

02 Jan 2019 12:08

Time of lambing analysis - Crossbred ewes @ Wagga NSW

1/01/1980 - 31/12/2012

Analysis Summary Time of lambing report

Gross margin

Long term average gross margin. For selected financial year [1 Jul - 30 Jun, 1980/1981 - 2011/2012]

	Lambing date	Lamb Jul	Lamb Jul	Lamb Sep	Lamb Sep
	Stocking rate	6/ha	9/ha	6/ha	9/ha
Net wool income - main flock	\$/ha	71	102	72	104
Net wool income - young stock	\$/ha	0	0	0	0
Sale income - young stock	\$/ha	381	490	297	419
Sale income - cast-for-age	\$/ha	60	87	57	85
Sale income - sold at foot	\$/ha	0	0	66	92
Hay sales	\$/ha	0	0	0	0
TOTAL INCOME	\$/ha	512	679	492	700
Maintenance supplement	\$/ha	133	287	148	303
Production supplement	\$/ha	0	0	0	0
Shearing costs	\$/ha	36	53	36	53
Animal husbandry	\$/ha	33	48	34	50
Replacements purchased	\$/ha	126	189	126	189
Rams purchased	\$/ha	14	22	14	22
Sale costs	\$/ha	37	50	37	52
Hay - harvesting costs	\$/ha	0	0	0	0
Hay - variable costs	\$/ha	0	0	0	0
Pasture costs	\$/ha	50	50	50	50
TOTAL EXPENSES	\$/ha	430	699	445	720
GROSS MARGIN	\$/ha	82	-20	47	-20

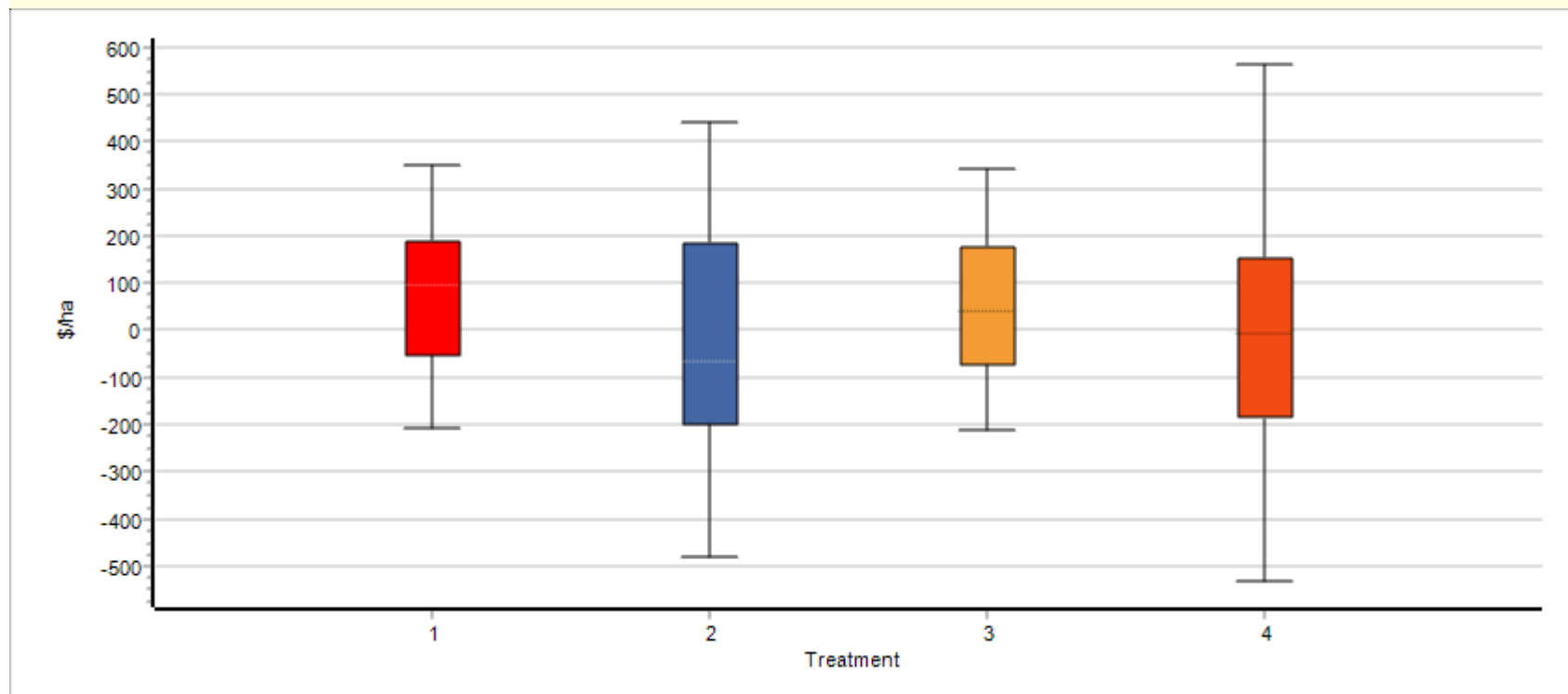
Variability of Gross Margin

Long term standard deviation of the annual gross margin (\$/ha) [1 Jul - 30 Jun, 1980/1981 - 2011/2012]

Lambing date	Lamb Jul	Lamb Jul	Lamb Sep	Lamb Sep
Stocking rate	6/ha	9/ha	6/ha	9/ha
Total income	\$/ha 92.64	112.59	63.72	91.85
Total expense	\$/ha 91.78	155.88	112.97	192.83
Gross margin	\$/ha 156.25	238.57	148.67	246.46

Boxplots for gross margins for all treatments.

Annual gross margins (\$/ha) for financial year [1 Jul - 30 Jun, 1980/1981 - 2011/2012]



Treatment	<i>Lambing date</i>	<i>Stocking rate</i>
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Interpretation of boxplots

The box shows the middle 50% of values (the interquartile range). The horizontal line inside the box is the median. The lines extending above and below the box (whiskers) show the upper and lower quartiles (25% of values). Beyond the whiskers, outlying values are shown by dots and extreme values are shown by asterisks. "Outlying values" lie more than 1.5 times the interquartile range beyond the upper and lower quartiles. "Extreme values" lie more than 3.0 times the interquartile range beyond the upper and lower quartiles.

Production summary

Long term averages for financial year [1 Jul - 30 Jun, 1980/1981 - 2011/2012]

	Lambing date	Lamb Jul	Lamb Jul	Lamb Sep	Lamb Sep
	Stocking rate	6/ha	9/ha	6/ha	9/ha
Dry sheep equivalents (av.)	dse/ha	12.4	17.4	12.4	17.6
Wool cut - total flock (sum)	kg CFW/ha	16	23	16	23
Wool cut - lambs (sum)	kg CFW/ha	0	0	0	0
Shorn fibre diameter - ewe adults (av.)	microns	26.3	26.0	26.3	26.1
Shorn fibre diameter - wether adults (av.)	microns	n/a	n/a	n/a	n/a
Shorn fibre diameter - lambs (av.)	microns	n/a	n/a	n/a	n/a
Numbers (max)	No.	3706	5005	3763	5367
Stock bought & sold (sum)	No.	3074	4182	2387	3410
Numbers (max)	No.	3704	5003	3761	5365
Stock bought & sold (sum)	No.	3078	4184	2391	3411
Meat sold - total flock (sum)	kg LW/ha	346	469	287	412
Meat sold - young stock (sum)	kg LW/ha	251	331	197	277
Total supplement fed (sum)	tonnes/ha	0.685	1.474	0.758	1.555

Sustainability

Long term average annual pasture production (Net Primary Production) and minimum mass of pasture, water balance and methane production [1 Jan - 31 Dec, 1980-2012]

		Lamb Jul	Lamb Jul	Lamb Sep	Lamb Sep
		6/ha	9/ha	6/ha	9/ha
Annual pasture production (P1) (sum)	kg/ha	7606	6826	7446	6971
Minimum total herbage mass (P1) (min)	kg/ha	1050	628	991	653
Ground cover (P1) (min)	m2/m2	0.53	0.34	0.50	0.37
Rainfall (sum)	mm	570	570	570	570
Runoff (P1) (sum)	mm	0.0	0.0	0.0	0.0
Actual evapotranspiration (P1) (sum)	mm	460	456	458	457
Drainage below rooting zone (P1) (sum)	mm	111	115	113	114
Methane production -main flock (sum)	g/head	11196	10465	11307	10631
Methane production -young stock (sum)	g/head	3331	3184	4001	3736

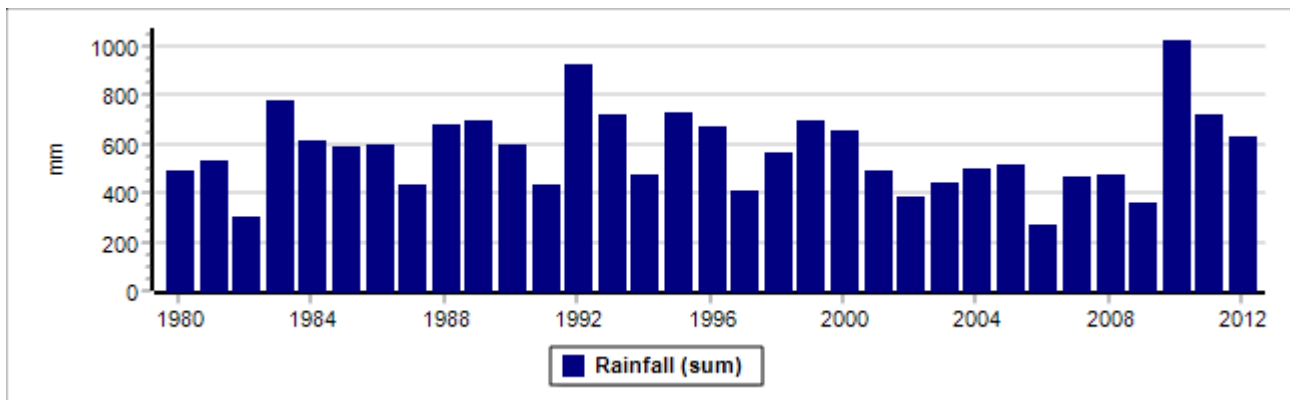
Ground cover threshold over entire period

Long term average over all years of percentage of the year when ground cover is < 0.7 [1 Jul - 30 Jun, 1980/1981 - 2011/2012]

Lambing date	Stocking rate	Proportion of year (P1)	Proportion of year (P2)	Proportion of year (P3)	Proportion of year (P4)	Proportion of year (P5)
		%	%	%	%	%
Lamb Jul	6/ha	28.04	n/a	n/a	n/a	n/a
Lamb Jul	9/ha	45.29	n/a	n/a	n/a	n/a
Lamb Sep	6/ha	28.87	n/a	n/a	n/a	n/a
Lamb Sep	9/ha	41.55	n/a	n/a	n/a	n/a

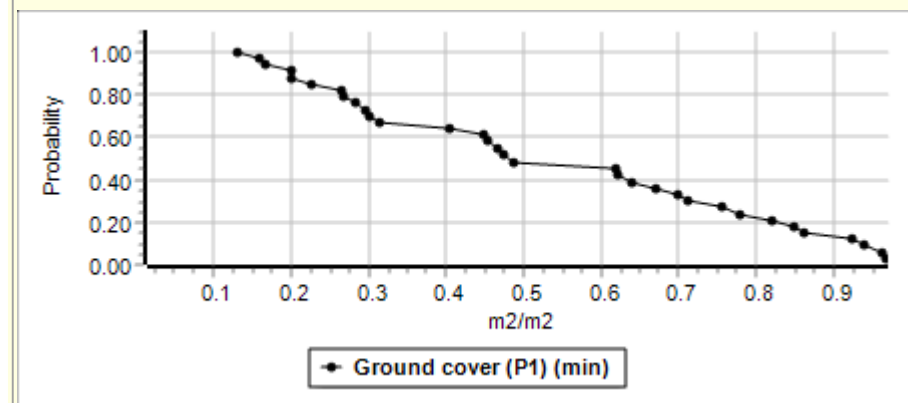
Annual rainfall [Lamb Jul - 6/ha]

Rainfall totals [1 Jan - 31 Dec, 1980-2012]



Cumulative distribution function for minimum ground cover [Lamb Jul - 6/ha]

The probability (shown on the vertical axis) of the minimum ground cover in a year exceeding the value shown on the horizontal axis [1 Jan - 31 Dec, 1980-2012]

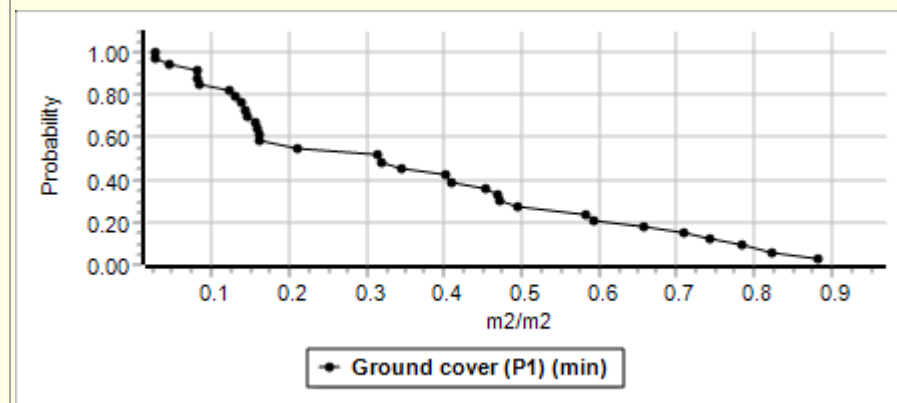


Cumulative distribution function for deep drainage [Lamb Jul - 6/ha]

The probability (shown on the vertical axis) of the total amount of soil water draining below the root zone each year exceeding the value shown on the

Cumulative distribution function for minimum ground cover [Lamb Jul - 9/ha]

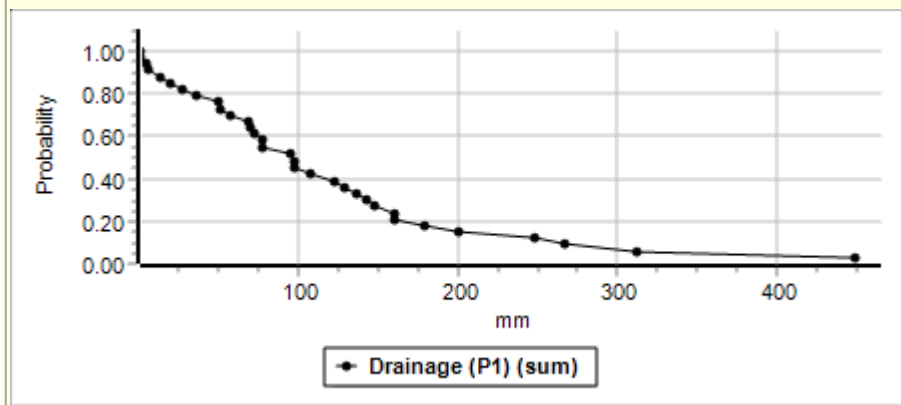
The probability (shown on the vertical axis) of the minimum ground cover in a year exceeding the value shown on the horizontal axis [1 Jan - 31 Dec, 1980-2012]



Cumulative distribution function for deep drainage [Lamb Jul - 9/ha]

The probability (shown on the vertical axis) of the total amount of soil water draining below the root zone each year exceeding the value shown on the

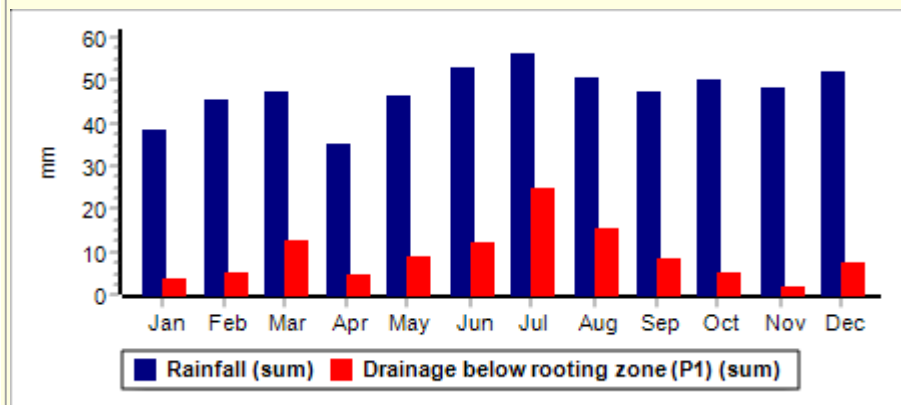
horizontal axis (mm/y) [1 Jan - 31 Dec, 1980-2012]



