



AGROMETEOROLOGICAL BULLETIN

February 2017
3rd 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



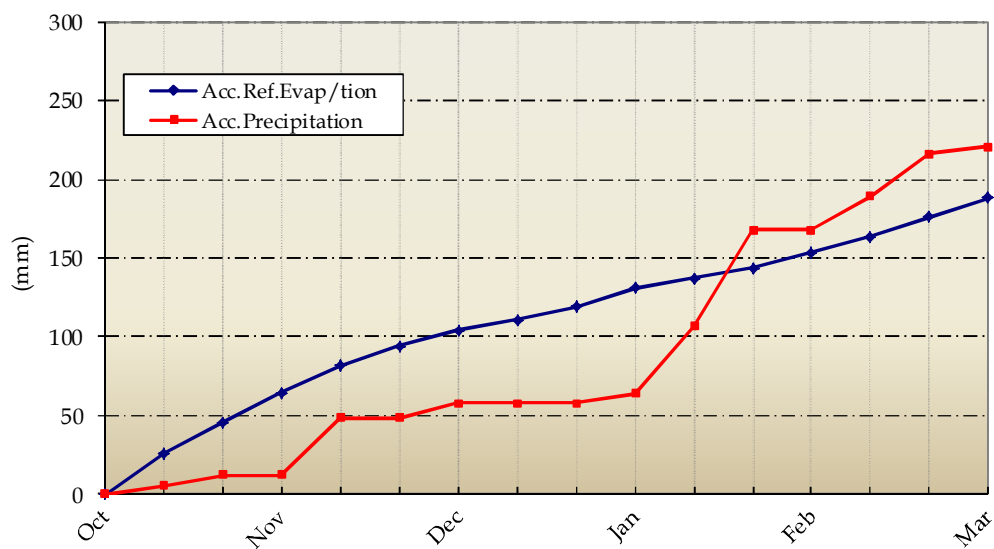
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3rd 10-day period (21-28/02/2017)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	12.0	14.4	16.2	17.4	16.4	14.0	12.6	14.0	14.6	15.2	9.7
	Min	0.8	5.0	4.2	11.0	13.6	6.4	6.0	3.2	6.3	7.4	1.6
Relative Humidity	Max	88	91	94	93	93	91	94	97	93	95	-
	Min	56	58	65	60	66	68	72	72	65	67	-
Soil Temperature at 10 cm	06 UTC	5.4	7.6	7.0	10.8	12.4	10.2	9.0	8.2	8.8	10.0	5.7
	12 UTC	10.6	11.8	13.4	15.0	14.2	11.6	10.4	13.0	12.5	12.7	7.3
Sunshine Duration		9.3	10.1	8.4	7.7	1.1	2.0	2.8	7.4	6.1	5.1	4.8
Precipitation						0.0	4.2			4.2	8.7	14.4
Evaporation		1.6	1.9	2.5	2.9	3.3	2.0	1.2	1.8	17.2	14.3	9.4
Growing Degrees	5	1.4	4.7	5.2	9.2	10.0	5.2	4.3	3.6	43.6	56.9	17.0
	10	0.0	0.0	0.2	4.2	5.0	0.2	0.0	0.0	9.6	14.7	2.5

3rd 10-day period (21-28/02/2017)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.1	12.4
Precipitation - Reference Evapotranspiration	-7.9	-3.7
Number of Rainy Days	1.0	2.0
Number of Dry Days	5.0	4.0

