



## **The Climate Smart Irrigated Agriculture Project**

### **District Wise Reference Crop Evapotranspiration (ET<sub>o</sub>) and Crop Water Requirements (ET<sub>c</sub>)**

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## **1. INTRODUCTION**

The Climate Smart Irrigated Agriculture Project (CSIAP) is implemented across identified 11 climate vulnerable districts in Sri Lanka. One of the primary challenges addressed by this report is the absence of district-wise crop water requirement data within those selected districts. To bridge this information gap, the project employs a professional and systematic approach. Climate data, sourced from CLIMWAT and the meteorological department, is used in CROPWAT, a recognized tool, for the calculation of Evapotranspiration (ET<sub>o</sub>) and subsequent determination of crop water requirements. This methodological choice ensures accuracy and adherence to industry standards in estimating the water needs of crops, promoting sustainable and climate-smart practices.

## **2. CALCULATION OF REFERENCE CROP EVAPOTRANSPIRATION (ET<sub>o</sub>)**

Reference Evapotranspiration (ET<sub>o</sub>) is a measure of the rate at which water is evaporated from a reference surface, typically a well-watered, large, and uniform grass field, under specific meteorological conditions. ET<sub>o</sub> is expressed in terms of depth of water (usually in millimeters) that would be evaporated from the reference surface.

ET<sub>o</sub> is an important parameter in agriculture and water resource management, and it serves several purposes:

- ❖ **Irrigation Scheduling:** ET<sub>o</sub> is used to estimate the amount of water that crops need for optimal growth and development. Crop water requirements are often expressed as a fraction of ET<sub>o</sub>, known as the crop coefficient. By multiplying ET<sub>o</sub> by the crop coefficient, you can determine the crop's water needs.
- ❖ **Water Management:** ET<sub>o</sub> is crucial for efficient water management in agricultural areas. It helps farmers and water managers decide when and how much water to apply to crops, considering the local climatic conditions.
- ❖ **Design of Irrigation Systems:** ET<sub>o</sub> is used in the design and management of irrigation systems to ensure that the irrigation schedule meets the water needs of crops without over-irrigating or wasting water.

- ❖ **Water Conservation:** By understanding ETo and using it to guide irrigation practices, water users can optimize water use efficiency and reduce water wastage. This is particularly important in regions facing water scarcity.
- ❖ **Climate Studies:** Used in climate studies to assess the evaporative demand of the atmosphere. It provides information about the atmospheric demand for water under specific weather conditions.

The most commonly used method for calculating ETo is the Penman-Monteith method, which considers meteorological parameters such as temperature, humidity, wind speed, and solar radiation. The Food and Agriculture Organization (FAO) has published guidelines on the calculation of ETo using the Penman-Monteith method, making it a widely accepted and standardized approach and it was used for the calculations.

## 2.1 FAO Penman-Monteith Approach

From the original Penman-Monteith equation and the equations of the aerodynamic and surface resistance, the FAO Penman-Monteith method to estimate ETo is expressed as:

**ETo** reference evapotranspiration [mm day<sup>-1</sup>],

**Rn** net radiation at the crop surface [MJ m<sup>-2</sup> day<sup>-1</sup>],

**G** soil heat flux density [MJ m<sup>-2</sup> day<sup>-1</sup>],

**T** mean daily air temperature at 2 m height [°C],

**u<sub>2</sub>** wind speed at 2 m height [m s<sup>-1</sup>],

**e<sub>s</sub>** saturation vapour pressure [kPa],

**e<sub>a</sub>** actual vapour pressure [kPa],

**e<sub>s</sub> - e<sub>a</sub>** saturation vapour pressure deficit [kPa],

**D** slope vapour pressure curve [kPa °C<sup>-1</sup>],

**g** psychrometric constant [kPa °C<sup>-1</sup>].

## 2.2 Meteorological Stations and the Data Sources

The general data of the selected station are given in table 2.1.

Table 2.1 Selected meteorological stations

<b>District</b>	<b>Station name</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Altitude</b>
Ampara	Pottuvil	6.88	81.83	4.00
Anuradhapura	Anuradhapura	8.35	80.38	112.00
Batticaloa	Batticaloa	7.72	81.70	8.64
Hambantota	Hambantota	6.12	81.13	16.00
Kilinochchi	Jaffna	9.68	80.03	3.00
Kurunegala	Kurunegala	7.47	80.37	116.00
Monaragala	Monaragala	6.84	81.32	165.00
Mullaitivu	Vavuniya	8.75	80.50	98.00
Polonnaruwa	Polonnaruwa	7.87	81.05	43.00
Puttalam	Puttalam	8.03	79.83	28.00
Trincomalee	Trincomalee	8.58	81.20	24.00

Sources of the data used for calculations are given in the table 2.2.

Table 2.2 Sources of the data used for calculations

<b>District</b>	<b>Station Name</b>	<b>Sunshine Hours</b>	<b>Wind Speed</b>	<b>Relative Humidity</b>	<b>Max Temperature</b>	<b>Min Temperature</b>
Puttalam	Pottuvil	CLIMWAT	CLIMWAT	CLIMWAT	CLIMWAT	CLIMWAT
Hambanthota	Anuradhapura	Met. Data	Met. Data	Met. Data	Met. Data	Met. Data
Batticaloa	Batticaloa	CLIMWAT	Met. Data	Met. Data	Met. Data	Met. Data
Trincomalee	Hambantota	CLIMWAT	Met. Data	Met. Data	Met. Data	Met. Data
Kurunegala	Jaffna	Met. Data	Met. Data	Met. Data	Met. Data	Met. Data
Anuradhapura	Kurunegala	Met. Data	Met. Data	Met. Data	Met. Data	Met. Data
Polonnaruwa	Monaragala	Met. Data	Met. Data	Met. Data	Met. Data	Met. Data
Ampara	Vavuniya	CLIMWAT	Met. Data	Met. Data	Met. Data	Met. Data
Mullaitivu	Polonnaruwa	CLIMWAT	CLIMWAT	CLIMWAT	CLIMWAT	CLIMWAT
Moneragala	Puttalam	Met. Data	Met. Data	Met. Data	Met. Data	Met. Data
Kilinochchi	Trincomalee	CLIMWAT	CLIMWAT	CLIMWAT	CLIMWAT	CLIMWAT

\*Met. Data – Meteorology Data

\* CLIMWAT – Data from CLIMWAT Software

### 2.3 Calculated ETo Values

The table 2.2 gives a summary of the calculated ETo values and the Annexure 1 consists of the detailed calculations for each station.

Table 2.3 Summary of the ETo calculations

<b>District</b>	<b>ETo(mm /year)</b>
Ampara	1716.0
Anuradhapura	1610.1
Batticaloa	1672.8
Hambanthota	1829.2
Kilinochchi	1776.3
Kurunegala	1506.5
Moneragala	1521.7
Mullaitivu	1792.2
Polonnaruwa	1775.5
Puttlam	1770.7
Trincomalee	1712.1

### 3. CALCULATION OF CROP WATER REQUIREMENTS (ETc)

The amount of water required to compensate the evapotranspiration loss from the cropped field is defined as crop water requirement. Although the values for Crop evapotranspiration under standard conditions (ETc) and crop water requirement are identical, crop water requirement refers to the amount of water that needs to be supplied, while crop evapotranspiration refers to the amount of water that is lost through evapotranspiration.

Crop evapotranspiration can be calculated from climatic data and by integrating directly the crop resistance, albedo and air resistance factors in the Penman-Monteith approach. Experimentally determined ratios of ETc/ETo, called Crop coefficient (Kc), are used to relate ETc to ETo, therefore we can express crop evapotranspiration as  $ETc = Kc * ETo$ . This is known as the crop coefficient approach to calculate crop evapotranspiration.

Differences in leaf anatomy, stomatal characteristics, aerodynamic properties and even albedo cause ETc to differ from ETo under the same climatic conditions. Due to variations in the crop characteristics throughout its growing season, Kc for a given crop changes from sowing till harvest.

In CROPWAT 8.0 the calculation of crop water requirements is carried out per deca-de. For the calculations of the Crop Water Requirements (CWR), the crop coefficient approach is used. Crop evapotranspiration per decade is calculated by multiplication of the number of effective crop days. Values for first and third decades of each month are calculated by inter-polation with the preceding and successive month respectively. To compensate for deviations in the maximum and minimum months, a reiteration is carried out to fulfil the condition that the 3-decade values average the given monthly average.

Water requirement for land preparation (Lp) consists of two components. land soaking (Ls) and land tilling (Lt). The amount of water and the number of applications required in Lowland for land soaking and tillage varies considerably with the type of soils, for clayey or heavy soils generally encountered in Lowland farms for paddy, two applications are required, Ls = 101.6 mm (4 inches) supplied within 5 days and LT = 76.2 mm (3 inches) supplied over 10 days. Thus, the total requirement of 177.8 mm (7 inches) process will take 15 days.

Land soaking is not separately required for the well-drained Upland farms for subsidiary food crops. One combined application of 38.1 mm (1.5”) (LP) is provided for land preparation at any predetermined time in the land preparation period of 15 days. The small nursery requirement is obtained from this Lp.

### 3.1 CWR for Paddy

The CWRs for three types of paddy was calculated for the Maha Season and Yala Season separately. The summary of CWRs are indicated in table 3.1 and table 3.2 for Maha Season and Yala Season separately. The detailed results indicating the monthly CWR are given under the annexure 2.

Table 3.1 Crop Water Requirement of Paddy in Maha Season

<b>District</b>	<b>Paddy (135 day)</b>	<b>Paddy (105 day)</b>	<b>Paddy (90 day)</b>
Ampara	784.2	628.4	559.1
Anuradhapura	711.3	558.6	494.7
Batticaloa	760.9	609.5	542.8
Hambanthota	947.5	746.5	648.4
Kilinochchi	797.7	629.5	557.3
Kurunegala	756.7	596.3	525.1
Moneragala	731.4	583.4	516.4
Mullaitivu	811.8	643.9	566.9
Polonnaruwa	704.7	559.5	497.9
Puttlam	848.2	669.8	588.6
Trincomalee	710.4	573.8	513.0

Table 3.2 Crop Water Requirement of Paddy in Yala Season

<b>District</b>	<b>Paddy (135 day)</b>	<b>Paddy (105 day)</b>	<b>Paddy (90 day)</b>
Ampara	949.9	767.6	681.3
Anuradhapura	938.3	763.0	676.6
Batticaloa	928.0	753.2	669.0
Hambanthota	1007.1	826.1	729.3
Kilinochchi	1032.3	843.2	749.3
Kurunegala	810.7	664.3	593.9
Moneragala	878.9	716.1	635.9
Mullaitivu	1076.6	878.2	776.6
Polonnaruwa	1115.7	900.0	791.8
Puttlam	979.2	790.9	699.4
Trincomalee	1063.0	865.6	765.8



### 3.2 CWR for Other Field Crops (OFC)

The CWRs for eight types of common other field crops (OFC) were calculated for the Maha Season and Yala Season separately. The summary of CWRs are indicated in table 3.3 and table 3.4 for Maha Season and Yala Season separately. The detailed results indicating the monthly CWR are given under the annexure 3.

