



AGROMETEOROLOGICAL BULLETIN

September 2021
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



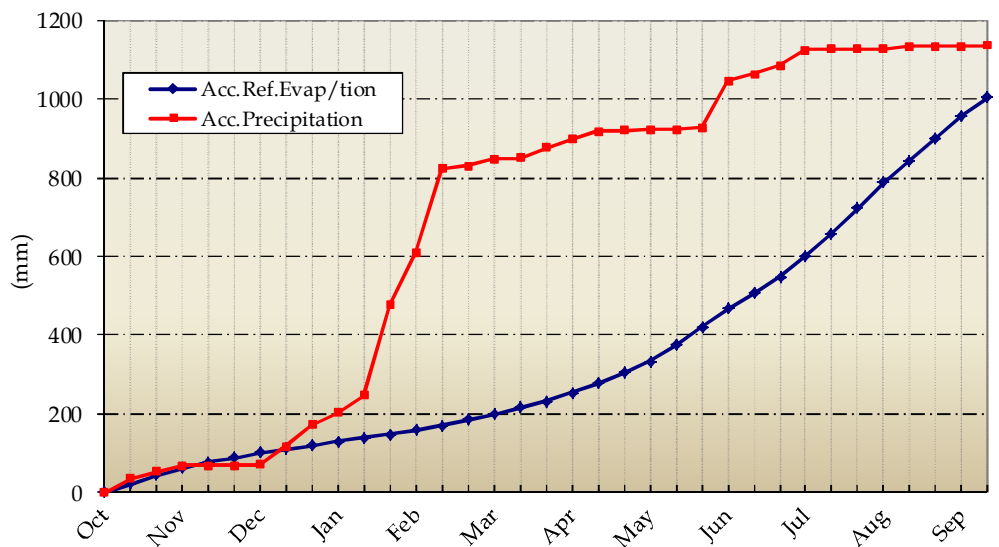
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1st 10-day period (1-10/09/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.6	28.2	27.0	28.0	28.6	27.6	26.2	26.0	24.0	26.4	27.4	33.0	27.3
	Min	11.8	14.2	18.6	14.4	15.6	19.0	17.0	18.0	17.8	17.6	16.4	18.0	15.0
Relative Humidity	Max	86	73	65	60	75	63	55	72	79	79	71	83	-
	Min	28	35	32	30	28	25	36	38	51	39	34	33	-
Soil Temperature at 10 cm	06 UTC	19.6	25.6	25.4	23.6	24.0	24.4	23.6	23.4	23.0	22.2	23.5	24.2	21.2
	12 UTC	31.2	29.4	29.4	28.0	27.6	28.6	26.6	26.0	23.6	24.8	27.5	28.8	24.9
Sunshine Duration		11.0	11.8	11.1	11.5	9.1	11.2	8.3	6.9	2.1	9.1	9.2	11.4	8.8
Precipitation			0.0							1.1	1.5	2.6		6.6
Evaporation		10.6	8.2	5.5	5.7	9.6	10.3	6.1	5.1	5.4	4.5	71.0	83.6	73.7
Growing Degrees	5	16.7	16.2	17.8	16.2	17.1	18.3	16.6	17.0	15.9	17.0	168.8	205.0	161.8
	10	11.7	11.2	12.8	11.2	12.1	13.3	11.6	12.0	10.9	12.0	118.8	155.0	111.8

1st 10-day period (1-10/09/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	47.0	50.0	42.4
Precipitation - Reference Evapotranspiration	-44.4	-50.0	-35.8
Number of Rainy Days	2.0	0.0	1.1
Number of Dry Days	12.0	21.0	-

