

Economics Associated with Beef Cattle Ranching



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UC Cooperative Extension
April 21, 2016



There are Five Facets to the Beef Cattle Industry:



- Cow-Calf/Seedstock
- Yearling/Stocker
- Feedlot
- Packer
- Wholesale/Retail



We're a long way from the other segments of the industry...



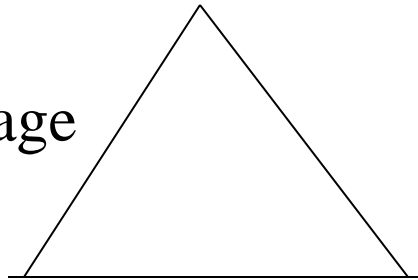
- Cow-Calf/Seedstock
- Yearling



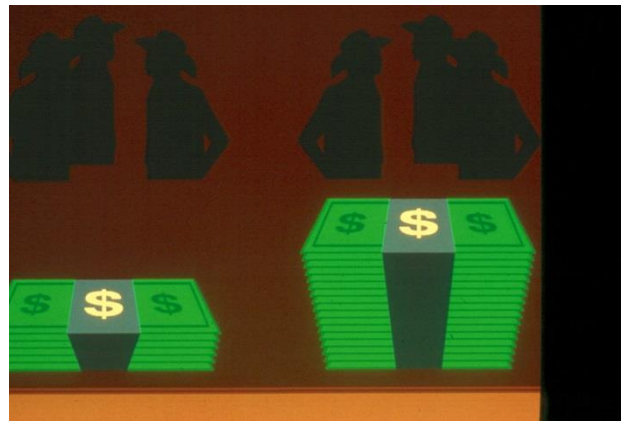


Feed/forage

Animal



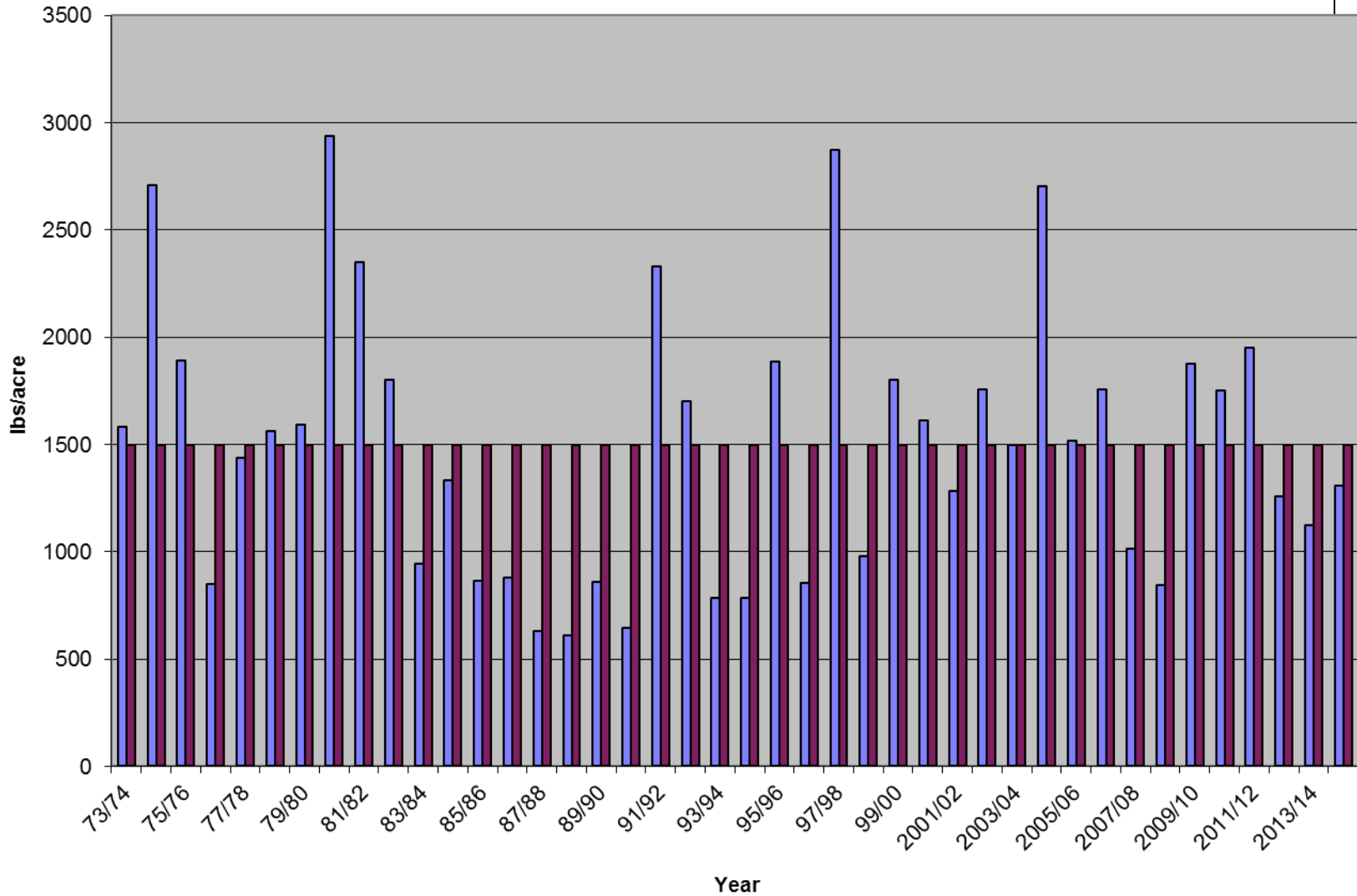
Finance



What about the forage side?



Forage Production in lbs/Acre, Redding, CA



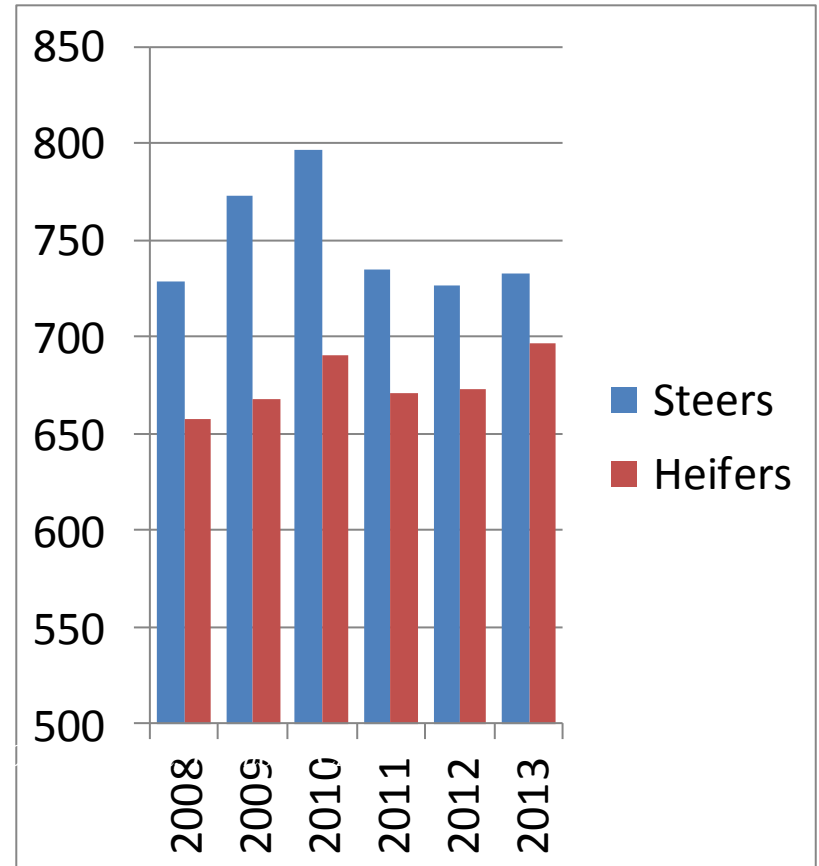
Quick Review: The goal of a cow-calf operator is to wean and ship a calf from every cow