Table 3.3 Crop Water Requirement of OFC in Maha Season

District	Cowpea (90 day)	Greengram (75 day)	Groundnut (110 day)	Maize (110 day)	Pulses (90 day)	Sorghum (100 day)	Soybean (105 day)	Tomato (135 day)
Ampara	321.5	225.7	359.6	342.9	321.5	275.7	358.7	451.1
Anuradhapur a	267.4	182.5	306.3	289.7	267.4	230.2	302	400.1
Batticaloa	308	215.8	344.8	326.7	308	262.5	343.2	433.6
Hambanthota	402.1	273	461.2	462.8	402.1	369.3	461.2	591.1
Kilinochchi	320.3	223.3	361.5	344.7	320.3	275.3	359.2	462.9
Kurunegala	295.1	201.6	338.3	324.4	295.1	258	334.4	438.3
Moneragala	287.7	196.8	326.8	313.7	287.7	251	324.2	418.1
Mullaitivu	329.6	229.3	375	369.7	329.6	294.6	375.2	478.5
Polonnaruwa	270.1	186.6	305.6	290.2	270.1	232.1	303.1	393.7
Puttlam	349.4	243.5	397	388.9	349.4	310.8	396	506.9
Trincomalee	282.5	197.6	315.9	297.1	282.5	238.8	314.4	395.8

Table 3.4 Crop Water Requirement of OFC in Yala Season

<b>District</b>	<b>Cowpea (90 day)</b>	<b>Greengram (75 day)</b>	<b>Groundnut (110 day)</b>	<b>Maize (110 day)</b>	<b>Pulses (90 day)</b>	<b>Sorghum (100 day)</b>	<b>Soybean (105 day)</b>	<b>Tomato (135 day)</b>
Ampara	425.4	304.0	469.1	450.6	425.4	364.9	471.9	572.5
Anuradhapura	421.7	299.2	465.7	449.8	421.7	364.3	468.6	566.1
Batticaloa	415.5	295.7	458.2	438.5	415.5	355.7	460.0	556.9
Hambanthota	469.8	331.8	518.0	520.3	469.8	422.8	526.9	626.5
Kilinochchi	482.6	346.9	527	518.7	482.6	421.9	535.9	634.1
Kurunegala	350.4	247.9	385.5	365.5	350.4	296.3	386.4	467.4
Moneragala	388.3	277.5	429.5	417.9	388.3	338.2	432.9	523.3
Mullaitivu	510.1	365.0	559.2	558.3	510.1	454.7	569.4	675.9
Polonnaruwa	524.0	373.2	579.5	569.1	524.0	461.8	585.0	706.4
Puttlam	442.2	315.6	489.3	480.7	442.2	388.8	494.7	599.5
Trincomalee	501.0	358.0	549.2	539.9	501.0	439.9	556.8	663.7

#### 4. ANNEXURE 1

Table 4.1 ETo calculations for Ampara District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	22.1	29.9	75	115	7.0	18.4	120.7
February	22.8	30.6	76	105	8.0	20.9	121.7
March	23.4	32.0	73	104	8.9	23.2	153.0
April	24.5	33.1	72	81	9.2	23.6	152.1
May	25.4	34.5	71	105	8.6	22.0	157.0
June	25.3	35.0	65	100	8.9	21.9	154.1
July	25.1	34.3	67	101	8.1	20.9	152.1
August	25.0	34.2	68	114	9.2	23.2	166.1
September	24.9	33.8	69	110	9.3	23.6	161.3
October	24.2	32.4	75	96	8.6	21.9	148.0
November	23.3	30.9	79	87	6.7	18.1	115.7
December	22.5	29.9	80	107	6.8	17.7	114.2
Average	24.0	32.5	73	102	8.3	21.3	1716.0

Table 4.2 ETo calculations for Anuradhapura District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	21.8	30.4	82	49	6.8	17.8	109.0
February	22.2	32.2	80	49	7.6	20.1	113.5
March	23.5	34.8	76	54	8.9	23.1	152.3
April	24.6	34.7	77	64	8.6	22.8	150.0
May	25.4	33.7	80	137	8.5	22.0	154.8
June	25.4	33.2	77	175	8.0	20.8	147.4
July	25.2	33.5	75	169	8.0	20.9	155.1
August	25.0	33.8	75	158	8.5	22.2	161.7
September	24.7	33.9	76	142	7.7	21.1	148.9
October	24.0	32.6	82	75	6.9	19.2	129.5
November	23.3	30.8	86	28	5.2	15.7	97.9
December	22.6	29.8	86	39	4.5	14.2	90.1
Average	24.0	32.8	79	95	7.4	20.0	1610.1

Table 4.3 ETo calculations for Batticaloa District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	23.7	28.4	82	175	7.0	18.2	117.0
February	23.9	29.3	82	156	8.0	20.8	118.7
March	24.5	30.8	80	128	8.9	23.1	149.0
April	25.6	32.4	80	105	9.2	23.7	151.8
May	26.1	33.5	78	93	8.6	22.1	151.7
June	25.9	34.5	71	95	8.9	22.0	151.2
July	25.7	34.4	71	98	8.1	21.0	151.6
August	25.5	33.8	73	98	9.2	23.3	161.7
September	25.3	33.0	76	95	9.3	23.6	155.0
October	24.8	31.6	82	98	8.6	21.8	143.3
November	24.3	29.7	86	115	6.7	17.9	111.3
December	23.9	28.6	85	157	6.8	17.5	110.6
Average	24.9	31.7	79	118	8.3	21.3	1672.8

Table 4.4 ETo calculations for Hambanthota District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	23.3	30.9	73	449	7.3	19.0	163.3
February	23.6	31.5	74	449	7.4	20.1	152.8
March	24.3	31.9	74	385	7.9	21.7	174.0
April	25.3	31.9	77	329	7.4	20.8	155.9
May	26.0	31.2	81	496	6.9	19.4	151.6
June	25.6	31.2	78	506	7.4	19.6	155.7
July	25.2	31.6	74	491	7.6	20.1	175.2
August	25.0	30.9	78	518	7.3	20.3	163.2
September	24.9	30.5	81	517	6.4	19.2	143.4
October	24.6	30.7	80	385	6.7	19.2	144.9
November	24.1	30.6	80	299	5.1	15.9	120.5
December	23.7	30.4	79	389	5.1	15.4	128.9
Average	24.6	31.1	77	434	6.9	19.2	1829.2

Table 4.5 ETo calculations for Kilinochchi District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	21.7	29.3	72	121	7.8	18.9	122.5
February	21.7	30.7	68	121	8.4	21.1	125.7
March	23.4	32.8	67	164	8.6	22.5	163.3
April	26.2	33.8	72	138	8.4	22.5	158.1
May	27.8	32.9	76	397	8.0	21.4	177.7
June	27.7	32.5	76	432	7.3	19.9	166.5
July	27.2	32.6	76	415	6.6	19.0	166.7
August	26.7	32.2	76	389	7.2	20.3	168.7
September	26.5	31.8	76	397	7.5	20.8	163.9
October	25.3	31.2	78	138	6.9	19.0	133.7
November	23.7	29.8	76	138	6.6	17.4	116.5
December	23.0	28.9	76	121	6.9	17.2	112.9
Average	24.6	31.1	77	434	6.9	19.2	1829.2

Table 4.6 ETo calculations for Kurunegala District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	21.3	31.3	71	62	7.8	19.4	121.1
February	21.6	33.3	70	68	8.2	21.1	123.7
March	22.8	35.0	71	49	8.6	22.7	149.7
April	23.7	33.8	78	39	8.1	22.0	140.3
May	24.7	32.5	78	79	7.2	20.0	136.5
June	24.5	31.2	80	95	6.6	18.6	122.3
July	24.5	31.1	78	104	6.9	19.2	130.7
August	24.2	31.5	78	107	6.9	19.7	134.8
September	23.8	31.8	78	95	6.5	19.3	127.7
October	23.2	31.4	80	51	6.2	18.2	119.2
November	22.6	31.1	82	25	5.5	16.3	99.9
December	22.0	30.5	81	42	5.7	16.0	100.6
Average	23.2	32.0	77	68	7.0	19.4	1506.5

Table 4.7 ETo calculations for Moneragala District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	21.3	29.9	70	106	6.5	17.7	119.2
February	21.7	30.7	69	93	6.7	19.0	114.5
March	21.8	33.1	65	70	7.6	21.2	141.1
April	22.6	34.0	69	47	7.2	20.5	132.3
May	23.2	33.6	69	86	6.7	19.2	136.4
June	22.7	34.6	60	115	6.5	18.4	140.1
July	22.3	35.0	59	83	6.6	18.7	138.8
August	22.5	34.8	59	111	6.7	19.4	150.9
September	22.4	34.1	62	93	6.1	18.7	135.8
October	22.3	32.7	69	55	5.4	17.1	117.8
November	22.4	30.8	77	44	4.6	15.1	96.4
December	22.2	29.8	76	69	4.7	14.8	98.5
Average	22.3	32.8	67	81	6.3	18.3	1521.7

Table 4.8 ETo calculations for Mullaitivu District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	20.3	28.9	81	328	7.0	18.0	123.6
February	20.4	30.7	76	251	7.7	20.2	128.5
March	21.8	33.2	72	173	7.9	21.5	155.7
April	23.6	34.0	74	173	7.5	21.1	152.3
May	24.6	33.1	74	285	7.4	20.4	164.8
June	24.7	33.2	69	380	7.7	20.4	180.0
July	24.3	33.6	68	346	7.2	19.8	183.1
August	24.0	33.4	69	320	7.1	20.1	178.0
September	23.8	33.3	70	285	7.5	20.8	169.1
October	22.9	31.8	78	225	6.3	18.2	137.5
November	22.0	29.9	83	233	5.8	16.5	111.3
December	21.3	28.6	84	320	5.6	15.6	108.4
Average	22.8	32.0	75	277	7.1	19.4	1792.2

Table 4.9 ETo calculations for Polonnaruwa District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	21.3	29.8	77	63	6.2	17.1	106.6
February	21.7	30.8	74	64	6.8	19.0	108.2
March	22.3	33.4	68	69	8.3	22.2	145.2
April	23.8	35.5	65	72	8.6	22.7	152.2
May	25.0	35.2	64	143	8.3	21.7	168.5
June	26.5	35.2	57	235	8.5	21.5	191.1
July	26.0	35.5	56	208	8.4	21.5	193.2
August	25.7	35.7	56	211	8.5	22.2	198.6
September	25.2	35.4	57	172	8.0	21.6	178.1
October	23.7	33.7	66	96	7.0	19.4	142.2
November	22.9	30.9	80	33	5.2	15.8	98.8
December	22.5	29.6	82	52	4.6	14.4	92.7
Average	23.9	33.4	67	118	7.4	19.9	1775.5

Table 4.10 ETo calculations for Puttalam District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	21.0	30.5	76	225	7.4	18.8	133.3
February	21.4	32.1	73	216	8.0	20.7	136.2
March	23.1	33.2	75	190	8.8	23.0	163.5
April	24.5	33.1	77	181	9.0	23.3	159.3
May	25.8	32.3	78	302	7.0	19.8	153.9
June	26.2	31.5	76	389	7.1	19.4	154.9
July	25.6	31.4	75	372	6.3	18.4	156.5
August	25.5	31.5	75	372	7.7	21.0	168.4
September	25.3	31.7	75	337	7.5	20.8	161.1
October	24.1	31.1	79	216	8.2	21.1	147.1
November	22.9	30.5	80	173	5.8	16.6	113.3
December	22.1	29.9	79	216	7.2	18.0	123.3
Average	24.0	31.6	76	266	7.5	20.1	1770.7

Table 4.11 ETo calculations for Trincomalee District

Month	Min Temp	Max Temp	Humidity	Wind	Sun	Rad	ETo
	°C	°C	%	km/day	hours	MJ/m <sup>2</sup> /day	mm/month
January	24.0	28.9	79	108	6.1	16.8	109.1
February	24.5	30.1	79	100	6.7	18.7	110.4
March	24.8	31.7	79	93	6.8	19.8	132.6
April	25.5	33.4	78	108	7.2	20.6	139.2
May	26.2	35.2	75	200	8.2	21.6	167.7
June	26.3	35.4	69	250	9.0	22.3	181.3
July	25.8	35.3	70	224	9.1	22.6	183.0
August	25.5	35.3	71	212	8.7	22.5	180.0
September	25.1	34.8	72	185	8.6	22.5	167.7
October	24.5	32.4	80	126	7.2	19.6	136.8
November	24.0	29.8	87	92	5.8	16.5	102.8
December	23.8	28.8	85	115	5.8	15.9	101.4
Average	25.0	32.6	77	151	7.4	20.0	1712.1



## 5. ANNEXURE 2

Table 5.1 Ampara District CWR for Paddy (135 days)

