UNIVERSITY of TASMANIA

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Tasmanian Institute of Agriculture

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Weekly pasture growth and evapotranspiration

utas.edu.au/tia

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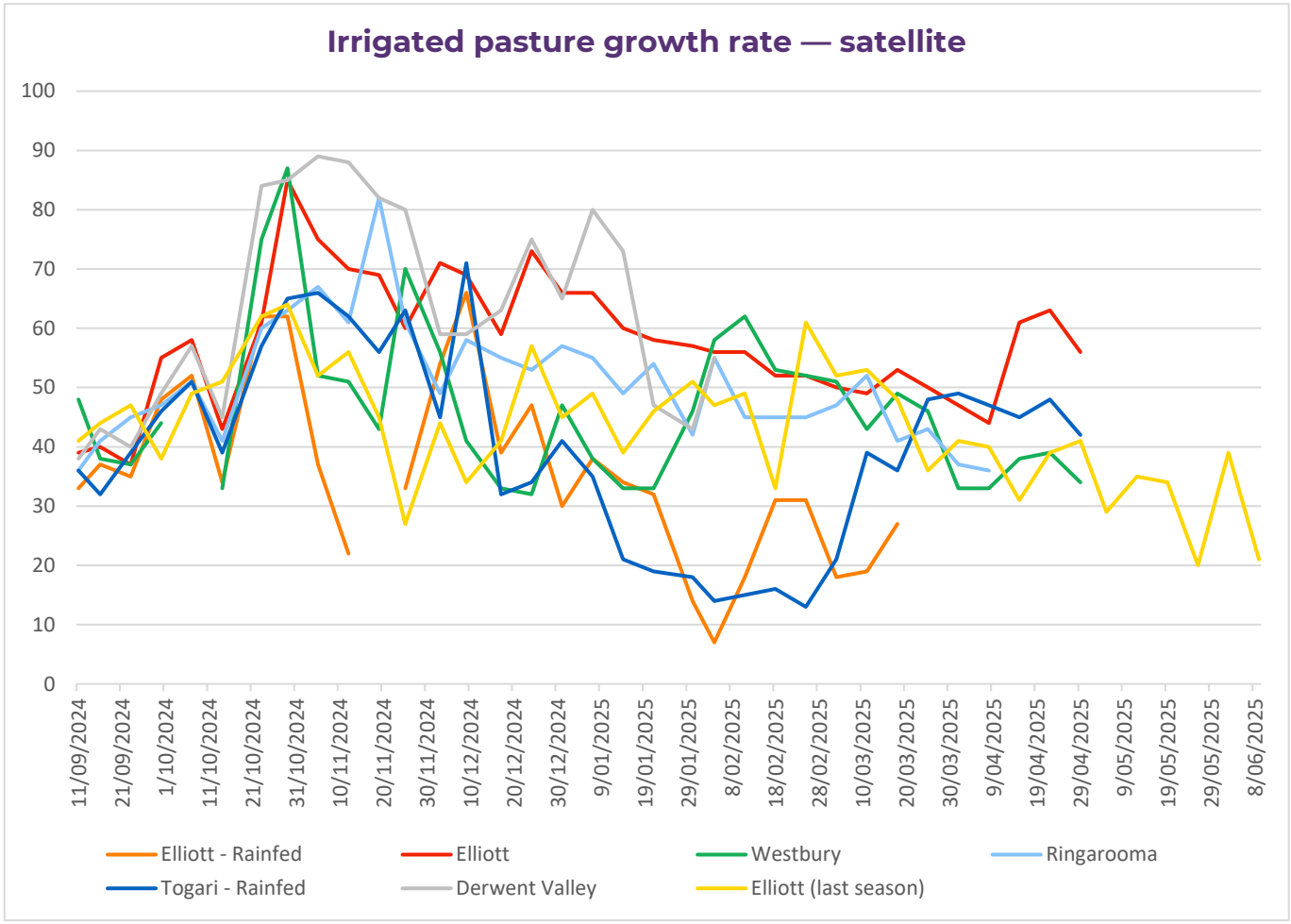
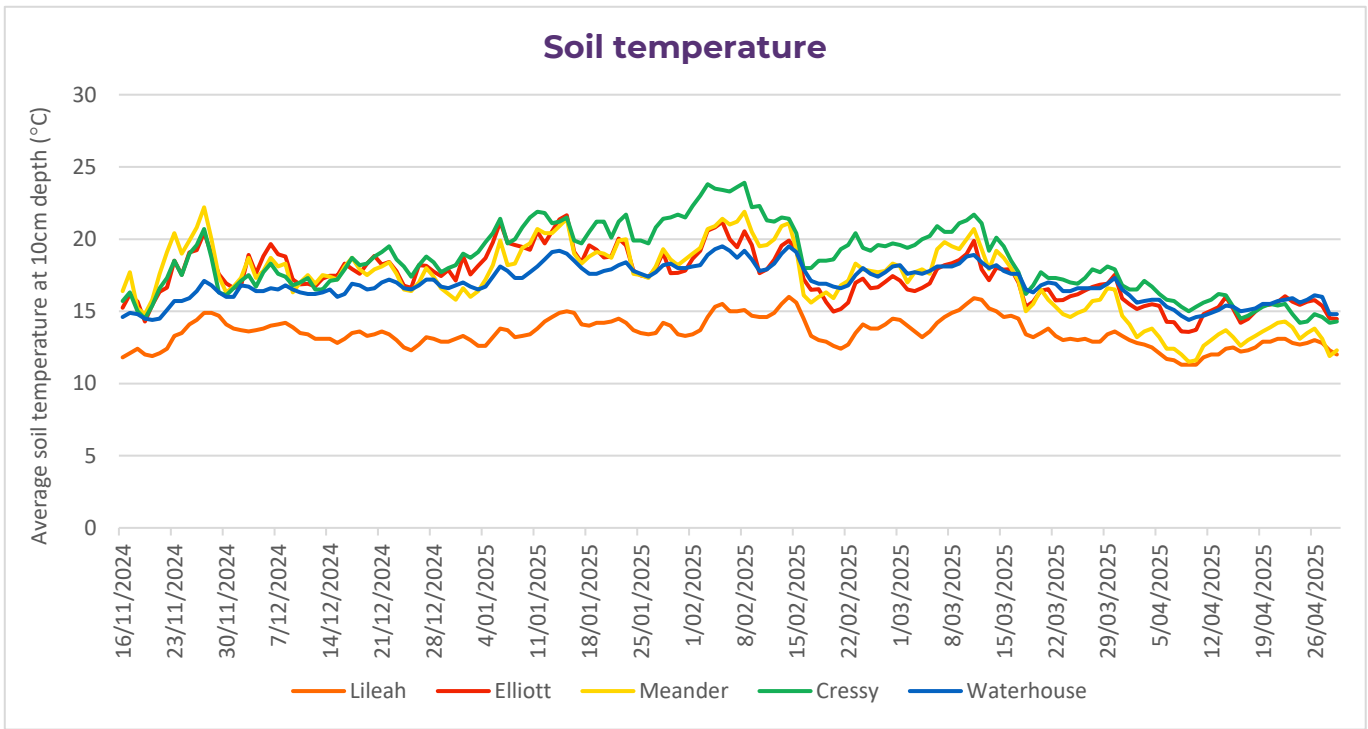
Regional pasture growth rates