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

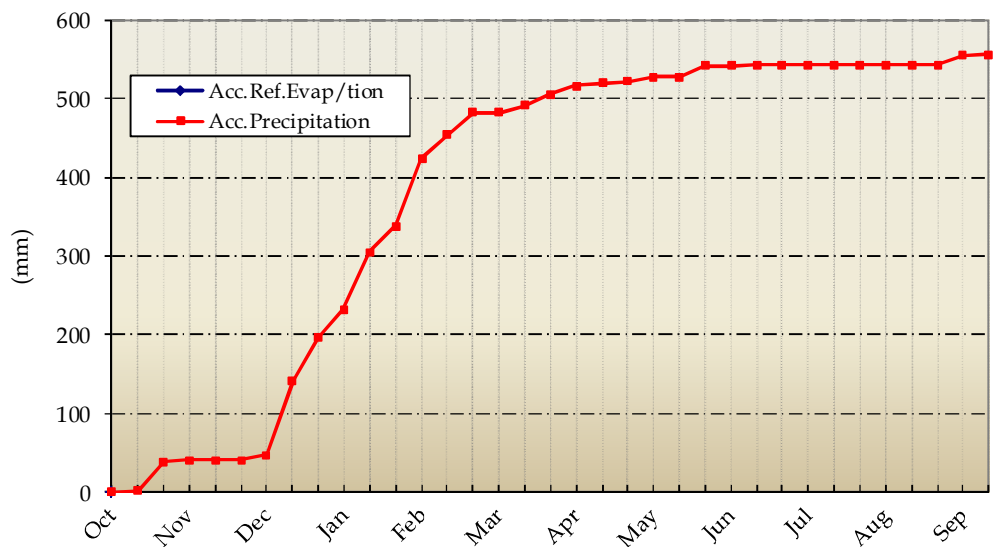


1st 10-day period (1-10/09/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.0	30.6	30.3	29.8	30.5	29.8	29.7	28.1	26.8	26.8	29.2	32.3	28.8
	Min	13.7	19.3	17.4	17.3	19.4	20.2	16.5	18.8	16.0	15.9	17.4	18.7	17.3
Relative Humidity	Max	83	89	93	93	90	90	67	95	93	93	89	89	-
	Min	42	38	29	29	44	28	30	44	48	42	37	33	-
Soil Temperature at 10 cm	06 UTC	24.2	26.6	26.4	27.4	27.8	27.6	26.0	25.6	24.4	24.6	26.1	28.3	24.8
	12 UTC	29.2	29.4	29.0	29.6	29.8	29.0	29.8	28.8	26.6	27.0	28.8	31.0	28.9
Sunshine Duration		11.9	10.7	11.6	9.3	8.9	9.0	10.9	4.4	9.8	11.8	9.8	10.2	9.7
Precipitation						0.0			1.4			1.4		5.8
Evaporation		4.4	5.0	8.9	8.6	6.2	9.7	6.6	6.5	4.2	4.9	65.0	94.1	62.5
Growing Degrees	5	16.9	20.0	18.9	18.6	20.0	20.0	18.1	18.5	16.4	16.4	183.5	204.8	180.3
	10	11.9	15.0	13.9	13.6	15.0	15.0	13.1	13.5	11.4	11.4	133.5	154.8	130.3

1st 10-day period (1-10/09/2021)	Previous Year Value	Past Years Mean Value	
Reference Evapotranspiration	34.5	-	40.4
Precipitation - Reference Evapotranspiration	-33.1	-	-34.6
Number of Rainy Days	1.0	0.0	1.2
Number of Dry Days	11.0	33.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