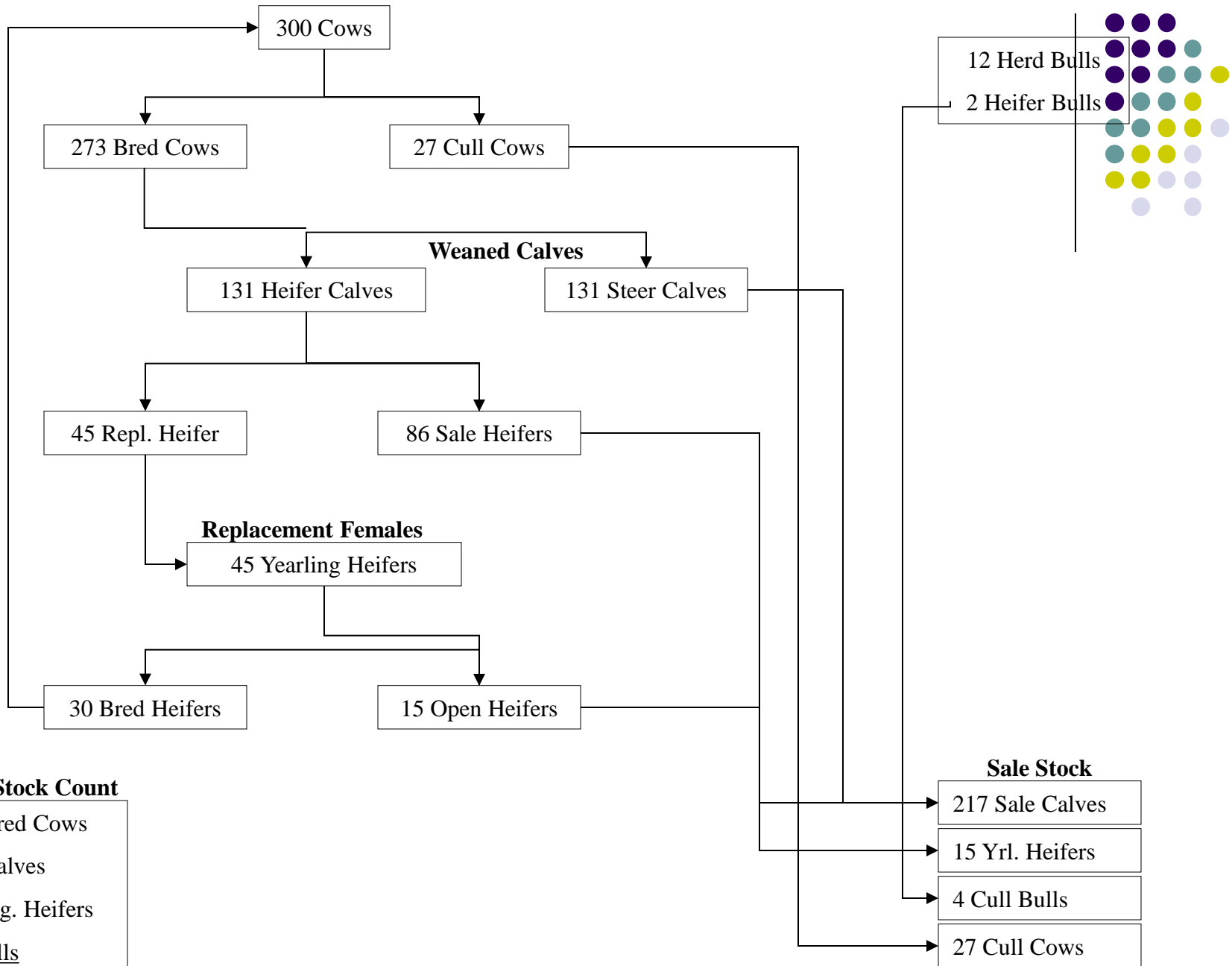
- Reality is they probably ship 85-90%
- Incur a small death loss
- Most producers are paid on a weight basis



