

PHOTOPERIOD RESEARCH PROJECT

2010-2012

ACKNOWLEDGEMENTS

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BACKGROUND AND OBJECTIVES

Sheep is a seasonal breeder that usually breeds in the winter when days are short. Synthetic hormone usage is the only method currently in practice in Manitoba for year round lamb, however, there are other methods. Studies have shown that exposure to a photoperiod sequence in which long days are alternated with short days lead to the induction of estrous and ovarian activity. The purpose of this research is to determine whether the control of long days only and using natural light and short days will have the same effect as controlling both long and short days, thus limiting the time of confinement.

RESULTS

Keep in mind that these results are based on one flock of commercial dorset cross ewes. The reason that we do research is with the expectation of success. However, results in this study show that some ewes did respond to photoperiod but not enough to be feasible.

IDENTIFICATION TAG

Purebred Dorset Rams – tag# 601,602,603,604

All ewes are Dorset Cross Commercial.

Group A	605 to 635
Group B	636 to 660
Group C	661 to 690
Group D	691 to 720
Group E	721 to 750
Group F	751 to 780
Group G	781 to 810
Group H	811 to 840

Please note that during the research period any ewes that were culled or died were replaced with yearlings with the same tag #.

TOTAL 24 MONTH – EXPENSE

F E E D

	HAY	16% Protein Ration with mineral	STRAW 5X6 round bales	VET FEES
Group A	91420 lbs 4 month pasture	17,400	17	\$124.30
Group B	89,900 lbs 4 month pasture	17,310	17	\$124.30
Group C	94,460 lbs 4 month pasture	17,340	17	\$124.30
Group D	94,640 lbs 4 month pasture	17,340	17	\$124.30
Group E	90,800 lbs 4 month pasture	16,380	17	\$124.30
Group F	90,680 lbs 4 month pasture	17,140	16	\$124.30
Group G	92,320 lbs 4 month pasture	15,620	16	\$124.30
Group H	89,740 lbs 4 month pasture	15,760	16	\$124.30
Rams when not with ewes	6,520 lbs 6 month pasture	960	2	\$ 16.60

EXPOSURE

August 2010

Aug 1 Expose Group A to Rams #601 and #602

September 2010

Sept 1 Expose Group B to Rams #603 and #604
Remove rams from Group A

October 2010

Oct 1 Expose Group C to Rams #601 and #602
Remove rams from Group B

November 2010

Nov 1 Expose Group D to Rams #603 and #604
Remove rams from Group C

Nov 10 Expose Group G to 16 hours daylight

December 2010

Dec 1 Expose Group E to Rams #601 and #602
Remove rams from Group D
Expose Group H to 17 hours daylight

January 2011

Jan 2 Expose Group F to Rams #603 and #604
Expose Group A to 18 hours daylight
Lambing Group A

Jan 20 Expose Group G to natural light

February 2011

Feb 1 Expose Group G to Rams #601 and #602
Remove rams from Group F
Lambing Group B

Feb 20 Expose Group B to 19 hours daylight
Expose Group H to natural light

March 2011

Mar 1 Expose Group H to Rams #603 and #604
Remove rams from Group G
Lambing Group C

Mar 16 Expose Group C to 20 hours of daylight
Wean lambs from Group A
Expose Group A to natural light

April 2011
 Apr 2 Expose Group A to Rams #601 and #602
 Remove rams from Group H
 Lambing Group D
 Expose Group D to 21 hours of daylight
 Apr 18 Wean lambs from Group B
 Apr 22 Expose Group B to natural light

May 2011
 May 1 Expose Group B to Rams #603 and #604
 Remove rams from Group A
 Lambing Group E
 May 17 Wean lambs from Group C
 May 21 Expose Group C to natural lights

June 2011
 Jun 1 Expose Group C to Rams #601 and #602
 Remove rams from Group B
 Lambing Group F
 Jun 16 Wean lambs from Group D
 Jun 21 Expose Group D to natural light

July 2011
 Jul 1 Expose Group D to Rams #603 and #604
 Remove rams from Group C
 Lambing Group G
 Jul 20 Wean lambs from Group E
 Lambing Group H

August 2011
 Aug 1 Expose Group E to Rams #601 and #602
 Remove rams from Group D
 Aug 20 Wean lambs from Group F