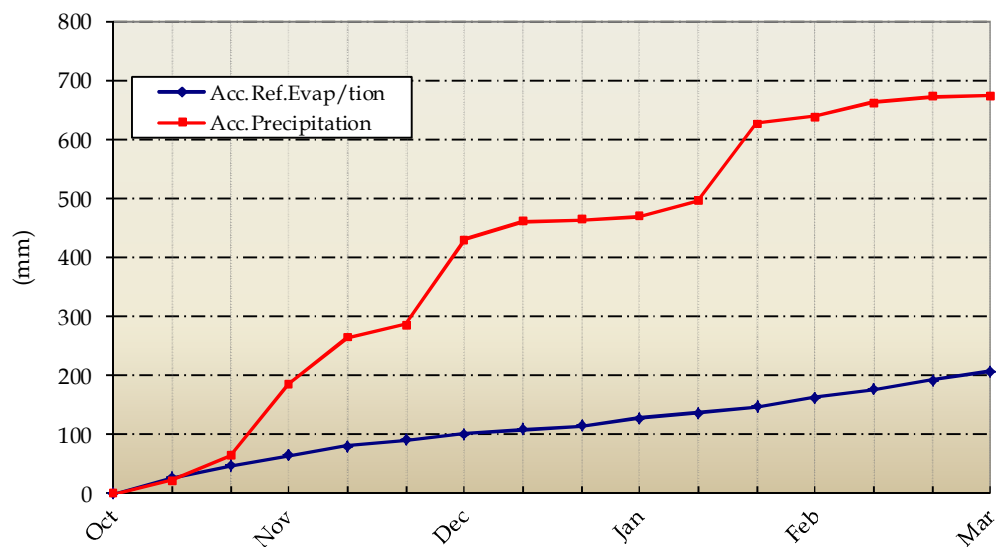
Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



3rd 10-day period (21-28/02/2017)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.7	15.6	17.4	17.6	19.1	15.8	20.6	17.7	17.3	18.4	14.1
	Min	7.8	5.2	6.3	9.1	10.6	12.0	10.4	6.6	8.5	7.2	5.3
Relative Humidity	Max	90	89	87	85	82	86	88	90	87	89	-
	Min	53	51	52	53	42	68	43	64	53	53	-
Soil Temperature at 10 cm	06 UTC	11.8	10.6	10.4	12.2	12.6	14.2	12.2	12.6	12.1	-	9.0
	12 UTC	14.4	13.2	13.2	13.8	14.0	15.0	13.8	17.6	14.4	-	11.2
Sunshine Duration		5.4	9.5	9.1	8.3	3.3	0.0	6.0	9.1	6.3	7.0	5.7
Precipitation							0.9	0.3		1.2		22.1
Evaporation		0.7	0.8	3.0	3.0	0.5	8.7	2.0	2.0	20.7	15.2	19.2
Growing Degrees	5	6.3	5.4	6.9	8.4	9.9	8.9	10.5	7.2	63.3	70.3	39.2
	10	1.3	0.4	1.9	3.4	4.9	3.9	5.5	2.2	23.3	25.3	8.3

3rd 10-day period (21-28/02/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	14.1	16.4	12.9
Precipitation - Reference Evapotranspiration	-12.9	-16.4	9.2
Number of Rainy Days	2.0	0.0	3.2
Number of Dry Days	5.0	9.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