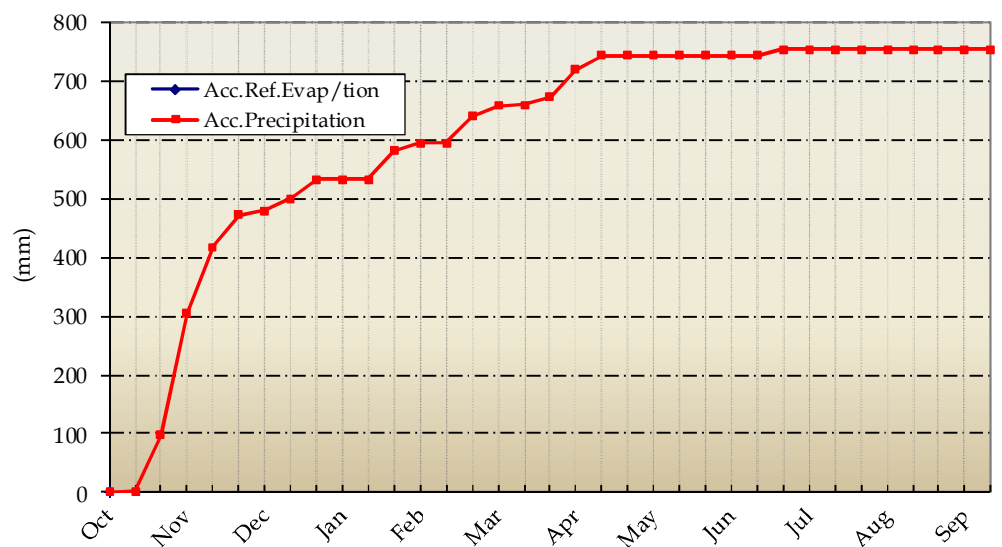
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1st 10-day period (1-10/09/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	29.2	28.6	28.0	27.8	27.4	26.8	25.6	26.6	25.4	26.2	27.2	29.6	27.0
	Min	20.4	21.4	24.0	23.8	23.8	24.0	23.0	21.0	20.2	21.0	22.3	23.6	20.4
Relative Humidity	Max	96	96	84	85	89	91	91	96	95	93	92	79	-
	Min	76	75	67	70	73	67	74	78	76	78	73	53	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		12.0	11.9	11.3	11.0	11.1	11.0	7.1	6.8	9.8	11.0	10.3	10.8	9.9
Precipitation							0.0		0.0	0.4		0.4		1.6
Evaporation		4.8	7.8	10.3	8.0	6.2	4.8	4.5	3.5	3.7	5.5	59.1	59.4	74.3
Growing Degrees	5	19.8	20.0	21.0	20.8	20.6	20.4	19.3	18.8	17.8	18.6	197.1	216.0	187.3
	10	14.8	15.0	16.0	15.8	15.6	15.4	14.3	13.8	12.8	13.6	147.1	166.0	137.3

1st 10-day period (1-10/09/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	1.6
Number of Rainy Days	1.0	0.3
Number of Dry Days	84.0	100.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

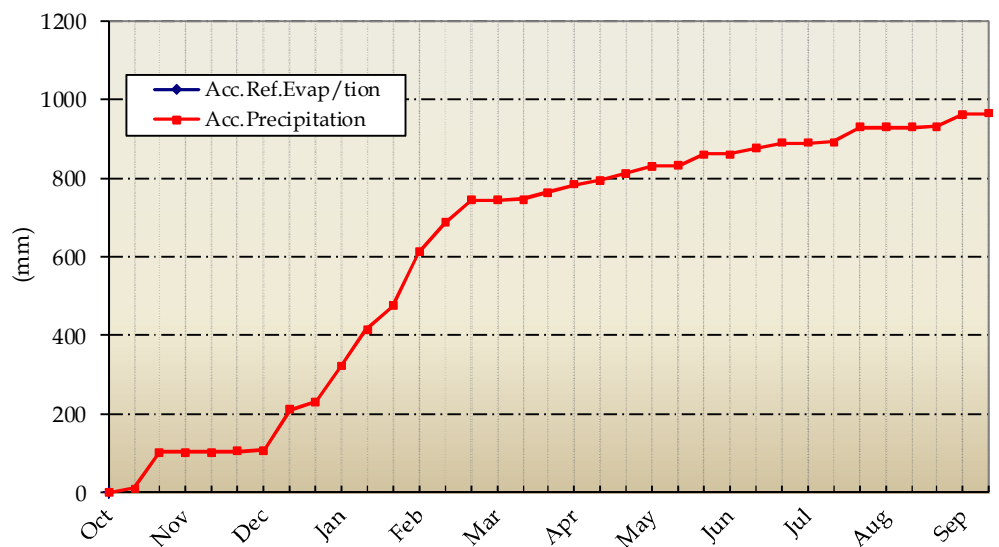


1st 10-day period (1-10/09/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	30.3	30.0	29.3	28.4	29.6	25.5	25.1	21.4	25.0	26.7	27.1	32.6	27.0
	Min	12.2	10.6	10.3	11.4	11.9	15.9	18.1	17.5	9.7	9.0	12.7	13.6	13.0
Relative Humidity	Max	95	92	92	97	97	90	50	67	98	91	87	86	-
	Min	19	22	29	25	25	33	33	49	40	35	31	27	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	19.6
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	22.8
Sunshine Duration		11.6	11.6	11.0	5.5	7.2	9.6	8.9	0.0	5.4	10.5	8.1	9.1	7.5
Precipitation		0.2				3.2	0.0		0.0			3.4	0.0	16.4
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	44.5
Growing Degrees	5	16.3	15.3	14.8	14.9	15.8	15.7	16.6	14.5	12.4	12.9	149.0	180.9	150.0
	10	11.3	10.3	9.8	9.9	10.8	10.7	11.6	9.5	7.4	7.9	99.0	130.9	100.0