Region	Pasture growth rate (kg DM/ha/day) - Satellite	
	Irrigated	Rainfed
Togari	42	-
Elliott	56	27
Westbury	34	-
Ringarooma	-	-
Derwent Valley	-	-

Pasture growth rates will vary between farms for many reasons, including: climate, soil type, nutrient availability and management. Satellite pasture growth rates are sourced from Pasture.io (https://pasture.io/).

Leaf emergence rate at Elliott				
Leaf emergence rate (days per leaf)		Days to 2 leaf stage	Days to 2.5 leaf stage	Days to 3 leaf stage
Irrigated	10	20	25	30


Irrigated pasture growth rate — satellite
100
90
80
70
60
50
40
30
20
10
0
11/09/2024
21/09/2024
1/10/2024
11/10/2024
21/10/2024
31/10/2024
10/11/2024
20/11/2024
30/11/2024
10/12/2024
20/12/2024
30/12/2024
9/01/2025
19/01/2025
29/01/2025
8/02/2025
18/02/2025
28/02/2025
10/03/2025
20/03/2025
30/03/2025
9/04/2025
19/04/2025
29/04/2025
9/05/2025
19/05/2025
29/05/2025
8/06/2025
Elliott - Rainfed
Elliott
Westbury
Ringarooma
Togari - Rainfed
Derwent Valley
Elliott (last season)


Soil temperature
Average soil temperature at 10cm depth (°C)
30
25
20
15
10
5
0
16/11/2024
23/11/2024
30/11/2024
7/12/2024
14/12/2024
21/12/2024
28/12/2024
4/01/2025
11/01/2025
18/01/2025
25/01/2025
1/02/2025
8/02/2025
15/02/2025
22/02/2025
1/03/2025
8/03/2025
15/03/2025
22/03/2025
29/03/2025
5/04/2025
12/04/2025
19/04/2025
26/04/2025
Lileah
Elliott
Meander
Cressy
Waterhouse