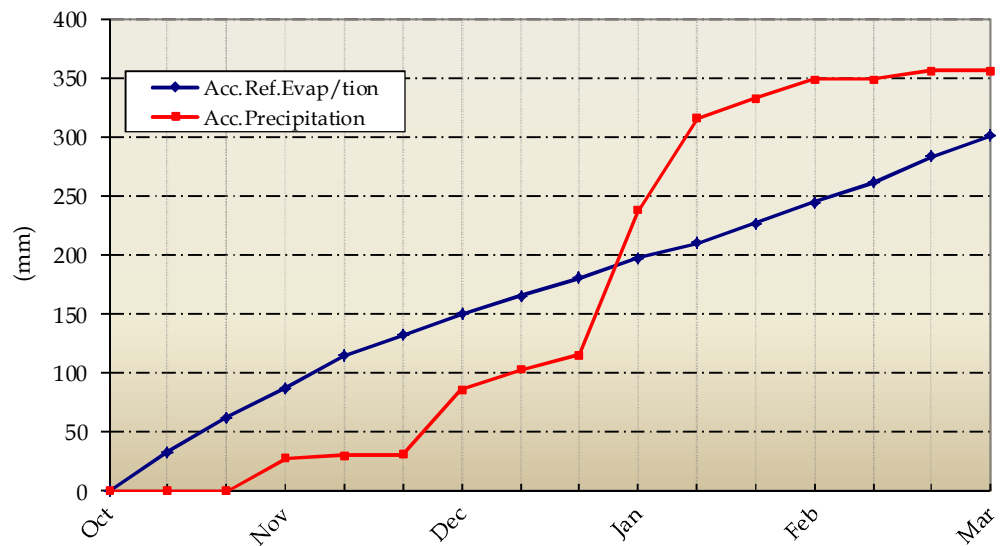


Iraklio

3rd 10-day period (21-28/02/2017)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	19.2	17.4	17.4	19.2	22.0	21.4	17.0	17.0	18.8	18.7	14.9
	Min	10.6	10.0	9.2	10.6	11.6	14.4	10.6	13.4	11.3	11.8	8.9
Relative Humidity	Max	75	87	87	85	85	83	93	94	86	87	-
	Min	46	63	63	54	43	41	76	72	57	50	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		8.3	8.1	5.3	2.6	8.0	3.6	5.9	2.4	5.5	6.9	4.7
Precipitation										0.0	6.2	19.7
Evaporation		3.7	1.4	3.8	1.5	3.5	3.2	1.2	0.4	18.7	29.9	26.4
Growing Degrees	5	9.9	8.7	8.3	9.9	11.8	12.9	8.8	10.2	80.5	92.2	57.1
	10	4.9	3.7	3.3	4.9	6.8	7.9	3.8	5.2	40.5	47.2	18.9

3rd 10-day period (21-28/02/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	17.5	23.8	-
Precipitation - Reference Evapotranspiration	-17.5	-17.6	19.7
Number of Rainy Days	0.0	1.0	3.4
Number of Dry Days	14.0	14.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

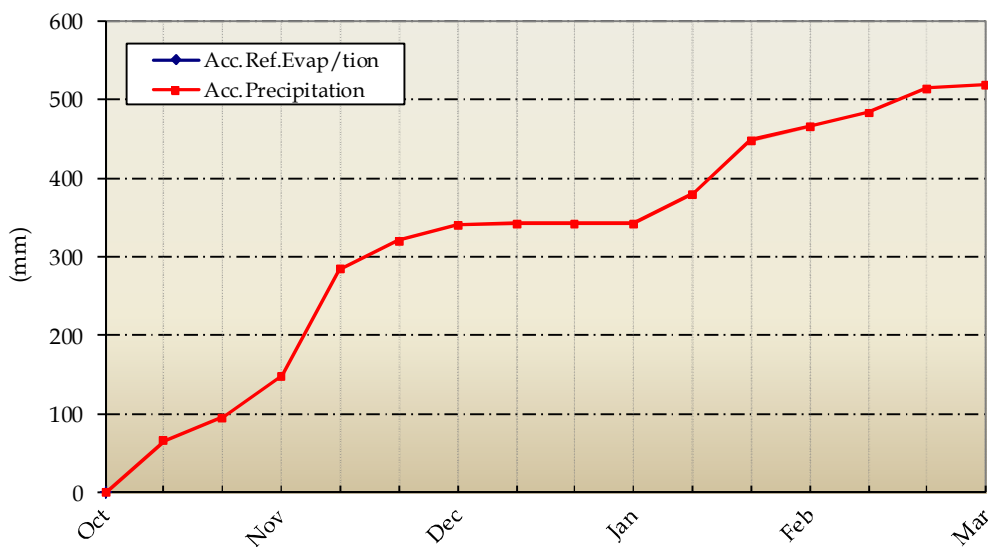


Ioannina

3rd 10-day period (21-28/02/2017)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	13.7	16.5	-	13.8	13.1	13.6	18.9	19.3	15.6	17.1	10.4
	Min	-1.8	-2.0	-2.6	-	-	-	7.0	0.9	0.3	4.1	1.4
Relative Humidity	Max	100	100	-	-	-	100	100	100	100	100	-
	Min	42	30	-	-	-	96	44	45	51	41	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	4.5
	12 UTC	-	-	-	-	-	-	-	-	-	-	5.7
Sunshine Duration		4.6	7.5	-	-	-	0.0	5.4	7.8	5.1	3.8	4.3
Precipitation						2.3	1.3	0.3		3.9	16.1	21.1
Evaporation		-	-	-	-	-	-	-	-	-	-	6.7
Growing Degrees	5	1.0	2.3	-	-	-	-	8.0	5.1	-	-	14.5
	10	0.0	0.0	-	-	-	-	3.0	0.1	-	-	1.1

3rd 10-day period (21-28/02/2017)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	10.3
Precipitation - Reference Evapotranspiration	-	10.8
Number of Rainy Days	3.0	2.9
Number of Dry Days	5.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