Month	Decade	Stage	Maha Season ETc (mm/dec)	Month	Decade	Stage	Yala Season ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	45.8	May	1	Init	55.7
Nov	2	Init	42.4	May	2	Init	55.7
Nov	3	Init	41.8	May	3	Init	61.6
Dec	1	Deve	41.3	Jun	1	Deve	56.6
Dec	2	Deve	40.9	Jun	2	Deve	57.3
Dec	3	Deve	46.2	Jun	3	Deve	57
Jan	1	Deve	43	Jul	1	Deve	56.6
Jan	2	Mid	43.9	Jul	2	Mid	55.9
Jan	3	Mid	50.1	Jul	3	Mid	63.3
Feb	1	Mid	47.3	Aug	1	Mid	59.3
Feb	2	Mid	49	Aug	2	Mid	61
Feb	3	Mid/Late	40.4	Aug	3	Mid/Late	65.7
Mar	1	Late	49.7	Sep	1	Late	55.7
Mar	2	Late	24.6	Sep	2	Late	10.7

Table 5.2 Ampara District CWR for Paddy (105 days)

Month	Decade	Stage	Maha Season ETc (mm/dec)	Month	Decade	Stage	Yala Season ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	45.8	May	1	Init	55.7
Nov	2	Init	42.4	May	2	Init	55.7
Nov	3	Deve	42	May	3	Deve	62
Dec	1	Deve	41.7	Jun	1	Deve	57.3
Dec	2	Deve	41.4	Jun	2	Deve	58.2
Dec	3	Mid	46.5	Jun	3	Mid	57.6
Jan	1	Mid	43.1	Jul	1	Mid	56.7
Jan	2	Mid	43.8	Jul	2	Mid	55.8
Jan	3	Late	48.2	Jul	3	Late	61
Feb	1	Late	42.9	Aug	1	Late	53.8
Feb	2	Late	12.8	Aug	2	Late	16

Table 5.3 Ampara District CWR for Paddy (90 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	45.8	May	1	Init	55.7
Nov	2	Init	42.4	May	2	Init	55.7
Nov	3	Deve	42	May	3	Deve	62.1
Dec	1	Deve	41.7	Jun	1	Deve	57.5
Dec	2	Deve/Mid	41.4	Jun	2	Deve/Mid	58.5
Dec	3	Mid	46.4	Jun	3	Mid	57.6
Jan	1	Mid	43	Jul	1	Mid	56.7
Jan	2	Late	41.9	Jul	2	Late	53.4
Jan	3	Late	36.7	Jul	3	Late	46.3

Table 5.4 Anuradhapura District CWR for Paddy (135 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	39.2	May	1	Init	55
Nov	2	Init	35.9	May	2	Init	54.9
Nov	3	Init	34.6	May	3	Init	60.1
Dec	1	Deve	32.6	Jun	1	Deve	54.8
Dec	2	Deve	31.1	Jun	2	Deve	55.1
Dec	3	Deve	37.3	Jun	3	Deve	56
Jan	1	Deve	37.1	Jul	1	Deve	57
Jan	2	Mid	39.4	Jul	2	Mid	57.6
Jan	3	Mid	45.6	Jul	3	Mid	64.2
Feb	1	Mid	43.5	Aug	1	Mid	59.2
Feb	2	Mid	45.5	Aug	2	Mid	60
Feb	3	Mid/Late	38.5	Aug	3	Mid/Late	63.6
Mar	1	Late	48.6	Sep	1	Late	53
Mar	2	Late	24.6	Sep	2	Late	10

Table 5.5 Anuradhapura District CWR for Paddy (105 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	39.2	May	1	Init	55
Nov	2	Init	35.9	May	2	Init	54.9
Nov	3	Deve	34.6	May	3	Deve	60.6
Dec	1	Deve	32.7	Jun	1	Deve	55.7
Dec	2	Deve	31.1	Jun	2	Deve	56.2
Dec	3	Mid	37.1	Jun	3	Mid	56.8
Jan	1	Mid	36.7	Jul	1	Mid	57.1
Jan	2	Mid	38.9	Jul	2	Mid	57.5
Jan	3	Late	43.5	Jul	3	Late	61.8
Feb	1	Late	39.2	Aug	1	Late	53.8
Feb	2	Late	11.9	Aug	2	Late	15.8

Table 5.6 Anuradhapura District CWR for Paddy (90 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	39.2	May	1	Init	55
Nov	2	Init	35.9	May	2	Init	54.9
Nov	3	Deve	34.6	May	3	Deve	60.7
Dec	1	Deve	32.6	Jun	1	Deve	55.9
Dec	2	Deve/Mid	31	Jun	2	Deve/Mid	56.4
Dec	3	Mid	36.9	Jun	3	Mid	56.8
Jan	1	Mid	36.5	Jul	1	Mid	57.1
Jan	2	Late	37.2	Jul	2	Late	55
Jan	3	Late	33	Jul	3	Late	47

Table 5.7 Batticaloa District CWR for Paddy (135 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	44.1	May	1	Init	54.4
Nov	2	Init	40.8	May	2	Init	53.8
Nov	3	Init	40.3	May	3	Init	59.8
Dec	1	Deve	39.8	Jun	1	Deve	55.1
Dec	2	Deve	39.4	Jun	2	Deve	56
Dec	3	Deve	44.3	Jun	3	Deve	55.8
Jan	1	Deve	41.2	Jul	1	Deve	55.6
Jan	2	Mid	42	Jul	2	Mid	55.1
Jan	3	Mid	48.1	Jul	3	Mid	62
Feb	1	Mid	45.5	Aug	1	Mid	57.6
Feb	2	Mid	47.2	Aug	2	Mid	58.8
Feb	3	Mid/Late	39	Aug	3	Mid/Late	63.1
Mar	1	Late	47.8	Sep	1	Late	53
Mar	2	Late	23.6	Sep	2	Late	10.1

Table 5.8 Batticaloa District CWR for Paddy (105 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	44.1	May	1	Init	54.4
Nov	2	Init	40.8	May	2	Init	53.8
Nov	3	Deve	40.3	May	3	Deve	60.1
Dec	1	Deve	39.9	Jun	1	Deve	55.7
Dec	2	Deve	39.5	Jun	2	Deve	56.7
Dec	3	Mid	44.4	Jun	3	Mid	56.3
Jan	1	Mid	41.1	Jul	1	Mid	55.8
Jan	2	Mid	41.9	Jul	2	Mid	55.2
Jan	3	Late	46.2	Jul	3	Late	59.7
Feb	1	Late	41.2	Aug	1	Late	52.3
Feb	2	Late	12.3	Aug	2	Late	15.4

Table 5.9 Batticaloa District CWR for Paddy (90 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	44.1	May	1	Init	54.4
Nov	2	Init	40.8	May	2	Init	53.8
Nov	3	Deve	40.3	May	3	Deve	60.2
Dec	1	Deve	39.9	Jun	1	Deve	55.8
Dec	2	Deve/Mid	39.5	Jun	2	Deve/Mid	56.8
Dec	3	Mid	44.3	Jun	3	Mid	56.3
Jan	1	Mid	41	Jul	1	Mid	55.7
Jan	2	Late	40	Jul	2	Late	52.8
Jan	3	Late	35.1	Jul	3	Late	45.4

Table 5.10 Hambanthota District CWR for Paddy (135 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	46.6	May	1	Init	54.9
Nov	2	Init	44.2	May	2	Init	53.8
Nov	3	Init	44.7	May	3	Init	60.4
Dec	1	Deve	45.3	Jun	1	Deve	57.1
Dec	2	Deve	46.8	Jun	2	Deve	60.1
Dec	3	Deve	58.4	Jun	3	Deve	63.7
Jan	1	Deve	60.9	Jul	1	Deve	67.4
Jan	2	Mid	66.5	Jul	2	Mid	70
Jan	3	Mid	73.5	Jul	3	Mid	75.2
Feb	1	Mid	66.8	Aug	1	Mid	66.8
Feb	2	Mid	67.6	Aug	2	Mid	65.2
Feb	3	Mid/Late	53.9	Aug	3	Mid/Late	68.1
Mar	1	Late	64	Sep	1	Late	56.2
Mar	2	Late	30.5	Sep	2	Late	10.4

Table 5.11 Hambanthota District CWR for Paddy (105 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	46.6	May	1	Init	54.9
Nov	2	Init	44.2	May	2	Init	53.8
Nov	3	Deve	45.6	May	3	Deve	61.9
Dec	1	Deve	47.1	Jun	1	Deve	59.8
Dec	2	Deve	49	Jun	2	Deve	63.3
Dec	3	Mid	60.2	Jun	3	Mid	66
Jan	1	Mid	60.9	Jul	1	Mid	67.9
Jan	2	Mid	65.8	Jul	2	Mid	69.8
Jan	3	Late	70.5	Jul	3	Late	72.5
Feb	1	Late	60.9	Aug	1	Late	61.1
Feb	2	Late	17.9	Aug	2	Late	17.3

Table 5.12 Hambanthota District CWR for Paddy (90 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	46.6	May	1	Init	54.9
Nov	2	Init	44.2	May	2	Init	53.8
Nov	3	Deve	45.8	May	3	Deve	62.1
Dec	1	Deve	47.4	Jun	1	Deve	60.5
Dec	2	Deve/Mid	49.2	Jun	2	Deve/Mid	63.9
Dec	3	Mid	59.8	Jun	3	Mid	66
Jan	1	Mid	60.4	Jul	1	Mid	67.8
Jan	2	Late	63.1	Jul	2	Late	67
Jan	3	Late	54.1	Jul	3	Late	55.5

Table 5.13 Kilinochchi District CWR for Paddy (135 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	44.3	May	1	Init	61.4
Nov	2	Init	42.7	May	2	Init	63.1
Nov	3	Init	41.8	May	3	Init	68.6
Dec	1	Deve	41.1	Jun	1	Deve	62.6
Dec	2	Deve	40.6	Jun	2	Deve	63.2
Dec	3	Deve	46.3	Jun	3	Deve	63.9
Jan	1	Deve	43.6	Jul	1	Deve	64.5
Jan	2	Mid	44.9	Jul	2	Mid	64.3
Jan	3	Mid	51.6	Jul	3	Mid	71
Feb	1	Mid	49	Aug	1	Mid	64.8
Feb	2	Mid	51	Aug	2	Mid	65.1
Feb	3	Mid/Late	42.7	Aug	3	Mid/Late	70.1
Mar	1	Late	53.5	Sep	1	Late	60.3
Mar	2	Late	26.8	Sep	2	Late	11.6

Table 5.14 Kilinochchi District CWR for Paddy (105 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	44.3	May	1	Init	61.4
Nov	2	Init	42.7	May	2	Init	63.1
Nov	3	Deve	42	May	3	Deve	69.9
Dec	1	Deve	41.4	Jun	1	Deve	64.8
Dec	2	Deve	40.7	Jun	2	Deve	65.9
Dec	3	Mid	46.2	Jun	3	Mid	65.8
Jan	1	Mid	43.2	Jul	1	Mid	65.1
Jan	2	Mid	44.3	Jul	2	Mid	64.4
Jan	3	Late	49.2	Jul	3	Late	68.6
Feb	1	Late	44.3	Aug	1	Late	59.2
Feb	2	Late	13.4	Aug	2	Late	17.2

Table 5.15 Kilinochchi District CWR for Paddy (90 days)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Oct	2	LandPrep	101.6	Apr	2	LandPrep	101.6
Oct	3	LandPrep	76.2	Apr	3	LandPrep	76.2
Nov	1	Init	44.3	May	1	Init	61.4
Nov	2	Init	42.7	May	2	Init	63.1
Nov	3	Deve	42	May	3	Deve	70.1
Dec	1	Deve	41.3	Jun	1	Deve	65.4
Dec	2	Deve/Mid	40.6	Jun	2	Deve/Mid	66.4
Dec	3	Mid	46	Jun	3	Mid	65.8
Jan	1	Mid	42.9	Jul	1	Mid	65.1
Jan	2	Late	42.3	Jul	2	Late	61.8
Jan	3	Late	37.4	Jul	3	Late	52.4



