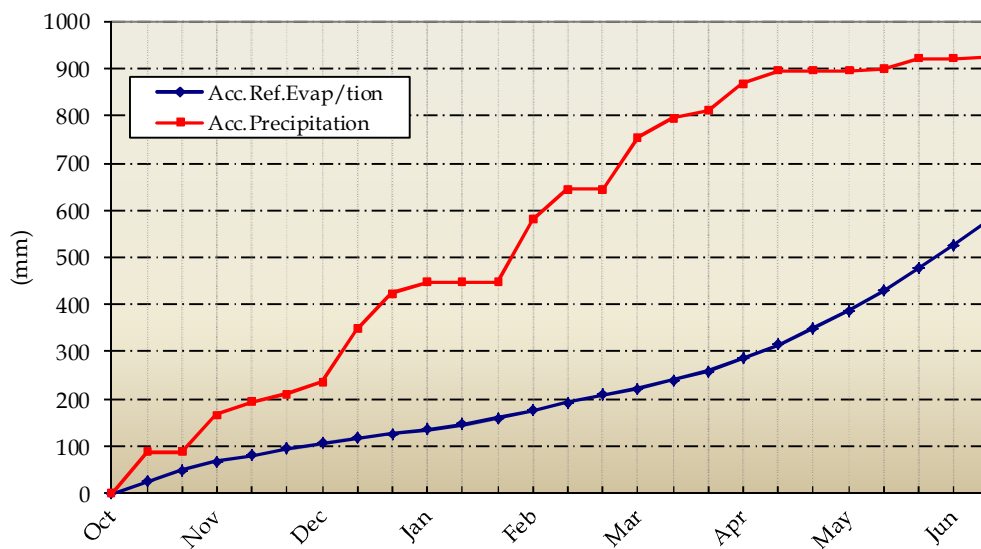
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2015)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.8	27.4	28.4	28.2	29.2	28.0	27.8	27.2	25.5	25.7	27.4	26.9	26.9
	Min	14.5	13.3	13.1	14.0	16.0	17.5	18.2	16.4	16.0	16.5	15.6	15.3	15.3
Relative Humidity	Max	88	89	89	83	86	86	84	89	87	88	87	87	-
	Min	34	30	27	31	34	39	36	39	51	56	38	37	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	22.5	23.0
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	26.7	27.7
Sunshine Duration		8.1	13.2	13.3	12.8	7.9	7.4	9.6	12.1	12.8	11.1	10.8	9.2	11.1
Precipitation							3.1					3.1	1.3	2.3
Evaporation		7.2	10.0	9.3	5.7	4.8	9.6	2.4	5.0	11.0	3.0	68.0	60.3	67.5
Growing Degrees	5	15.7	15.4	15.8	16.1	17.6	17.8	18.0	16.8	15.8	16.1	164.9	160.9	160.7
	10	10.7	10.4	10.8	11.1	12.6	12.8	13.0	11.8	10.8	11.1	114.9	110.9	110.7

1st 10-day period (1-10/06/2015)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	51.4	47.8	48.5
Precipitation - Reference Evapotranspiration	-48.3	-46.5	-46.2
Number of Rainy Days	1.0	3.0	0.7
Number of Dry Days	16.0	14.0	-