1st 10-day period (1-10/09/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	33.0
Precipitation - Reference Evapotranspiration	-	-	-16.6
Number of Rainy Days	2.0	0.0	2.1
Number of Dry Days	4.0	24.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

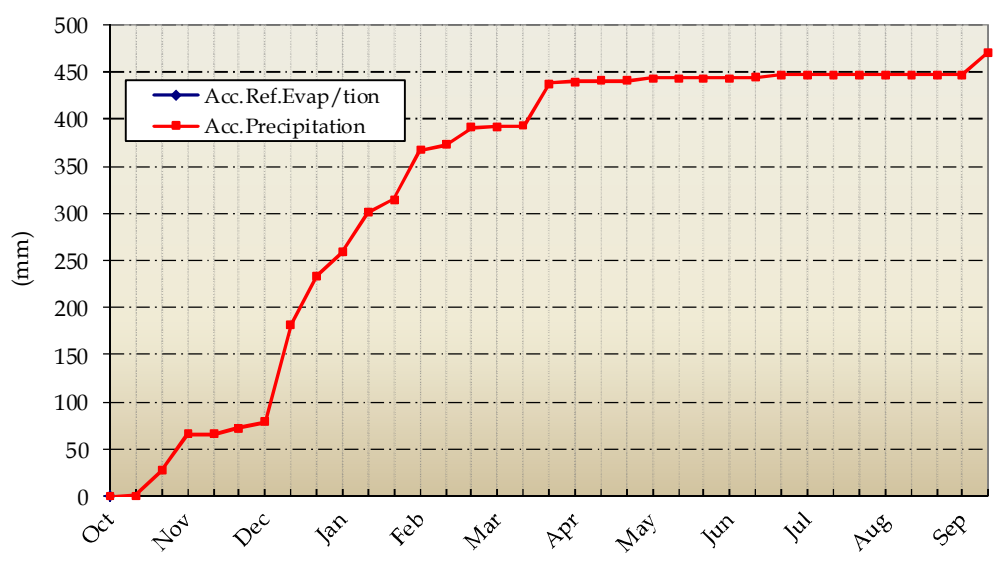


1st 10-day period (1-10/09/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.2	31.0	30.8	28.8	29.0	30.1	28.6	26.6	26.2	29.0	29.3	34.2	29.3
	Min	15.2	20.0	19.4	17.5	17.7	18.4	20.0	18.4	15.3	15.0	17.7	19.5	16.6
Relative Humidity	Max	78	75	81	92	95	95	55	96	97	94	86	79	-
	Min	25	35	30	56	48	32	34	55	54	35	40	23	-
Soil Temperature at 10 cm	06 UTC	20.0	27.5	26.2	27.0	27.2	25.4	23.2	24.5	22.5	21.5	24.5	27.6	23.8
	12 UTC	31.5	31.8	31.8	31.5	31.0	27.5	27.4	27.4	25.0	24.4	28.9	31.7	27.2
Sunshine Duration		11.9	10.9	10.6	10.0	8.2	5.2	8.4	3.2	5.3	9.9	8.4	11.0	9.3
Precipitation						8.7	1.2		8.8	5.7		24.4		7.7
Evaporation		-	-	-	-	-	-	-	-	-	-	-	89.4	67.1
Growing Degrees	5	19.2	20.5	20.1	18.2	18.4	19.3	19.3	17.5	15.8	17.0	185.1	218.1	179.8
	10	14.2	15.5	15.1	13.2	13.4	14.3	14.3	12.5	10.8	12.0	135.1	168.1	129.8

1st 10-day period (1-10/09/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-	43.1
Precipitation - Reference Evapotranspiration	-	-	-35.4
Number of Rainy Days	4.0	0.0	1.1
Number of Dry Days	81.0	39.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration

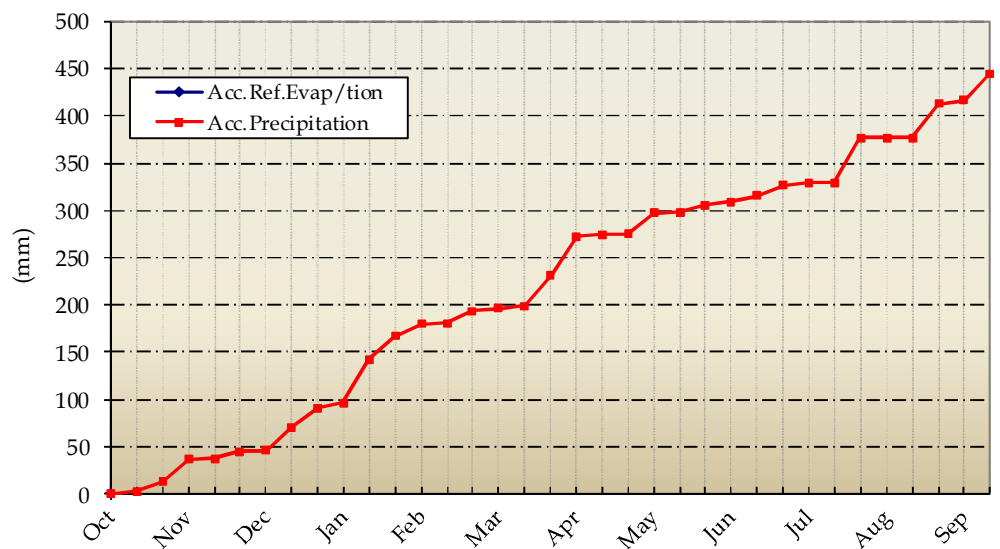


1st 10-day period (1-10/09/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	33.8	29.8	29.4	29.2	28.0	27.6	25.6	21.6	22.8	27.6	27.5	33.8	29.4
	Min	15.8	20.8	17.2	14.8	18.6	16.0	17.2	16.0	15.4	13.2	16.5	17.4	14.9
Relative Humidity	Max	92	49	82	86	88	94	96	99	99	95	88	73	-
	Min	22	28	30	27	41	30	37	61	53	39	37	27	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	23.3
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	25.4
Sunshine Duration		9.9	9.9	10.4	9.9	3.9	10.0	7.4	0.0	3.5	8.4	7.3	9.6	8.7
Precipitation								1.0	11.8	15.9		28.7		5.6
Evaporation		9.2	9.6	10.0	7.0	6.7	10.3	6.3	0.0	2.9	5.1	67.1	100.9	63.7
Growing Degrees	5	19.8	20.3	18.3	17.0	18.3	16.8	16.4	13.8	14.1	15.4	170.2	206.0	171.4
	10	14.8	15.3	13.3	12.0	13.3	11.8	11.4	8.8	9.1	10.4	120.2	156.0	121.4

1st 10-day period (1-10/09/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	39.7	49.1	42.5
Precipitation - Reference Evapotranspiration	-11.0	-49.1	-36.9
Number of Rainy Days	3.0	0.0	1.4
Number of Dry Days	11.0	16.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