## 6. ANNEXURE 3

Table 6.1 Ampara District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	29.1	May	1	Init	35.5
Nov	2	Deve	27.8	May	2	Deve	36.5
Nov	3	Deve	32	May	3	Deve	47.8
Dec	1	Deve	36.6	Jun	1	Mid	51.1
Dec	2	Mid	38.3	Jun	2	Mid	53.9
Dec	3	Mid	42.9	Jun	3	Mid	53.1
Jan	1	Mid	39.7	Jul	1	Mid	52.3
Jan	2	Late	39.9	Jul	2	Late	50.8
Jan	3	Late	35.2	Jul	3	Late	44.4

Table 6.2 Anuradhapura District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	25	May	1	Init	35
Nov	2	Deve	23.5	May	2	Deve	36
Nov	3	Deve	26.3	May	3	Deve	46.9
Dec	1	Deve	28.5	Jun	1	Mid	49.7
Dec	2	Mid	28.7	Jun	2	Mid	52
Dec	3	Mid	34.2	Jun	3	Mid	52.3
Jan	1	Mid	33.9	Jul	1	Mid	52.6
Jan	2	Late	35.5	Jul	2	Late	52.2
Jan	3	Late	31.8	Jul	3	Late	45

Table 6.3 Batticaloa District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	28.1	May	1	Init	34.6
Nov	2	Deve	26.7	May	2	Deve	35.3
Nov	3	Deve	30.6	May	3	Deve	46.2
Dec	1	Deve	35	Jun	1	Mid	49.5
Dec	2	Mid	36.6	Jun	2	Mid	52.5
Dec	3	Mid	41	Jun	3	Mid	52
Jan	1	Mid	38	Jul	1	Mid	51.5
Jan	2	Late	38.2	Jul	2	Late	50.3
Jan	3	Late	33.8	Jul	3	Late	43.6

Table 6.4 Hambanthota District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	29.7	May	1	Init	34.9
Nov	2	Deve	29.1	May	2	Deve	35.5
Nov	3	Deve	35.5	May	3	Deve	48.8
Dec	1	Deve	42.1	Jun	1	Mid	54.3
Dec	2	Mid	45.3	Jun	2	Mid	58.5
Dec	3	Mid	54.7	Jun	3	Mid	60.3
Jan	1	Mid	55.4	Jul	1	Mid	62
Jan	2	Late	59.2	Jul	2	Late	63
Jan	3	Late	51.1	Jul	3	Late	52.5

Table 6.5 Kilinochchi District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	28.2	May	1	Init	39
Nov	2	Deve	28	May	2	Deve	41.5
Nov	3	Deve	31.9	May	3	Deve	54.6
Dec	1	Deve	36.2	Jun	1	Mid	58.4
Dec	2	Mid	37.6	Jun	2	Mid	61
Dec	3	Mid	42.5	Jun	3	Mid	60.3
Jan	1	Mid	39.7	Jul	1	Mid	59.7
Jan	2	Late	40.3	Jul	2	Late	58.3
Jan	3	Late	35.9	Jul	3	Late	49.8

Table 6.6 Kurunegala District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	24.5	May	1	Init	31.5
Nov	2	Deve	24	May	2	Deve	31.7
Nov	3	Deve	27.8	May	3	Deve	39.9
Dec	1	Deve	31.9	Jun	1	Mid	41
Dec	2	Mid	33.6	Jun	2	Mid	41.9
Dec	3	Mid	39.5	Jun	3	Mid	42.3
Jan	1	Mid	38.2	Jul	1	Mid	42.8
Jan	2	Late	40	Jul	2	Late	42.7
Jan	3	Late	35.6	Jul	3	Late	36.6

Table 6.7 Moneragala District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	23.9	May	1	Init	30.8
Nov	2	Deve	23.1	May	2	Deve	31.8
Nov	3	Deve	26.9	May	3	Deve	42.6
Dec	1	Deve	31.1	Jun	1	Mid	46.6
Dec	2	Mid	32.9	Jun	2	Mid	50
Dec	3	Mid	38.7	Jun	3	Mid	49.3
Jan	1	Mid	37.5	Jul	1	Mid	48.6
Jan	2	Late	39.3	Jul	2	Late	47.3
Jan	3	Late	34.3	Jul	3	Late	41.3

Table 6.8 Mullaitivu District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	27.7	May	1	Init	36.7
Nov	2	Deve	26.9	May	2	Deve	38.5
Nov	3	Deve	31.6	May	3	Deve	53.9
Dec	1	Deve	36.6	Jun	1	Mid	61
Dec	2	Mid	38.4	Jun	2	Mid	67
Dec	3	Mid	44.2	Jun	3	Mid	66.7
Jan	1	Mid	42	Jul	1	Mid	66.3
Jan	2	Late	43.3	Jul	2	Late	65.1
Jan	3	Late	38.9	Jul	3	Late	54.9

Table 6.9 Polonnaruwa District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	25.6	May	1	Init	37.2
Nov	2	Deve	23	May	2	Deve	39.3
Nov	3	Deve	26.1	May	3	Deve	54.8
Dec	1	Deve	29.9	Jun	1	Mid	62.8
Dec	2	Mid	30.7	Jun	2	Mid	69.8
Dec	3	Mid	35.4	Jun	3	Mid	69
Jan	1	Mid	33.7	Jul	1	Mid	67.8
Jan	2	Late	34.8	Jul	2	Late	66.4
Jan	3	Late	30.9	Jul	3	Late	56.9

Table 6.10 Puttalam District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	28.2	May	1	Init	35.5
Nov	2	Deve	26.6	May	2	Deve	35.9
Nov	3	Deve	32.4	May	3	Deve	48.3
Dec	1	Deve	39.4	Jun	1	Mid	52.8
Dec	2	Mid	42.8	Jun	2	Mid	56.4
Dec	3	Mid	48.4	Jun	3	Mid	55.9
Jan	1	Mid	45.1	Jul	1	Mid	55.5
Jan	2	Late	45.7	Jul	2	Late	54.4
Jan	3	Late	40.8	Jul	3	Late	47.5

Table 6.11 Trincomalee District CWR for Cowpea (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	26.3	May	1	Init	36.1
Nov	2	Deve	24.6	May	2	Deve	39.1
Nov	3	Deve	28.1	May	3	Deve	53.8
Dec	1	Deve	31.8	Jun	1	Mid	60.1
Dec	2	Mid	33.2	Jun	2	Mid	65.6
Dec	3	Mid	37.4	Jun	3	Mid	65.1
Jan	1	Mid	34.9	Jul	1	Mid	64.6
Jan	2	Late	35.2	Jul	2	Late	63.2
Jan	3	Late	31	Jul	3	Late	53.4

Table 6.12 Ampara District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.8	May	1	Init	25.3
Nov	2	Deve	20.7	May	2	Deve	27.2
Nov	3	Deve	28.7	May	3	Deve	43.4
Dec	1	Mid	36	Jun	1	Mid	50.4
Dec	2	Mid	36.3	Jun	2	Mid	51.4
Dec	3	Late	40.7	Jun	3	Late	50.6
Jan	1	Late	32	Jul	1	Late	42.3
Jan	2	Late	10.5	Jul	2	Late	13.4

Table 6.13 Anuradhapura District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	17.8	May	1	Init	25
Nov	2	Deve	17.5	May	2	Deve	26.9
Nov	3	Deve	23.4	May	3	Deve	42.6
Dec	1	Mid	27.9	Jun	1	Mid	49
Dec	2	Mid	27.1	Jun	2	Mid	49.5
Dec	3	Late	32.3	Jun	3	Late	49.7
Jan	1	Late	27.2	Jul	1	Late	42.6
Jan	2	Late	9.3	Jul	2	Late	13.9

Table 6.14 Batticaloa District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.1	May	1	Init	24.7
Nov	2	Deve	19.9	May	2	Deve	26.3
Nov	3	Deve	27.4	May	3	Deve	41.9
Dec	1	Mid	34.3	Jun	1	Mid	48.7
Dec	2	Mid	34.7	Jun	2	Mid	50
Dec	3	Late	38.9	Jun	3	Late	49.3
Jan	1	Late	30.5	Jul	1	Late	41.5
Jan	2	Late	10	Jul	2	Late	13.3

Table 6.15 Hambanthota District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	21.2	May	1	Init	25
Nov	2	Deve	21.8	May	2	Deve	26.6
Nov	3	Deve	32.2	May	3	Deve	44.8
Dec	1	Mid	41.6	Jun	1	Mid	53.9
Dec	2	Mid	42.8	Jun	2	Mid	55.9
Dec	3	Late	51.7	Jun	3	Late	57.4
Jan	1	Late	45.4	Jul	1	Late	50.9
Jan	2	Late	16.3	Jul	2	Late	17.3

Table 6.16 Kilinochchi District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.1	May	1	Init	27.9
Nov	2	Deve	20.8	May	2	Deve	31
Nov	3	Deve	28.5	May	3	Deve	50
Dec	1	Mid	35.5	Jun	1	Mid	57.9
Dec	2	Mid	35.6	Jun	2	Mid	58.2
Dec	3	Late	40.1	Jun	3	Late	57.4
Jan	1	Late	32	Jul	1	Late	48.7
Jan	2	Late	10.7	Jul	2	Late	15.8



Table 6.17 Kurunegala District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	17.5	May	1	Init	22.5
Nov	2	Deve	17.8	May	2	Deve	23.6
Nov	3	Deve	24.8	May	3	Deve	36
Dec	1	Mid	31.2	Jun	1	Mid	40.3
Dec	2	Mid	31.8	Jun	2	Mid	39.8
Dec	3	Late	37.2	Jun	3	Late	40.1
Jan	1	Late	30.7	Jul	1	Late	34.4
Jan	2	Late	10.6	Jul	2	Late	11.2

Table 6.18 Moneragala District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	17	May	1	Init	22
Nov	2	Deve	17.2	May	2	Deve	23.7
Nov	3	Deve	24	May	3	Deve	38.9
Dec	1	Mid	30.4	Jun	1	Mid	46.1
Dec	2	Mid	31.1	Jun	2	Mid	47.7
Dec	3	Late	36.5	Jun	3	Late	47
Jan	1	Late	30.2	Jul	1	Late	39.5
Jan	2	Late	10.4	Jul	2	Late	12.6

Table 6.19 Mullaitivu District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	19.8	May	1	Init	26.2
Nov	2	Deve	20.1	May	2	Deve	28.8
Nov	3	Deve	28.6	May	3	Deve	49.5
Dec	1	Mid	36.3	Jun	1	Mid	60.7
Dec	2	Mid	36.5	Jun	2	Mid	64.1
Dec	3	Late	41.9	Jun	3	Late	63.6
Jan	1	Late	34.3	Jul	1	Late	54.4
Jan	2	Late	11.8	Jul	2	Late	17.7

Table 6.20 Polonnaruw District CWR for a Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	18.3	May	1	Init	26.6
Nov	2	Deve	17.1	May	2	Deve	29.3
Nov	3	Deve	23.3	May	3	Deve	50
Dec	1	Mid	29.2	Jun	1	Mid	62.1
Dec	2	Mid	29	Jun	2	Mid	66.6
Dec	3	Late	33.4	Jun	3	Late	65.7
Jan	1	Late	27.1	Jul	1	Late	55.1
Jan	2	Late	9.2	Jul	2	Late	17.8

Table 6.21 Puttlam District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.2	May	1	Init	25.4
Nov	2	Deve	19.8	May	2	Deve	26.8
Nov	3	Deve	29.2	May	3	Deve	44.1
Dec	1	Mid	38.9	Jun	1	Mid	52.2
Dec	2	Mid	40.6	Jun	2	Mid	53.8
Dec	3	Late	45.7	Jun	3	Late	53.3
Jan	1	Late	36.7	Jul	1	Late	45.3
Jan	2	Late	12.4	Jul	2	Late	14.7

Table 6.22 Trincomalee District CWR for Greengram(75 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	18.8	May	1	Init	25.8
Nov	2	Deve	18.3	May	2	Deve	29.2
Nov	3	Deve	25.1	May	3	Deve	49.2
Dec	1	Mid	31.3	Jun	1	Mid	59.5
Dec	2	Mid	31.6	Jun	2	Mid	62.7
Dec	3	Late	35.5	Jun	3	Late	62
Jan	1	Late	27.9	Jul	1	Late	52.6
Jan	2	Late	9.1	Jul	2	Late	17