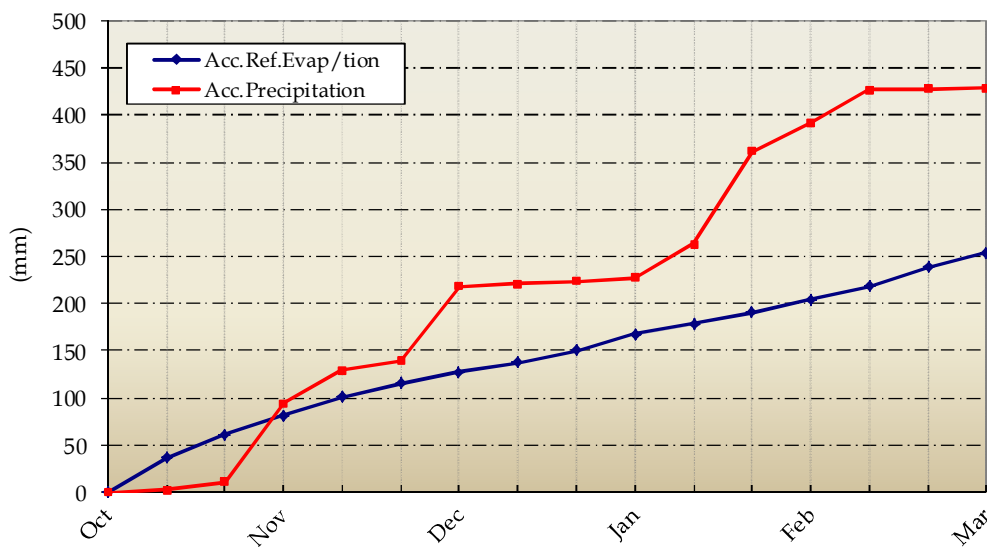


Kalamata

3rd 10-day period (21-28/02/2017)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	16.9	20.0	18.5	18.7	18.7	20.3	20.8	19.6	19.2	19.8	14.8
	Min	5.6	4.6	4.1	6.6	6.5	11.3	11.0	6.9	7.1	7.9	5.1
Relative Humidity	Max	92	92	93	91	93	89	92	93	92	89	-
	Min	53	38	47	51	58	46	39	52	48	43	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	12.9	9.6
	12 UTC	-	-	-	-	-	-	-	-	-	14.0	11.1
Sunshine Duration		3.0	9.4	9.6	2.7	6.5	0.2	0.8	9.4	5.2	7.8	5.3
Precipitation		0.7				0.1	0.6	0.1		1.5	0.8	28.6
Evaporation		2.4	2.0	2.6	2.4	2.2	1.0	3.6	2.6	18.8	23.9	20.1
Growing Degrees	5	6.3	7.3	6.3	7.7	7.6	10.8	10.9	8.3	65.1	79.7	40.8
	10	1.3	2.3	1.3	2.7	2.6	5.8	5.9	3.3	25.1	34.7	8.0

3rd 10-day period (21-28/02/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	15.6	21.8	13.5
Precipitation - Reference Evapotranspiration	-14.1	-21.0	15.1
Number of Rainy Days	4.0	2.0	3.3
Number of Dry Days	1.0	0.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