**Timing of drainage
[Lamb Jul - 6/ha]**

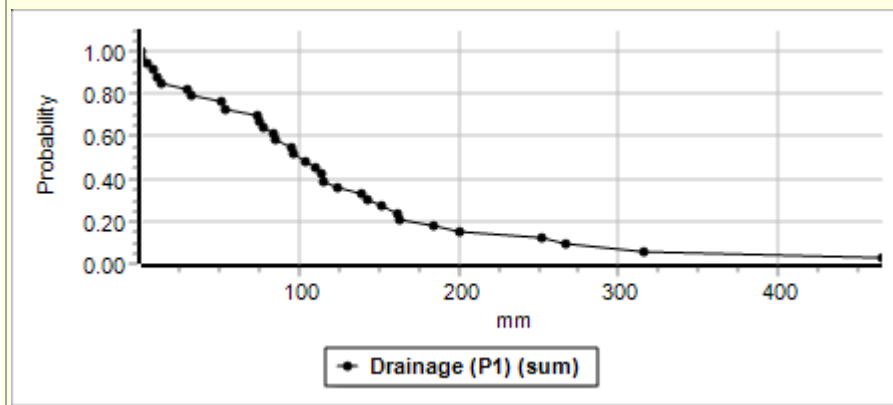
Long term average monthly rainfall (mm/month) and drainage of water below the root zone (mm/month)

Note: distributions are typically highly skewed [1 Jan - 31 Dec, 1980-2012]



**Cumulative distribution function for minimum ground cover
[Lamb Sep - 6/ha]**

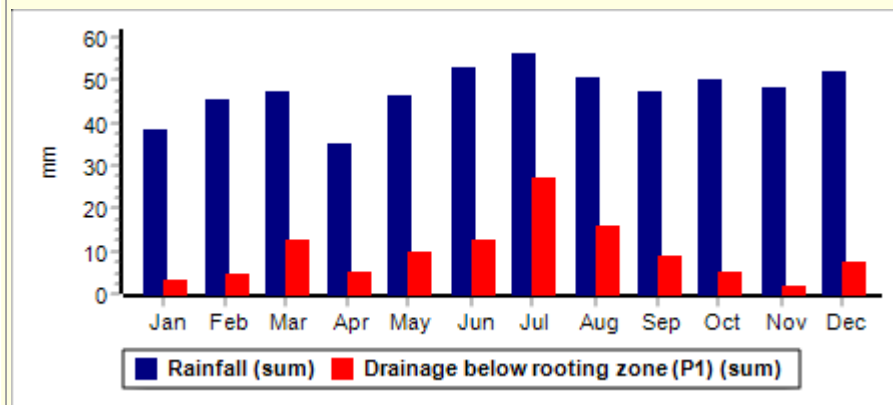
horizontal axis (mm/y) [1 Jan - 31 Dec, 1980-2012]



**Timing of drainage
[Lamb Jul - 9/ha]**

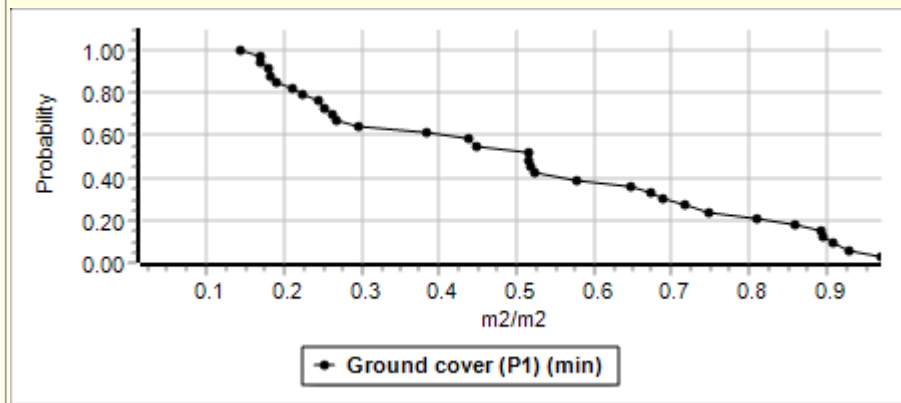
Long term average monthly rainfall (mm/month) and drainage of water below the root zone (mm/month)

Note: distributions are typically highly skewed [1 Jan - 31 Dec, 1980-2012]



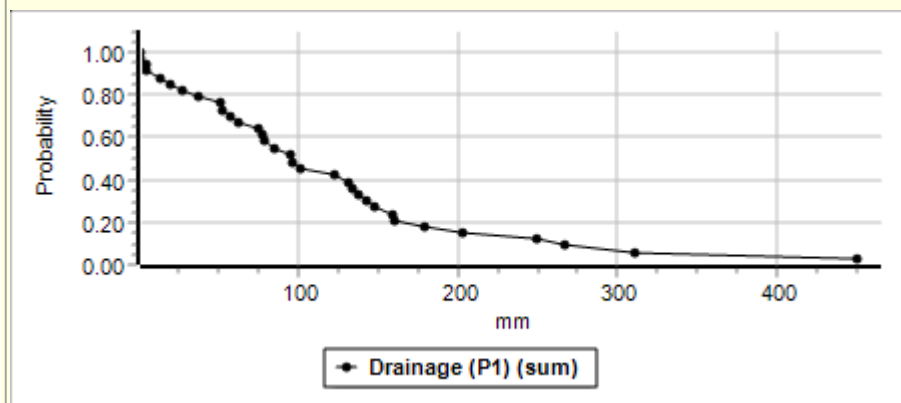
**Cumulative distribution function for minimum ground cover
[Lamb Sep - 9/ha]**

The probability (shown on the vertical axis) of the minimum ground cover in a year exceeding the value shown on the horizontal axis [1 Jan - 31 Dec, 1980-2012]



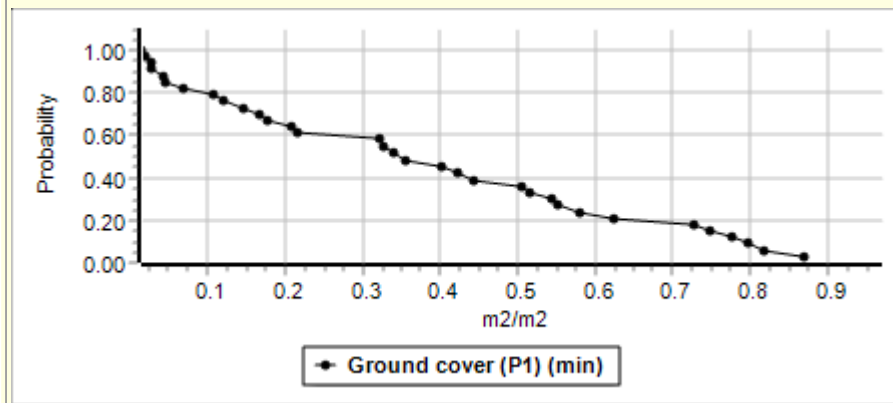
Cumulative distribution function for deep drainage [Lamb Sep - 6/ha]

The probability (shown on the vertical axis) of the total amount of soil water draining below the root zone each year exceeding the value shown on the horizontal axis (mm/y) [1 Jan - 31 Dec, 1980-2012]



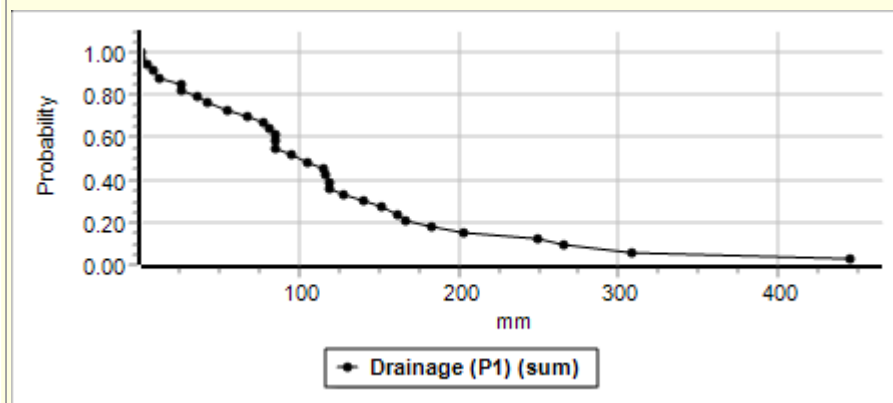
Timing of drainage

The probability (shown on the vertical axis) of the minimum ground cover in a year exceeding the value shown on the horizontal axis [1 Jan - 31 Dec, 1980-2012]



Cumulative distribution function for deep drainage [Lamb Sep - 9/ha]

The probability (shown on the vertical axis) of the total amount of soil water draining below the root zone each year exceeding the value shown on the horizontal axis (mm/y) [1 Jan - 31 Dec, 1980-2012]

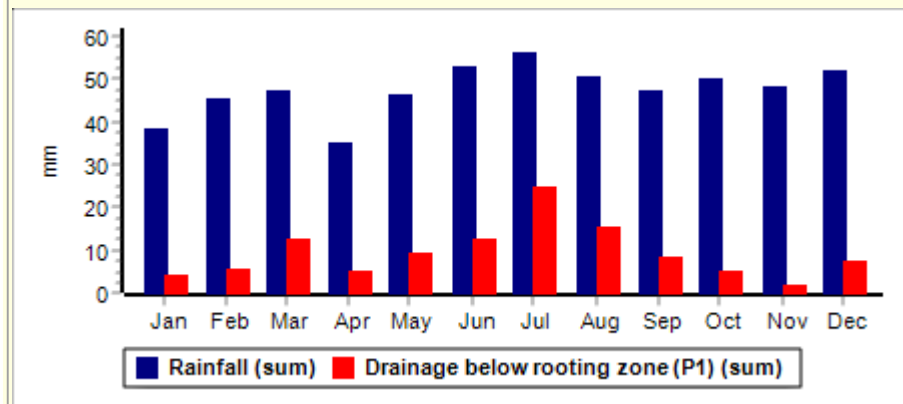


Timing of drainage

[Lamb Sep - 6/ha]

Long term average monthly rainfall (mm/month) and drainage of water below the root zone (mm/month)

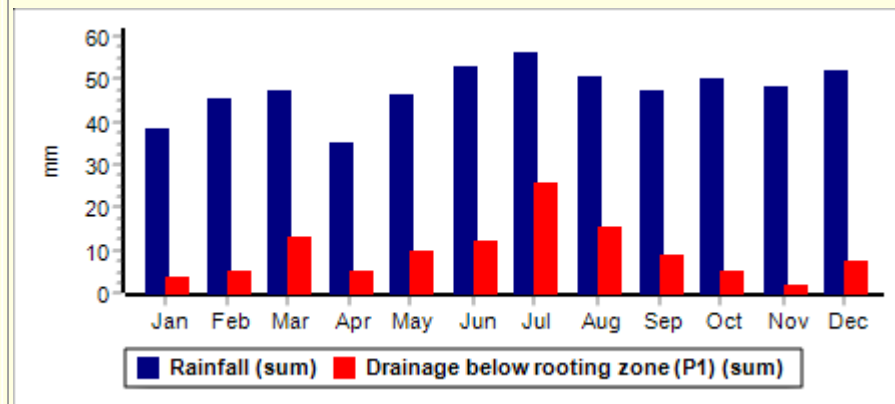
Note: distributions are typically highly skewed [1 Jan - 31 Dec, 1980-2012]



[Lamb Sep - 9/ha]

Long term average monthly rainfall (mm/month) and drainage of water below the root zone (mm/month)

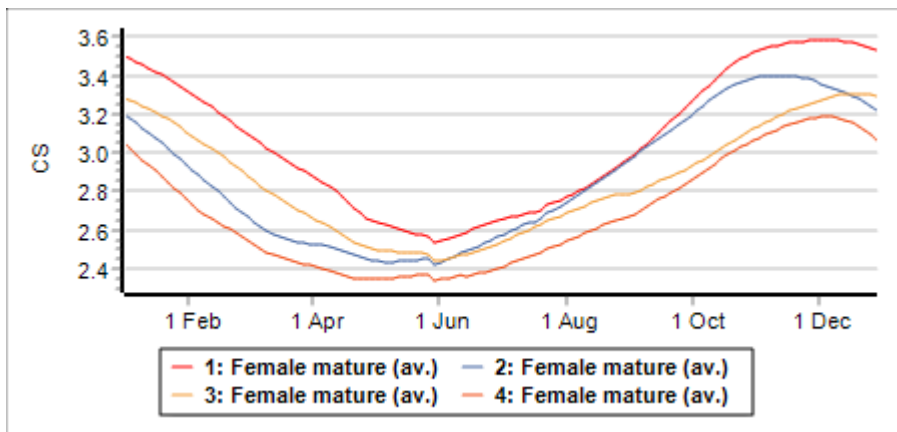
Note: distributions are typically highly skewed [1 Jan - 31 Dec, 1980-2012]



Average differences between treatments

Body condition of mature ewes for all treatments.

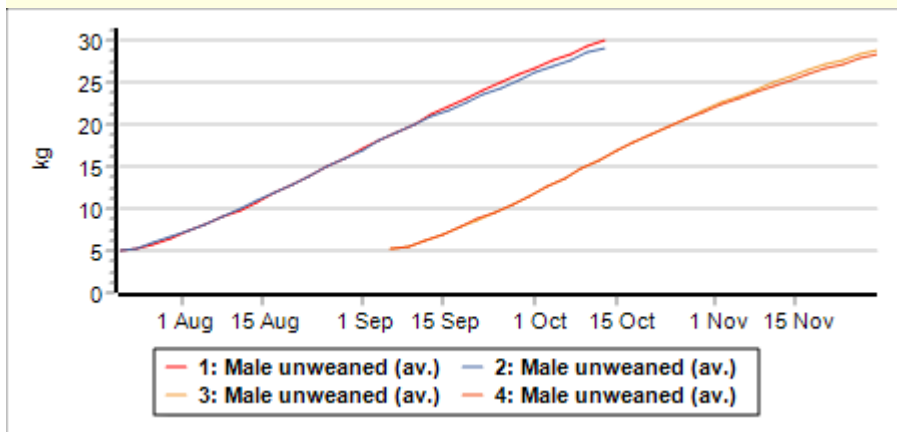
Long term average body condition score [1 Jan - 31 Dec, 1980-2012]



Treatment	Lambing date	Stocking rate
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Live weight of wether lambs to weaning for all treatments.

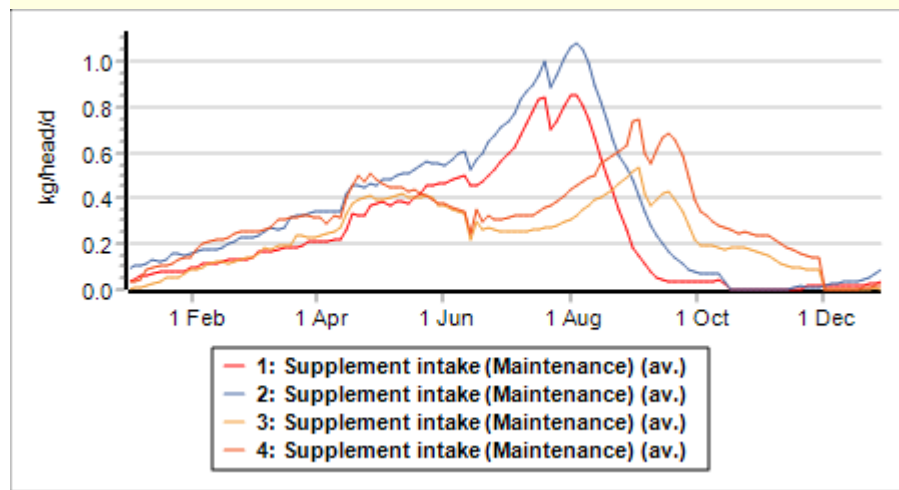
Long term average live weight, including fleece (kg/head) [6 Sep - 1 Dec, 1980-2012]



Treatment	Lambing date	Stocking rate
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Supplement intake of ewes for all treatments.