Table 6.23 Ampara District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	27.1	May	1	Init	32.9
Nov	2	Init	25.1	May	2	Init	32.9
Nov	3	Deve	26.8	May	3	Deve	39.8
Dec	1	Deve	30	Jun	1	Deve	41.7
Dec	2	Deve	33.2	Jun	2	Mid	47.1
Dec	3	Mid	39	Jun	3	Mid	48.2
Jan	1	Mid	36.1	Jul	1	Mid	47.5
Jan	2	Mid	36.8	Jul	2	Mid	46.7
Jan	3	Late	41.9	Jul	3	Late	52.8
Feb	1	Late	36.5	Aug	1	Late	45.7
Feb	2	Late	27.1	Aug	2	Late	33.8

Table 6.24 Anuradhapura District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	23.2	May	1	Init	32.5
Nov	2	Init	21.2	May	2	Init	32.5
Nov	3	Deve	22.1	May	3	Deve	38.9
Dec	1	Deve	23.5	Jun	1	Deve	40.6
Dec	2	Deve	25	Jun	2	Mid	45.4
Dec	3	Mid	31.2	Jun	3	Mid	47.5
Jan	1	Mid	30.9	Jul	1	Mid	47.8
Jan	2	Mid	32.8	Jul	2	Mid	48.1
Jan	3	Late	37.8	Jul	3	Late	53.5
Feb	1	Late	33.4	Aug	1	Late	45.6
Feb	2	Late	25.2	Aug	2	Late	33.3

Table 6.25 Batticaloa District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	26.1	May	1	Init	32.2
Nov	2	Init	24.1	May	2	Init	31.8
Nov	3	Deve	25.7	May	3	Deve	38.6
Dec	1	Deve	28.8	Jun	1	Deve	40.6
Dec	2	Deve	31.7	Jun	2	Mid	45.9
Dec	3	Mid	37.3	Jun	3	Mid	47.2
Jan	1	Mid	34.5	Jul	1	Mid	46.7
Jan	2	Mid	35.2	Jul	2	Mid	46.3
Jan	3	Late	40.2	Jul	3	Late	51.9
Feb	1	Late	35.1	Aug	1	Late	44.5
Feb	2	Late	26.1	Aug	2	Late	32.5

Table 6.26 Hambanthota District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	27.5	May	1	Init	32.4
Nov	2	Init	26.1	May	2	Init	31.8
Nov	3	Deve	29.2	May	3	Deve	39.8
Dec	1	Deve	34.1	Jun	1	Deve	43.6
Dec	2	Deve	39.2	Jun	2	Mid	51
Dec	3	Mid	50.1	Jun	3	Mid	54.9
Jan	1	Mid	50.7	Jul	1	Mid	56.5
Jan	2	Mid	54.9	Jul	2	Mid	58
Jan	3	Late	60.5	Jul	3	Late	62.2
Feb	1	Late	51.2	Aug	1	Late	51.4
Feb	2	Late	37.7	Aug	2	Late	36.4

Table 6.27 Kilinochchi District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	26.2	May	1	Init	36.3
Nov	2	Init	25.2	May	2	Init	37.3
Nov	3	Deve	26.8	May	3	Deve	44.9
Dec	1	Deve	29.8	Jun	1	Deve	47.2
Dec	2	Deve	32.7	Jun	2	Mid	53.1
Dec	3	Mid	38.8	Jun	3	Mid	54.9
Jan	1	Mid	36.2	Jul	1	Mid	54.3
Jan	2	Mid	37.2	Jul	2	Mid	53.7
Jan	3	Late	42.7	Jul	3	Late	59.2
Feb	1	Late	37.6	Aug	1	Late	50
Feb	2	Late	28.3	Aug	2	Late	36.1

Table 6.28 Kurunegala District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	22.8	May	1	Init	29.2
Nov	2	Init	21.6	May	2	Init	28.6
Nov	3	Deve	23.2	May	3	Deve	33.4
Dec	1	Deve	26.3	Jun	1	Deve	33.7
Dec	2	Deve	29.2	Jun	2	Mid	36.6
Dec	3	Mid	36	Jun	3	Mid	38.4
Jan	1	Mid	34.8	Jul	1	Mid	38.9
Jan	2	Mid	36.9	Jul	2	Mid	39.3
Jan	3	Late	42.3	Jul	3	Late	43.5
Feb	1	Late	37.2	Aug	1	Late	37
Feb	2	Late	28	Aug	2	Late	26.9

Table 6.29 Moneragala District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	22.2	May	1	Init	28.6
Nov	2	Init	20.9	May	2	Init	28.6
Nov	3	Deve	22.5	May	3	Deve	35.3
Dec	1	Deve	25.6	Jun	1	Deve	37.9
Dec	2	Deve	28.6	Jun	2	Mid	43.6
Dec	3	Mid	35.3	Jun	3	Mid	44.8
Jan	1	Mid	34.2	Jul	1	Mid	44.1
Jan	2	Mid	36.3	Jul	2	Mid	43.5
Jan	3	Late	40.7	Jul	3	Late	49.1
Feb	1	Late	34.9	Aug	1	Late	42.5
Feb	2	Late	25.6	Aug	2	Late	31.5

Table 6.30 Mullaitivu District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	25.7	May	1	Init	34
Nov	2	Init	24.1	May	2	Init	34.5
Nov	3	Deve	26	May	3	Deve	44.1
Dec	1	Deve	29.7	Jun	1	Deve	49.1
Dec	2	Deve	33.2	Jun	2	Mid	58.3
Dec	3	Mid	40.4	Jun	3	Mid	60.6
Jan	1	Mid	38.4	Jul	1	Mid	60.3
Jan	2	Mid	40	Jul	2	Mid	59.9
Jan	3	Late	46.1	Jul	3	Late	65.2
Feb	1	Late	40.7	Aug	1	Late	54.4
Feb	2	Late	30.7	Aug	2	Late	38.8

Table 6.31 Polonnaruwa District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	23.8	May	1	Init	34.5
Nov	2	Init	20.7	May	2	Init	35.3
Nov	3	Deve	21.9	May	3	Deve	45.3
Dec	1	Deve	24.6	Jun	1	Deve	50.9
Dec	2	Deve	26.7	Jun	2	Mid	60.9
Dec	3	Mid	32.3	Jun	3	Mid	62.7
Jan	1	Mid	30.7	Jul	1	Mid	61.6
Jan	2	Mid	32.1	Jul	2	Mid	61.1
Jan	3	Late	36.7	Jul	3	Late	67.7
Feb	1	Late	32.1	Aug	1	Late	57.6
Feb	2	Late	24	Aug	2	Late	41.9

Table 6.32 Puttlam District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	26.2	May	1	Init	33
Nov	2	Init	23.9	May	2	Init	32.3
Nov	3	Deve	26.9	May	3	Deve	39.7
Dec	1	Deve	32.1	Jun	1	Deve	42.7
Dec	2	Deve	37.1	Jun	2	Mid	49.1
Dec	3	Mid	44.2	Jun	3	Mid	50.8
Jan	1	Mid	41.2	Jul	1	Mid	50.5
Jan	2	Mid	42.3	Jul	2	Mid	50.1
Jan	3	Late	48.4	Jul	3	Late	56.4
Feb	1	Late	42.6	Aug	1	Late	48.7
Feb	2	Late	32.1	Aug	2	Late	36



Table 6.33 Trincomalee District CWR for Groundnut (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	24.4	May	1	Init	33.5
Nov	2	Init	22.3	May	2	Init	35.2
Nov	3	Deve	23.6	May	3	Deve	44.3
Dec	1	Deve	26.2	Jun	1	Deve	48.7
Dec	2	Deve	28.7	Jun	2	Mid	57.1
Dec	3	Mid	33.9	Jun	3	Mid	59.1
Jan	1	Mid	31.6	Jul	1	Mid	58.6
Jan	2	Mid	32.3	Jul	2	Mid	58.2
Jan	3	Late	36.9	Jul	3	Late	63.4
Feb	1	Late	32.1	Aug	1	Late	53.1
Feb	2	Late	23.9	Aug	2	Late	38

Table 6.34 Ampara District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.8	May	1	Init	25.3
Nov	2	Init	19.3	May	2	Init	25.3
Nov	3	Deve	22.6	May	3	Deve	33.8
Dec	1	Deve	28.6	Jun	1	Deve	40.3
Dec	2	Deve	34.4	Jun	2	Mid	49.3
Dec	3	Mid	41.7	Jun	3	Mid	51.8
Jan	1	Mid	38.6	Jul	1	Mid	51
Jan	2	Mid	39.3	Jul	2	Mid	50.2
Jan	3	Late	44.6	Jul	3	Late	56.5
Feb	1	Late	33.7	Aug	1	Late	42.6
Feb	2	Late	19.3	Aug	2	Late	24.5

Table 6.35 Anuradhapura District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	17.8	May	1	Init	25
Nov	2	Init	16.3	May	2	Init	25
Nov	3	Deve	18.5	May	3	Deve	33.2
Dec	1	Deve	22.3	Jun	1	Deve	39.3
Dec	2	Deve	25.7	Jun	2	Mid	47.8
Dec	3	Mid	33.1	Jun	3	Mid	51.3
Jan	1	Mid	32.8	Jul	1	Mid	51.6
Jan	2	Mid	34.8	Jul	2	Mid	51.9
Jan	3	Late	39.9	Jul	3	Late	57.5
Feb	1	Late	30.6	Aug	1	Late	42.8
Feb	2	Late	17.9	Aug	2	Late	24.4

Table 6.36 Batticaloa District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.1	May	1	Init	24.7
Nov	2	Init	18.5	May	2	Init	24.5
Nov	3	Deve	21.6	May	3	Deve	32.8
Dec	1	Deve	27.2	Jun	1	Deve	39
Dec	2	Deve	32.7	Jun	2	Mid	47.9
Dec	3	Mid	39.6	Jun	3	Mid	50.5
Jan	1	Mid	36.7	Jul	1	Mid	50
Jan	2	Mid	37.4	Jul	2	Mid	49.5
Jan	3	Late	42.5	Jul	3	Late	55.3
Feb	1	Late	32.1	Aug	1	Late	41.1
Feb	2	Late	18.3	Aug	2	Late	23.2

Table 6.37 Hambanthota District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	21.2	May	1	Init	25
Nov	2	Init	20.1	May	2	Init	24.4
Nov	3	Deve	25.1	May	3	Deve	34.5
Dec	1	Deve	33.5	Jun	1	Deve	43.5
Dec	2	Deve	42.2	Jun	2	Mid	55.4
Dec	3	Mid	55.7	Jun	3	Mid	61.1
Jan	1	Mid	56.4	Jul	1	Mid	62.9
Jan	2	Mid	61	Jul	2	Mid	64.6
Jan	3	Late	67	Jul	3	Late	69
Feb	1	Late	50.4	Aug	1	Late	50.7
Feb	2	Late	30.2	Aug	2	Late	29.2

Table 6.38 Kilinochchi District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.1	May	1	Init	27.9
Nov	2	Init	19.4	May	2	Init	28.7
Nov	3	Deve	22.5	May	3	Deve	38.7
Dec	1	Deve	28.3	Jun	1	Deve	46.5
Dec	2	Deve	33.9	Jun	2	Mid	57
Dec	3	Mid	41.4	Jun	3	Mid	60.3
Jan	1	Mid	38.7	Jul	1	Mid	59.7
Jan	2	Mid	39.7	Jul	2	Mid	59.1
Jan	3	Late	45.4	Jul	3	Late	64.8
Feb	1	Late	34.8	Aug	1	Late	48.2
Feb	2	Late	20.5	Aug	2	Late	27.8