Weekly evapotranspiration and rainfall

Wednesday, 23 April to Tuesday, 29 April 2025

Location	ET_0[1] (mm)	Rainfall (mm)	Rainfall (month-to-date; mm)	Soil temp (°C) 9:00 a.m. @ 10 cm
Pegarah (KI)	-	-	-	-
Lileah	4.0	6.2	45.4	12.0
Elliott	8.2	12.0	34.0	14.5
Meander	9.1	22.4	41.4	12.3
Cressy	9.2	11.8	29.0	14.3
Ringarooma	-	-	-	-
Waterhouse	7.3	13.6	33.4	14.8

Data for this table is collected from the UNITAS Weathermation weather stations at Lileah, Elliott (Elliott Research), Meander (Clear Springs) and Waterhouse (Forester Lodge). These weather stations have been installed on Smarter Irrigation for Profit II optimised irrigation farms. Data for Pegarah (King Island) and Ringarooma is sourced from the Ag Logic Weather Station and Probe Network (https://www.aglogic.com.au/)

[1]ET_0 is the reference evapotranspiration, an estimation of the evapotranspiration from the "reference surface" – grass with an assumed height of 0.12m.

Monday, 21 April to Sunday, 27 April 2025

Location	ET_0[1] (mm)	Rainfall (mm)	Rainfall (month-to-date; mm)	Soil temp (°C) 9:00 a.m. @ 10 cm
Ouse	12.3	2.6	24.2	-

Climate data for Ouse is collated from www.bom.gov.au. It is displayed in a different table because the date that data is available is different to the UNITAS Weathermation stations.

* This soil temp information is from Bushy Park http://www.bom.gov.au/products/IDT65176.shtml

[1]ET_0 is the reference evapotranspiration, an estimation of the evapotranspiration from the "reference surface" – grass with an assumed height of 0.12m.

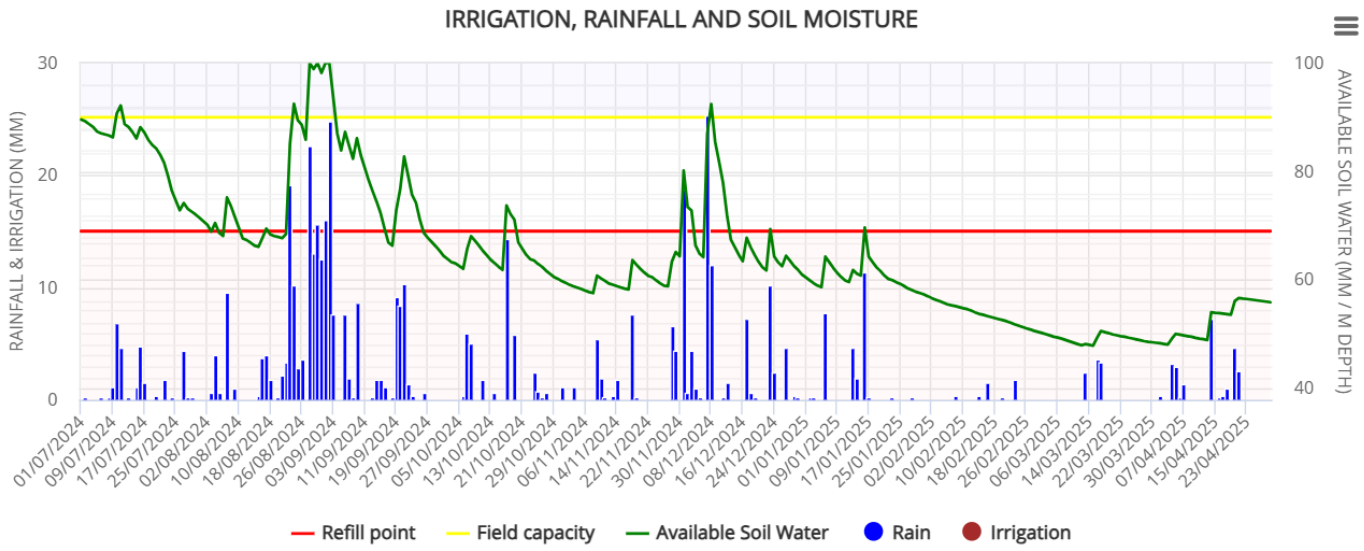
Soil moisture budgets

The soil moisture budgets below have been produced using IrriPasture (https://irripasture.com/). This is a free budgeting tool that can help you make decisions about your irrigation scheduling. This report has budgets for Bushy Park/Ouse, Scottsdale, Meander, Sheffield, Elliott and Lileah. The graphs show the available soil moisture (green line). The aim is to keep this green line between the red line (refill point) and the yellow line (field capacity). The distance between the yellow and red line is how much Readily Available Water (RAW) the soil holds. The amount of RAW your soil can hold will depend on your soil type. As a guide, the amount of Readily Available Water that is held in the top 30 cm for common soil types is:

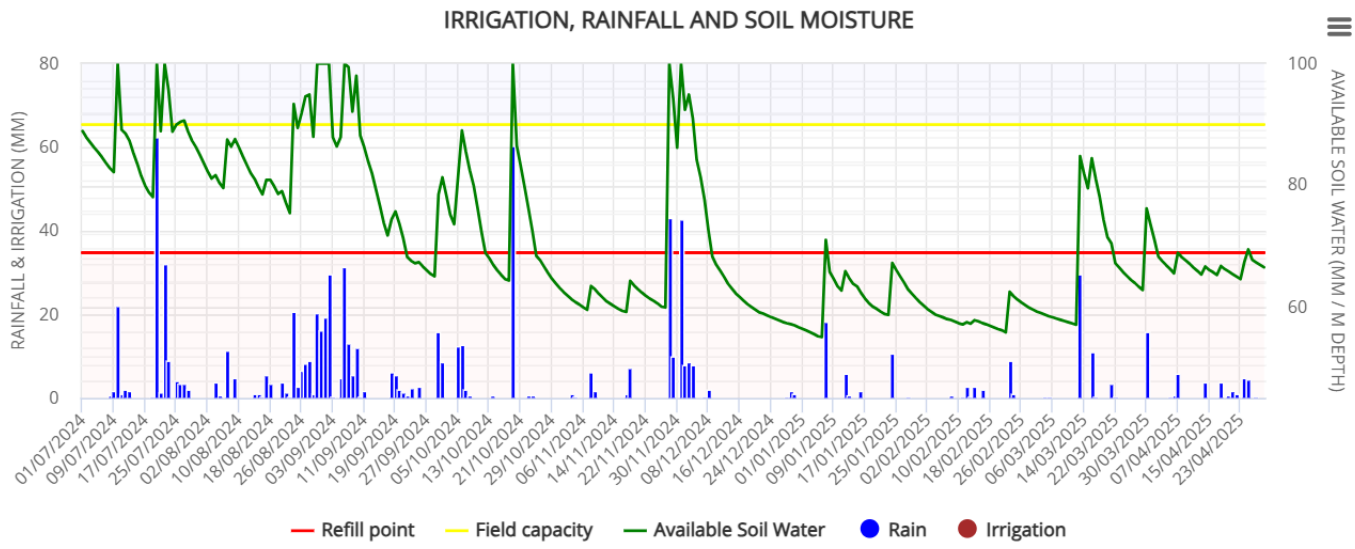
- Sand = 9 mm
- Loamy sand = 15 mm
- Sandy loam = 21 mm
- Loam = 27 mm
- Clay = 15 mm
- Clay loam = 24 mm

The soil moisture budgets in this report have used an 'average' RAW value of 21 mm. If your soil holds less soil moisture than this, you will need to irrigate earlier than the water budget indicates. If your soil holds more moisture than this, you probably don't need to irrigate as soon. **THESE SOIL MOISTURE BUDGETS ARE A GUIDE ONLY**. Please do a physical check of the soil moisture on your farm to help make the decision when to start irrigating.