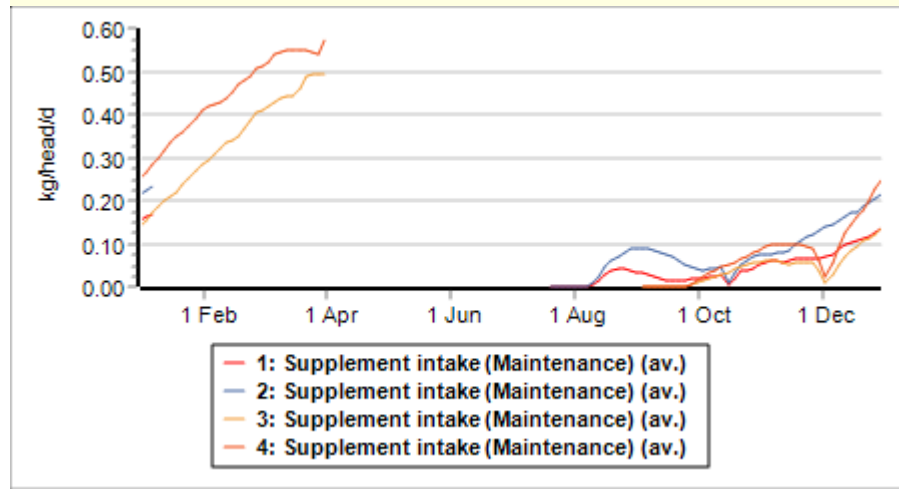
Long term average daily supplement intake by type (kg/head/day) [1 Jan - 31 Dec, 1980-2012]



Treatment	Lambing date	Stocking rate
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Supplement intake of all lambs for all treatments.

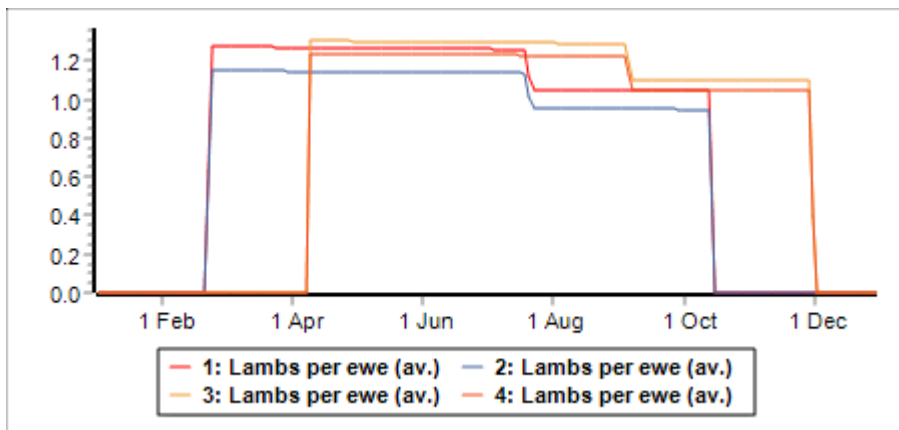
Long term average daily supplement intake by type (kg/head/day) [1 Jan - 31 Dec, 1980-2012]



Treatment	Lambing date	Stocking rate
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Lambs per ewe for all treatments.

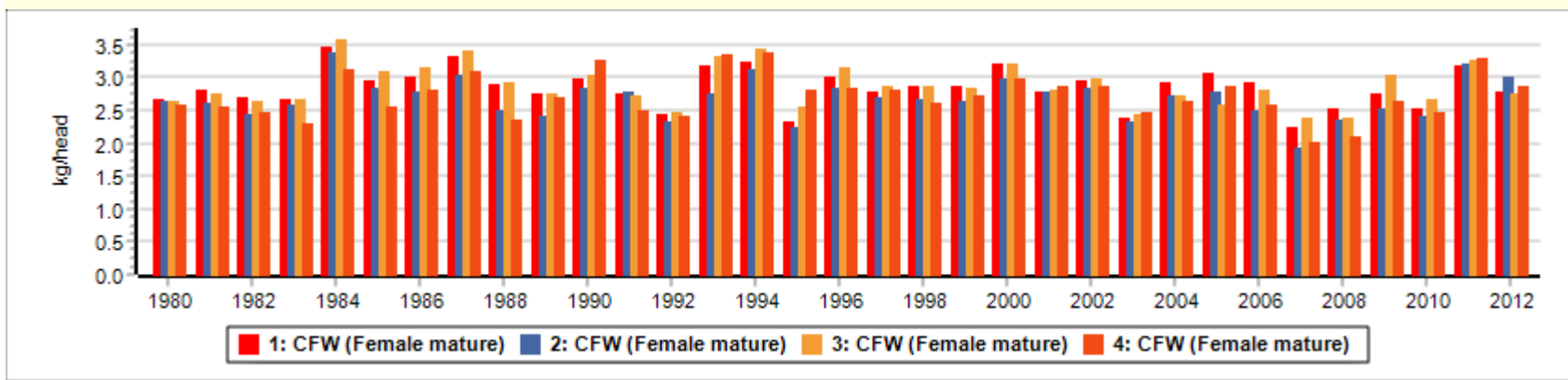
Long term average [1 Jan - 31 Dec, 1980-2012]



Treatment	Lambing date	Stocking rate
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Clean fleece weight shorn for mature female sheep for all treatments.

Clean fleece weight shorn (CFW) by year (kg/head) [1 Jan - 31 Dec, 1980-2012]

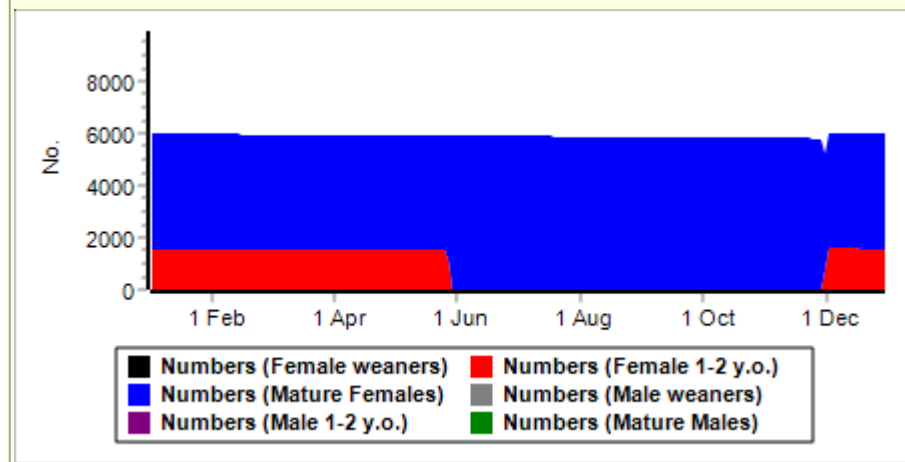


Treatment	Lambing date	Stocking rate
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Numbers in main flock

[Lamb Jul - 6/ha]

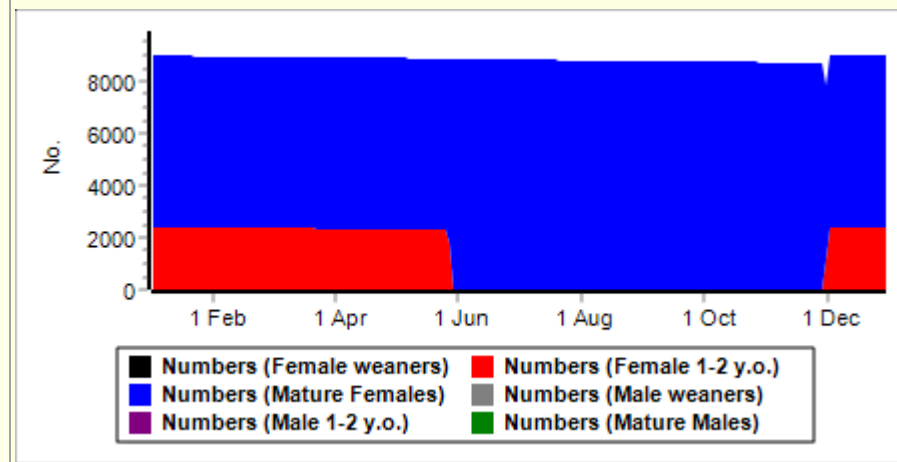
Long term average total number of head [1 Jan - 31 Dec, 1980-2012]



Numbers in main flock

[Lamb Jul - 9/ha]

Long term average total number of head [1 Jan - 31 Dec, 1980-2012]



Numbers in main flock

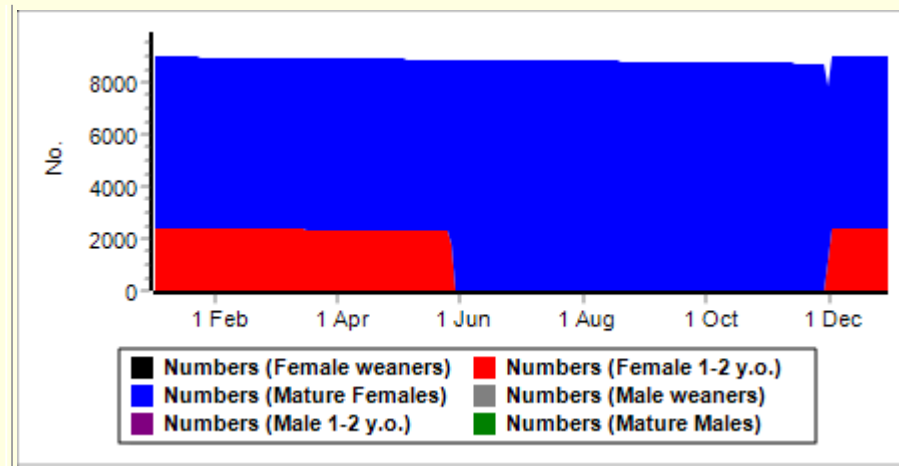
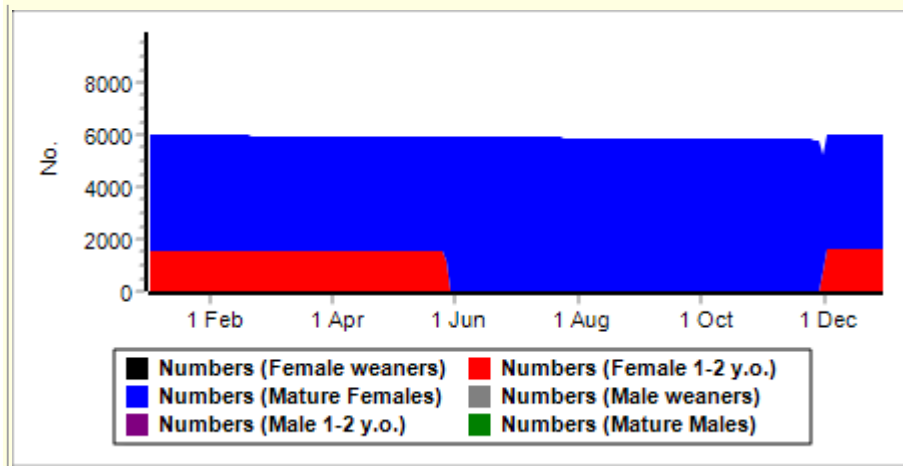
[Lamb Sep - 6/ha]

Long term average total number of head [1 Jan - 31 Dec, 1980-2012]

Numbers in main flock

[Lamb Sep - 9/ha]

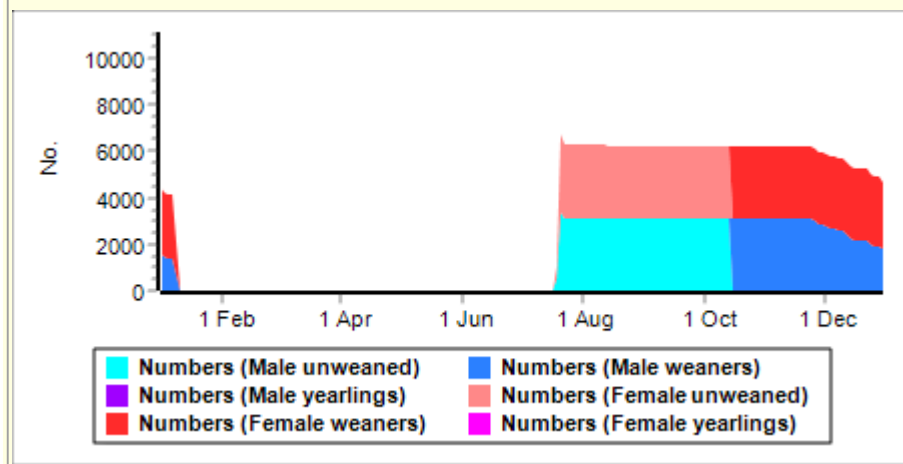
Long term average total number of head [1 Jan - 31 Dec, 1980-2012]



Numbers of young sheep

[Lamb Jul - 6/ha]

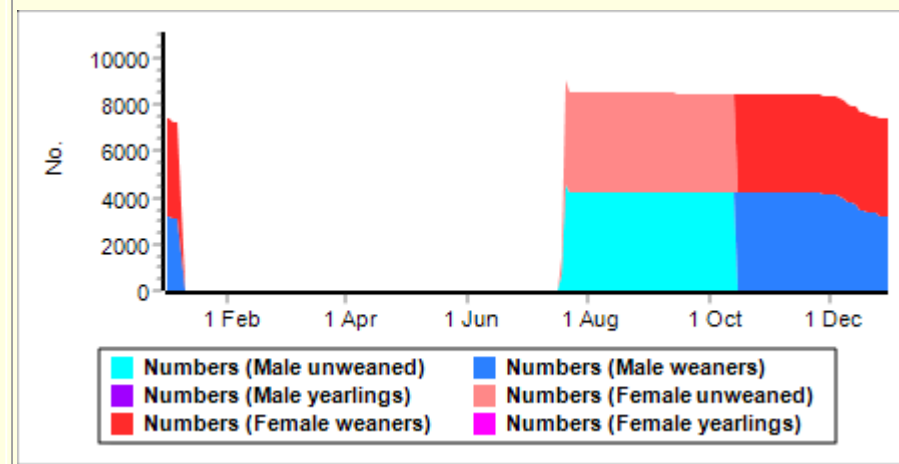
Long term average total number of head [1 Jan - 31 Dec, 1980-2012]



Numbers of young sheep

[Lamb Jul - 9/ha]

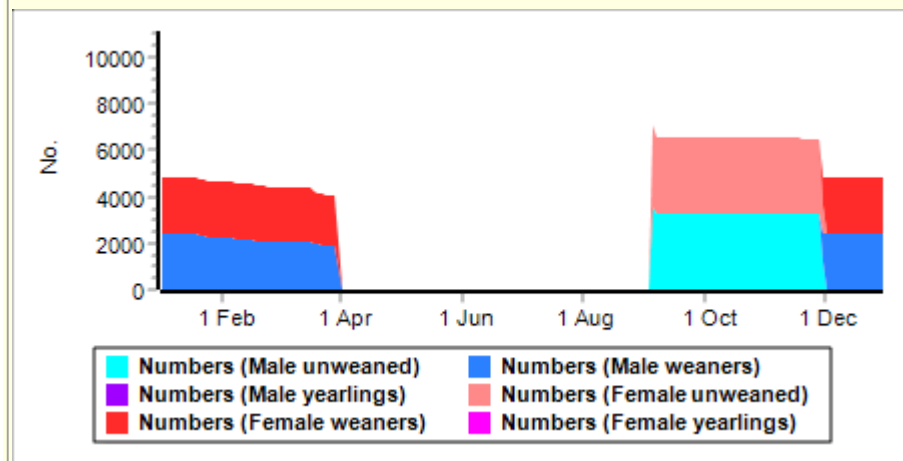
Long term average total number of head [1 Jan - 31 Dec, 1980-2012]



Numbers of young sheep

[Lamb Sep - 6/ha]