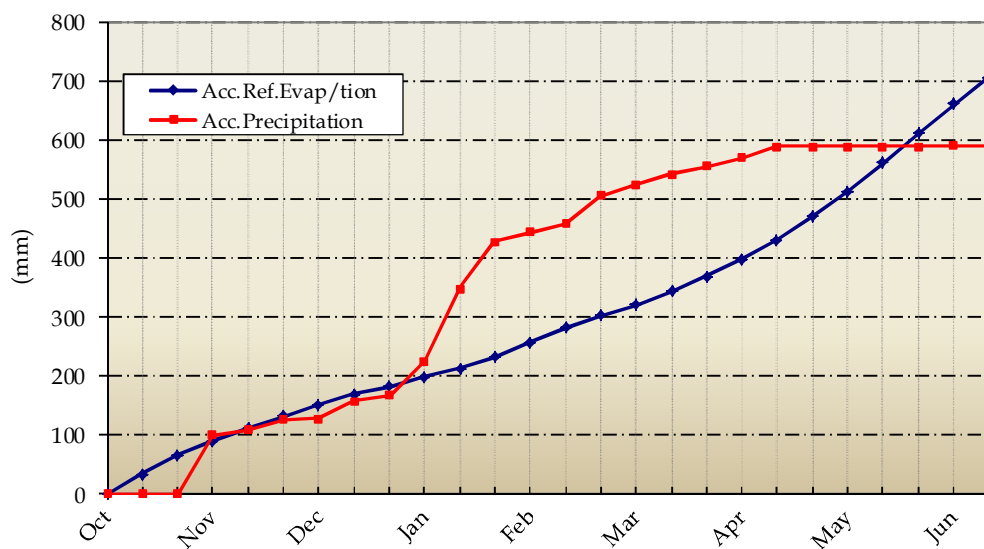
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2015)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	23.0	23.0	23.6	24.0	24.0	23.4	24.2	23.2	23.8	24.4	23.7	25.0	25.7
	Min	14.2	15.0	16.0	19.0	20.0	18.0	17.0	18.6	17.6	17.0	17.2	18.1	17.9
Relative Humidity	Max	86	89	83	90	84	86	89	90	91	89	88	86	-
	Min	61	61	54	55	62	73	67	71	66	62	63	57	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		11.5	12.7	12.0	11.0	12.3	8.2	5.8	5.9	7.7	13.1	10.0	9.1	11.2
Precipitation									0.0	0.0		0.0	4.7	3.5
Evaporation		2.0	5.4	3.8	10.4	6.2	3.5	1.2	1.0	4.0	2.8	40.3	51.8	76.6
Growing Degrees	5	13.6	14.0	14.8	16.5	17.0	15.7	15.6	15.9	15.7	15.7	154.5	165.5	167.8
	10	8.6	9.0	9.8	11.5	12.0	10.7	10.6	10.9	10.7	10.7	104.5	115.5	117.8

1st 10-day period (1-10/06/2015)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	45.4	46.7	-
Precipitation - Reference Evapotranspiration	-45.4	-42.0	3.5
Number of Rainy Days	0.0	2.0	0.5
Number of Dry Days	12.0	4.0	-

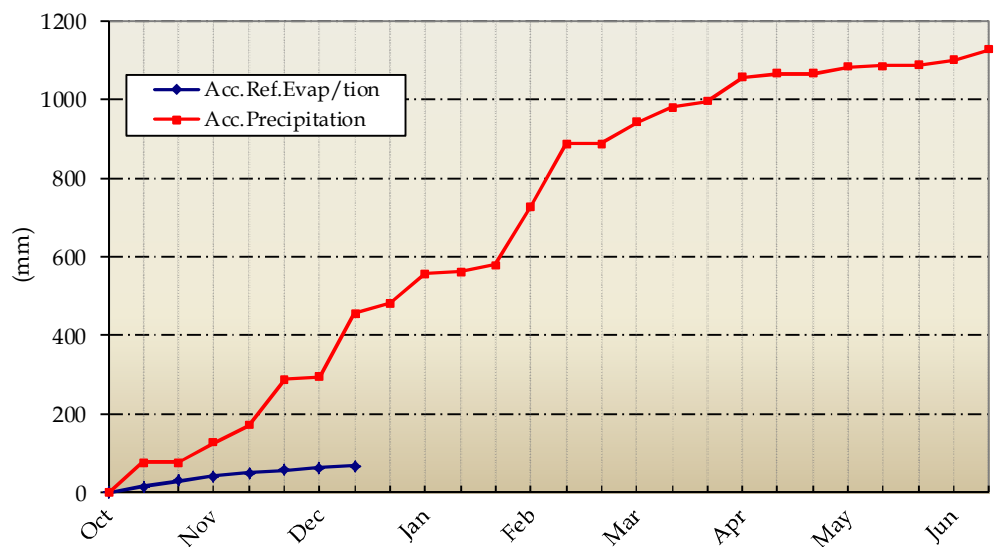
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2015)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	24.4	27.3	27.8	27.9	28.3	27.8	24.7	26.2	23.8	26.7	26.5	25.1	26.3
	Min	12.6	9.3	9.2	9.6	12.7	15.3	17.8	14.8	14.5	11.6	12.7	13.2	12.0
Relative Humidity	Max	100	100	100	100	100	83	69	100	100	100	95	85	-
	Min	44	28	23	30	26	33	35	33	53	53	36	36	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	18.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	22.9
Sunshine Duration		4.9	8.6	12.1	9.8	8.7	8.1	3.8	7.8	3.8	4.6	7.2	8.8	9.1
Precipitation		12.6			0.0	1.1	0.0	0.2	0.3	10.5	0.4	25.1	7.0	14.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	46.7
Growing Degrees	5	13.5	13.3	13.5	13.8	15.5	16.6	16.3	15.5	14.2	14.2	146.2	142.0	141.5
	10	8.5	8.3	8.5	8.8	10.5	11.6	11.3	10.5	9.2	9.2	96.2	92.0	91.5