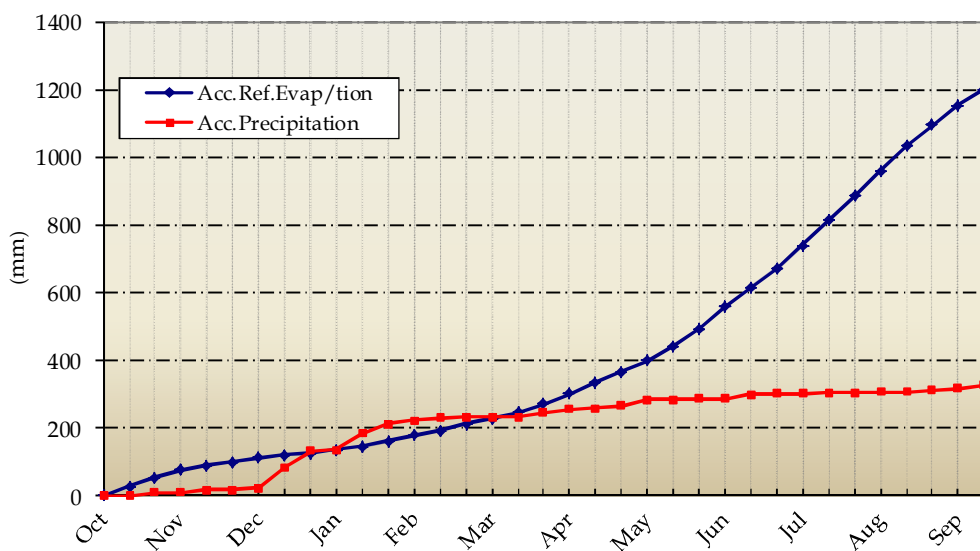
Mikra

1st 10-day period (1-10/09/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	32.4	29.1	28.2	27.7	27.4	27.6	26.9	23.4	22.4	22.4	26.8	31.3	28.1
	Min	16.6	21.2	14.9	17.8	18.8	17.7	20.2	17.4	15.8	17.6	17.8	19.4	16.4
Relative Humidity	Max	89	51	75	80	92	93	62	86	90	89	81	77	-
	Min	29	30	33	47	50	31	30	41	59	41	39	39	-
Soil Temperature at 10 cm	06 UTC	20.4	26.6	25.8	26.2	26.4	25.6	25.4	25.4	21.4	22.0	24.5	25.6	22.6
	12 UTC	28.8	27.8	28.0	28.2	28.2	28.0	27.4	26.2	25.8	24.4	27.3	27.5	26.5
Sunshine Duration		11.4	12.8	12.3	9.4	4.0	7.7	8.7	0.8	0.4	8.6	7.6	10.7	8.4
Precipitation						0.4			3.9	5.0	0.1	9.4		7.2
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	68.9
Growing Degrees	5	19.5	20.2	16.6	17.8	18.1	17.7	18.6	15.4	14.1	15.0	172.8	203.5	172.3
	10	14.5	15.2	11.6	12.8	13.1	12.7	13.6	10.4	9.1	10.0	122.8	153.5	122.3

1st 10-day period (1-10/09/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	46.1	50.3	42.4
Precipitation - Reference Evapotranspiration	-36.7	-50.3	-35.2
Number of Rainy Days	4.0	0.0	1.4
Number of Dry Days	9.0	15.0	-

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



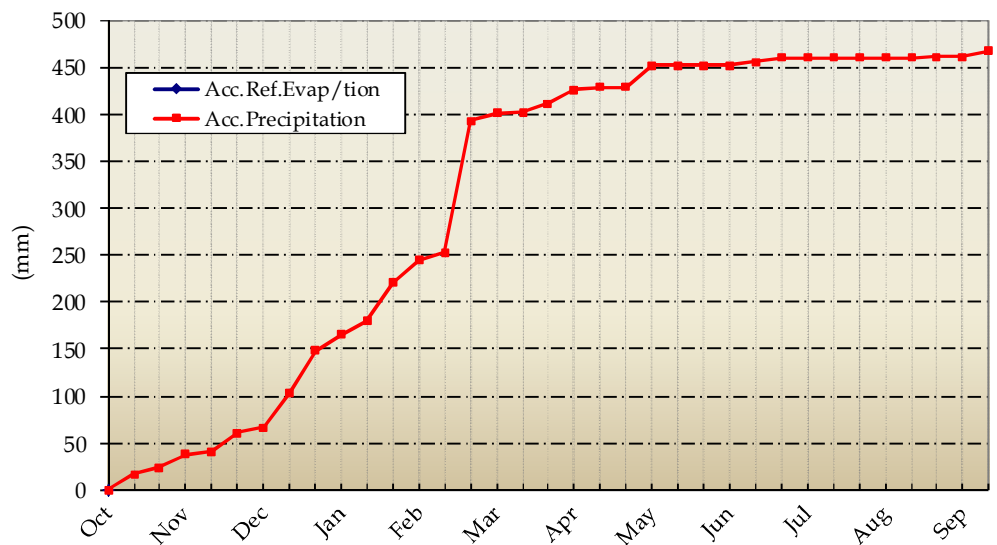
Tanagra

1st 10-day period (1-10/09/2021)		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	28.0	27.6	28.4	28.3	26.2	23.6	20.6	21.9	26.0	26.3	31.7	28.9
	Min	16.5	21.8	16.4	16.2	17.4	19.5	20.2	16.0	16.4	15.6	17.6	18.9	16.1
Relative Humidity	Max	64	65	68	69	65	75	60	96	95	93	75	68	-
	Min	28	28	29	32	32	32	39	57	61	38	38	26	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunshine Duration		10.2	11.5	10.6	11.3	7.5	9.4	4.3	0.0	1.8	7.2	7.4	11.6	
Precipitation							0.1		5.7	0.9		6.7		8.1
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	-
Growing Degrees	5	19.6	19.9	17.0	17.3	17.9	17.9	16.9	13.3	14.2	15.8	169.6	203.1	
	10	14.6	14.9	12.0	12.3	12.9	12.9	11.9	8.3	9.2	10.8	119.6	153.1	