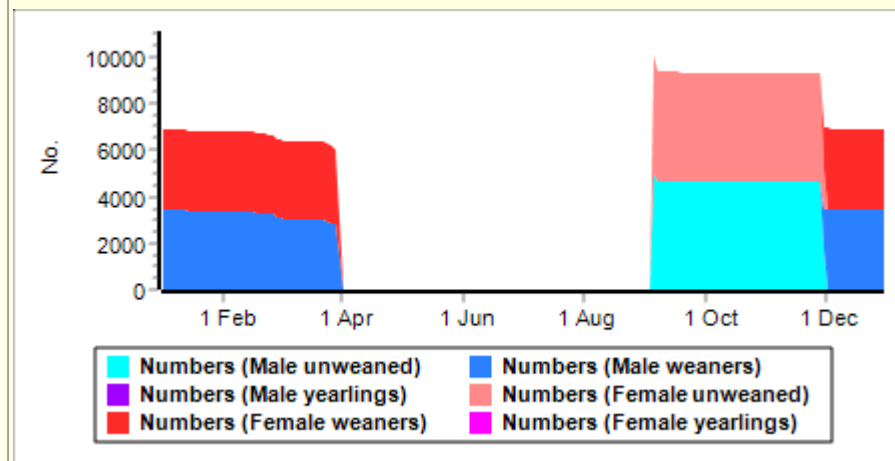
Long term average total number of head [1 Jan - 31 Dec, 1980-2012]



Numbers of young sheep

[Lamb Sep - 9/ha]

Long term average total number of head [1 Jan - 31 Dec, 1980-2012]



Stocking rate for each paddock

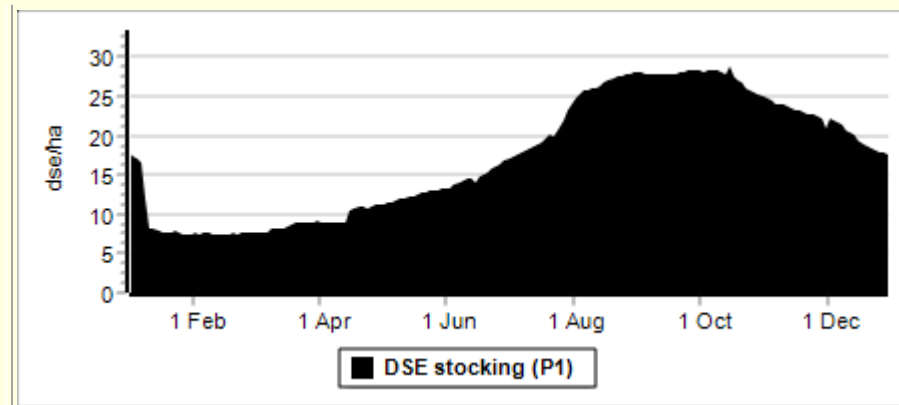
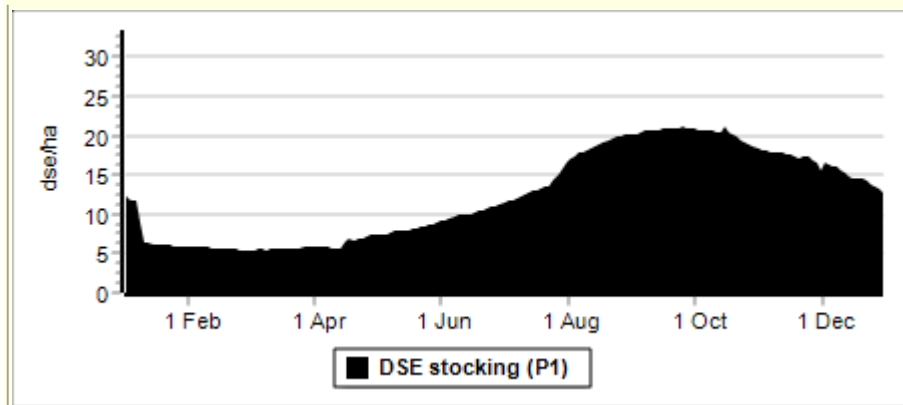
[Lamb Jul - 6/ha]

Long term average stocking rate in DSE for each paddock [1 Jan - 31 Dec, 1980-2012]

Stocking rate for each paddock

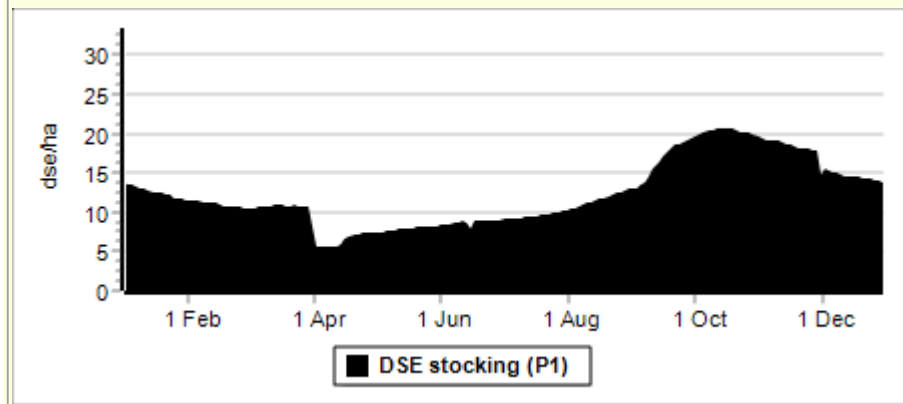
[Lamb Jul - 9/ha]

Long term average stocking rate in DSE for each paddock [1 Jan - 31 Dec, 1980-2012]



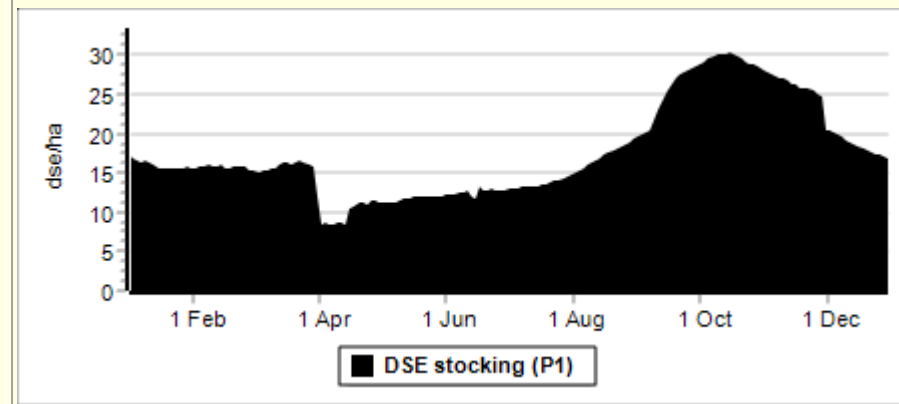
Stocking rate for each paddock [Lamb Sep - 6/ha]

Long term average stocking rate in DSE for each paddock [1 Jan - 31 Dec, 1980-2012]



Stocking rate for each paddock [Lamb Sep - 9/ha]

Long term average stocking rate in DSE for each paddock [1 Jan - 31 Dec, 1980-2012]

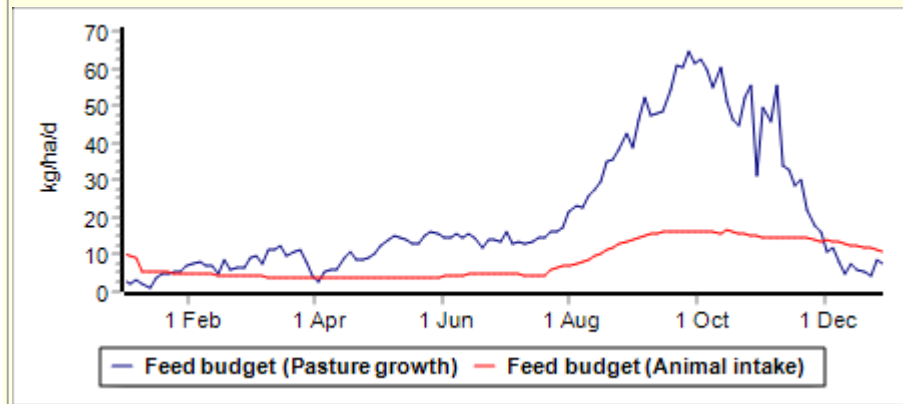


Feed budget for whole enterprise

Feed budget for whole enterprise

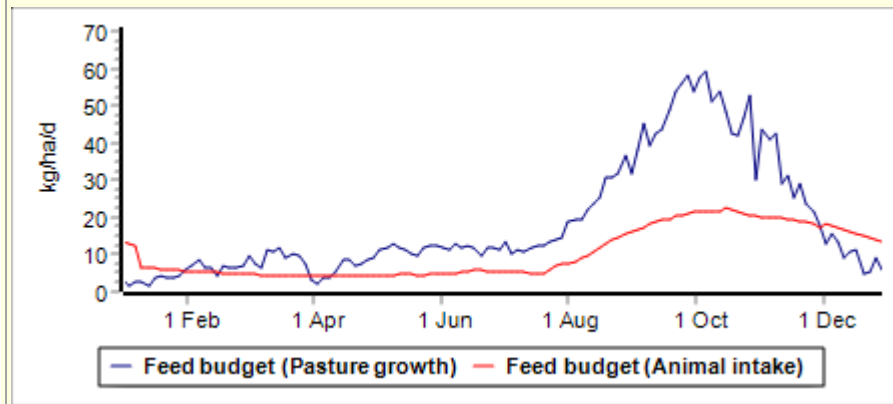
[Lamb Jul - 6/ha]

Long term average pasture growth and pasture intake (kg DM/ha/d) [1 Jan - 31 Dec, 1980-2012]



[Lamb Jul - 9/ha]

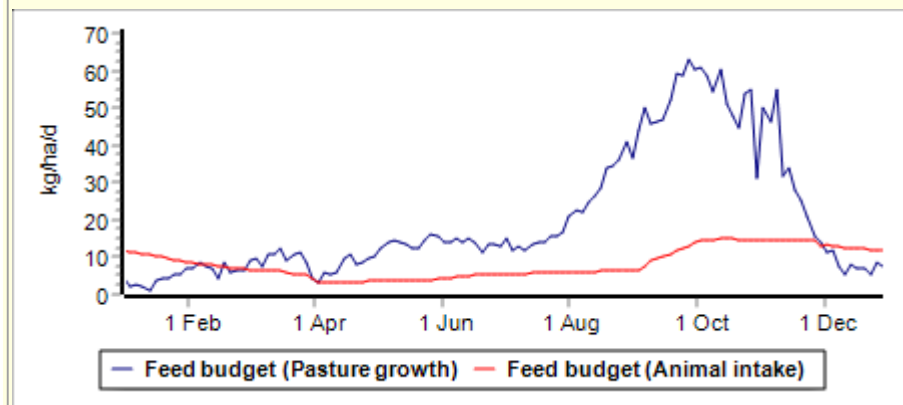
Long term average pasture growth and pasture intake (kg DM/ha/d) [1 Jan - 31 Dec, 1980-2012]



Feed budget for whole enterprise

[Lamb Sep - 6/ha]

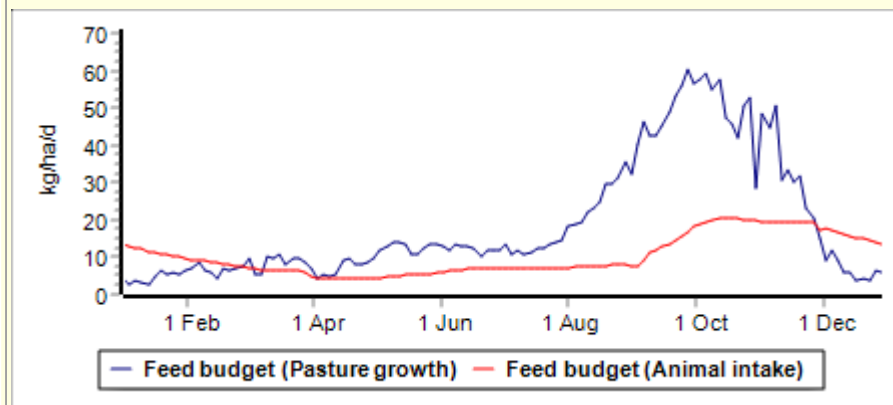
Long term average pasture growth and pasture intake (kg DM/ha/d) [1 Jan - 31 Dec, 1980-2012]



Feed budget for whole enterprise

[Lamb Sep - 9/ha]

Long term average pasture growth and pasture intake (kg DM/ha/d) [1 Jan - 31 Dec, 1980-2012]



Pasture utilization rate

The long term average amount of pasture consumed by all stock as a proportion of the amount of pasture grown over the period analysed (%) [31 Dec - 31 Dec, 2012-2012]

Lambing date	Stocking rate	Utilization rate
		%
Lamb Jul	6/ha	41
Lamb Jul	9/ha	56
Lamb Sep	6/ha	41
Lamb Sep	9/ha	55

Unweaned lamb growth rate

Average liveweight gain (kg/head/day) of lambs between birth and weaning [21 Jul - 15 Oct, 1980-2012]

Lambing date	Stocking rate	Weight change (av.)
		kg/d
Lamb Jul	6/ha	0.274
Lamb Jul	9/ha	0.265
Lamb Sep	6/ha	0.261
Lamb Sep	9/ha	0.256

Lamb average sale weight

Long term average live weight of lambs at sale (kg/head) [1 Jan - 31 Dec, 1980-2012]

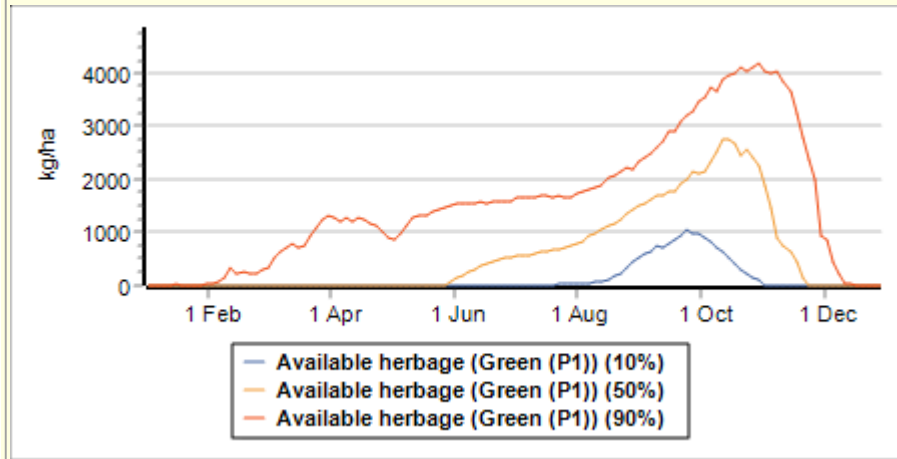
Lambing date	Stocking rate	Wether Lambs	Ewe Lambs
		kg	kg
Lamb Jul	6/ha	42.86	39.00
Lamb Jul	9/ha	41.57	37.44
Lamb Sep	6/ha	43.66	38.61
Lamb Sep	9/ha	43.20	38.04

Summary of variability of each treatment

Pasture details for the first 5 paddocks

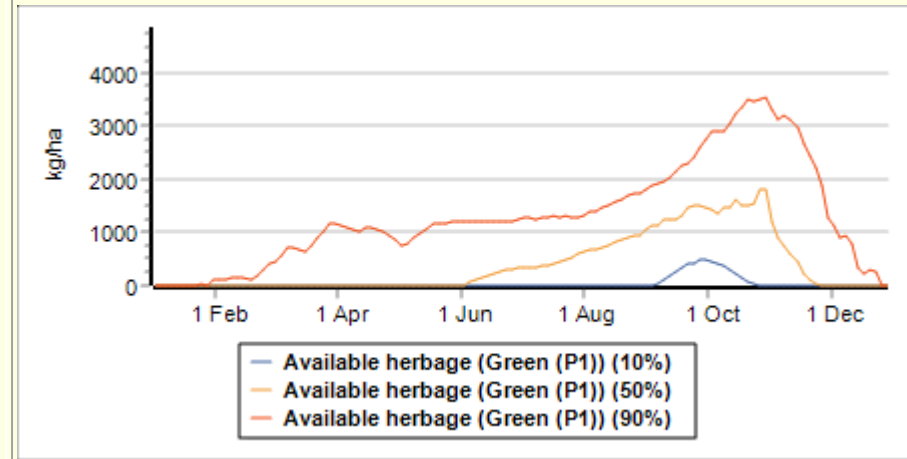
Available green pasture - Paddock 1 [Lamb Jul - 6/ha]

