

## On the Cutting Edge of Cow/Calf Production

What are the economics of being on the cutting edge of cow-calf production? With the profitability of beef production being challenged year after year, it is more important than ever to take advantage of every area of technology available to enhance productivity and profitability.

We have put together some of the numbers associated with how adopting various technologies and management strategies effect profitability. These numbers are based on a 100 cow herd with a 90% calf crop and a 475 lb average weaning weight valued at \$.06/lb.

### Nutrition of The Cow

If one can improve calf crop by 1%, profitability can be improved by \$285/year. If all the cows can be bred on the first and second service and the breeding season reduced from 60 days to 45 days, one can generate an additional \$890 annually, plus improve uniformity of the calf crop. These areas of production are impacted by the nutrition of the cow during her last trimester of pregnancy and her first two months post-calving. This will in turn improve the number of calves weaned and weaning weights of the calves through increased milk yield and thriftiness of the calf.

### Growth of The Calf

Weaning heavier calves is a combination of growth rate of the calf and number of day the calf is suckling prior to weaning. If one can increase weaning weight by 10 lb, one earns an additional \$540 annually. Creep feeding can add an additional 100 lb to a calf's weaning weight, which would net an additional \$900/year. Implants improve growth of steer calves by 15% and heifer calves by 10%, thus implanting calves would increase returns by \$2,500 annually.

Marketing of calves is often over-looked and selling price is simply accepted. If one could receive an additional \$.01/lb for weaned calves, one could net an additional \$425 annually. Uniformity is one way to increase the value of a calf. Uniformity can be achieved by grouping calves by similar color, size, sex, etc.

Management Item	Potential Return <sup>a</sup>
Increase Calf Crop by 1%	\$285
Reduce Breeding Season from 50 to 45 days	\$890
Increase Weaning Weight by 10 lb	\$540
Implant Calves	\$2,500
Creep Feed Calves	\$900
Increase Selling Price by \$.01/lb	\$425

<sup>a</sup>Based on a 100 cow herd, with a 90% calf crop, and a 475 lb average weaning weight valued at \$.60/lb.

## Meeting The Nutrition Needs of The Cow

Gestating cows can be maintained with minimal forage and free-choice minerals, provided the forage is at least 9 to 10% crude protein. Low protein forages should be supplemented with another source. When minerals and vitamins are added to the protein supplement and hand-fed, it results in more consistent consumption of all nutrients without over-consumption and wasted money. One to two pounds daily of the **40% Cow Cube** take care of these needs in an efficient, convenient manner. The higher energy requirements of the lactating cow require limited energy supplementation until spring pasture is in abundant supply. Three to four pounds daily of the **20% Cow Cube** provides a mean of meeting her increased energy, protein, mineral, and vitamin needs during early lactation.

Free-choice mineral programs should be used during months when good quality forages are meeting the cow's protein and energy requirements. **The Hi Mag Mineral** should be offered the first four to eight weeks of the spring, when the pasture is lush, followed by **Pasture Mineral** the remainder of the summer and into fall and winter. Free-choice minerals are not needed when **Cow Cubes** are being fed.

Proper nutrition of the gestating cow improves calf vigor, thriftiness, and early adequate consumption of colostrum. Subsequently, calf respiratory sickness and scouring are decreased, resulting in greater growth rates and weaning weights. Proper nutrition of the gestating cow decreases the incidence of uterine infections, allowing for earlier conception. Proper nutrition of the early lactation cow also affects how early the cow conceives and how early in the next calving season the calf is born. Early lactation nutrition affects the percent calf crop, the days needed to get cows bred, the weaning weight of the next year's calf crop, and the amount of milk produced in the current lactation.

## Maximizing Growth of the Calf

Genetics play a large role in growth. Selection for growth traits via bull selection and/or artificial insemination (AI) can add points to the weaning weight of calves. Selection of sires to take advantage of heterosis in commercial herds can also improve weaning weights. Genetics play a role in uniformity of the calf crop as well. Sire selection can be used to provide similar colors or color patterns in calves. Culling cows that consistently breed back late or wean lightweight calves will improve consistency in calf size.

Implants are often over-looked for suckling calves. A single implant costs very little (less than \$2/calf for the implant plus labor) for a 10 to 15% improvement in gain. If one is selling weaned calves, and not retaining the calves for growing and/or finishing, creep feeding also has a good return on the investment in most market conditions.

## Impact on The Bottom Line

The impact on the bottom line of adopting technology will depend on the present level of production and management practices. For example, if one reduced their breeding season from 60 to 45 days, implanted their calves for the first time, and creep-fed their calves for the first time, they could expect a potential return of \$4,290 per 100 cows. If the calf crop was improved from 88 to 90%, they could expect an additional return of \$570 per 100 cows. Consider the current management and level of production. There are likely technologies available that are not being used that would improve the bottom line.