Table 6.39 Kurunegala District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	17.5	May	1	Init	22.5
Nov	2	Init	16.7	May	2	Init	22
Nov	3	Deve	19.6	May	3	Deve	28.2
Dec	1	Deve	25	Jun	1	Deve	32.2
Dec	2	Deve	30.3	Jun	2	Mid	38
Dec	3	Mid	38.5	Jun	3	Mid	40.8
Jan	1	Mid	37.3	Jul	1	Mid	41.3
Jan	2	Mid	39.5	Jul	2	Mid	41.7
Jan	3	Late	45	Jul	3	Late	46
Feb	1	Late	34.6	Aug	1	Late	33.9
Feb	2	Late	20.4	Aug	2	Late	18.9

Table 6.40 Moneragala District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	17	May	1	Init	22
Nov	2	Init	16.1	May	2	Init	22
Nov	3	Deve	19	May	3	Deve	30.2
Dec	1	Deve	24.4	Jun	1	Deve	36.9
Dec	2	Deve	29.7	Jun	2	Mid	46.1
Dec	3	Mid	37.8	Jun	3	Mid	48.6
Jan	1	Mid	36.6	Jul	1	Mid	47.9
Jan	2	Mid	38.9	Jul	2	Mid	47.2
Jan	3	Late	43.4	Jul	3	Late	53.1
Feb	1	Late	32.4	Aug	1	Late	40.3
Feb	2	Late	18.4	Aug	2	Late	23.6

Table 6.41 Mullaitivu District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	19.8	May	1	Init	26.2
Nov	2	Init	18.5	May	2	Init	26.6
Nov	3	Deve	22.2	May	3	Deve	38.1
Dec	1	Deve	29	Jun	1	Deve	48.7
Dec	2	Deve	35.5	Jun	2	Mid	63
Dec	3	Mid	44.5	Jun	3	Mid	67.1
Jan	1	Mid	42.3	Jul	1	Mid	66.8
Jan	2	Mid	44.1	Jul	2	Mid	66.4
Jan	3	Late	50.6	Jul	3	Late	71.9
Feb	1	Late	39.4	Aug	1	Late	53
Feb	2	Late	23.8	Aug	2	Late	30.5

Table 6.42 Polonnaruwa District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	18.3	May	1	Init	26.6
Nov	2	Init	16	May	2	Init	27.2
Nov	3	Deve	18.5	May	3	Deve	38.8
Dec	1	Deve	23.3	Jun	1	Deve	49.8
Dec	2	Deve	27.5	Jun	2	Mid	64.7
Dec	3	Mid	34.3	Jun	3	Mid	68.3
Jan	1	Mid	32.7	Jul	1	Mid	67.1
Jan	2	Mid	34.2	Jul	2	Mid	66.6
Jan	3	Late	38.9	Jul	3	Late	73.4
Feb	1	Late	29.5	Aug	1	Late	54.9
Feb	2	Late	17	Aug	2	Late	31.7

Table 6.43 Puttlam District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.2	May	1	Init	25.4
Nov	2	Init	18.4	May	2	Init	24.8
Nov	3	Deve	22.8	May	3	Deve	34.2
Dec	1	Deve	31.1	Jun	1	Deve	41.9
Dec	2	Deve	39.2	Jun	2	Mid	52.5
Dec	3	Mid	48.2	Jun	3	Mid	55.7
Jan	1	Mid	44.9	Jul	1	Mid	55.3
Jan	2	Mid	46.1	Jul	2	Mid	54.9
Jan	3	Late	52.6	Jul	3	Late	61.5
Feb	1	Late	40.8	Aug	1	Late	46.8
Feb	2	Late	24.6	Aug	2	Late	27.7

Table 6.44 Trincomalee District CWR for Maize (110 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	18.8	May	1	Init	25.8
Nov	2	Init	17.1	May	2	Init	27.1
Nov	3	Deve	19.8	May	3	Deve	38
Dec	1	Deve	24.7	Jun	1	Deve	47.6
Dec	2	Deve	29.4	Jun	2	Mid	60.9
Dec	3	Mid	35.7	Jun	3	Mid	64.5
Jan	1	Mid	33.3	Jul	1	Mid	64
Jan	2	Mid	34.1	Jul	2	Mid	63.5
Jan	3	Late	38.7	Jul	3	Late	69
Feb	1	Late	29.1	Aug	1	Late	50.7
Feb	2	Late	16.4	Aug	2	Late	28.8

Table 6.45 Ampara District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	29.1	May	1	Init	35.5
Nov	2	Deve	27.8	May	2	Deve	36.5
Nov	3	Deve	32	May	3	Deve	47.8
Dec	1	Deve	36.6	Jun	1	Mid	51.1
Dec	2	Mid	38.3	Jun	2	Mid	53.9
Dec	3	Mid	42.9	Jun	3	Mid	53.1
Jan	1	Mid	39.7	Jul	1	Mid	52.3
Jan	2	Late	39.9	Jul	2	Late	50.8
Jan	3	Late	35.2	Jul	3	Late	44.4

Table 6.46 Anuradhapura District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	25	May	1	Init	35
Nov	2	Deve	23.5	May	2	Deve	36
Nov	3	Deve	26.3	May	3	Deve	46.9
Dec	1	Deve	28.5	Jun	1	Mid	49.7
Dec	2	Mid	28.7	Jun	2	Mid	52
Dec	3	Mid	34.2	Jun	3	Mid	52.3
Jan	1	Mid	33.9	Jul	1	Mid	52.6
Jan	2	Late	35.5	Jul	2	Late	52.2
Jan	3	Late	31.8	Jul	3	Late	45

Table 6.47 Batticaloa District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	28.1	May	1	Init	34.6
Nov	2	Deve	26.7	May	2	Deve	35.3
Nov	3	Deve	30.6	May	3	Deve	46.2
Dec	1	Deve	35	Jun	1	Mid	49.5
Dec	2	Mid	36.6	Jun	2	Mid	52.5
Dec	3	Mid	41	Jun	3	Mid	52
Jan	1	Mid	38	Jul	1	Mid	51.5
Jan	2	Late	38.2	Jul	2	Late	50.3
Jan	3	Late	33.8	Jul	3	Late	43.6

Table 6.48 Hambanthota District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	29.7	May	1	Init	34.9
Nov	2	Deve	29.1	May	2	Deve	35.5
Nov	3	Deve	35.5	May	3	Deve	48.8
Dec	1	Deve	42.1	Jun	1	Mid	54.3
Dec	2	Mid	45.3	Jun	2	Mid	58.5
Dec	3	Mid	54.7	Jun	3	Mid	60.3
Jan	1	Mid	55.4	Jul	1	Mid	62
Jan	2	Late	59.2	Jul	2	Late	63
Jan	3	Late	51.1	Jul	3	Late	52.5



Table 6.49 Kilinochchi District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	28.2	May	1	Init	39
Nov	2	Deve	28	May	2	Deve	41.5
Nov	3	Deve	31.9	May	3	Deve	54.6
Dec	1	Deve	36.2	Jun	1	Mid	58.4
Dec	2	Mid	37.6	Jun	2	Mid	61
Dec	3	Mid	42.5	Jun	3	Mid	60.3
Jan	1	Mid	39.7	Jul	1	Mid	59.7
Jan	2	Late	40.3	Jul	2	Late	58.3
Jan	3	Late	35.9	Jul	3	Late	49.8

Table 6.50 Kurunegala District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	24.5	May	1	Init	31.5
Nov	2	Deve	24	May	2	Deve	31.7
Nov	3	Deve	27.8	May	3	Deve	39.9
Dec	1	Deve	31.9	Jun	1	Mid	41
Dec	2	Mid	33.6	Jun	2	Mid	41.9
Dec	3	Mid	39.5	Jun	3	Mid	42.3
Jan	1	Mid	38.2	Jul	1	Mid	42.8
Jan	2	Late	40	Jul	2	Late	42.7
Jan	3	Late	35.6	Jul	3	Late	36.6

Table 6.51 Moneragala District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	23.9	May	1	Init	30.8
Nov	2	Deve	23.1	May	2	Deve	31.8
Nov	3	Deve	26.9	May	3	Deve	42.6
Dec	1	Deve	31.1	Jun	1	Mid	46.6
Dec	2	Mid	32.9	Jun	2	Mid	50
Dec	3	Mid	38.7	Jun	3	Mid	49.3
Jan	1	Mid	37.5	Jul	1	Mid	48.6
Jan	2	Late	39.3	Jul	2	Late	47.3
Jan	3	Late	34.3	Jul	3	Late	41.3

Table 6.52 Mullaitivu District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	27.7	May	1	Init	36.7
Nov	2	Deve	26.9	May	2	Deve	38.5
Nov	3	Deve	31.6	May	3	Deve	53.9
Dec	1	Deve	36.6	Jun	1	Mid	61
Dec	2	Mid	38.4	Jun	2	Mid	67
Dec	3	Mid	44.2	Jun	3	Mid	66.7
Jan	1	Mid	42	Jul	1	Mid	66.3
Jan	2	Late	43.3	Jul	2	Late	65.1
Jan	3	Late	38.9	Jul	3	Late	54.9

Table 6.53 Polonnaruwa District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	25.6	May	1	Init	37.2
Nov	2	Deve	23	May	2	Deve	39.3
Nov	3	Deve	26.1	May	3	Deve	54.8
Dec	1	Deve	29.9	Jun	1	Mid	62.8
Dec	2	Mid	30.7	Jun	2	Mid	69.8
Dec	3	Mid	35.4	Jun	3	Mid	69
Jan	1	Mid	33.7	Jul	1	Mid	67.8
Jan	2	Late	34.8	Jul	2	Late	66.4
Jan	3	Late	30.9	Jul	3	Late	56.9

Table 6.54 Puttalam District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	28.2	May	1	Init	35.5
Nov	2	Deve	26.6	May	2	Deve	35.9
Nov	3	Deve	32.4	May	3	Deve	48.3
Dec	1	Deve	39.4	Jun	1	Mid	52.8
Dec	2	Mid	42.8	Jun	2	Mid	56.4
Dec	3	Mid	48.4	Jun	3	Mid	55.9
Jan	1	Mid	45.1	Jul	1	Mid	55.5
Jan	2	Late	45.7	Jul	2	Late	54.4
Jan	3	Late	40.8	Jul	3	Late	47.5

Table 6.55 Trincomalee District CWR for Pulses (90 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	26.3	May	1	Init	36.1
Nov	2	Deve	24.6	May	2	Deve	39.1
Nov	3	Deve	28.1	May	3	Deve	53.8
Dec	1	Deve	31.8	Jun	1	Mid	60.1
Dec	2	Mid	33.2	Jun	2	Mid	65.6
Dec	3	Mid	37.4	Jun	3	Mid	65.1
Jan	1	Mid	34.9	Jul	1	Mid	64.6
Jan	2	Late	35.2	Jul	2	Late	63.2
Jan	3	Late	31	Jul	3	Late	53.4

Table 6.56 Ampara District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	16.7	May	May	1	20.3
Nov	2	Init	15.4	May	May	2	20.3
Nov	3	Deve	19.1	May	May	3	28.9
Dec	1	Deve	25.9	Jun	Jun	1	36.7
Dec	2	Deve	32.5	Jun	Jun	2	46.7
Dec	3	Mid	39.9	Jun	Jun	3	49.6
Jan	1	Mid	37	Jul	Jul	1	48.8
Jan	2	Late	37.5	Jul	Jul	2	47.9
Jan	3	Late	34.5	Aug	Jul	3	43.8
Feb	1	Late	17.2	Aug	Aug	1	21.9

Table 6.57 Anuradhapura District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	14.3	May	May	1	20
Nov	2	Init	13	May	May	2	20
Nov	3	Deve	15.7	May	May	3	28.3
Dec	1	Deve	20.2	Jun	Jun	1	35.9
Dec	2	Deve	24.3	Jun	Jun	2	45.3
Dec	3	Mid	31.7	Jun	Jun	3	49.1
Jan	1	Mid	31.4	Jul	Jul	1	49.3
Jan	2	Late	33.2	Jul	Jul	2	49.5
Jan	3	Late	30.8	Aug	Jul	3	44.7
Feb	1	Late	15.6	Aug	Aug	1	22.2