Percentiles for green available herbage (kg DM/ha) [1 Jan - 31 Dec, 1980-2012]



Available green pasture - Paddock 1 [Lamb Jul - 9/ha]

Percentiles for green available herbage (kg DM/ha) [1 Jan - 31 Dec, 1980-2012]

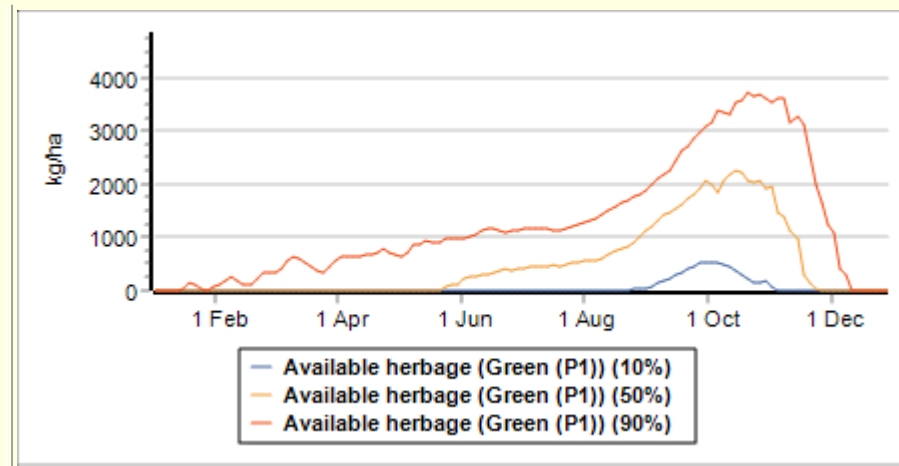
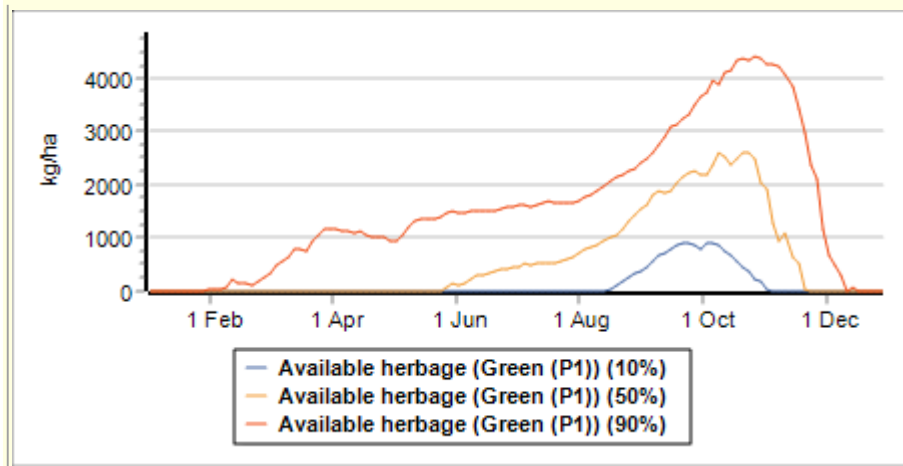


Available green pasture - Paddock 1 [Lamb Sep - 6/ha]

Percentiles for green available herbage (kg DM/ha) [1 Jan - 31 Dec, 1980-2012]

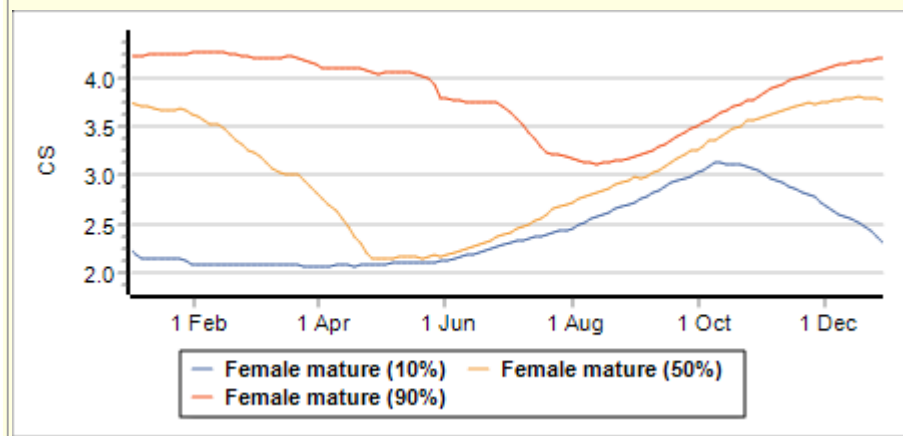
Available green pasture - Paddock 1 [Lamb Sep - 9/ha]

Percentiles for green available herbage (kg DM/ha) [1 Jan - 31 Dec, 1980-2012]



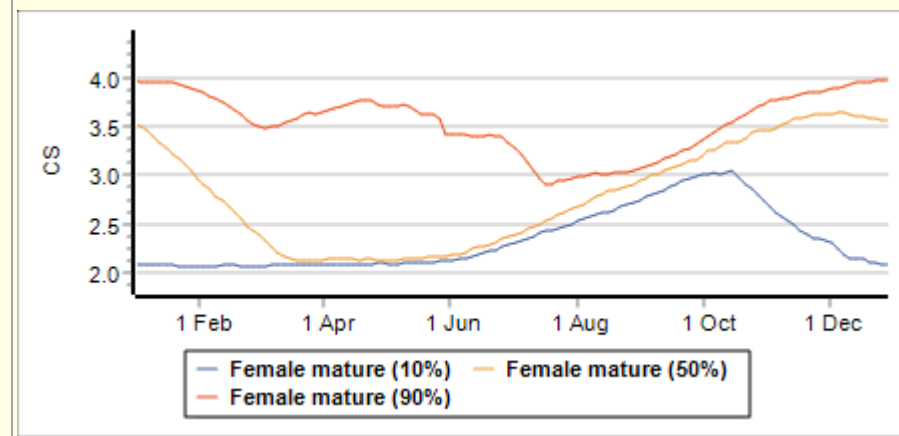
Body condition score (CS) of mature ewes [Lamb Jul - 6/ha]

Percentiles for ewe body condition score [1 Jan - 31 Dec, 1980-2012]



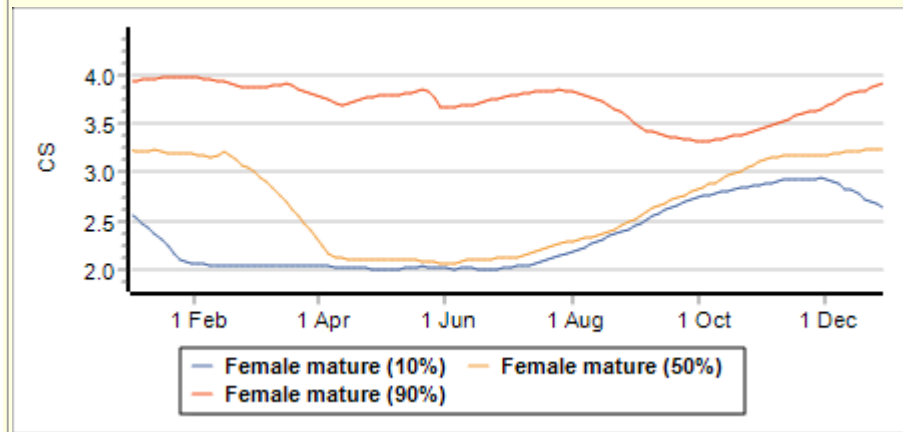
Body condition score (CS) of mature ewes [Lamb Jul - 9/ha]

Percentiles for ewe body condition score [1 Jan - 31 Dec, 1980-2012]



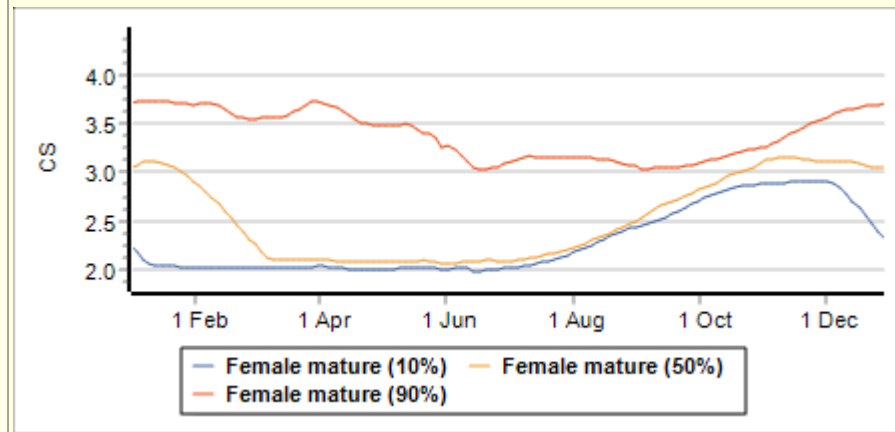
**Body condition score (CS) of mature ewes
[Lamb Sep - 6/ha]**

Percentiles for ewe body condition score [1 Jan - 31 Dec, 1980-2012]



**Body condition score (CS) of mature ewes
[Lamb Sep - 9/ha]**

Percentiles for ewe body condition score [1 Jan - 31 Dec, 1980-2012]



Supplement intake - main flock

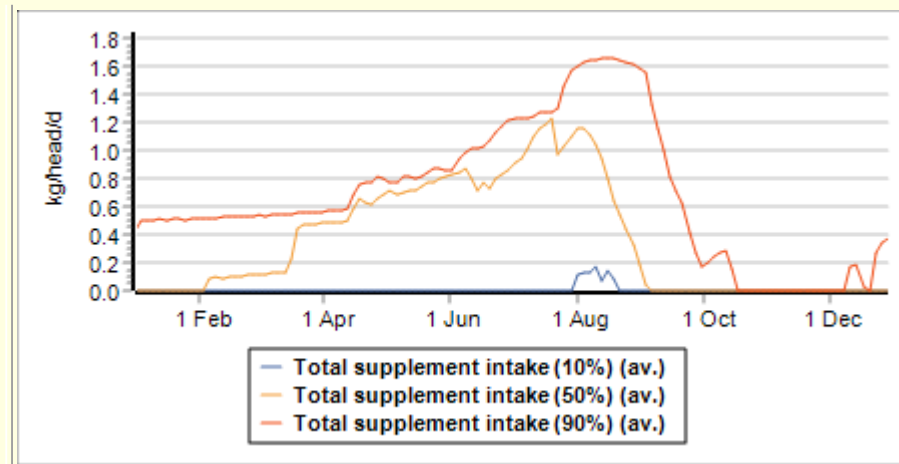
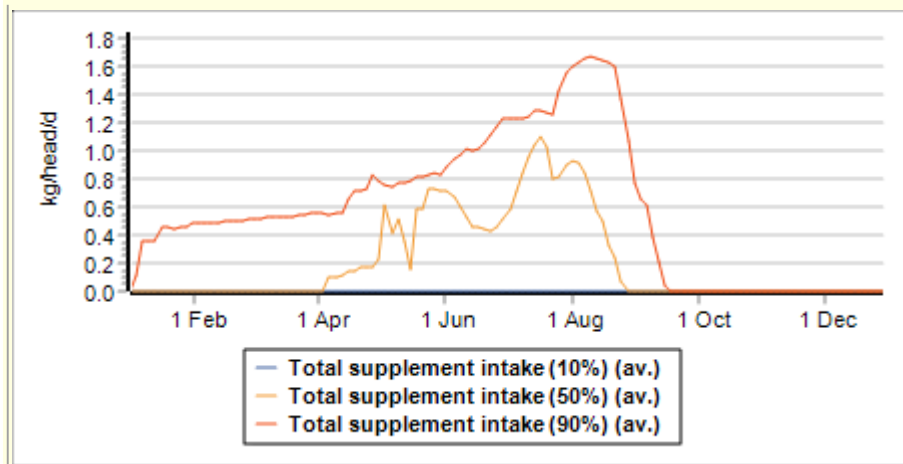
[Lamb Jul - 6/ha]

Percentiles for daily total supplement intake (kg/head/day) [1 Jan - 31 Dec, 1980-2012]

Supplement intake - main flock

[Lamb Jul - 9/ha]

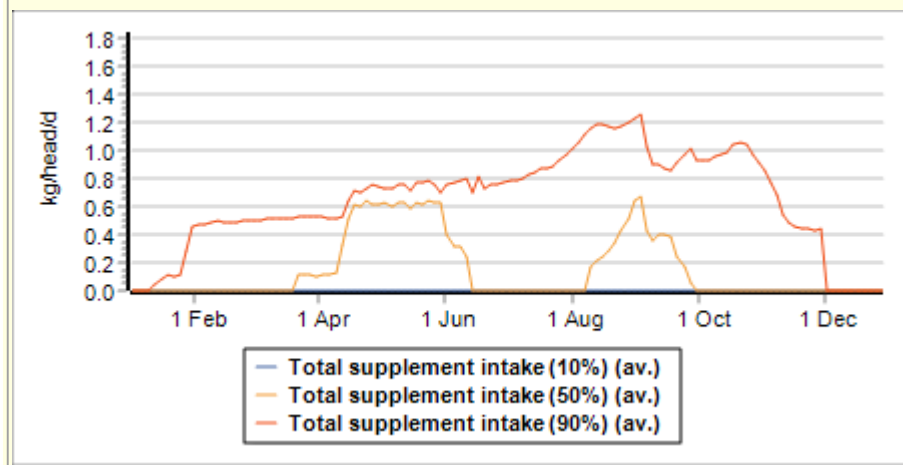
Percentiles for daily total supplement intake (kg/head/day) [1 Jan - 31 Dec, 1980-2012]



Supplement intake - main flock

[Lamb Sep - 6/ha]

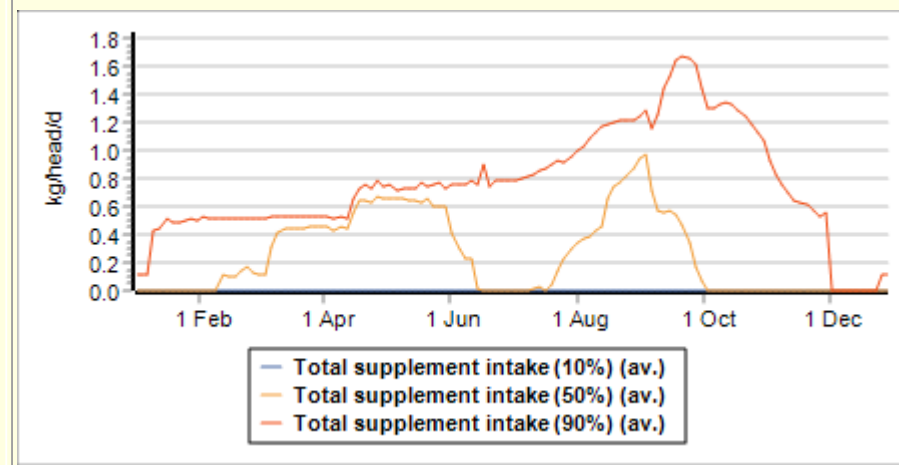
Percentiles for daily total supplement intake (kg/head/day) [1 Jan - 31 Dec, 1980-2012]



Supplement intake - main flock

[Lamb Sep - 9/ha]