Average ship weight (lbs) steers and heifers by year-Production Variation



| | | | | | | |
|------------|-----------|----------|----------|-----------|-----------|-----------|
| Ship Dates | 6/17/2008 | 7/7/2009 | 7/1/2010 | 6/29/2011 | 6/27/2012 | 6/20/2013 |
|------------|-----------|----------|----------|-----------|-----------|-----------|



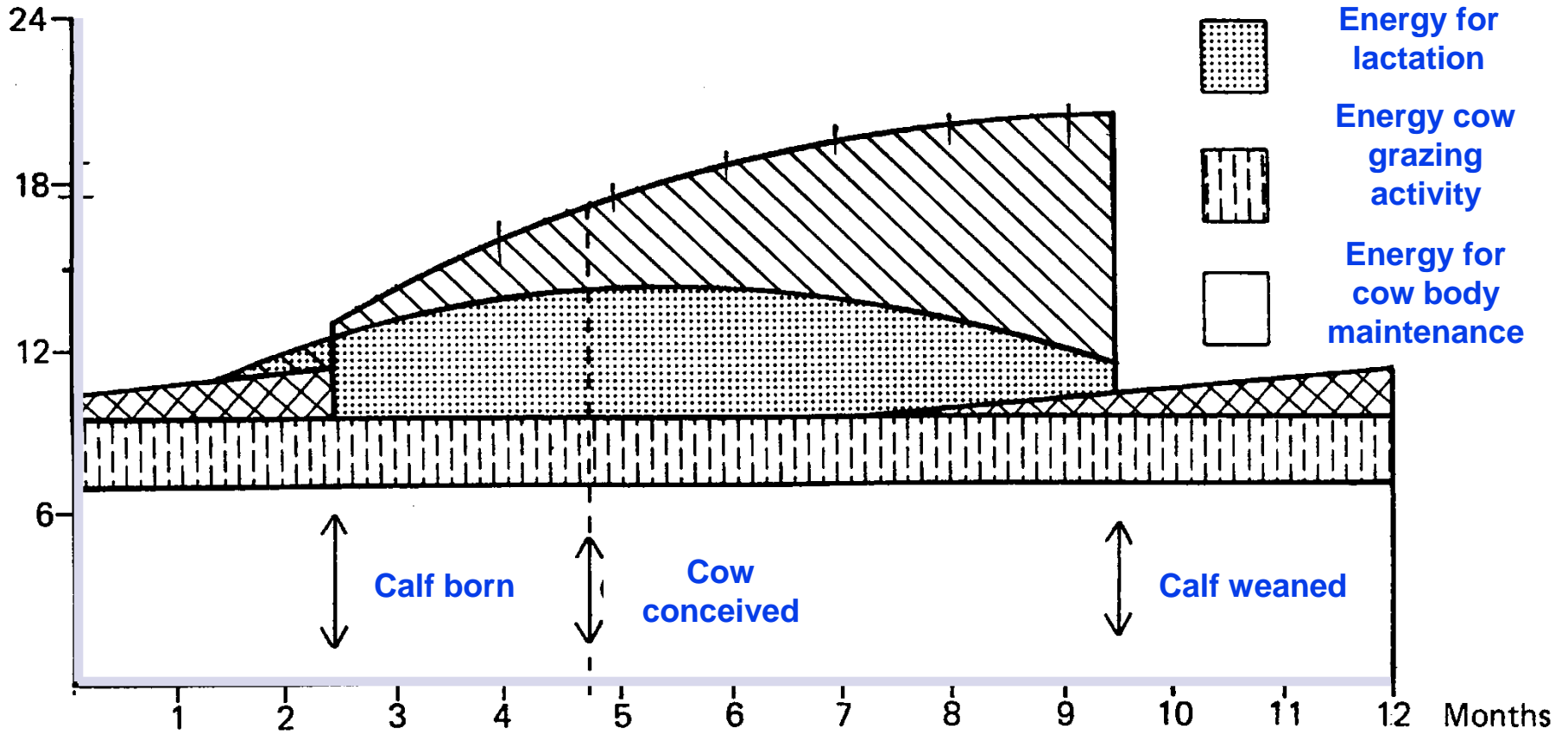
Total Stock Count

300 Bred Cows
 262 Calves
 45 Yrlg. Heifers
14 Bulls
 621 Total

**Note: Assumes 87% Weaning and 0% Death Loss

Total daily requirements

Total Digestible nutrients (TDN) lb.



Last third of pregnancy - First 84 days after calving are the most critical production phases

Estimated requirements for 1000 lb. mature cow for 12 month reproductive cycle, based on 90 day calving season and 500 lb calf at 7 months of age (Ensminger).

Finance: What's the money look like?





PASKENTA RANCH: 5,526 Acres located about 30 miles southwest of Red Bluff, CA. **HARD TO FIND High quality winter range runs about 750 AU, stock water is provided by seasonal drainages and creeks, as well as seven reservoirs. There are great fishing opportunities in the reservoirs as well as hunting for black tail deer, wild pigs, wild turkey, and upland game birds. This is an established, well set up, winter range operation with a proven reputation in the livestock industry. \$6,750,000**

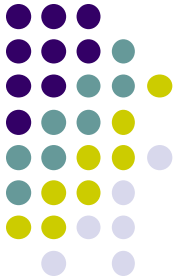


Shasta Livestock Auction Yard

Office: (530) 347-3793
Report: (530) 347-4927

Cottonwood, California
Sale Every Friday

www.ShastaLivestock.com
kevin@shastalivestock.com



January 30, 2015

RECEIPTS: This Week: 2606 Last Week: 831