Table 6.58 Batticaloa District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	16.1	May	May	1	19.8
Nov	2	Init	14.8	May	May	2	19.6
Nov	3	Deve	18.3	May	May	3	27.9
Dec	1	Deve	24.7	Jun	Jun	1	35.6
Dec	2	Deve	30.9	Jun	Jun	2	45.4
Dec	3	Mid	37.9	Jun	Jun	3	48.4
Jan	1	Mid	35.1	Jul	Jul	1	47.9
Jan	2	Late	35.7	Jul	Jul	2	47.3
Jan	3	Late	32.7	Aug	Jul	3	42.7
Feb	1	Late	16.3	Aug	Aug	1	21.1

Table 6.59 Hambanthota District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	16.9	May	May	1	20
Nov	2	Init	16.1	May	May	2	19.6
Nov	3	Deve	21.3	May	May	3	29.5
Dec	1	Deve	30.4	Jun	Jun	1	39.7
Dec	2	Deve	39.7	Jun	Jun	2	52.3
Dec	3	Mid	53	Jun	Jun	3	58.2
Jan	1	Mid	53.6	Jul	Jul	1	59.9
Jan	2	Late	57.8	Jul	Jul	2	61.4
Jan	3	Late	53	Aug	Jul	3	54.6
Feb	1	Late	27.5	Aug	Aug	1	27.6

Table 6.60 Kilinochchi District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	16.1	May	May	1	22.3
Nov	2	Init	15.5	May	May	2	22.9
Nov	3	Deve	19.1	May	May	3	33
Dec	1	Deve	25.7	Jun	Jun	1	42.5
Dec	2	Deve	31.9	Jun	Jun	2	53.9
Dec	3	Mid	39.5	Jun	Jun	3	57.6
Jan	1	Mid	36.9	Jul	Jul	1	57
Jan	2	Late	37.7	Jul	Jul	2	56.2
Jan	3	Late	35.1	Aug	Jul	3	50.8
Feb	1	Late	17.8	Aug	Aug	1	25.7

Table 6.61 Kurunegala District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	14	May	May	1	18
Nov	2	Init	13.3	May	May	2	17.6
Nov	3	Deve	16.6	May	May	3	24.1
Dec	1	Deve	22.7	Jun	Jun	1	29.4
Dec	2	Deve	28.6	Jun	Jun	2	36
Dec	3	Mid	36.8	Jun	Jun	3	39.1
Jan	1	Mid	35.6	Jul	Jul	1	39.5
Jan	2	Late	37.6	Jul	Jul	2	39.9
Jan	3	Late	34.9	Aug	Jul	3	35.5
Feb	1	Late	17.9	Aug	Aug	1	17.2

Table 6.62 Moneragala District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	13.6	May	May	1	17.6
Nov	2	Init	12.8	May	May	2	17.6
Nov	3	Deve	16.1	May	May	3	25.8
Dec	1	Deve	22.1	Jun	Jun	1	33.7
Dec	2	Deve	28	Jun	Jun	2	43.7
Dec	3	Mid	36.1	Jun	Jun	3	46.5
Jan	1	Mid	35	Jul	Jul	1	45.8
Jan	2	Late	37	Jul	Jul	2	45
Jan	3	Late	33.6	Aug	Jul	3	41.4
Feb	1	Late	16.7	Aug	Aug	1	21.1

Table 6.63 Mullaitivu District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	15.8	May	May	1	20.9
Nov	2	Init	14.8	May	May	2	21.3
Nov	3	Deve	18.9	May	May	3	32.6
Dec	1	Deve	26.3	Jun	Jun	1	44.4
Dec	2	Deve	33.4	Jun	Jun	2	59.5
Dec	3	Mid	42.4	Jun	Jun	3	64
Jan	1	Mid	40.3	Jul	Jul	1	63.7
Jan	2	Late	41.9	Jul	Jul	2	63.2
Jan	3	Late	39.7	Aug	Jul	3	56.6
Feb	1	Late	21.1	Aug	Aug	1	28.5

Table 6.64 Polonnaruwa District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	14.6	May	May	1	21.3
Nov	2	Init	12.8	May	May	2	21.7
Nov	3	Deve	15.7	May	May	3	33.1
Dec	1	Deve	21.2	Jun	Jun	1	45.4
Dec	2	Deve	26	Jun	Jun	2	61.2
Dec	3	Mid	32.8	Jun	Jun	3	65.2
Jan	1	Mid	31.3	Jul	Jul	1	64.1
Jan	2	Late	32.6	Jul	Jul	2	63.5
Jan	3	Late	30	Aug	Jul	3	57.4
Feb	1	Late	15.1	Aug	Aug	1	28.9



Table 6.65 Puttlam District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	16.1	May	May	1	20.3
Nov	2	Init	14.7	May	May	2	19.9
Nov	3	Deve	19.4	May	May	3	29.2
Dec	1	Deve	28.2	Jun	Jun	1	38.3
Dec	2	Deve	37	Jun	Jun	2	49.7
Dec	3	Mid	45.9	Jun	Jun	3	53.2
Jan	1	Mid	42.9	Jul	Jul	1	52.8
Jan	2	Late	43.8	Jul	Jul	2	52.3
Jan	3	Late	41.2	Aug	Jul	3	48.2
Feb	1	Late	21.6	Aug	Aug	1	24.9

Table 6.66 Trincomalee District CWR for Sorghum (100 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	15	May	May	1	20.6
Nov	2	Init	13.7	May	May	2	21.6
Nov	3	Deve	16.8	May	May	3	32.5
Dec	1	Deve	22.4	Jun	Jun	1	43.5
Dec	2	Deve	27.8	Jun	Jun	2	57.6
Dec	3	Mid	34.3	Jun	Jun	3	61.7
Jan	1	Mid	32	Jul	Jul	1	61.2
Jan	2	Late	32.6	Jul	Jul	2	60.5
Jan	3	Late	29.7	Aug	Jul	3	53.9
Feb	1	Late	14.5	Aug	Aug	1	26.8

Table 6.67 Ampara District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	27.1	May	1	Init	32.9
Nov	2	Deve	26	May	2	Deve	34.2
Nov	3	Deve	31.4	May	3	Deve	47.1
Dec	1	Mid	36.3	Jun	1	Mid	50.4
Dec	2	Mid	36.3	Jun	2	Mid	51.2
Dec	3	Mid	40.7	Jun	3	Mid	50.5
Jan	1	Mid	37.7	Jul	1	Mid	49.7
Jan	2	Mid	38.4	Jul	2	Mid	48.9
Jan	3	Late	42.2	Jul	3	Late	53.3
Feb	1	Late	33.5	Aug	1	Late	42.2
Feb	2	Late	9.1	Aug	2	Late	11.5

Table 6.68 Anuradhapura District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	23.2	May	1	Init	32.5
Nov	2	Deve	22	May	2	Deve	33.8
Nov	3	Deve	25.7	May	3	Deve	46.2
Dec	1	Mid	28.2	Jun	1	Mid	49.2
Dec	2	Mid	27.2	Jun	2	Mid	49.4
Dec	3	Mid	32.4	Jun	3	Mid	49.7
Jan	1	Mid	32.1	Jul	1	Mid	50
Jan	2	Mid	34.1	Jul	2	Mid	50.3
Jan	3	Late	37.9	Jul	3	Late	54
Feb	1	Late	30.7	Aug	1	Late	42.2
Feb	2	Late	8.5	Aug	2	Late	11.3

Table 6.69 Batticaloa District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	26.1	May	1	Init	32.2
Nov	2	Deve	25	May	2	Deve	33.1
Nov	3	Deve	30	May	3	Deve	45.5
Dec	1	Mid	34.5	Jun	1	Mid	48.8
Dec	2	Mid	34.7	Jun	2	Mid	49.8
Dec	3	Mid	38.9	Jun	3	Mid	49.3
Jan	1	Mid	36	Jul	1	Mid	48.8
Jan	2	Mid	36.7	Jul	2	Mid	48.3
Jan	3	Late	40.4	Jul	3	Late	52.3
Feb	1	Late	32.1	Aug	1	Late	40.9
Feb	2	Late	8.8	Aug	2	Late	11

Table 6.70 Hambanthota District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	27.5	May	1	Init	32.4
Nov	2	Deve	27.4	May	2	Deve	33.4
Nov	3	Deve	35.3	May	3	Deve	48.6
Dec	1	Mid	42.4	Jun	1	Mid	54.3
Dec	2	Mid	43.4	Jun	2	Mid	56
Dec	3	Mid	52.4	Jun	3	Mid	57.7
Jan	1	Mid	53	Jul	1	Mid	59.4
Jan	2	Mid	57.4	Jul	2	Mid	61
Jan	3	Late	61.3	Jul	3	Late	63.3
Feb	1	Late	48	Aug	1	Late	48.2
Feb	2	Late	13.1	Aug	2	Late	12.6

Table 6.71 Kilinochchi District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	26.2	May	1	Init	36.3
Nov	2	Deve	26.2	May	2	Deve	39
Nov	3	Deve	31.3	May	3	Deve	54.2
Dec	1	Mid	35.9	Jun	1	Mid	58.2
Dec	2	Mid	35.7	Jun	2	Mid	58.2
Dec	3	Mid	40.4	Jun	3	Mid	57.6
Jan	1	Mid	37.7	Jul	1	Mid	57
Jan	2	Mid	38.7	Jul	2	Mid	56.4
Jan	3	Late	42.9	Jul	3	Late	60
Feb	1	Late	34.6	Aug	1	Late	46.6
Feb	2	Late	9.6	Aug	2	Late	12.4

Table 6.72 Kurunegala District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	22.8	May	1	Init	29.2
Nov	2	Deve	22.5	May	2	Deve	29.7
Nov	3	Deve	27.2	May	3	Deve	39.1
Dec	1	Mid	31.6	Jun	1	Mid	40.3
Dec	2	Mid	31.9	Jun	2	Mid	39.7
Dec	3	Mid	37.5	Jun	3	Mid	40.1
Jan	1	Mid	36.2	Jul	1	Mid	40.6
Jan	2	Mid	38.4	Jul	2	Mid	41
Jan	3	Late	42.5	Jul	3	Late	43.8
Feb	1	Late	34.3	Aug	1	Late	33.9
Feb	2	Late	9.5	Aug	2	Late	9

Table 6.73 Moneragala District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	22.2	May	1	Init	28.6
Nov	2	Deve	21.7	May	2	Deve	29.8
Nov	3	Deve	26.4	May	3	Deve	42.1
Dec	1	Mid	30.8	Jun	1	Mid	46.2
Dec	2	Mid	31.2	Jun	2	Mid	47.6
Dec	3	Mid	36.8	Jun	3	Mid	46.9
Jan	1	Mid	35.6	Jul	1	Mid	46.3
Jan	2	Mid	37.8	Jul	2	Mid	45.6
Jan	3	Late	40.9	Jul	3	Late	49.7
Feb	1	Late	32.1	Aug	1	Late	39.4
Feb	2	Late	8.7	Aug	2	Late	10.7

Table 6.74 Mullaitivu District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	25.7	May	1	Init	34
Nov	2	Deve	25.2	May	2	Deve	36.2
Nov	3	Deve	31.3	May	3	Deve	53.6
Dec	1	Mid	36.8	Jun	1	Mid	60.9
Dec	2	Mid	36.7	Jun	2	Mid	64.1
Dec	3	Mid	42.3	Jun	3	Mid	63.7
Jan	1	Mid	40.2	Jul	1	Mid	63.4
Jan	2	Mid	41.9	Jul	2	Mid	63.1
Jan	3	Late	46.6	Jul	3	Late	66.2
Feb	1	Late	37.9	Aug	1	Late	50.8
Feb	2	Late	10.6	Aug	2	Late	13.4

Table 6.75 Polonnaruwa District CWR for Soybean (105 day)