1st 10-day period (1-10/09/2021)	Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	-	-
Precipitation - Reference Evapotranspiration	-	8.1
Number of Rainy Days	3.0	0.0
Number of Dry Days	24.0	32.0

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

Diagram of Accumulated Precipitation and Accumulated Reference Evapotranspiration



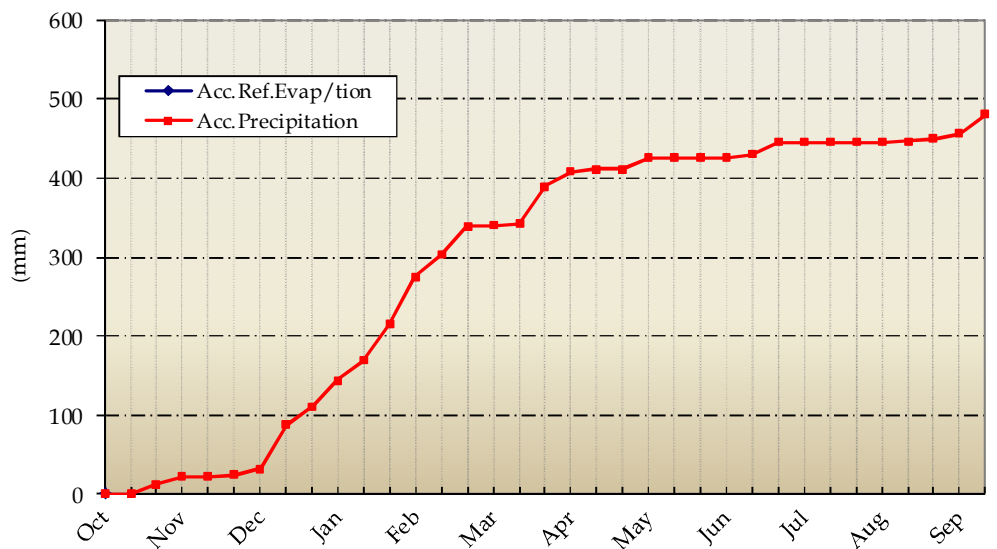
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1st 10-day period (1-10/09/2021)		1	2	3	4	5	6	7	8	9	10	Mean Value or Sum	Previous Year Value	Past Years Mean Value
Temperature	Max	31.3	30.2	27.4	27.5	24.8	23.3	18.3	21.6	23.5	25.4	25.3	31.9	27.4
	Min	10.3	12.1	15.9	12.2	13.5	14.1	14.4	13.4	9.6	9.9	12.5	14.1	12.2
Relative Humidity	Max	83	89	90	91	97	85	83	94	99	100	91	76	-
	Min	17	27	30	33	49	40	30	52	41	33	35	18	-
Soil Temperature at 10 cm	06 UTC	-	-	-	-	-	-	-	-	-	-	-	-	21.7
	12 UTC	-	-	-	-	-	-	-	-	-	-	-	-	24.2
Sunshine Duration		11.4	9.9	11.1	8.6	5.9	7.8	9.9	1.4	4.4	8.6	7.9	10.8	9.3
Precipitation						12.5			0.0	11.6	0.0	24.1		5.8
Evaporation		-	-	-	-	-	-	-	-	-	-	-	-	47.2
Growing Degrees	5	15.8	16.2	16.7	14.9	14.2	13.7	11.4	12.5	11.6	12.7	139.4	180.2	148.0
	10	10.8	11.2	11.7	9.9	9.2	8.7	6.4	7.5	6.6	7.7	89.4	130.2	98.0

1st 10-day period (1-10/09/2021)		Previous Year Value	Past Years Mean Value
Reference Evapotranspiration	35.3	43.1	39.2
Precipitation - Reference Evapotranspiration	-11.2	-43.1	-33.4
Number of Rainy Days	2.0	0.0	1.6
Number of Dry Days	14.0	16.0	-

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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**ΕΘΝΙΚΗ
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