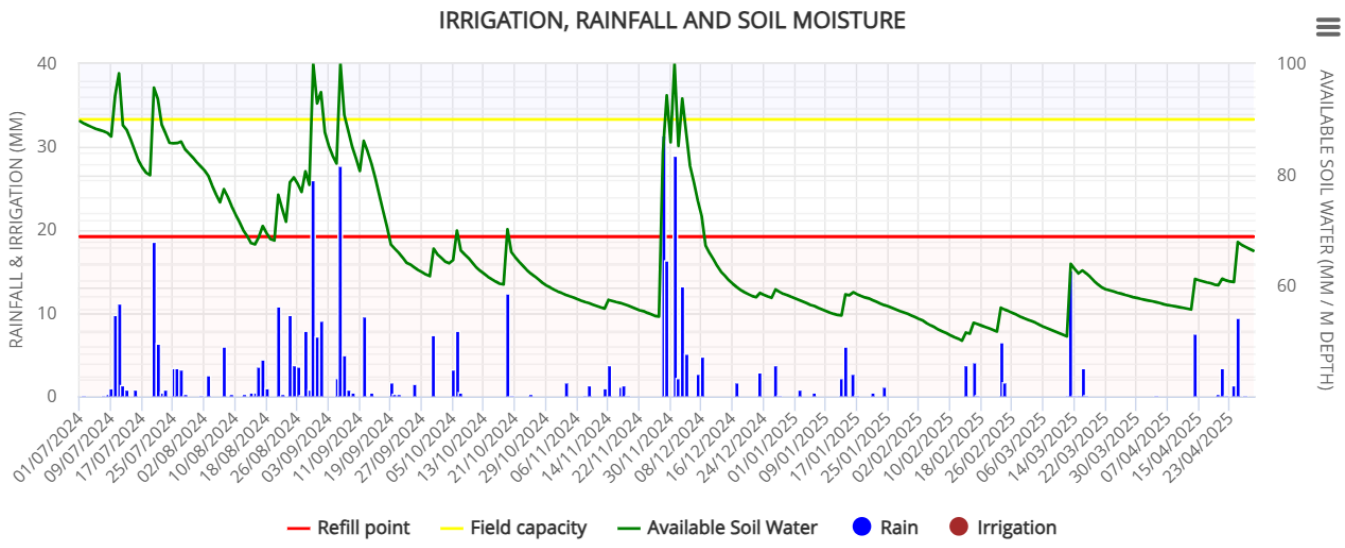
Ouse



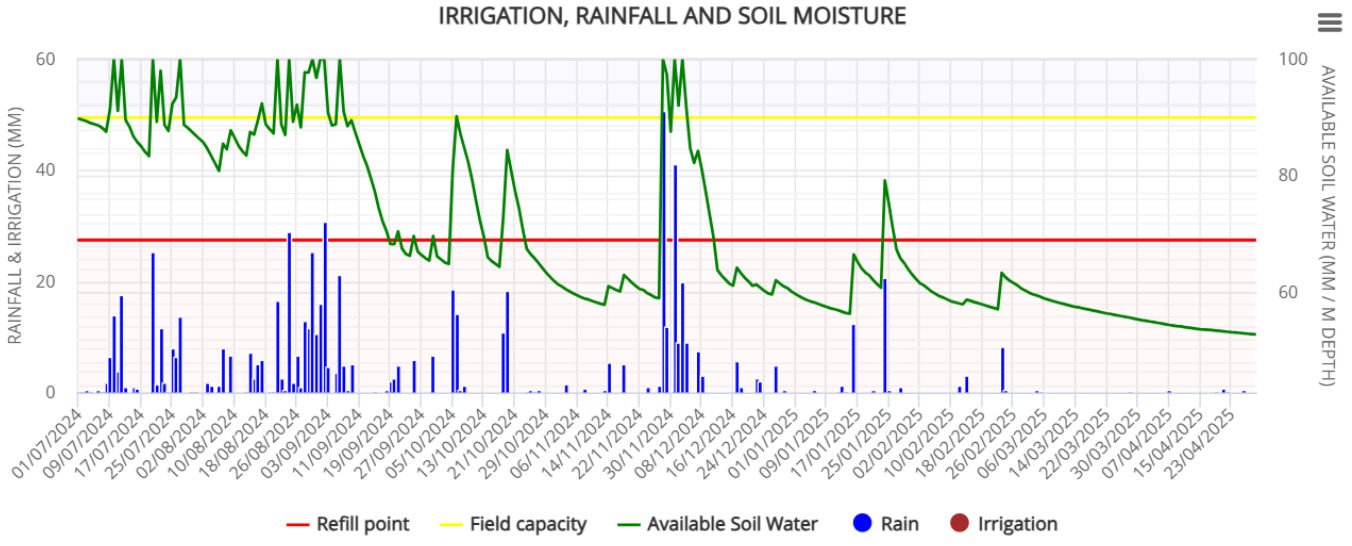
Scottsdale



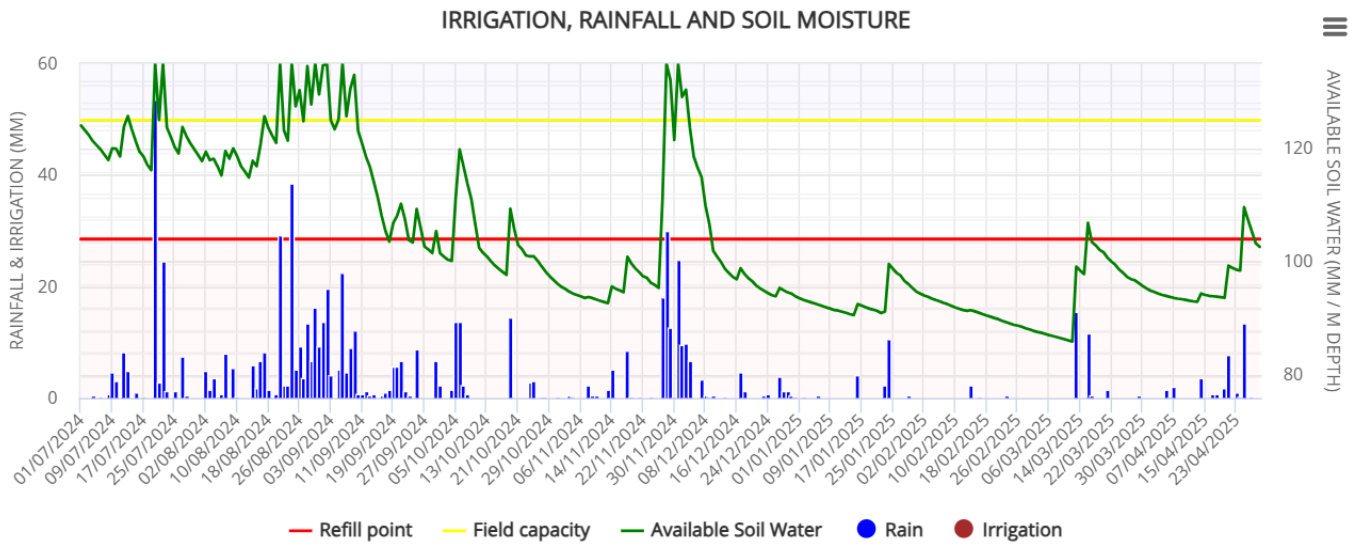
Cressy



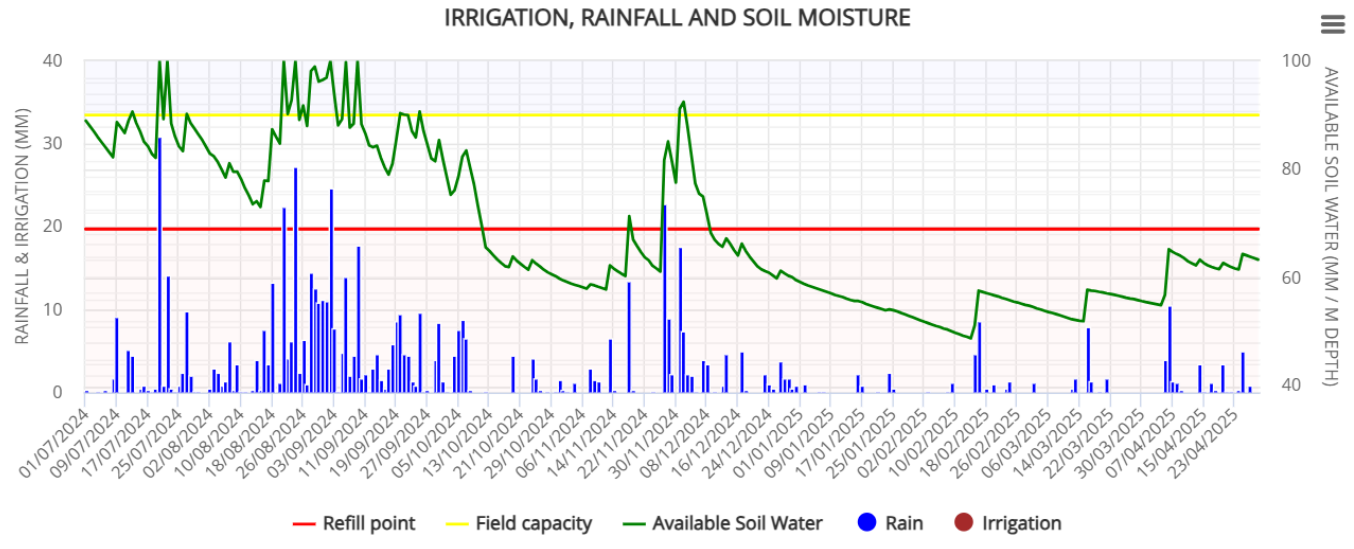
Sheffield



Wynyard



Smithton



7-day forecasts

The following tables present the 7-day evapotranspiration, rainfall, temperature, humidity, and forecast for key dairy regions in Tasmania. The data is sourced from the Weatherwise Watering Swan Systems (https://www.swansystems.com.au/irrigation-harnessing-power-of-data/)