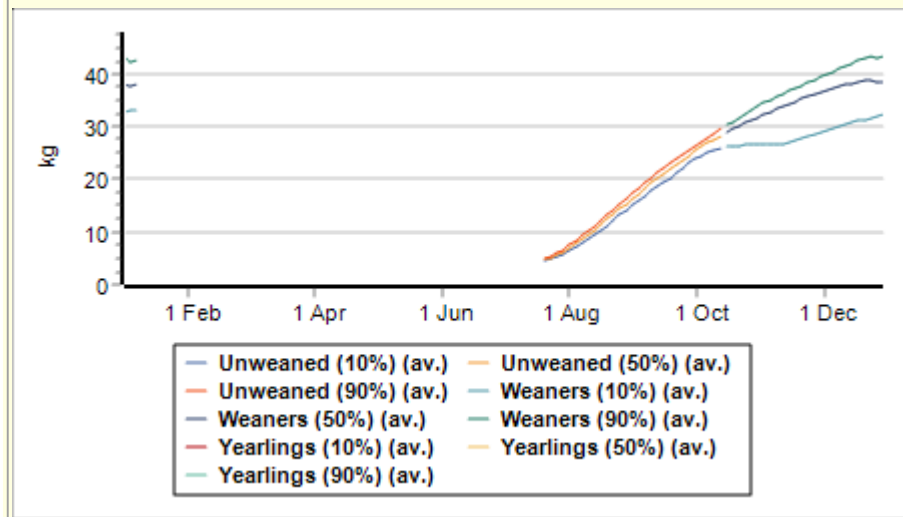
Percentiles for daily total supplement intake (kg/head/day) [1 Jan - 31 Dec, 1980-2012]



Live weight of young female sheep

[Lamb Jul - 6/ha]

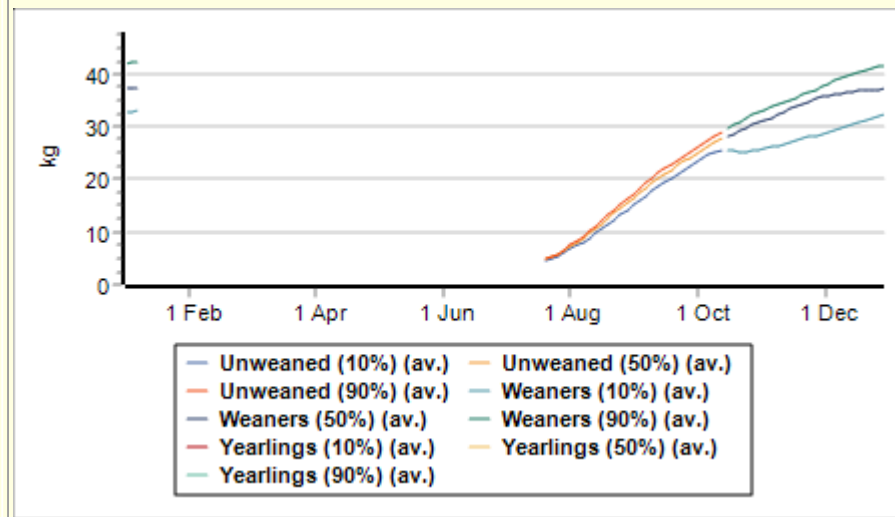
Percentiles for live weight of young female sheep (kg/head) [1 Jan - 31 Dec, 1980-2012]



Live weight of young female sheep

[Lamb Jul - 9/ha]

Percentiles for live weight of young female sheep (kg/head) [1 Jan - 31 Dec, 1980-2012]



Live weight of young female sheep

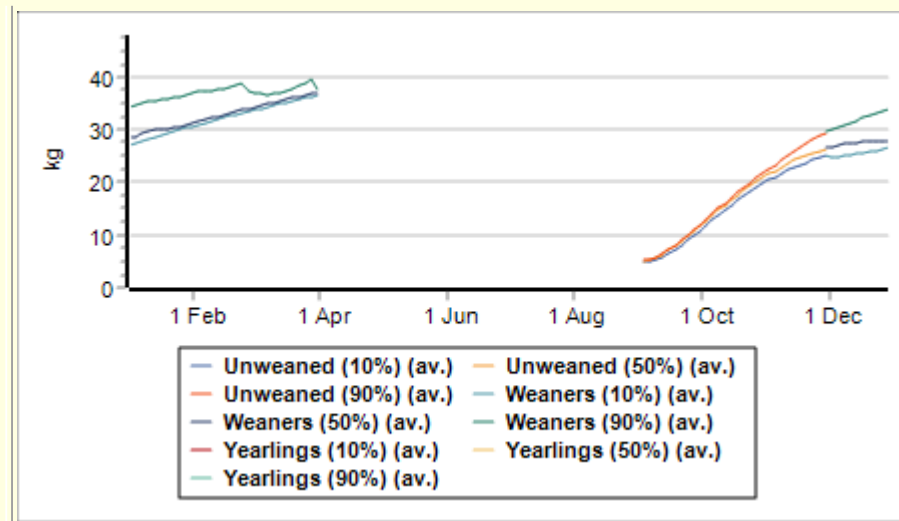
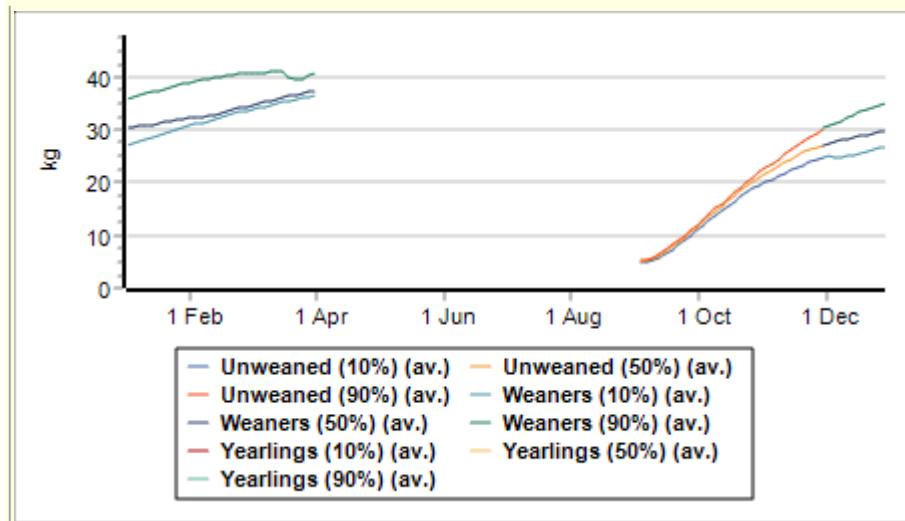
[Lamb Sep - 6/ha]

Percentiles for live weight of young female sheep (kg/head) [1 Jan - 31 Dec, 1980-2012]

Live weight of young female sheep

[Lamb Sep - 9/ha]

Percentiles for live weight of young female sheep (kg/head) [1 Jan - 31 Dec, 1980-2012]



Comparisons of treatments over years

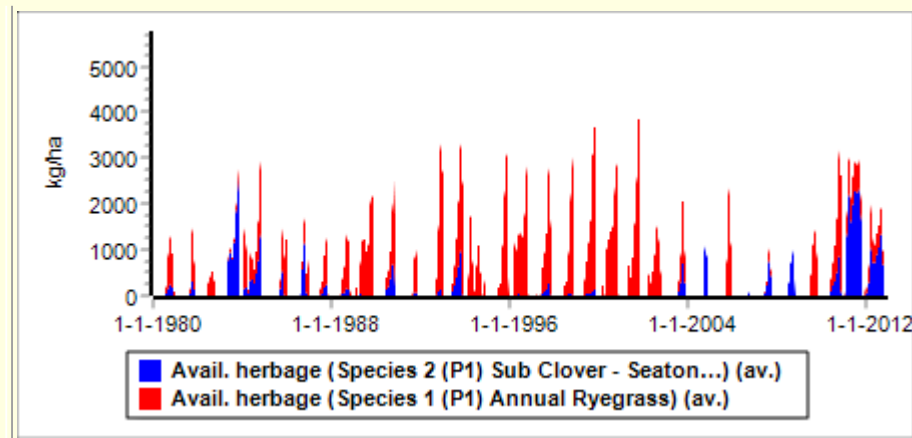
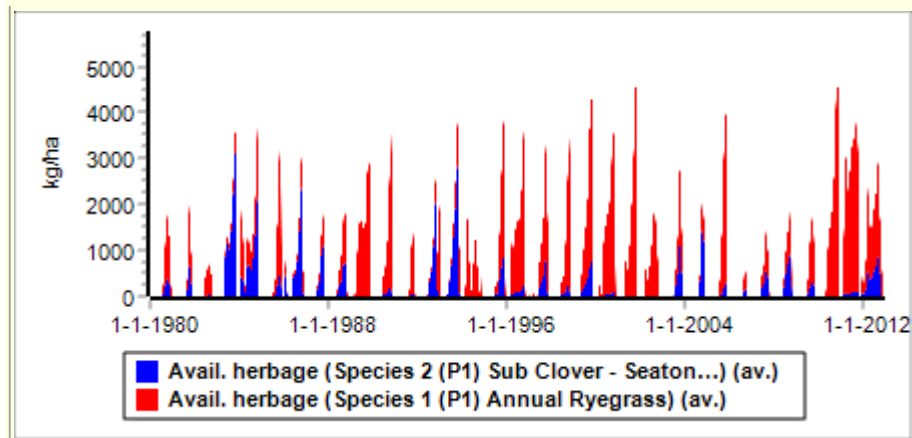
Pasture details for the first 5 paddocks

Pasture composition - Paddock 1 [Lamb Jul - 6/ha]

Green available herbage by species (kg DM/ha) [1/01/1980 - 31/12/2012]

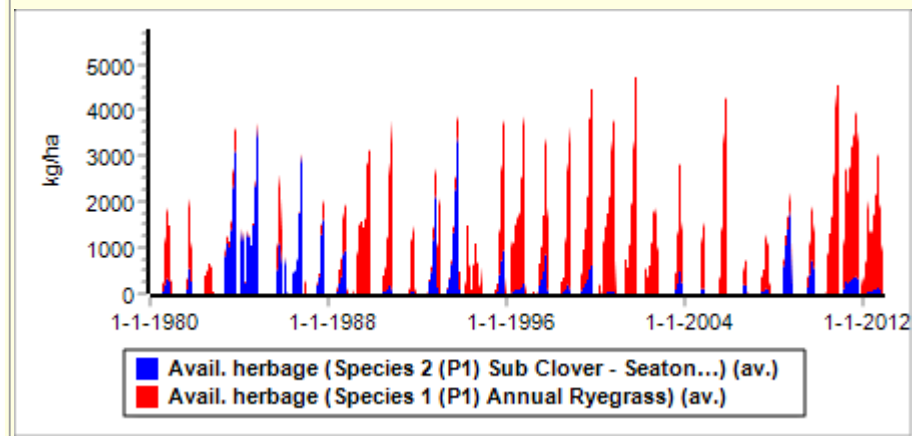
Pasture composition - Paddock 1 [Lamb Jul - 9/ha]

Green available herbage by species (kg DM/ha) [1/01/1980 - 31/12/2012]



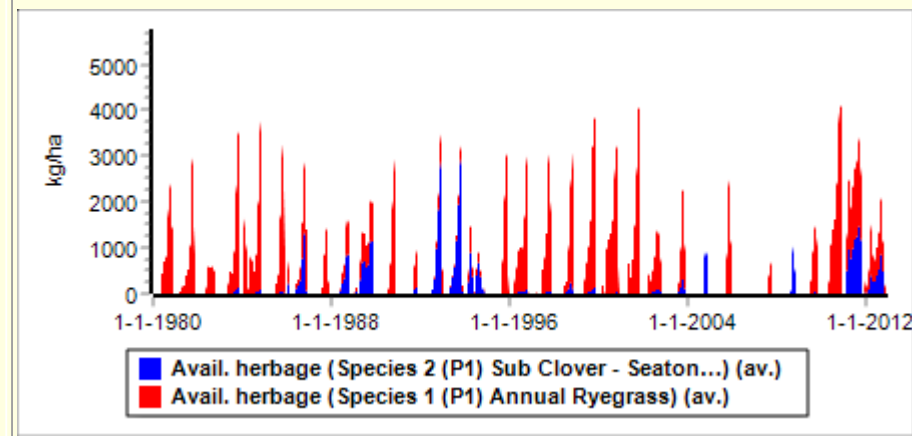
**Pasture composition - Paddock 1
[Lamb Sep - 6/ha]**

Green available herbage by species (kg DM/ha) [1/01/1980 - 31/12/2012]



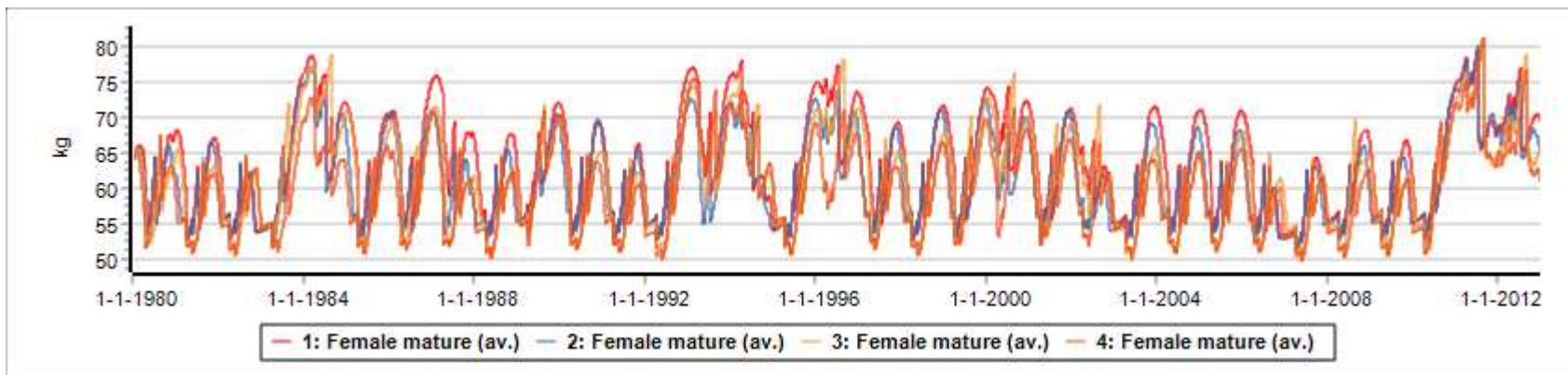
**Pasture composition - Paddock 1
[Lamb Sep - 9/ha]**

Green available herbage by species (kg DM/ha) [1/01/1980 - 31/12/2012]



Mature female animal liveweight for all treatments.

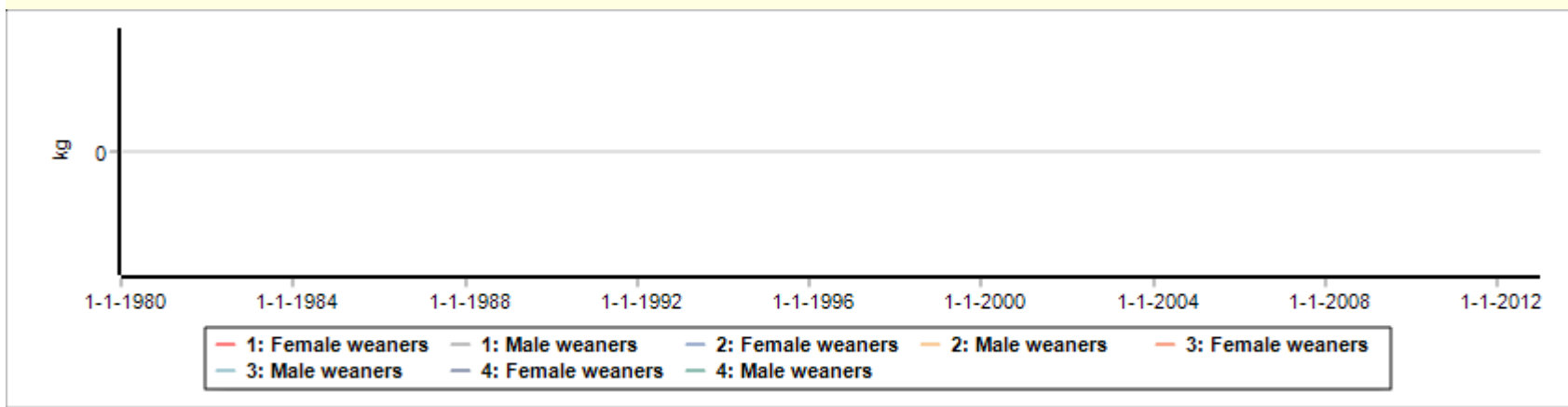
Live weight of the mature ewes [1/01/1980 - 31/12/2012]



Treatment	Lambing date	Stocking rate
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Weaned animal liveweight for all treatments.