Nov	1	Init	23.8	May	1	Init	34.5
Nov	2	Deve	21.5	May	2	Deve	36.9
Nov	3	Deve	25.6	May	3	Deve	54.2
Dec	1	Mid	29.6	Jun	1	Mid	62.3
Dec	2	Mid	29.1	Jun	2	Mid	66.5
Dec	3	Mid	33.6	Jun	3	Mid	65.7
Jan	1	Mid	32	Jul	1	Mid	64.5
Jan	2	Mid	33.4	Jul	2	Mid	64.1
Jan	3	Late	36.9	Jul	3	Late	68.5
Feb	1	Late	29.5	Aug	1	Late	53.5
Feb	2	Late	8.1	Aug	2	Late	14.3

Table 6.76 Puttlam District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	26.2	May	1	Init	33
Nov	2	Deve	24.9	May	2	Deve	33.7
Nov	3	Deve	32	May	3	Deve	47.9
Dec	1	Mid	39.4	Jun	1	Mid	52.5
Dec	2	Mid	40.8	Jun	2	Mid	53.8
Dec	3	Mid	46.1	Jun	3	Mid	53.4
Jan	1	Mid	43	Jul	1	Mid	53
Jan	2	Mid	44.1	Jul	2	Mid	52.6
Jan	3	Late	48.9	Jul	3	Late	57.1
Feb	1	Late	39.6	Aug	1	Late	45.3
Feb	2	Late	11	Aug	2	Late	12.4

Table 6.77 Trincomalee District CWR for Soybean (105 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	24.4	May	1	Init	33.5
Nov	2	Deve	23.1	May	2	Deve	36.7
Nov	3	Deve	27.4	May	3	Deve	53.3
Dec	1	Mid	31.4	Jun	1	Mid	59.7
Dec	2	Mid	31.4	Jun	2	Mid	62.5
Dec	3	Mid	35.4	Jun	3	Mid	62
Jan	1	Mid	33	Jul	1	Mid	61.5
Jan	2	Mid	33.8	Jul	2	Mid	61
Jan	3	Late	37.1	Jul	3	Late	64.3
Feb	1	Late	29.4	Aug	1	Late	49.3
Feb	2	Late	8	Aug	2	Late	13

Table 6.78 Ampara District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.8	May	1	Init	25.3
Nov	2	Init	19.3	May	2	Init	25.3
Nov	3	Init	19	May	3	Deve	28.1
Dec	1	Deve	21.7	Jun	1	Deve	30.5
Dec	2	Deve	26.8	Jun	2	Deve	38.3
Dec	3	Deve	36.4	Jun	3	Deve	45.3
Jan	1	Mid	39.6	Jul	1	Mid	52
Jan	2	Mid	42.4	Jul	2	Mid	53.8
Jan	3	Mid	48.4	Jul	3	Mid	61
Feb	1	Mid	45.6	Aug	1	Mid	57.1
Feb	2	Late	47	Aug	2	Late	58.4
Feb	3	Late	34.3	Aug	3	Late	54.3
Mar	1	Late	35.4	Sep	1	Late	37.1
Mar	2	Late	14.4	Sep	2	Late	6

Table 6.79 Anuradhapura District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	17.8	May	1	Init	25
Nov	2	Init	16.3	May	2	Init	25
Nov	3	Init	15.7	May	3	Deve	27.4
Dec	1	Deve	17.2	Jun	1	Deve	29.6
Dec	2	Deve	20.4	Jun	2	Deve	36.9
Dec	3	Deve	29.4	Jun	3	Deve	44.6
Jan	1	Mid	34.1	Jul	1	Mid	52.4
Jan	2	Mid	38	Jul	2	Mid	55.4
Jan	3	Mid	44	Jul	3	Mid	61.8
Feb	1	Mid	41.9	Aug	1	Mid	57
Feb	2	Late	43.6	Aug	2	Late	57.4
Feb	3	Late	32.7	Aug	3	Late	52.6
Mar	1	Late	34.6	Sep	1	Late	35.4
Mar	2	Late	14.4	Sep	2	Late	5.6

Table 6.80 Batticaloa District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.1	May	1	Init	24.7
Nov	2	Init	18.5	May	2	Init	24.5
Nov	3	Init	18.3	May	3	Deve	27.3
Dec	1	Deve	20.9	Jun	1	Deve	29.7
Dec	2	Deve	25.8	Jun	2	Deve	37.4
Dec	3	Deve	35	Jun	3	Deve	44.4
Jan	1	Mid	37.9	Jul	1	Mid	51.1
Jan	2	Mid	40.6	Jul	2	Mid	53.2
Jan	3	Mid	46.5	Jul	3	Mid	59.8
Feb	1	Mid	43.9	Aug	1	Mid	55.6
Feb	2	Late	45.3	Aug	2	Late	56.4
Feb	3	Late	33.1	Aug	3	Late	52.1
Mar	1	Late	34	Sep	1	Late	35.1
Mar	2	Late	13.7	Sep	2	Late	5.6



Table 6.81 Hambanthota District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	21.2	May	1	Init	25
Nov	2	Init	20.1	May	2	Init	24.4
Nov	3	Init	20.3	May	3	Deve	27.5
Dec	1	Deve	24	Jun	1	Deve	31.1
Dec	2	Deve	31	Jun	2	Deve	40.6
Dec	3	Deve	46.3	Jun	3	Deve	50.9
Jan	1	Mid	55.7	Jul	1	Mid	61.7
Jan	2	Mid	63.5	Jul	2	Mid	66.8
Jan	3	Mid	70.2	Jul	3	Mid	71.8
Feb	1	Mid	63.8	Aug	1	Mid	63.8
Feb	2	Late	64.2	Aug	2	Late	61.9
Feb	3	Late	45.7	Aug	3	Late	56.5
Mar	1	Late	46.4	Sep	1	Late	38.3
Mar	2	Late	18.7	Sep	2	Late	6.2

Table 6.82 Kilinochchi District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.1	May	1	Init	27.9
Nov	2	Init	19.4	May	2	Init	28.7
Nov	3	Init	19	May	3	Deve	31.3
Dec	1	Deve	21.7	Jun	1	Deve	34
Dec	2	Deve	26.6	Jun	2	Deve	42.6
Dec	3	Deve	36.5	Jun	3	Deve	51
Jan	1	Mid	40.1	Jul	1	Mid	59.2
Jan	2	Mid	43.3	Jul	2	Mid	61.7
Jan	3	Mid	49.7	Jul	3	Mid	68.1
Feb	1	Mid	47.2	Aug	1	Mid	62.1
Feb	2	Late	48.9	Aug	2	Late	62
Feb	3	Late	36.3	Aug	3	Late	58.1
Mar	1	Late	38.2	Sep	1	Late	40.7
Mar	2	Late	15.9	Sep	2	Late	6.7

Table 6.83 Kurunegala District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	17.5	May	1	Init	22.5
Nov	2	Init	16.7	May	2	Init	22
Nov	3	Init	16.5	May	3	Deve	23.7
Dec	1	Deve	19.1	Jun	1	Deve	24.9
Dec	2	Deve	23.8	Jun	2	Deve	30.1
Dec	3	Deve	33.9	Jun	3	Deve	36.4
Jan	1	Mid	38.5	Jul	1	Mid	42.7
Jan	2	Mid	42.9	Jul	2	Mid	45.4
Jan	3	Mid	49.3	Jul	3	Mid	50.5
Feb	1	Mid	46.7	Aug	1	Mid	46.3
Feb	2	Late	48.3	Aug	2	Late	46.5
Feb	3	Late	34.9	Aug	3	Late	42.9
Mar	1	Late	35.7	Sep	1	Late	28.9
Mar	2	Late	14.5	Sep	2	Late	4.6

Table 6.84 Moneragala District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	17	May	1	Init	22
Nov	2	Init	16.1	May	2	Init	22
Nov	3	Init	16	May	3	Deve	24.8
Dec	1	Deve	18.5	Jun	1	Deve	27.5
Dec	2	Deve	23.2	Jun	2	Deve	35.3
Dec	3	Deve	33.1	Jun	3	Deve	41.9
Jan	1	Mid	37.7	Jul	1	Mid	48.3
Jan	2	Mid	42	Jul	2	Mid	50.1
Jan	3	Mid	47.2	Jul	3	Mid	56.7
Feb	1	Mid	43.8	Aug	1	Mid	53
Feb	2	Late	44.4	Aug	2	Late	54.2
Feb	3	Late	32.3	Aug	3	Late	49.3
Mar	1	Late	33.3	Sep	1	Late	33
Mar	2	Late	13.5	Sep	2	Late	5.2

Table 6.85 Mullaitivu District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	19.8	May	1	Init	26.2
Nov	2	Init	18.5	May	2	Init	26.6
Nov	3	Init	18.2	May	3	Deve	30.6
Dec	1	Deve	21	Jun	1	Deve	35.1
Dec	2	Deve	26.3	Jun	2	Deve	46.4
Dec	3	Deve	37.2	Jun	3	Deve	56.1
Jan	1	Mid	41.9	Jul	1	Mid	65.5
Jan	2	Mid	46	Jul	2	Mid	68.7
Jan	3	Mid	53.1	Jul	3	Mid	74.9
Feb	1	Mid	50.6	Aug	1	Mid	67.4
Feb	2	Late	52.6	Aug	2	Late	66.4
Feb	3	Late	38.1	Aug	3	Late	61.8
Mar	1	Late	39.2	Sep	1	Late	43.1
Mar	2	Late	16	Sep	2	Late	7.1

Table 6.86 Polonnaruwa District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	18.3	May	1	Init	26.6
Nov	2	Init	16	May	2	Init	27.2
Nov	3	Init	15.6	May	3	Deve	31.7
Dec	1	Deve	17.9	Jun	1	Deve	36.9
Dec	2	Deve	21.7	Jun	2	Deve	49.2
Dec	3	Deve	30.4	Jun	3	Deve	58.6
Jan	1	Mid	33.9	Jul	1	Mid	67.4
Jan	2	Mid	37.2	Jul	2	Mid	70.4
Jan	3	Mid	42.7	Jul	3	Mid	78.2
Feb	1	Mid	40.3	Aug	1	Mid	71.7
Feb	2	Late	41.6	Aug	2	Late	72
Feb	3	Late	31.2	Aug	3	Late	65.5
Mar	1	Late	33.1	Sep	1	Late	44
Mar	2	Late	13.8	Sep	2	Late	7

Table 6.87 Puttlam District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	20.2	May	1	Init	25.4
Nov	2	Init	18.4	May	2	Init	24.8
Nov	3	Init	18.9	May	3	Deve	27.7
Dec	1	Deve	23	Jun	1	Deve	30.8
Dec	2	Deve	29.7	Jun	2	Deve	39.5
Dec	3	Deve	41.1	Jun	3	Deve	47.4
Jan	1	Mid	45.3	Jul	1	Mid	55.2
Jan	2	Mid	48.9	Jul	2	Mid	57.7
Jan	3	Mid	56.2	Jul	3	Mid	65.1
Feb	1	Mid	53.2	Aug	1	Mid	60.6
Feb	2	Late	55	Aug	2	Late	61.7
Feb	3	Late	39.7	Aug	3	Late	57.5
Mar	1	Late	40.8	Sep	1	Late	39.6
Mar	2	Late	16.5	Sep	2	Late	6.5

Table 6.88 Trincomalee District CWR for Tomato (135 day)

Month	Decade	Stage	ETc (mm/dec)	Month	Decade	Stage	ETc (mm/dec)
Nov	1	Init	18.8	May	1	Init	25.8
Nov	2	Init	17.1	May	2	Init	27.1
Nov	3	Init	16.9	May	3	Deve	31
Dec	1	Deve	19.2	Jun	1	Deve	35.2
Dec	2	Deve	23.4	Jun	2	Deve	46
Dec	3	Deve	31.9	Jun	3	Deve	55.1
Jan	1	Mid	34.7	Jul	1	Mid	64
Jan	2	Mid	37.3	Jul	2	Mid	66.8
Jan	3	Mid	42.7	Jul	3	Mid	73.1
Feb	1	Mid	40.3	Aug	1	Mid	66.1
Feb	2	Late	41.5	Aug	2	Late	65.3
Feb	3	Late	29.8	Aug	3	Late	60.2
Mar	1	Late	30.2	Sep	1	Late	41.3
Mar	2	Late	12	Sep	2	Late	6.7