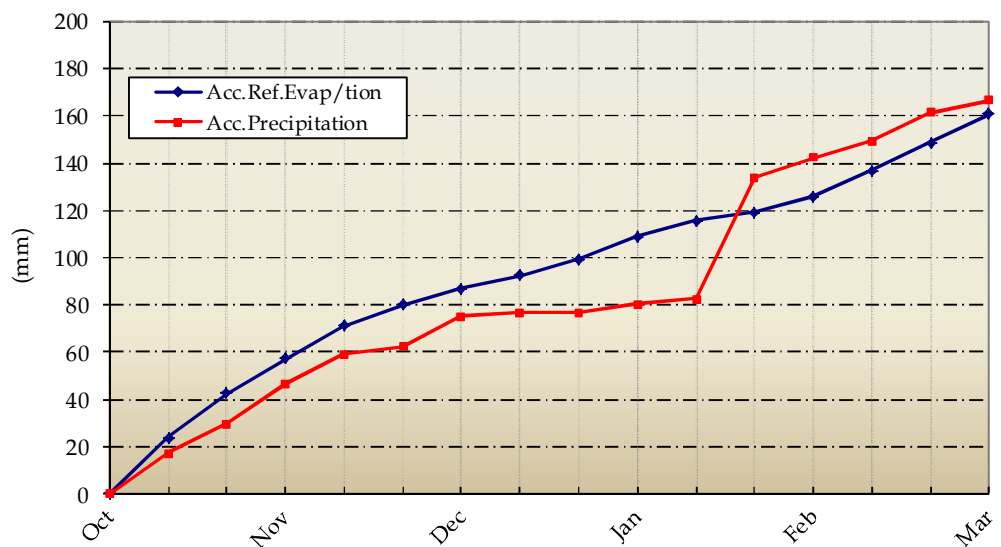


Larisa

3rd 10-day period (21-28/02/2017)		21	22	23	24	25	26	27	28	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	13.6	18.6	21.2	21.6	18.0	12.0	16.6	19.0	17.6	18.1	11.9
	Min	0.4	1.2	1.4	1.0	5.5	9.0	10.0	3.8	4.0	4.8	1.7
Relative Humidity	Max	100	100	100	100	100	100	100	100	100	100	-
	Min	49	31	27	26	43	85	67	60	48	52	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	11.7	7.0
	12 UTC	-	-	-	-	-	-	-	-	-	11.7	7.7
Sunshine Duration		6.2	8.2	9.3	8.2	1.0	0.3	4.1	6.3	5.4	6.4	4.6
Precipitation						1.5	3.4	0.1		5.0	0.2	13.4
Evaporation		2.1	1.7	2.9	4.2	0.7	2.7	0.0	3.0	17.3	22.7	9.6
Growing Degrees	5	2.0	4.9	6.3	6.3	6.8	5.5	8.3	6.4	46.5	58.1	20.2
	10	0.0	0.0	1.3	1.3	1.8	0.5	3.3	1.4	9.6	13.4	2.5

3rd 10-day period (21-28/02/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.2	15.7	11.5
Precipitation - Reference Evapotranspiration	-7.2	-15.5	1.9
Number of Rainy Days	3.0	2.0	2.6
Number of Dry Days	4.0	0.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