COMPARED TO LAST WEEK: Slaughter cows and bulls steady. Bred cows & pairs \$200+ lower on nearly 700 head and no rain. Stockers & feeders \$10-\$30 higher than last week. Off lots and singles \$30-\$60 below top offerings.

SLAUGHTER COWS:

Breakers: 95.00-99.00

Boneing: 90.00-94.00

Cutters: 75.00-89.00

BULLS 1 & 2: 100.00-119.00

High Dress

100.00-110.00

Low Dress

Heiferettes: \$127.00-\$165.00

FEEDER STEERS:

| | | | | |
|------------------------|---------------|----|---------------|---------|
| 300-400 | <u>XXXX</u> | to | <u>360.00</u> | (1 set) |
| Top Offerings/Pen Lots | <u>260.00</u> | to | <u>300.00</u> | (few) |
| 450-500 | <u>260.00</u> | to | <u>320.00</u> | (few) |
| 500-550 | <u>260.00</u> | to | <u>322.00</u> | |
| 550-600 | <u>245.00</u> | to | <u>284.00</u> | |
| 600-650 | <u>220.00</u> | to | <u>252.50</u> | |
| 650-700 | <u>220.00</u> | to | <u>245.00</u> | |
| 700-750 | <u>210.00</u> | to | <u>227.00</u> | |
| 750-800 | <u>197.00</u> | to | <u>219.00</u> | |
| 800-900 | <u>182.00</u> | to | <u>199.00</u> | (few) |

FEEDER HEIFERS:

| | | | | |
|------------------------|---------------|----|---------------|----------|
| 300-400 | <u>281.00</u> | to | <u>340.00</u> | |
| Top Offerings/Pen Lots | <u>265.00</u> | to | <u>303.00</u> | |
| 450-500 | <u>255.00</u> | to | <u>300.00</u> | |
| 500-550 | <u>245.00</u> | to | <u>280.00</u> | |
| 550-600 | <u>225.00</u> | to | <u>246.00</u> | |
| 600-650 | <u>225.00</u> | to | <u>248.00</u> | |
| 650-700 | <u>202.00</u> | to | <u>223.00</u> | |
| 700-750 | <u>195.00</u> | to | <u>214.00</u> | |
| 750-800 | <u>191.00</u> | to | <u>211.00</u> | |
| 800-900 | <u>183.00</u> | to | <u>187.50</u> | (2 sets) |