September 2011
 Sep 1 Expose Group G to Rams #603 and #604
 Remove rams from Group E
 Lambing Group A

October 2011
 Oct 1 Expose Group G to Rams #601 and #602
 Remove rams from Group E

Lambing Group B

November 2011

Nov 2 Expose Group H to Rams #603 and #604
Remove rams from Group G
Lambing Group C
Expose Group C to 16 hours of daylight
Nov 19 Wean lambs from Group A

December 2011

Dec 1 Expose Group A to Rams #601 and #602
Remove rams from Group H
Lambing Group D
Expose Group D to 17 hours of daylight
Dec 16 Wean lambs from Group B

January 2012

Jan 3 Expose Group B to Rams #603 and #604
Remove rams from Group A
Lambing Group E
Expose Group E to 18 hours of daylight
Jan 19 Wean lambs from Group C
Jan 22 Expose Group C to natural light

February 2012

Feb 1 Expose Group C to Rams #601 and #602
Remove rams from Group B
Lambing Group F
Expose Group F to 19 hours of daylight
Feb 17 Wean lambs from Group D
Feb 23 Expose Group D to natural light

March 2012

Mar 1 Expose Group D to Rams #603 and #604
Lambing Group F
Expose Group G to 20 hours of daylight
Mar 14 Remove rams from Group C
Mar 17 Wean lambs from Group E
Expose Group E to natural light

April 2012

Apr 1 Expose Group E to Rams #601 and #602

Lambing Group H
Apr 15 Expose Group H to 21 hours of daylight
Apr 19 Remove rams from Group D
Wean lambs from Group F
Expose Group F to natural light

May 2012

May 1 Expose Group F to Rams #603 and #604
Lambing Group A
May 14 Remove rams from Group E
May 20 Wean lambs from Group G
Expose Group G to natural light

June 2012

Jun 1 Expose Group G to Rams #601 and #602
Lambing Group B
Jun 1 Remove rams from Group F
Jun 20 Wean lambs from Group H
Expose Group H to natural light

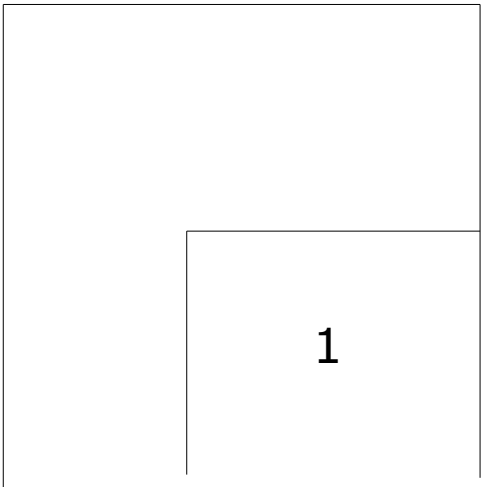
July 2012

Jul 1 Expose Group H to Rams #603 and #604
Lambing Group C
Jul 14 Remove rams from Group G

LAMBING RESULTS

Group A	Jan 2011	23 Ewes	31 Lambs
	Sept 2011	5 Ewes	7 Lambs
	May 2012	29 Ewes	53 Lambs
Group B	Feb 2011	26 Ewes	37 Lambs
	Oct 2011	8 Ewes	13 Lambs
	June 2012	28Ewes	53 Lambs
Group C	Mar 2011	27 Ewes	49 Lambs
	Nov 2011	11 Ewes	19 Lambs
	July 2012	14 Ewes	21 Lambs
Group D	Apr 2011	28 Ewes	51 Lambs
	Dec 2011	19 Ewes	28 Lambs
Group E	May 2011	28 Ewes	56 Lambs
	Jan 2012	26 Ewes	34 Lambs
Group F	Jun 2011	24 Ewes	43 Lambs
	Feb 2012	26 Ewes	34 Lambs
Group G	July 2011	0 Ewes	0 Lambs
	Mar 2012	28 Ewes	47 Lambs
Group H	Aug 2011	0 Ewes	0 Lambs
	April 2012	30 Ewes	56 Lambs

PHOTOPERIOD SITE



- 1) LAMBING BARN & PHOTOPERIOD
- 2) PHOTOPERIOD
- 3) PHOTOPERIOD
- 4) GESTATION
- 5) LACTATION
- 6) LACTATION
- 7) GESTATION
- 8) GESTATION