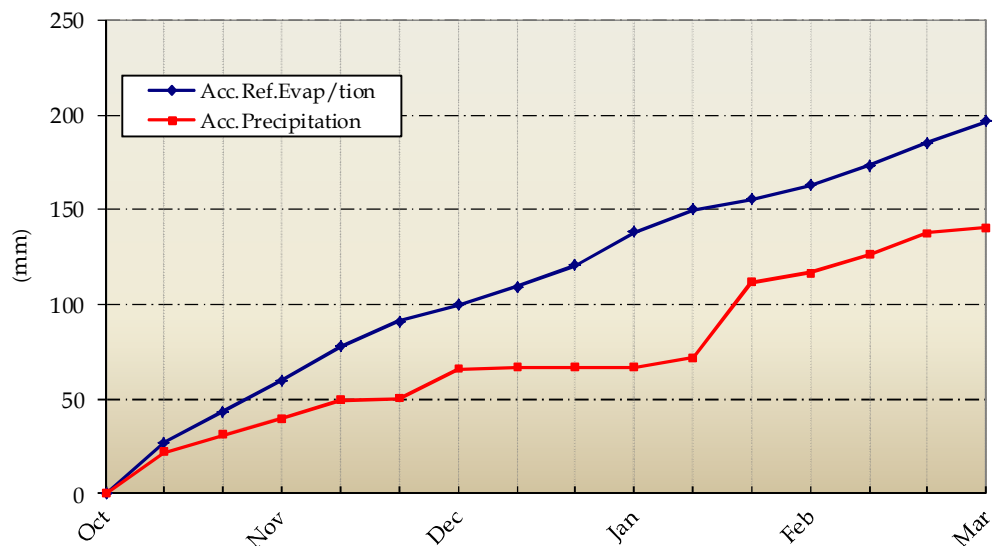


Mikra

3rd 10-day period (21-28/02/2017)		21	22	23	24	25	26	27	28	29	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	13.0	18.2	17.4	17.7	14.0	10.8	15.4	11.9	14.8	16.5	11.1	11.1
	Min	3.0	1.8	4.1	3.3	6.7	8.6	9.3	7.8	5.6	7.1	2.8	2.8
Relative Humidity	Max	77	91	93	95	95	98	98	98	93	90	-	-
	Min	31	34	37	37	68	92	65	87	56	49	-	-
Soil Temperature at 10 cm	06 UTC	6.1	6.8	8.3	8.2	9.8	10.1	10.2	11.1	8.8	10.9	6.7	6.7
	12 UTC	8.4	9.5	11.0	11.2	10.8	10.4	12.2	11.8	10.7	12.8	9.0	9.0
Sunshine Duration		9.1	9.0	9.5	7.9	0.3	0.0	7.1	1.3	5.5	6.0	4.4	4.4
Precipitation						0.2	2.4	0.4		3.0	6.9	13.2	13.2
Evaporation		1.4	3.4	2.4	4.6	0.2	0.4	1.6	1.8	15.8	17.2	13.2	13.2
Growing Degrees	5	3.0	5.0	5.8	5.5	5.4	4.7	7.4	4.9	41.5	61.1	21.0	21.0
	10	0.0	0.0	0.8	0.5	0.4	0.0	2.4	0.0	4.0	16.1	2.4	2.4

3rd 10-day period (21-28/02/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	11.1	16.2	11.8
Precipitation - Reference Evapotranspiration	-8.1	-9.3	1.4
Number of Rainy Days	3.0	3.0	2.4
Number of Dry Days	5.0	0.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

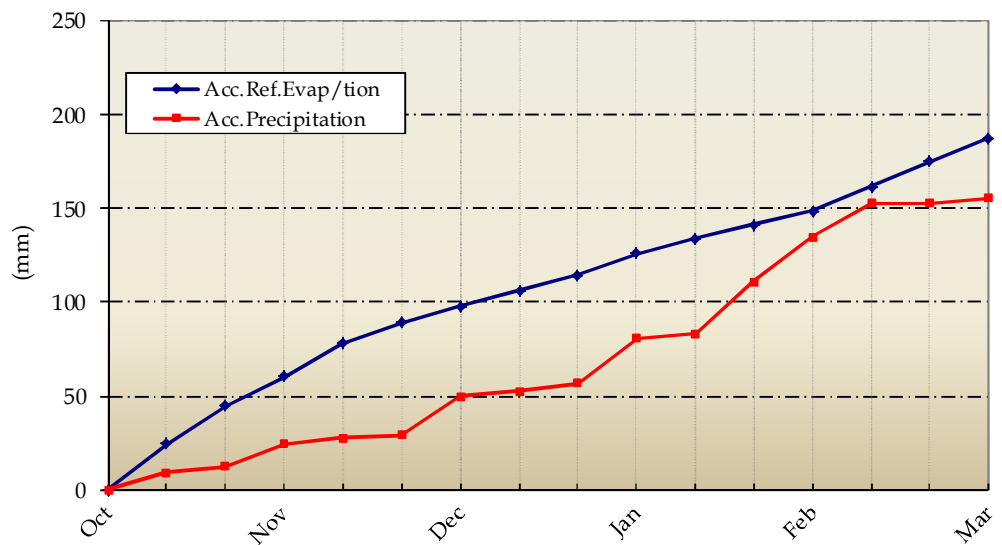


Tanagra

3rd 10-day period (21-28/02/2017)		21	22	23	24	25	26	27	28	29	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	14.5	18.7	20.0	20.6	20.4	14.4	14.6	18.8	17.8	19.0	12.6	12.6
	Min	5.8	3.0	4.3	9.8	4.7	10.2	11.0	5.6	6.8	6.1	3.5	3.5
Relative Humidity	Max	100	100	85	83	97	100	100	100	96	97	-	-
	Min	52	27	19	33	40	36	76	50	42	44	-	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-		
	12 UTC	-	-	-	-	-	-	-	-	-	-		
Sunshine Duration		3.7	8.5	9.9	9.0	5.5	0.0	0.4	7.2	5.5	7.0		
Precipitation							2.1	0.9		3.0	9.6	17.9	17.9
Evaporation		-	-	-	-	-	-	-	-	-	21.5		
Growing Degrees	5	5.2	5.9	7.2	10.2	7.6	7.3	7.8	7.2	58.2	68.2		
	10	0.2	0.9	2.2	5.2	2.6	2.3	2.8	2.2	18.2	23.2		