PAIRS: Full-mouth \$2500-\$3200; Few broken-mouth \$2000-\$2700 depending on type and flesh

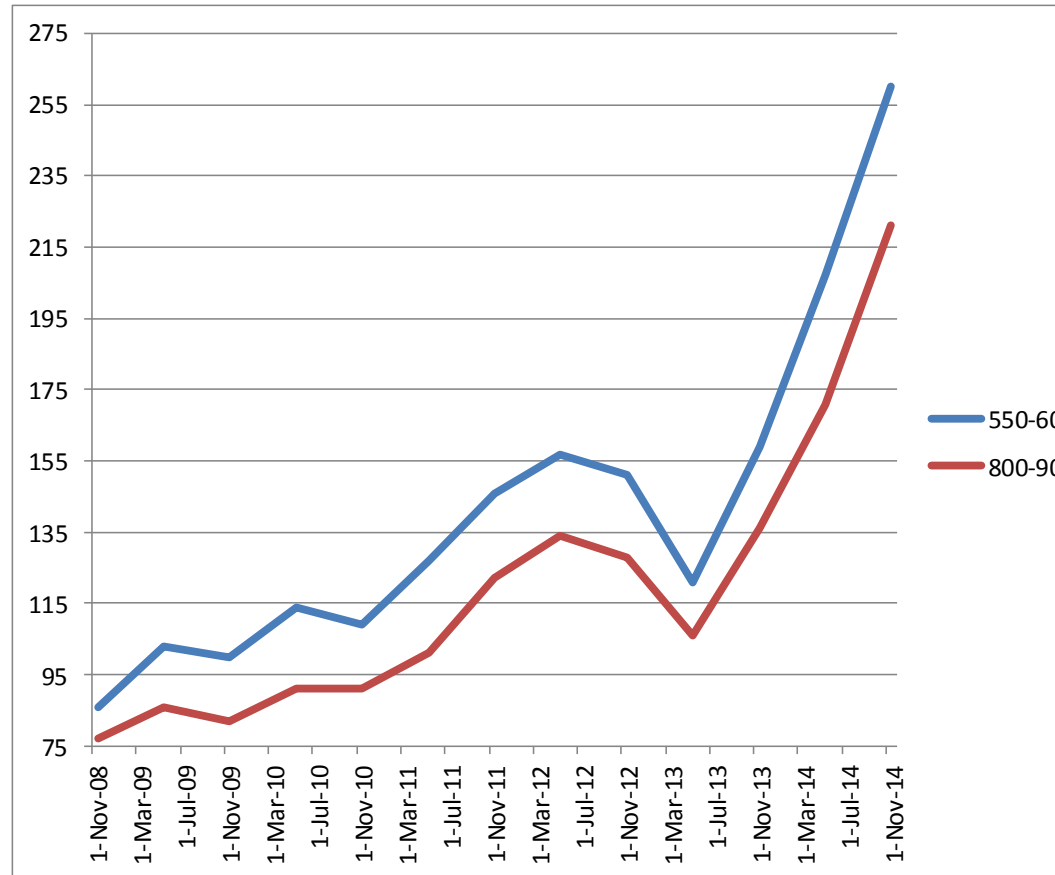
CALVY COWS: Top cows \$2175-\$2600; Smaller framed and less fleshy cows \$1600-\$1950; Broken-mouth cows \$1500-\$1900

NEXT WEEK (Feb. 6): Expecting 1200 head incl. herd reduction of Cottonwood Creek Ranch with approx. 150 bred cows & 250 calves



Remember when the Cattle Market looked great?