1st 10-day period (1-10/06/2015)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	37.8	43.4
Precipitation - Reference Evapotranspiration	-	-30.8	-29.0
Number of Rainy Days	6.0	5.0	2.5
Number of Dry Days	3.0	0.0	-

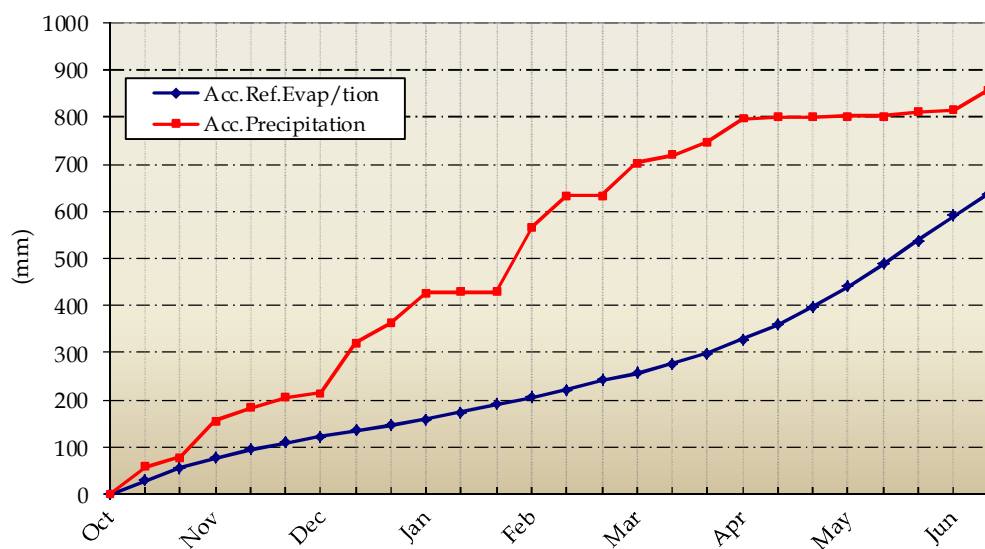
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2015)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.8	27.3	27.5	30.7	28.5	30.6	28.3	25.2	24.2	27.7	27.7	27.8	27.6
	Min	13.0	12.5	14.6	14.0	14.6	16.9	18.2	14.6	14.3	15.8	14.8	15.3	14.5
Relative Humidity	Max	91	80	91	84	88	84	95	95	96	94	90	91	-
	Min	33	27	31	27	39	27	30	46	59	51	37	35	-
Soil Temperature at 10 cm	06 UTC	20.4	20.0	20.4	20.6	20.6	20.6	21.2	20.8	20.6	21.0	20.6	21.3	21.6
	12 UTC	22.0	22.0	22.0	22.0	21.0	22.0	22.2	22.6	21.6	22.4	22.0	22.6	25.8
Sunshine Duration		9.1	10.9	9.9	8.5	5.0	7.9	3.1	5.9	7.3	8.6	7.6	7.3	10.5
Precipitation				0.5	0.0	0.5		4.6	37.0	0.7		43.3	10.3	2.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	75.1
Growing Degrees	5	14.9	14.9	16.1	17.4	16.6	18.8	18.3	14.9	14.3	16.8	162.7	165.6	160.6
	10	9.9	9.9	11.1	12.4	11.6	13.8	13.3	9.9	9.3	11.8	112.7	115.6	110.6

1st 10-day period (1-10/06/2015)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	46.2	46.4	50.2
Precipitation - Reference Evapotranspiration	-2.9	-36.1	-47.5
Number of Rainy Days	5.0	4.0	0.9
Number of Dry Days	6.0	13.0	-

