

REPRODUCTIVE SUCCESS OF SHEEP RIVER EWES: A PRELIMINARY REPORT

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Abstract: Information on the reproductive success of 82 individually marked adult bighorn ewes in the Sheep River herd in southwestern Alberta was obtained from April 1981 to February 1986. Location rate increased from 63% among 2-year-olds (N=38) to 100% among ewes of 5 to 9 years of age (N=42 ewes, 127 ewe-years), declining to 90% for older ewes (N=11 ewes, 21 ewe-years). The median lambing date of 2-year-old ewes in 1984 and 1985 (June 5, N = 14) was later than for older ewes (May 25, N=79). Survival to October of lambs born to 2-year-olds was 52% (N=23), compared to 76% (N=123) for lambs born to ewes between 5 and 9 years of age. Two-year-olds and ewes older than 9 appeared to produce an excess of male lambs (male:female ratio = 3.0) compared to other ewes (ratio = 0.88). With the limited sample available, it does not appear that reproduction at age 2 compromises future reproductive performance. However, pregnant 2-year-olds had greater ($P < 0.05$) fecal output of lungworm larvae than barren ones, likely because of the energetic cost of gestation. Early reproduction may be an optimal strategy for ewes in good condition, but more data are required before a definite assessment of the advantages and disadvantages of early breeding can be made.

QUESTIONS AND ANSWERS

Wayne Heimer, Alaska: Marco, as I recall, the percent survival of lambs born to two and three year old ewes was about the same. Have you data on whether the lambs that perished, that had mothers three years old, were born to ewes that had had lambs the year before or not?

Marco Festa-Bianchet: Yes, I do. When looked at by the sample sizes which are very small, I think there were nine of those lambs born to three year olds that were born to ewes that also bred as two year olds. I think four made it and five died. So more died than made it. I only had three lambs born to three year olds that were breeding for the first time. Two of those died and one survived. So you can't really say anything about it. One problem with three year olds is the fact that there was a strong three year old age class last year, and that was the year when a lot of lambs died. That might have had an affect on the overall data. So I looked for that, but I didn't have a large enough sample to really see anything.