Ouse

Date	ETo* mm	Chance of Rain %	Rain Range mm	Rain Estimate mm	Temp Range °C	Avg R. Humidity %	Avg Wind Speed km/hr
Tue, 29-Apr	1.5	30	< 1	0	4-14	76	9
Wed, 30-Apr	1.3	15	< 1	0	1-14	73	7
Thu, 01-May	1.4	10	< 1	0	1-15	80	7
Fri, 02-May	1.5	10	< 1	0	0-16	82	8
Sat, 03-May	1.6	10	< 1	0	1-19	83	7
Sun, 04-May	2	10	< 1	0	1-22	78	10
Mon, 05-May	2.5	55	0-3	2.7	6-23	72	14
TOTAL	**11.8**			**2.7**			

Scottsdale

Date	ETo* mm	Chance of Rain %	Rain Range mm	Rain Estimate mm	Temp Range °C	Avg R. Humidity %	Avg Wind Speed km/hr
Tue, 29-Apr	1.8	25	< 1	0	9-16	71	12
Wed, 30-Apr	1.7	10	< 1	0	4-15	70	10
Thu, 01-May	1.5	5	< 1	0	2-16	77	8
Fri, 02-May	1.4	10	< 1	0	3-16	83	7
Sat, 03-May	1.4	15	< 1	0	5-17	87	8
Sun, 04-May	1.4	30	< 1	0	6-18	90	9
Mon, 05-May	1.5	65	1-5	4.2	9-20	86	12
TOTAL	**10.7**			**4.2**			

Meander

Date	ETo* mm	Chance of Rain %	Rain Range mm	Rain Estimate mm	Temp Range °C	Avg R. Humidity %	Avg Wind Speed km/hr
Tue, 29-Apr	1.6	10	< 1	0	5-14	74	11
Wed, 30-Apr	1.6	5	< 1	0	1-14	74	9
Thu, 01-May	1.4	5	< 1	0	0-15	79	7
Fri, 02-May	1.4	10	< 1	0	1-15	83	7
Sat, 03-May	1.5	20	< 1	0	2-17	86	9
Sun, 04-May	1.4	40	0-1	1	4-17	88	11
Mon, 05-May	1.6	75	3-9	6.8	8-19	84	14
TOTAL	**10.5**			**7.8**			

Sheffield

Date	ETo* mm	Chance of Rain %	Rain Range mm	Rain Estimate mm	Temp Range °C	Avg R. Humidity %	Avg Wind Speed km/hr
Tue, 29-Apr	1.6	10	< 1	0	6-15	75	11
Wed, 30-Apr	1.6	5	< 1	0	2-14	71	9
Thu, 01-May	1.5	5	< 1	0	2-15	77	9
Fri, 02-May	1.4	10	< 1	0	2-16	84	9
Sat, 03-May	1.4	20	< 1	0	3-17	87	8
Sun, 04-May	1.3	35	< 1	0	4-18	89	9
Mon, 05-May	1.5	70	2-7	5.6	9-19	86	12
TOTAL	**10.3**			**5.6**			

Elliott

Date	ETo* mm	Chance of Rain %	Rain Range mm	Rain Estimate mm	Temp Range °C	Avg R. Humidity %	Avg Wind Speed km/hr
Tue, 29-Apr	1.9	15	< 1	0	7-16	69	13
Wed, 30-Apr	1.8	5	< 1	0	4-15	66	9
Thu, 01-May	1.7	5	< 1	0	3-16	72	10
Fri, 02-May	1.6	10	< 1	0	3-16	80	10
Sat, 03-May	1.5	20	< 1	0	4-17	88	11
Sun, 04-May	1.5	25	< 1	0	6-19	90	15
Mon, 05-May	1.7	60	1-5	4.2	10-20	85	18
TOTAL	**11.7**			**4.2**			