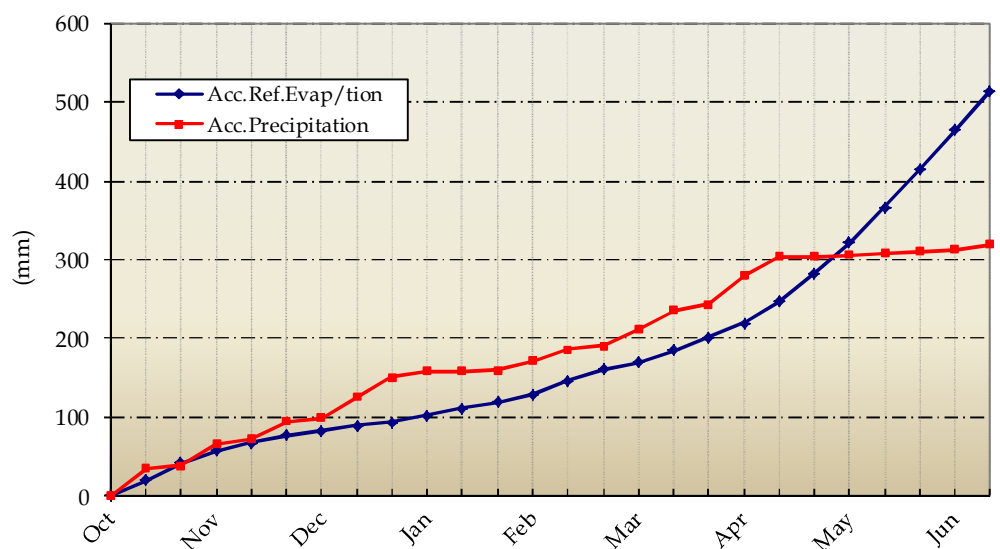
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



1st 10-day period (1-10/06/2015)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	28.8	28.9	29.6	32.2	31.1	30.6	24.0	24.1	29.8	30.6	29.0	28.8	29.7
	Min	12.6	12.8	13.0	13.6	18.2	17.2	16.8	16.1	14.5	14.7	15.0	14.7	14.1
Relative Humidity	Max	96	96	78	74	83	73	100	100	100	100	90	88	-
	Min	18	22	20	18	22	22	48	38	29	23	26	27	-
Soil Temperature at 10 cm	06 UTC	22.2	22.6	23.2	23.2	24.4	24.6	24.6	22.6	22.2	23.2	23.3	-	21.7
	12 UTC	22.2	22.8	23.0	23.6	24.4	24.6	24.0	22.6	22.6	23.9	23.4	-	24.3
Sunshine Duration		10.4	12.4	9.0	11.1	11.2	6.2	0.3	2.9	9.2	11.9	8.5	8.2	10.4
Precipitation						0.1		5.9	0.4			6.4	24.0	9.2
Evaporation		15.0	10.4	2.6	0.6	9.5	8.4	0.1	5.4	7.0	9.5	68.5	70.1	79.0
Growing Degrees	5	15.7	15.9	16.3	17.9	19.7	18.9	15.4	15.1	17.2	17.7	169.6	167.6	169.0
	10	10.7	10.9	11.3	12.9	14.7	13.9	10.4	10.1	12.2	12.7	119.6	117.6	119.0

1st 10-day period (1-10/06/2015)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	49.5	47.7	54.0
Precipitation - Reference Evapotranspiration	-43.1	-23.7	-44.8
Number of Rainy Days	3.0	3.0	2.3
Number of Dry Days	7.0	2.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

