INTRODUCTION

The average cow-calf operator in northern Nevada runs 600 to 1,000 mother cows with a 90 to 120 day spring and early summer calving season (Torell, Myers 1995). The typical cow is predominately English-bred Angus and Hereford with some Continental influence. Genetic variation within each of these breeds is broad.

Brood cows from these ranches range in age from two to ten years and are in all stages of the production cycle. Summer grazing conditions and forage quality may vary within groups of cattle running on separate rangelands.

Combining these factors one can visualize why a uniform weight and genetic set of calves is seldom realized when all calves are sold as one lot.

Genetics, frame, time of year marketed, calf age, health status, and sale weight should dictate how individual animals are fed and managed after they leave your ranch. Sale weight often deviates more than 100 pounds on either side of the base weight. Buyers like to purchase uniform lots of cattle that have similar after-ranch requirements. Buyers seek out those lots of calves that match their specific goals and feed resources. Sold separately, each weight group will demand a premium if marketed at the correct time of year with conditions specific to the buyers needs.

A three-tiered marketing system simply sorts cattle into like marketing groups and markets each group to its fullest potential. Work at the University of Nevada Gund Research and Demonstration ranch, shows that a three-tiered marketing approach can increase profitability with limited input.

WEANING WEIGHT VARIATION

Table 1 shows the weaning weight variation at the UNR Gund Research and Demonstration ranch from 1993 to 1998. The ranch is located 50 miles north of Austin, Nevada and is typical of those ranches located in northern Nevada. English-bred Angus steers and heifers (combined) are represented during the years 1993 through 1995. Terminal cross Limousin calves are represented for 1996 to 1998.
Table 1. Weaning Weight Breakdown 1993-1998 at the UNR Gund Ranch.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Wean Wt.</td>
<td>430#</td>
<td>447#</td>
<td>409#</td>
<td>428#</td>
</tr>
<tr>
<td>400-500#</td>
<td>67%</td>
<td>50.6%</td>
<td>54%</td>
<td>52.3%</td>
</tr>
<tr>
<td>&gt;500#</td>
<td>15%</td>
<td>25.3%</td>
<td>10.6%</td>
<td>17.9%</td>
</tr>
<tr>
<td>&lt; 400#</td>
<td>18%</td>
<td>24%</td>
<td>35.3%</td>
<td>29.7%</td>
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*Weights recorded approximately October 1 of each year.

Cattle are sold in 50,000-pound truckload lots. If calves are 500 pounds at sale time, this would require 100 calves to make a truckload. Using data for English-bred cattle from Table 1, 15 percent of steer and heifer calves would weigh 500 pounds or more at sale time. This would require approximately 750 mature cows to produce 50,000 pounds (assuming a 90 percent conception to weaning rate). This is assuming there are no replacement heifers retained from this weight group.

These same 750 cows would produce 452 calves (67 percent) weighing between 400 to 500 pounds (450 average) or 203,400 pounds (four truckloads). Using a 15 percent replacement heifer rate, one truckload of heifers would be held back leaving two truckloads of steers and one truckload of heifers to be marketed as 400 to 500 pound calves. The two truckloads of steer calves could be divided into tighter weight groups for more uniformity.

The 750 cows would result in 121 head of calves (18 percent) weighing 400 pounds or less totaling 48,600 pounds.

By sorting calves into marketing groups based on weight you have created one truckload of 500 pound steers and heifers, two truckloads of 450 weight steers, one truckload of 450 weight heifers and one truckload of mixed 400 weight steers and heifers. When a terminal cross program is initiated, the percentages will change as per Table 1, resulting in a different marketing strategy.

THE HEAVY CALVES

These are usually the earliest born calves with superior genetics. Five hundred-pound or heavier calves should be managed differently than those that are lighter. If these calves were “double seasoned”, in other words over wintered, grown on spring and summer grass and placed in the feedlot as a yearling the following August; the steer would weigh in excess of 1,000 pounds entering the feedlot. This may result in a 1,400 to 1,500-pound fat steer.

In order to reach the quality and yield grade potential, cattle need to be on a high concentrate diet for a minimum of 90 to 100 days. If cattle are placed on this diet at a heavy weight, they may achieve a high slaughter weight that could result in discounts as high as $20/cwt if carcasses are heavier than 950 pounds.

Cattle-Fax information (Diagram 1) suggests that placing 500-pound steers and heifers on a warm up growing ration and selling at 800 pounds can result in a profit of $35 per head 17 out of 19 years. Taking the 800-pound animal to a finished steer results in a $49 additional profit 13 out of 19 years.

A 500-pound calf taken directly to the feedlot and placed on a finishing ration may result in a profit of $89 per head 15 out of 19 years. The profit potential is increased when cattle are placed against the historically better fat marketing months of January through May or November and December as illustrated in Graph 1. It is essential to realize that markets are seasonable. Employing risk management in the form of futures and options when marketing cattle may also insure profit when retaining ownership on cattle as a hedge against the cash market.

THE MIDDLEWEIGHT CALVES

The middleweight calves, those weighing between 400 to 500 pounds, represent the majority of calves produced on western rangelands. In the UNR study 67 percent of English-bred calves fell into this weight range. This group of cattle fits a fall marketing
program or, as an alternative, a double seasoned yearling program.

There are many options for the middle weight calves. Diagram 2 shows many of these options, aside from selling at the ranch. For these options to work well, retained ownership is necessary. A strong risk management program using the futures market would strengthen these programs. For those needing a cash flow, or those not interested in the extra time and effort necessary in retained ownership programs, selling these calves in the fall might be best.