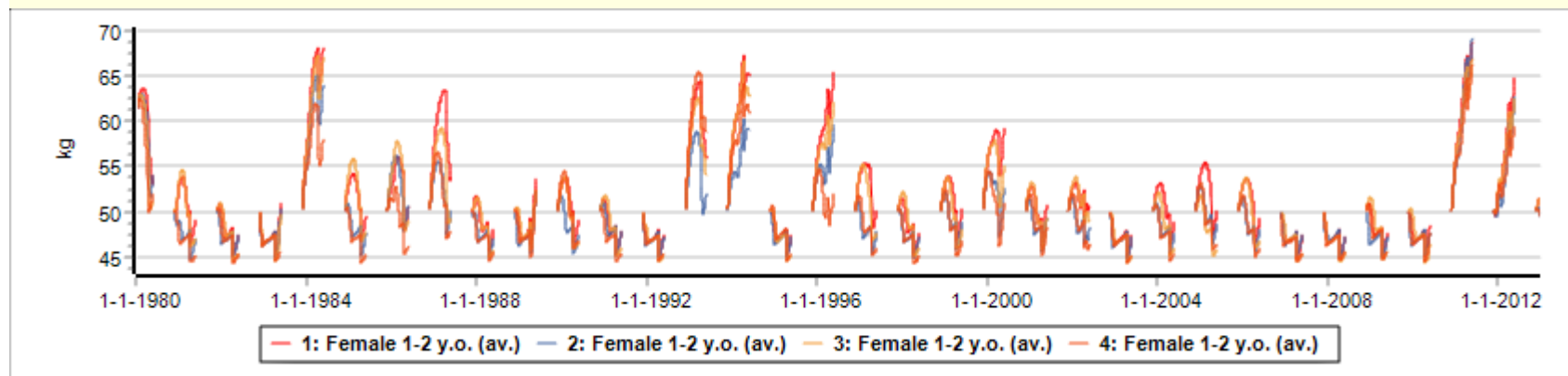
Live weight of the weaners [1/01/1980 - 31/12/2012]



Treatment	Lambing date	Stocking rate
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Yearling liveweight for all treatments.

Live weight of the 1-2 year olds [1/01/1980 - 31/12/2012]



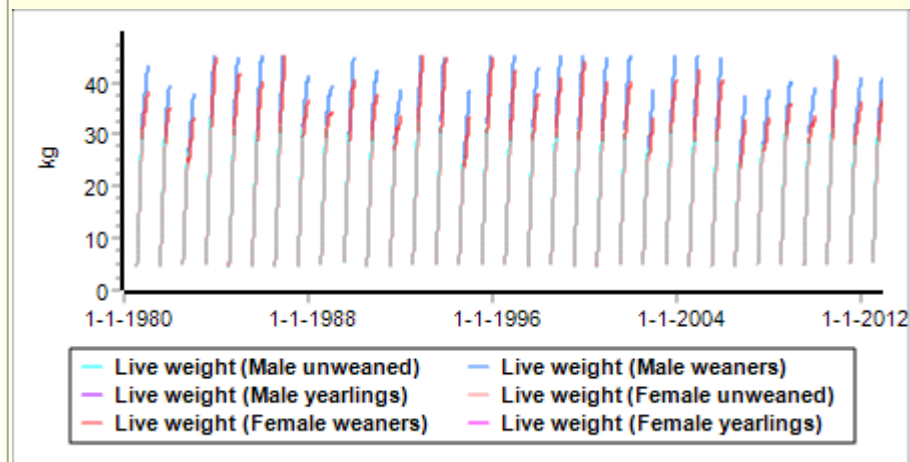
Treatment	Lambing date	Stocking rate
1	Lamb Jul	6/ha
2	Lamb Jul	9/ha
3	Lamb Sep	6/ha
4	Lamb Sep	9/ha

Live weight of young sheep

Live weight of young sheep

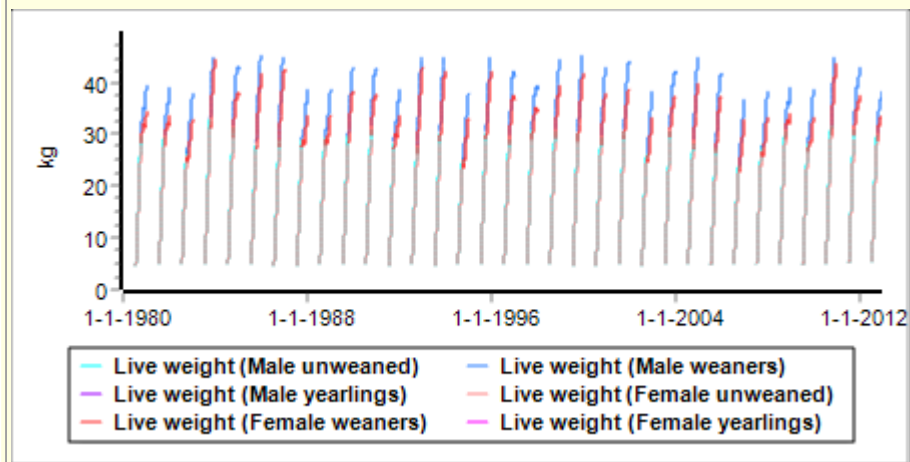
[Lamb Jul - 6/ha]

Live weight (kg/head) [1/01/1980 - 31/12/2012]



[Lamb Jul - 9/ha]

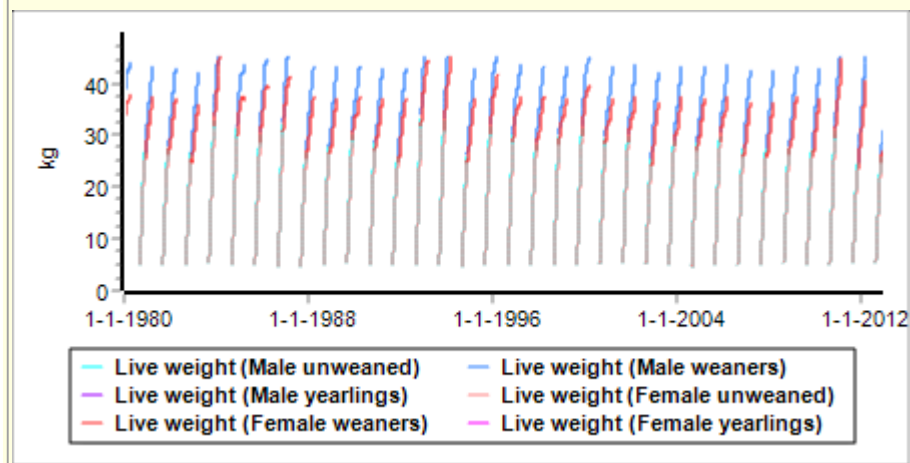
Live weight (kg/head) [1/01/1980 - 31/12/2012]



Live weight of young sheep

[Lamb Sep - 6/ha]

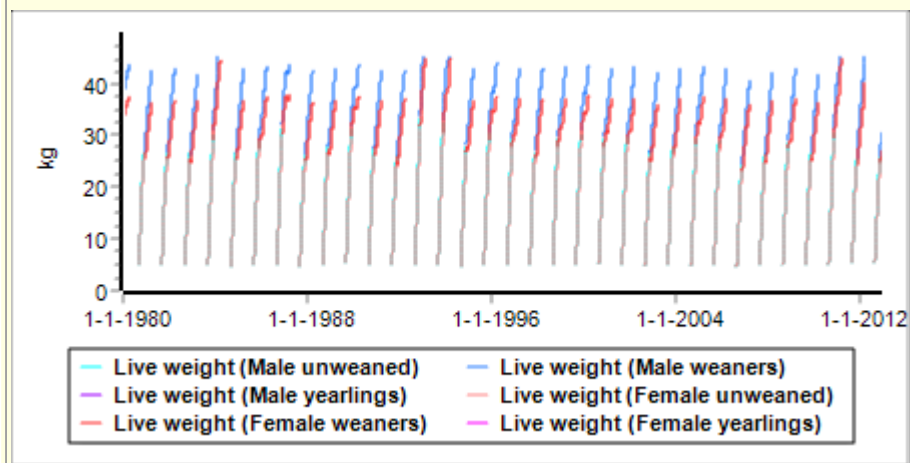
Live weight (kg/head) [1/01/1980 - 31/12/2012]



Live weight of young sheep

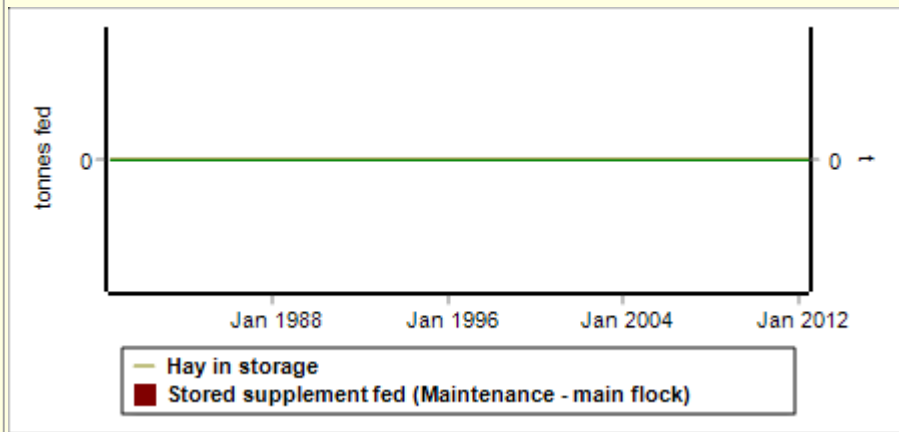
[Lamb Sep - 9/ha]

Live weight (kg/head) [1/01/1980 - 31/12/2012]



**Fodder in storage
[Lamb Jul - 6/ha]**

Fodder storage and monthly amount fed [1/07/1980 - 31/07/2012]



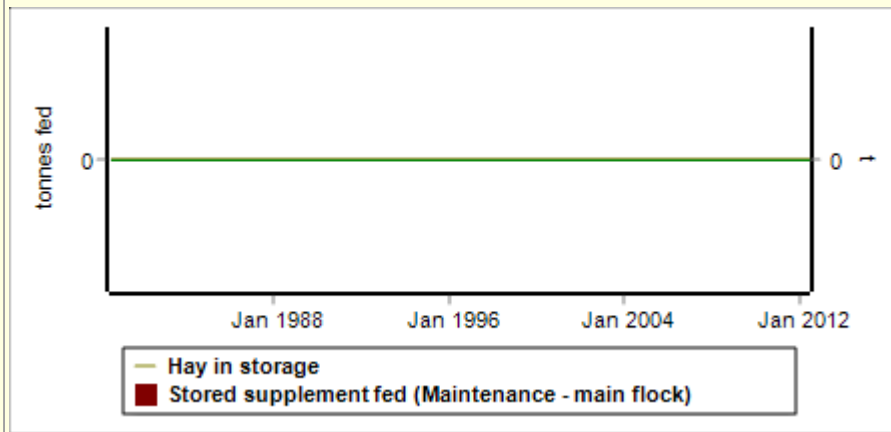
Supplement intake by type - main flock

[Lamb Jul - 6/ha]

Monthly supplement intake (kg/head/month) [1/01/1980 - 31/12/2012]

**Fodder in storage
[Lamb Jul - 9/ha]**

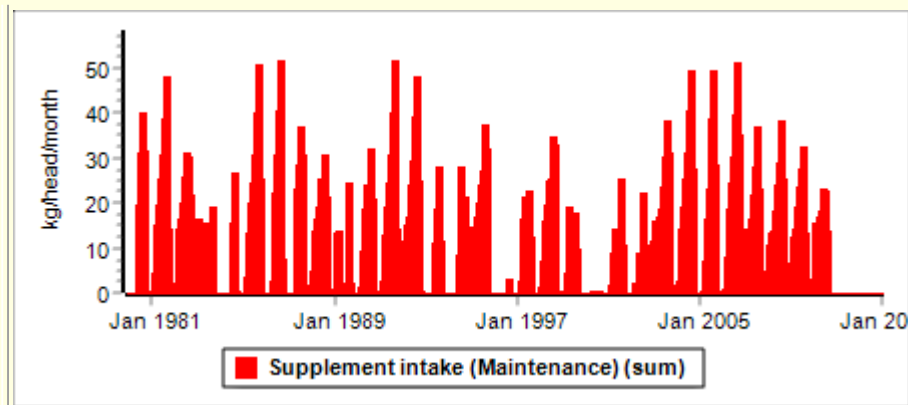
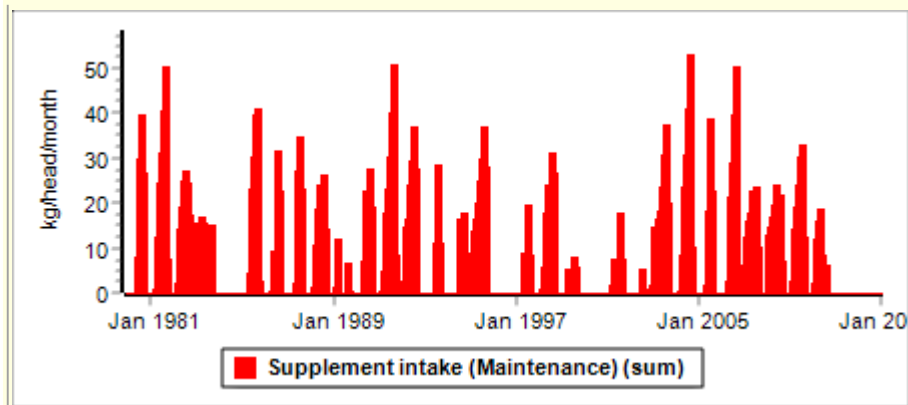
Fodder storage and monthly amount fed [1/07/1980 - 31/07/2012]



Supplement intake by type - main flock

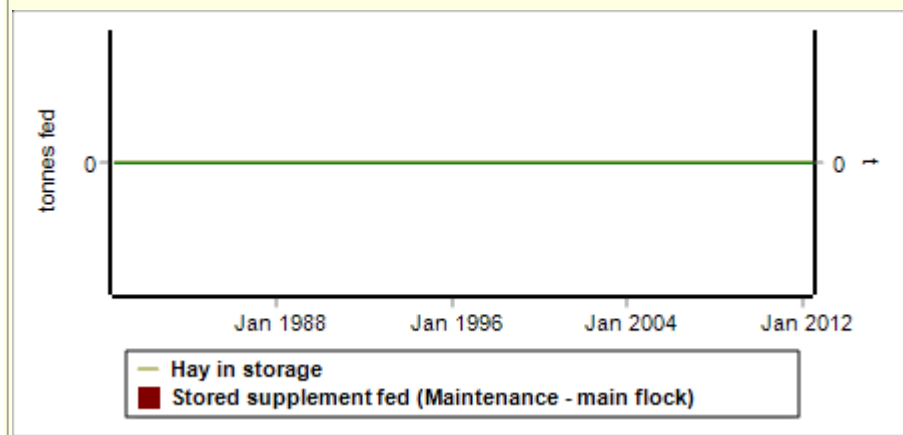
[Lamb Jul - 9/ha]

Monthly supplement intake (kg/head/month) [1/01/1980 - 31/12/2012]



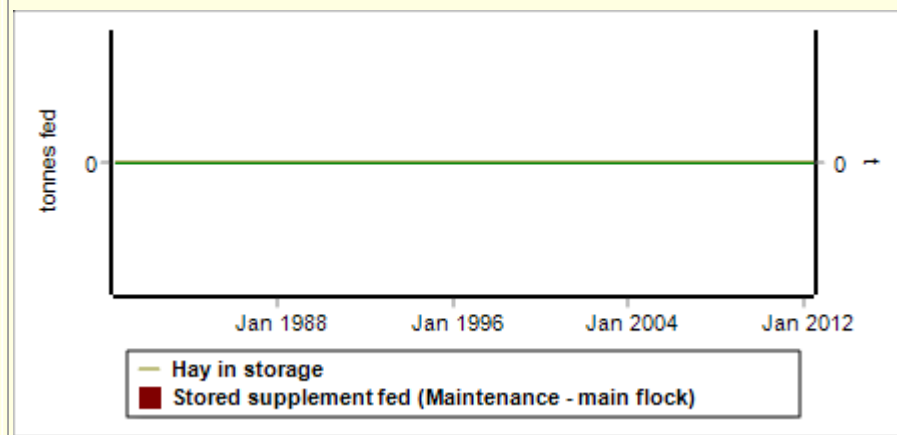
**Fodder in storage
[Lamb Sep - 6/ha]**

Fodder storage and monthly amount fed [1/07/1980 - 31/07/2012]