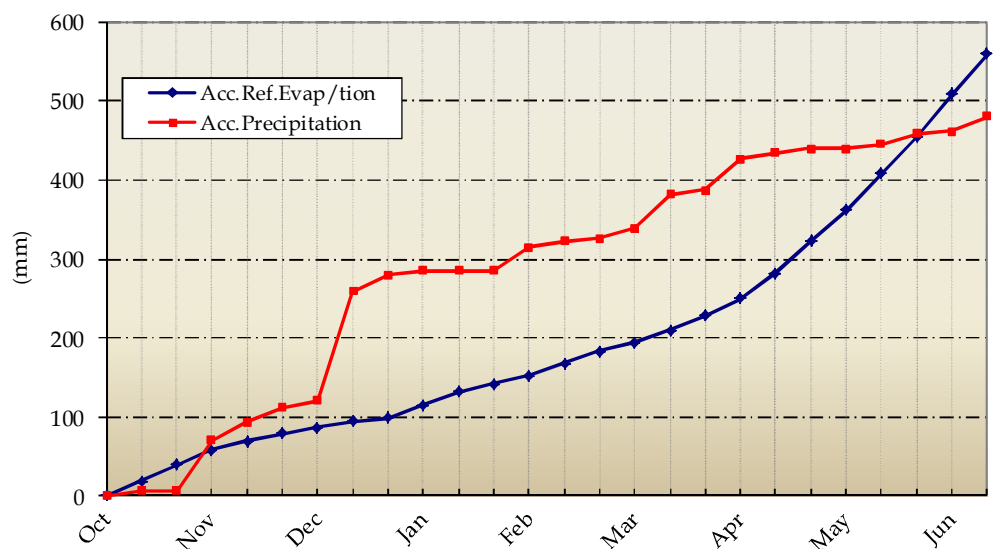


Mikra

1st 10-day period (1-10/06/2015)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	27.6	28.0	28.9	31.8	29.1	30.3	25.2	23.4	27.2	27.6	27.9	27.5	27.9
	Min	14.4	15.6	14.6	14.4	17.0	17.2	19.5	18.1	15.6	16.2	16.3	16.7	15.4
Relative Humidity	Max	78	75	67	76	89	91	77	80	92	92	82	80	-
	Min	23	26	25	22	41	32	50	40	40	38	34	36	-
Soil Temperature at 10 cm	06 UTC	22.8	23.3	24.0	24.2	24.0	23.0	24.2	21.4	20.6	22.2	23.0	21.4	22.3
	12 UTC	28.8	29.8	29.6	29.2	27.5	29.1	27.0	22.8	26.6	27.2	27.8	26.2	27.3
Sunshine Duration		11.6	13.5	12.4	8.4	9.3	10.2	3.0	1.5	6.3	10.9	8.7	9.1	10.0
Precipitation					0.8	12.6	0.0	0.7	3.6	0.0	1.9	19.6	7.9	11.2
Evaporation		5.9	3.8	13.4	6.0	3.3	10.2	2.6	3.1	5.7	9.5	63.5	56.7	74.4
Growing Degrees	5	16.0	16.8	16.8	18.1	18.1	18.8	17.4	15.8	16.4	16.9	170.9	171.3	166.4
	10	11.0	11.8	11.8	13.1	13.1	13.8	12.4	10.8	11.4	11.9	120.9	121.3	116.4

1st 10-day period (1-10/06/2015)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	50.4	53.4	52.1
Precipitation - Reference Evapotranspiration	-30.8	-45.5	-40.9
Number of Rainy Days	5.0	4.0	2.7
Number of Dry Days	6.0	2.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