Selling middleweight calves in the fall of the year results in a cash flow and spreads marketing risk.

THE LIGHTWEIGHT CALVES

Based on the Nevada study 18 percent of calves produced on western ranches weigh less than 400 pounds at weaning. Most of these calves are late born (young), and from first-calf heifers or older cows.

Selling this class of cattle in the fall of the year along with the main group has the disadvantage of bringing the base sale weight of the group down. On a per pound basis these calves are worth more than heavier calves. However, on a per head basis they seldom pay the carrying cost of the mother cow for the year resulting in decreased cash flow.

Retaining ownership of these cattle, double seasoning and selling as yearlings can be an attractive option (Diagram 3).

December marketing as a weaned light calf is another option. This weight of weaned calf sold in December usually results in a premium from buyers filling orders for wheat pasture, California grass, or mid-west grass.

By retaining ownership of lightweight cattle and marketing during optimum market periods (Graph 1), producers add weight and add subsequent value that increases profitability.

SUMMARY

Sorting cattle into marketing groups based on weight has potential financial rewards. Three-tiered marketing spreads risk and results in cash flow throughout the year. This approach to marketing capitalizes on the ranches best genetics through retained ownership. Three-tiered marketing also takes advantage of the seasonable market that is usually present. The major advantage however, is making more marketable groups that appeal to buyers. By marketing uniform groups of cattle for specific feed resources at specific times of delivery, value is added to a group of cattle without significant added cost.

Risk management in the form of futures and options should be considered when implementing a three-tiered marketing program. This can be complicated so it is advisable for producers to become knowledgeable in this area before becoming involved in futures or options trading. Tax ramifications should also be considered when selling cattle in the following tax year.

Reference
Diagram #1. Spring-born Calves, Marketing Alternatives Heavyweight Calves

Weaned 500 weight calf  
(575 lbs.)

Background Yard ADG:  
2.5; + 300 lbs.  
Oct.-Feb.: 120 days

Advantage: 17 of 19 years

875 lbs.

*Feedlot: Conv: 6.1  
ADG: 3.2; +375 lbs.  
Feb.-June: 117 days

Advantage: 13 of 19 years  
Average: $49

1250 lbs.

*Feedlot: Conv: 5.8  
ADG: 3.0; +575 lbs.  
Oct.-Apr.: 192 days

Advantage: 15 of 19 years  
Average: $89

1150 lbs.

*Feed conversions are measured on a dry-matter basis. Source: Cattle-Fax Retained Ownership 7th Edition
Diagram #2. Spring-born Calves Marketing Alternatives, Middleweight calves

Weaned 450 weight calf
(475 lbs.)

Preconditioning
ADG: 1.0; +25 lbs.
Oct-Nov; 25 days

Wheat Pasture
ADG: 2.0; +240 lbs.
Nov-Mar; 120 days

Dry Lot Winter Program
ADG: 1.0; +175 lbs.
Oct-Apr; 175 days

Advantage: 7 of 19 years
Average: ($17)

Advantage: 14 of 19 years
Average: $30

Advantage: 14 of 19 years
Average: $31

Background Yard
ADG: 2.25; +325 lbs.
Oct-Mar; 144 days

Background Yard
ADG: 2.25; +325 lbs.
Oct-Mar; 144 days

650 lbs.

740 lbs.

800 lbs.

Summer Grass
ADG: 1.5; +240 lbs.
Apr-Sept; 160 days

Advantage: 12 of 18 years
Average: $35

Advantage: 14 of 18 years
Average: $55

Summer Grass
ADG: 1.35 +175 lbs.
Apr-July; 129 days

Advantage: 12 of 18 years
Average: $35

Advantage: 14 of 18 years
Average: $55

*Feedlot:
Conv: 6.2
ADG: 3.2; +385 lbs.
Oct-Jan; 120 days

Advantage: 15 of 18 years

Advantage: 16 of 18 years
Average: $101

*Feedlot:
Conv: 6.3
ADG: 3.2 + 360 lbs.
July-Nov; 112 days

Advantage: 12 of 18 years
Average: $49

*Feedlot:
Conv: 6.0
ADG: 3.1; +435 lbs.
Mar-Aug; 140 days

Advantage: 13 of 18 years
Average: $36

*Feedlot:
Conv: 6.1
ADG: 3.0; + 400 lbs.
Mar-July; 133 days

650 lbs.

915 lbs.

1275 lbs.

1275 lbs.

1175 lbs.

1200 lbs.

*Feedlot conversions are measured on a dry-matter basis. Source: Cattle-Fax Retained Ownership 7th Edition.
Diagram #3. Spring-born Calves Marketing Alternatives, Lightweight Calves

Weaned 400 Weight Calf
(425 lbs.)

Preconditioning
ADG: 1.0; +25 lbs.
Oct-Nov; 25 days
Wheat Pasture
ADG: 1.8; +225 lbs.
Nov-Mar; 125 days

Advantage: 16 of 19 years
Average: $34

675 lbs.

*Feedlot: Conv: 6.4
ADG: 2.8 + 400 lbs.
Mar-Aug; 143 days

Advantage: 11 of 18 years

1075 lbs.

*Feedlot conversions are measured on a dry-matter basis.
Source: Cattle-Fax Retained Ownership 7th Edition
Graph #1: Seasonal Cattle Prices (Fed Steers, Feeder Cattle and Calves) 1989-1998