

Fall calving yields a bumper crop of benefits

MANY EASTERN OREGON cattle ranchers can harvest a bumper crop of benefits by switching from spring to fall calving.

That's the report from OSU animal scientists R. J. Raleigh and H. A. Turner, following four years of research at the Squaw Butte Experiment Station in Harney County. The benefits include higher conception rates, higher weaning percentages, and higher weaning weights, as well as an opportunity for more intensive management virtually throughout the cow-calf operation.

Most ranchers in eastern Oregon follow a spring-calving program. That is, calves are born in March or April, then put on range in mid-April or early May. Range forage at this time is high in quality and cows are producing relatively large supplies of milk. However, by the time spring calves are mature enough to make much use of the range, its forage plants have declined substantially in both protein and energy content. This decline in forage quality also generates a reduction in cows' milk output.

To see if such drawbacks could be circumvented, OSU scientists decided to convert half the Station's experimental herd to a fall-calving program. The basic idea, of course, was that

calves born in October and November would be sufficiently mature by the following spring to make good use of early, high-quality range forage. Last summer, the conversion was completed and the fourth consecutive crop of fall calves was weaned. The comparative findings to date:

Conception rates in both fall- and spring-calving cows have averaged in excess of 90%. Why, then, would a switch to fall calving be beneficial?

On the Squaw Butte Station, spring-calving cows are bred on relatively small range pastures. This, combined with good water conditions brought about by water hauling, means animals are concentrated in small areas. Most eastern Oregon summer ranges, however, are considerably larger, poor in water distribution, and include somewhat more rugged terrain. Cattle, therefore, often scatter over the entire range area. As a result, breeding seasons may last five months or longer and conception rates can be as low as 50% or 60%.

On winter headquarters

Under a fall-calving program, cows normally would be bred while on small, winter headquarters pastures. Given this degree of confinement and good

Cattle ranchers can boost conception rates, weaning percentages, and weaning weights by calving in the fall

Fall calves vs. spring calves

Item	Spring calves*	Fall calves*
Number of calves	507	377
Date of birth	Mar. 30	Oct. 26
Weight when put on range (<i>lb.</i>)	302
Average daily gain from birth to when put on range (<i>lb.</i>)	1.34
Average daily gain from when put on range to weaning (<i>lb.</i>)	1.95
Average daily gain from birth to weaning (<i>lb.</i>)	1.56	1.58
Weaning age (<i>days</i>)	166	273
Weaning weight (<i>lb.</i>)	329	502

* All figures listed are averages of four years' data with the exception of the first item, "number of calves."

winter nutrition, Raleigh and Turner figure most ranchers could readily achieve conception rates of 90% or better with a 60-day breeding season. Breeding on these small pastures also would require fewer bulls, provide a more uniform calf crop, and facilitate crossbreeding or artificial insemination.

Higher weaning percentages

Spring weather in eastern Oregon usually is cold, windy, and wet. These conditions can cause scours, pneumonia, chilling, and other serious calving hazards. Fall weather, on the other hand, often is mild and dry. Largely because of better weather during calving, weaning percentages at the Station have averaged nearly 5% higher with fall-born calves than with spring calves. The OSU scientists note that five additional calves per 100 cows at times may be the difference between a profit and a loss.

Converting half the Station herd to fall calving has enabled a significant reduction in the amount of calving difficulties experienced by first-calf heifers. Ever since the conversion was launched, replacement heifers for fall-calving cows have been selected from spring-born animals and, as fall-born animals have become available, *vice*

versa. Thus, heifers now are 2.5 years old before calving for the first time.

Fall calves, as shown in the accompanying table, have weaned at an average of 173 pounds heavier than calves born in the spring. How much expense have these extra pounds involved?

Feed costs for wintering lactating cows have ranged from \$10 to \$18 per animal more than for wintering spring-calving cows. And the fall calves have been creep-fed during the winter at a cost of \$3.75 to \$5.50 per calf. This adds up to wintering feed costs of \$13.75 to \$23.50 more for a fall-calving cow-calf pair than for a spring-calving cow. For the past two years, fall calves also have been creep-fed during the summer at a cost of \$5 to \$7 per calf. (Reason for the spreads in feed costs is that several different rations have been tried.)

How costs would compare

By way of comparison, the spring calves would have to be fed to gain 1.25 pounds per day for 140 days after weaning in order to attain the average weaning weight of the fall calves (see table). Feed costs for these gains would range from \$25 to \$30 per animal and, of course, the feeding period would extend well into the winter, at which

time the animals would be nearly one year old.

Currently, Raleigh and Turner are working to determine the minimum level of winter feed that can be provided fall-calving cows without lowering conception rates and weaning weights. Other important questions under investigation include: Is creep-feeding profitable in summer, as well as winter? Does creep-feeding reduce calves' milk consumption? Do supplements lower the hay intake of lactating cows? Is the increase in daily gain after fall calves go on range (see table) due to an increase in milk production, use of the high-quality range forage, or both? How much more—if any—range feed does a fall cow-calf pair consume than a spring cow-calf pair?

The OSU animal scientists point out that fall calving will not fit all cattle operations. In particular, a rancher whose range is at high elevation already may be weaning heavy spring-born calves. Or spring calving may be better suited to his feed supply. As more questions are answered, there may prove to be other situations in which fall calving would not pay.

But for many eastern Oregon ranchers, that bumper crop of benefits clearly is ready and waiting to be harvested.