3rd 10-day period (21-28/02/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.4	15.9	
Precipitation - Reference Evapotranspiration	-9.4	-6.3	17.9
Number of Rainy Days	2.0	2.0	3.5
Number of Dry Days	16.0	9.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

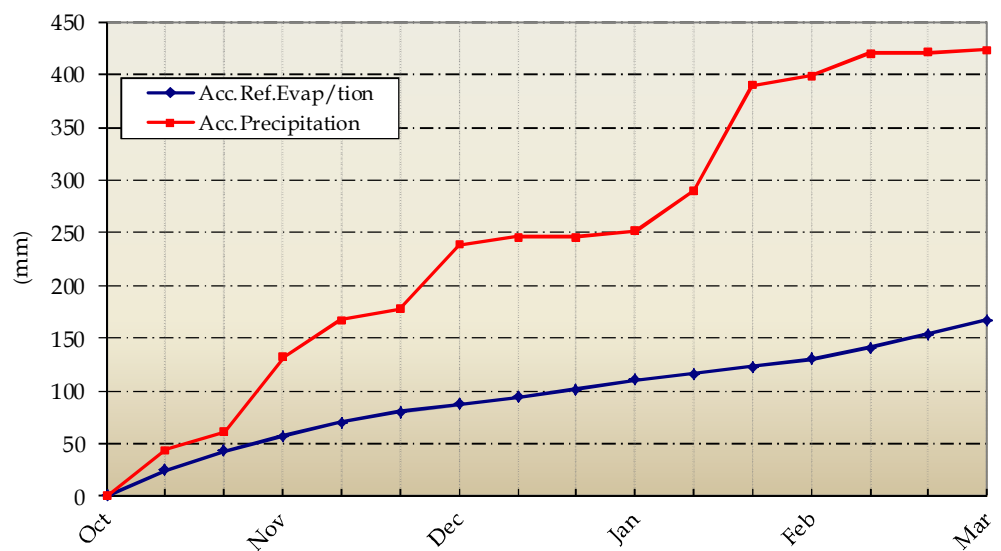


Tripoli

3rd 10-day period (21-28/02/2017)		21	22	23	24	25	26	27	28	29	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	12.8	16.7	15.3	15.3	17.0	12.9	15.0	19.2	15.5	17.4	10.1	10.1
	Min	-1.3	-3.1	-1.9	1.8	0.9	7.0	5.8	1.4	1.3	2.8	1.0	1.0
Relative Humidity	Max	100	100	100	100	100	100	100	100	100	100	-	-
	Min	53	23	38	52	31	66	54	39	44	39	-	-
Soil Temperature at 10 cm	06 UTC	5.6	5.0	5.2	6.6	6.6	8.8	8.6	7.6	6.8	7.9	5.0	5.0
	12 UTC	8.0	8.4	8.6	9.8	-	-	-	10.8	9.1	12.2	6.2	6.2
Sunshine Duration		4.8	8.3	9.2	9.3	6.4	0.0	5.8	6.0	6.2	8.0	5.1	5.1
Precipitation						0.2	2.6	0.0		2.8	0.4	27.0	27.0
Evaporation		1.3	3.3	0.9	2.0	0.7	1.6	0.8	1.8	12.4	17.2	9.7	9.7
Growing Degrees	5	0.8	1.8	1.7	3.6	4.0	5.0	5.4	5.3	27.4	45.6	14.5	14.5
	10	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.7	7.7	1.4	1.4

3rd 10-day period (21-28/02/2017)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	12.7	17.1	12.6
Precipitation - Reference Evapotranspiration	-9.9	-16.7	14.4
Number of Rainy Days	2.0	1.0	3.2
Number of Dry Days	5.0	3.0	-

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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ΕΘΝΙΚΗ
ΜΕΤΕΩΡΟΛΟΓΙΚΗ
ΥΠΗΡΕΣΙΑ

HELLENIC NATIONAL METEOROLOGICAL SERVICE

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