Smithton

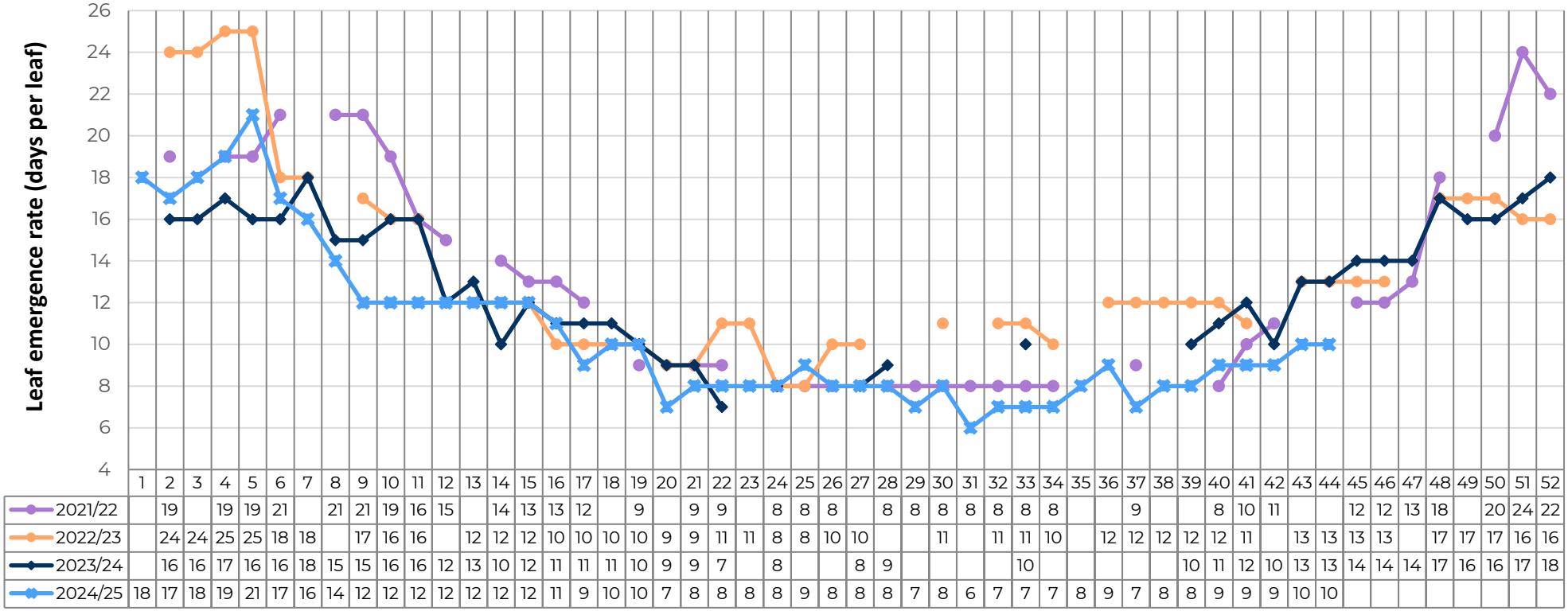
Date	ETo* mm	Chance of Rain %	Rain Range mm	Rain Estimate mm	Temp Range °C	Avg R. Humidity %	Avg Wind Speed km/hr
Tue, 29-Apr	2.3	15	< 1	0	6-17	73	17
Wed, 30-Apr	2.1	10	< 1	0	6-16	67	13
Thu, 01-May	1.9	5	< 1	0	3-17	77	13
Fri, 02-May	1.6	15	< 1	0	3-17	85	11
Sat, 03-May	2	10	< 1	0	5-19	87	18
Sun, 04-May	2	15	< 1	0	9-20	87	22
Mon, 05-May	2.2	60	1-4	3.9	12-22	80	24
TOTAL	**14.1**			**3.9**			

King Island

Date	ETo* mm	Chance of Rain %	Rain Range mm	Rain Estimate mm	Temp Range °C	Avg R. Humidity %	Avg Wind Speed km/hr
Tue, 29-Apr	2.3	35	< 1	0	11-17	74	18
Wed, 30-Apr	2	35	< 1	0	10-16	70	13
Thu, 01-May	1.7	15	< 1	0	9-17	71	9
Fri, 02-May	1.5	10	< 1	0	8-18	78	7
Sat, 03-May	2	5	< 1	0	9-20	80	13
Sun, 04-May	2.5	10	< 1	0	12-21	75	18
Mon, 05-May	3	50	0-2	2	14-22	71	23
TOTAL	**15**			**2**			

Leaf emergence rate

This graph shows the leaf emergence rate in days per leaf for the past two seasons compared to the current season. The numbers directly below the graph (1-52) represent the weeks in the financial year. Week 1 is the first week in July, Week 52 is the last week in June.



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2021/22		19		19	19	21		21	21	19	16	15		14	13	13	12		9		9	9		8	8	8		8	8	8	8	8	8	8			9			8	10	11			12	12	13	18		20	24	22
2022/23		24	24	25	25	18	18		17	16	16		12	12	12	10	10	10	10	9	9	11	11	8	8	10	10			11		11	11	10		12	12	12	12	12	11		13	13	13	13		17	17	17	16	16
2023/24		16	16	17	16	16	18	15	15	16	16	12	13	10	12	11	11	11	10	9	9	7		8			8	9					10						10	11	12	10	13	13	14	14	14	17	16	16	17	18
2024/25	18	17	18	19	21	17	16	14	12	12	12	12	12	12	12	11	9	10	10	7	8	8	8	8	9	8	8	8	7	8	6	7	7	7	8	9	7	8	8	9	9	9	10	10								

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