**Fodder in storage
[Lamb Sep - 9/ha]**

Fodder storage and monthly amount fed [1/07/1980 - 31/07/2012]



Supplement intake by type - main flock

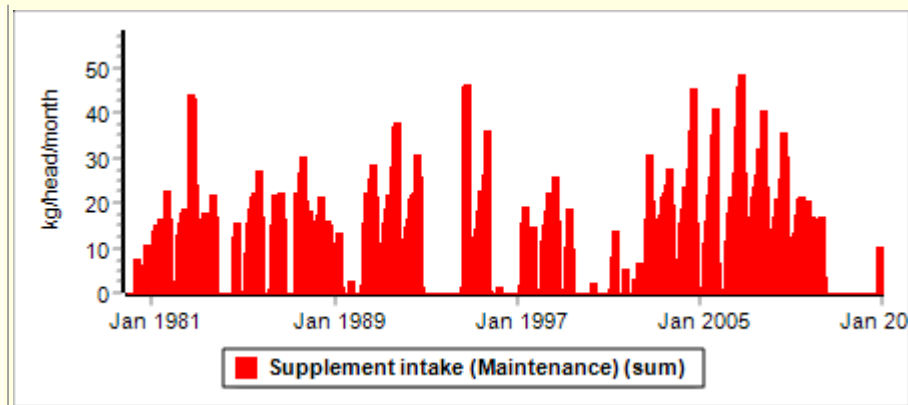
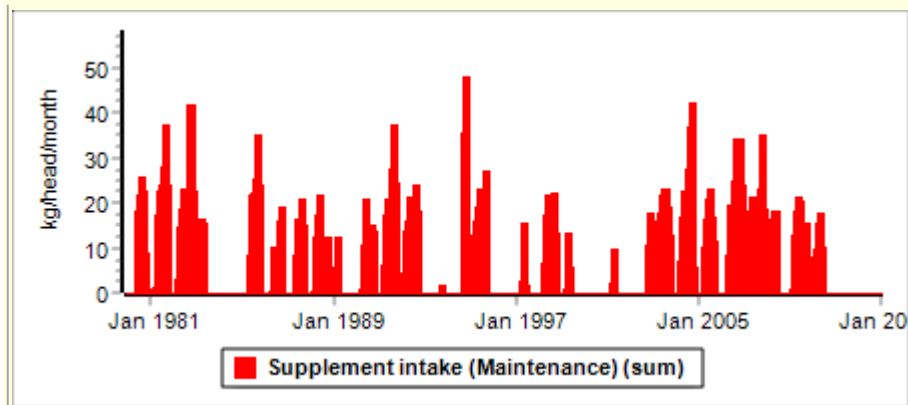
[Lamb Sep - 6/ha]

Monthly supplement intake (kg/head/month) [1/01/1980 - 31/12/2012]

Supplement intake by type - main flock

[Lamb Sep - 9/ha]

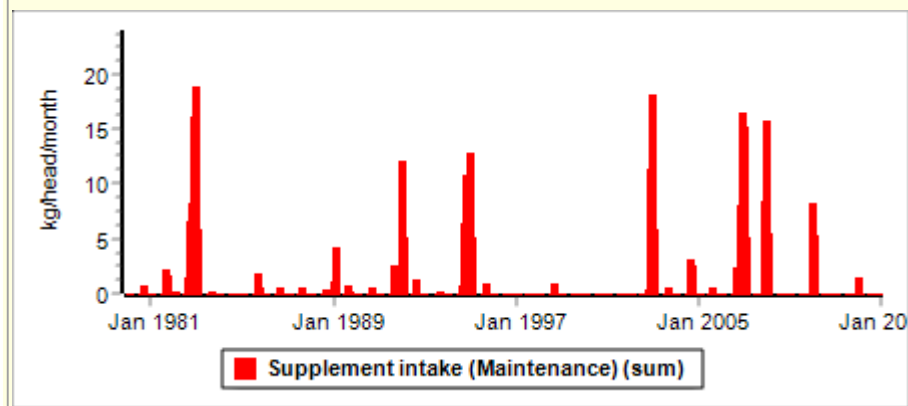
Monthly supplement intake (kg/head/month) [1/01/1980 - 31/12/2012]



Supplement intake by type - all young sheep

[Lamb Jul - 6/ha]

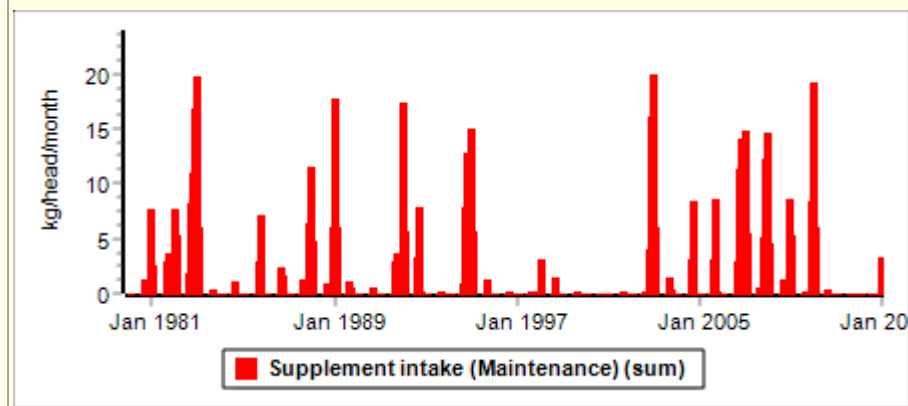
Monthly supplement intake for all young sheep (kg/head/month) [1/01/1980 - 31/12/2012]



Supplement intake by type - all young sheep

[Lamb Jul - 9/ha]

Monthly supplement intake for all young sheep (kg/head/month) [1/01/1980 - 31/12/2012]

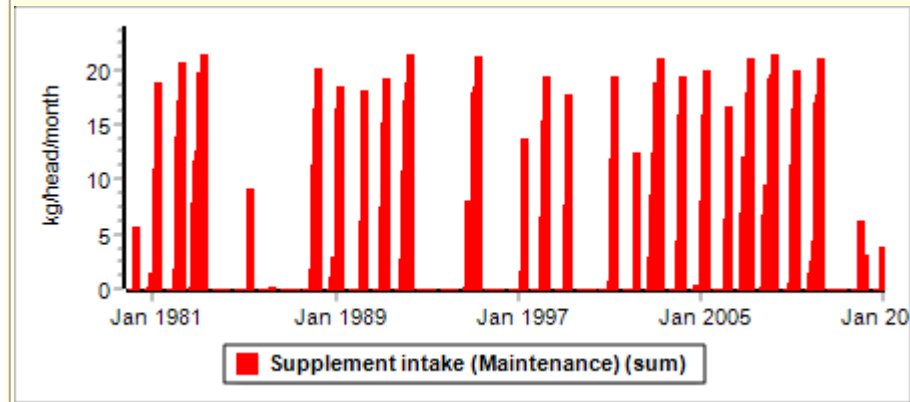


Supplement intake by type - all young sheep

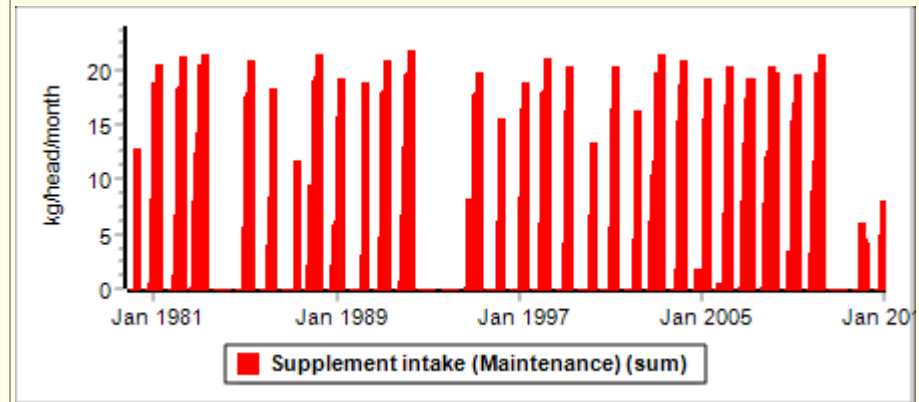
Supplement intake by type - all young sheep

[Lamb Sep - 6/ha]

Monthly supplement intake for all young sheep (kg/head/month) [1/01/1980 - 31/12/2012]

**[Lamb Sep - 9/ha]**

Monthly supplement intake for all young sheep (kg/head/month) [1/01/1980 - 31/12/2012]

**Farm system description**

Initial values for base Farm System used in this analysis

Farm System

Name	Crossbred ewes @ Wagga NSW
Enterprise type	Ewe
Initial state	1 Jan 1980
Tested	Over 1 Jan 1980 to 31 Dec 2008
Passed	Yes
Pasture parameters	<i>standard</i> , last edited 30 Jan 2013 by Andrew Moore
Animal parameters	<i>standard</i> , last edited 30 Jan 2013 by Andrew Moore

Property: Wagga ARI

Number of paddocks	1
Total area	1000 ha
No initial fodder store	

Weather: Wagga Wagga (NSW)

Weather station	Wagga Wagga (NSW)
Latitude	35°10'S
Longitude	147°27'E
Data period	1 Jan 1943 to 31 Dec 2017
Last edited	15 Feb 2018
CO2 concentration	350.0 ppm (default)

Paddock: Paddock 1

Area	1000.0 ha
Steepness	Level
Fertility	0.80
Reduce wind to	100%

Soil: Wagga ARI

Description	Wagga ARI -Red Brown Earth, clay loam over medium clay, Dr2.53 (#13 Forrest et al)
Soil albedo	0.17
Soil evaporation	3.8 mm/d ^{1/2}
SCS runoff curve no.	Using default

	Topsoil	Subsoil
Cumulative depth (mm)	150	1500
Field capacity (m³/m³)	0.26	0.30
Wilting point (m³/m³)	0.15	0.22
Bulk density (Mg/m³)	1.61	1.48
Saturated conductivity (mm/hr)	95.00	100.00
Initial water (m³/m³)	0.15	0.28

Pasture: Annual ryegrass - sub clover

Population	Annual Ryegrass	Sub Clover - Seaton Park
Phenology	Senescent	Senescent
Live DM (kg/ha)	0	0

Standing dead DM (kg/ha)	3000	1500
Litter DM (kg/ha)	500	500
Below ground DM (kg/ha)	0	0
Max. rooting depth (mm)	600	600
Seed DM (kg/ha)	300	300

Livestock: XB ewes

Breed	Border Leicester x Merino	
Standard reference weight	60.0	kg
Greasy fleece weight	3.80	kg
Fibre diameter	26.0	microns
Fleece yield	70	%
Ram breed	Dorset (Mature ram: 91.0 kg)	
Death rate: adults	3.0	%/year
Death rate: weaners	3.0	%/year

Using default values for initial animal and fleece weights

Management policy: Ewes -purchase-July lambing-XB**Stocking rate**

Description	6 ewes/ha
Rate	6.0/ha

Shearing date

Main flock	15 Apr
Weaners	15 Apr

Replacement rule

Description	Cull Nov buy Dec @18 mo
Purchase	Purchase ewes on 1 Dec at age 18 months, live weight 50 kg and C.S. 2.5
Cast for age	Sell stock aged 5 to 6 years on 30 Nov

Reproduction rule: July lambing XB ewes

Description	Sell weaners @5mo in Dec
First join at	1 years
Mating date	23 Feb

Conception at CS 3	(1) 50%
	(2) 45%
	(3) 3%
Birth date	21 Jul
Castration	yes
Weaning date	20 Oct
One ram per	75 ewes
Keep rams for	5.0 years
Sell young ewes	Sell 0 year old animals as they reach a weight of 45 kg after 1 Nov; sell any remaining 0 year old animals on 10 Dec
Sell young wethers	Sell 0 year old animals as they reach a weight of 45 kg after 1 Nov; sell any remaining 0 year old animals on 10 Dec

Maintenance Feeding rule: Ewes@CS2.0

Main flock/herd

Mature Females	Feed in paddock, applying the rule: If animal condition falls to 2.0 during 1 Jan to 31 Dec feed to maintain condition of the thinnest animals
Immature Females	Feed in paddock, applying the rule: If animal condition falls to 2.0 during 1 Jan to 31 Dec feed to maintain condition of the thinnest animals
Immature Males	Feed in paddock, applying the rule: If animal condition falls to 2.0 during 1 Jan to 31 Dec feed to maintain condition of the thinnest animals

Weaner flock/herd

Weaners	Feed in paddock, applying the rule: If animal condition falls to 2.5 during 1 Jan to 31 Dec feed to maintain condition of the thinnest animals
----------------	---------------------------------------------------------------------------------------------------------------------------------------------------

Supplement

Supplement: Wheat, whole

Ingredient	Wheat, whole
Proportion of mix (%)	100
Dry matter content (%)	89
Dry matter digestibility (%)	90
ME:DM (MJ/kg)	13.8
Crude protein (%)	14
Rumen-degradable protein (%)	92

**Production
Feeding rule: Nil
production**

feeding**Feeding rule** none**Pasture rule: New
Pasture rule****Reset on** 5 Apr**No irrigation****Costs: Sheep costs -crossbred**

Ewe Shearing	\$6.00	/head
Shearing Lambs	\$5.00	/head
Ewe Husbandry	\$3.00	/head
Lamb Husbandry	\$2.50	/head
Ewe Replacement	\$80.00	/head
Rams	\$900.00	/head
Sheep sales commission	5.00	%
Sheep sales cost	\$2.00	/head
Hay Fixed cost	\$0.00	/ha cut
Hay Variable cost	\$0.00	/tonne FW stored
Pasture costs	Fertility scalar = 0.60	\$30.00 /ha
	Fertility scalar = 0.70	\$40.00 /ha
	Fertility scalar = 0.80	\$50.00 /ha
	Fertility scalar = 0.90	\$60.00 /ha
Irrigation water	\$0.00	/ML
Supplement costs	Barley, whole	\$185.00 /t
	Canola meal	\$270.00 /t
	Cottonseed meal	\$250.00 /t
	Cottonseed, whole	\$170.00 /t
	Peas	\$190.00 /t
	Hay	\$95.00 /t
	Lupins	\$230.00 /t
	Molasses	\$47.00 /t
	Oats, whole	\$170.00 /t
	Sorghum, whole	\$180.00 /t

	Triticale, whole	\$190.00 /t
	Wheat, whole	\$195.00 /t

Prices: Sheep prices -crossbreds

Description Wool prices:XF5 & XLF5 (Woolcheque, Mar 2007). Meat prices: Over-The-Hooks (The Land, Feb 2007)

Wool prices for ewes	23 micron	663	c/kg
	25 micron	605	c/kg
	27 micron	518	c/kg
	29 micron	439	c/kg
	Av. Fleece Price	85.0	%
	Wool commission	5.0	%
Ewe sales	Base price	130.0	c/kg
	Dressing percentage	45.0	%
	Skin price	\$3.00	/head
Ewe lamb sales	< 18.0 kg	280.0	c/kg
	< 26.0 kg	325.0	c/kg
	> 26.0 kg	350.0	c/kg
	Dressing percentage	45.0	%
	Skin price	\$5.00	/head
Wether lamb sales	< 18.0 kg	280.0	c/kg
	< 26.0 kg	325.0	c/kg
	> 26.0 kg	350.0	c/kg
	Dressing percentage	45.0	%
	Skin price	\$5.00	/head
Hay sales	Price	\$0.00	/tonne

GrassGro 3.3.9. Build 29 Nov 2018