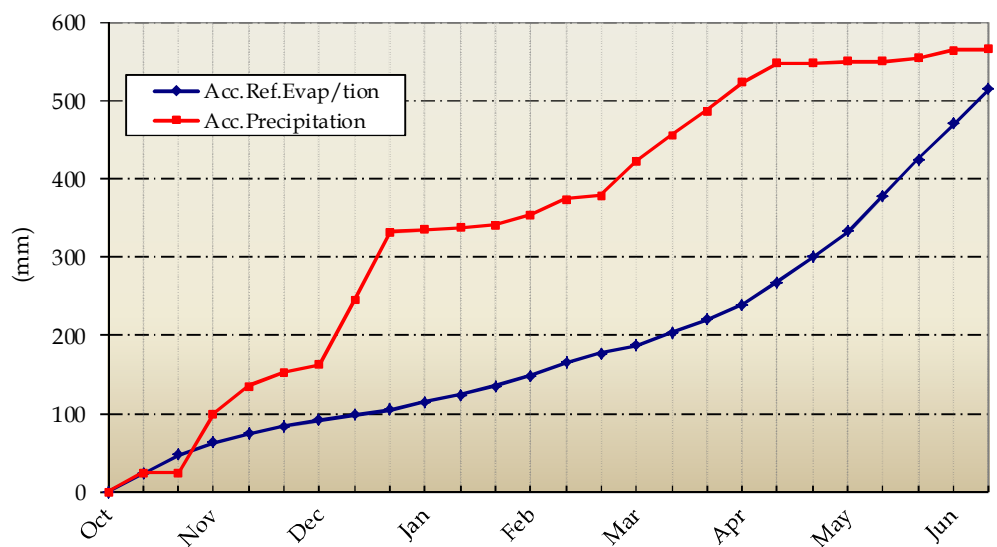


Tanagra

1st 10-day period (1-10/06/2015)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	26.3	25.2	26.5	29.0	26.4	24.9	21.6	22.7	27.3	28.6	25.8	25.3	28.3
	Min	11.6	13.4	14.8	16.2	17.6	18.2	19.6	17.0	12.7	13.9	15.5	14.4	14.2
Relative Humidity	Max	74	75	66	62	91	70	82	86	83	84	77	-	-
	Min	28	31	30	27	42	38	63	48	29	30	37	-	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		9.3	12.8	11.5	13.3	7.5	1.1	0.7	0.2	10.1	10.7	7.7	-	-
Precipitation						1.5		0.0				1.5	16.6	6.3
Evaporation		7.0	8.5	9.5	8.0	4.5	6.0	6.0	4.0	6.0	5.0	64.5	-	
Growing Degrees	5	14.0	14.3	15.7	17.6	17.0	16.6	15.6	14.9	15.0	16.3	156.8	-	
	10	9.0	9.3	10.7	12.6	12.0	11.6	10.6	9.9	10.0	11.3	106.8	-	

1st 10-day period (1-10/06/2015)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	44.5	-	
Precipitation - Reference Evapotranspiration	-43.0	-	0.0
Number of Rainy Days	1.0	-	2.0
Number of Dry Days	6.0	-	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

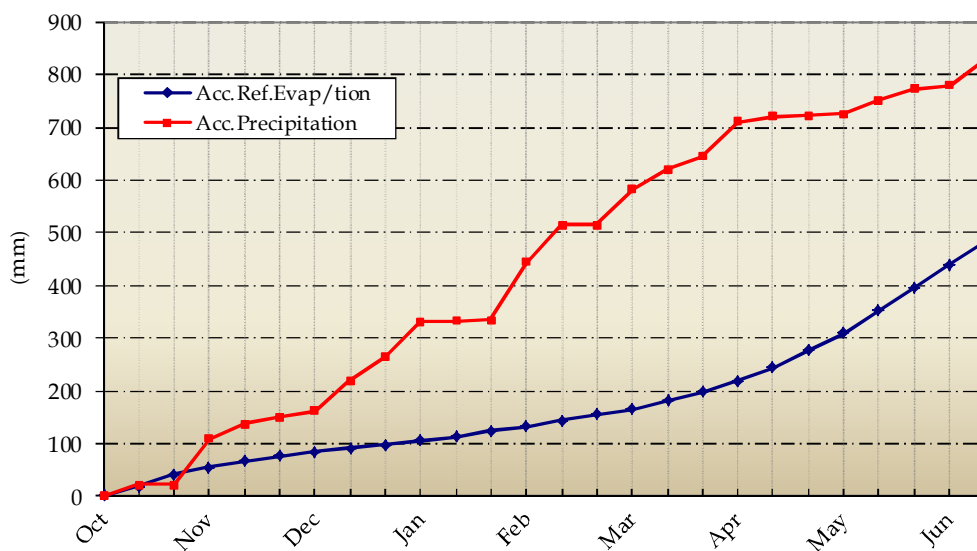


Tripoli

1st 10-day period (1-10/06/2015)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	25.0	26.1	27.1	28.0	25.3	23.5	21.8	24.0	22.6	26.0	24.9	24.2	26.4
	Min	8.4	10.8	8.1	8.5	10.8	15.8	16.5	11.5	12.5	11.1	11.4	10.5	10.7
Relative Humidity	Max	100	86	90	91	92	81	96	100	100	100	94	92	-
	Min	24	23	27	28	32	44	56	40	50	33	36	33	-
Soil Temperature at 10 cm	06 UTC	19.2	19.6	20.8	20.8	21.6	21.6	19.0	19.6	19.0	18.6	20.0	18.4	20.3
	12 UTC	-	26.8	27.8	26.8	25.4	-	-	26.4	23.6	25.2	26.0	22.5	23.4
Sunshine Duration		12.2	12.5	8.8	12.1	6.8	5.0	2.8	7.5	5.7	6.4	8.0	6.6	10.2
Precipitation						0.3		0.0	26.3	4.3	16.6	47.5	8.2	6.1
Evaporation		7.0	7.0	6.4	7.1	6.4	6.0	1.1	6.4	3.0	0.7	51.1	41.0	55.4
Growing Degrees	5	11.7	13.5	12.6	13.3	13.1	14.7	14.2	12.8	12.6	13.6	131.7	123.9	135.3
	10	6.7	8.5	7.6	8.3	8.1	9.7	9.2	7.8	7.6	8.6	81.7	73.9	85.3

1st 10-day period (1-10/06/2015)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	42.9	40.3	48.9
Precipitation - Reference Evapotranspiration	4.6	-32.1	-42.8
Number of Rainy Days	4.0	7.0	1.6
Number of Dry Days	7.0	2.0	-

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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