- The market is good and most producers are seeing a return above cash costs
- Most producers have only sold one calf crop on this market
- The drought in CA has resulted in producers reducing numbers
- This reduction in numbers brings with it a new set of challenges that include cash flow and tax management as well as capital retention



Online dtn 1/5/2015



- *Cattle and beef markets will start 2015 with record or near record prices and carry them through the year with little risk of any major market break and annual average cattle and beef prices will be higher than in 2014. That said, it may be hard to extend the impressive market gains in 2014 for cattle farmers and feedlots... Darrell S. Peel, Oklahoma State University*

Derrell Peel Calls 2015 Cattle Market "Agonizing and Frustrating" For Nearly Everyone Involved (12/14/15)



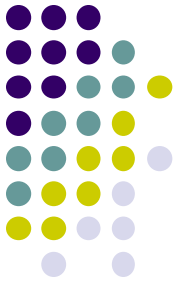
"Cattle and beef market fundamentals will continue to evolve as anticipated in 2016. Herd expansion will continue, perhaps more modestly than in 2015, and the larger 2016 calf crop will contribute to significantly higher feeder cattle supplies by the end of the year; with bigger implications for beef production in 2017. Carcass weights will continue higher, given continued cheap feed costs, but some of the incentive to overfeed cattle should be moderated with the realignment in feeder and fed cattle prices. 2016 beef production will increase year over year based on higher carcass weights and increased cattle slaughter. Feeder cattle supplies in 2016 will increase year over year but will be moderated by continued heifer retention and a likely moderation in feeder cattle imports from Mexico (already dropping in late 2015) and continued small imports of Canadian feeder cattle."

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Cottonwood, California
Sale Every Friday

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info@shastalivestock.com



April 15, 2016

RECEIPTS: This Week: 705 Last Week: 727

COMPARED TO LAST WEEK: Slaughter cows & bulls mostly steady. Cattle under 600 \$3-10 higher. Yearlings in low supply and market uneven. Off lots & singles \$30-60 below top.

SLAUGHTER COWS:

Breakers: 73-80
Boneing: 66-72
Cutters: 55-65

High Dress

81-91

Low Dress

BULLS 1 & 2: 75-90

91-97

FEEDER STEERS:

| | | | | |
|--------------------------------|---------------|----|---------------|-------|
| 300-400 | <u>205.00</u> | to | <u>214.00</u> | Few |
| Top Offerings/Pen Lots 400-450 | <u>190.00</u> | to | <u>223.00</u> | |
| 450-500 | <u>190.00</u> | to | <u>217.00</u> | |
| 500-550 | <u>185.00</u> | to | <u>199.00</u> | |
| 550-600 | <u>176.00</u> | to | <u>196.50</u> | |
| 600-650 | <u>162.00</u> | to | <u>172.00</u> | |
| 650-700 | <u>XXXX</u> | to | <u>162.00</u> | 1 Set |
| 700-750 | <u>140.00</u> | to | <u>151.00</u> | |
| 750-800 | <u>137.00</u> | to | <u>140.00</u> | Few |
| 800-900 | <u>128.00</u> | to | <u>134.00</u> | Few |

FEEDER HEIFERS:

| | | | | |
|--------------------------------|---------------|----|---------------|-------|
| 300-400 | <u>184.00</u> | to | <u>207.00</u> | |
| Top Offerings/Pen Lots 400-450 | <u>XXXX</u> | to | <u>XXXX</u> | |
| 450-500 | <u>158.00</u> | to | <u>183.00</u> | |
| 500-550 | <u>XXXX</u> | to | <u>168.00</u> | 1 Set |
| 550-600 | <u>145.00</u> | to | <u>168.00</u> | |
| 600-650 | <u>XXXX</u> | to | <u>159.00</u> | 1 Set |
| 650-700 | <u>137.00</u> | to | <u>146.00</u> | |
| 700-750 | <u>XXXX</u> | to | <u>142.00</u> | 1 Set |
| 750-800 | <u>132.00</u> | to | <u>140.00</u> | |
| 800-900 | <u>114.00</u> | to | <u>129.00</u> | |

PAIRS: No test

CALVY COWS: No test

NEXT WEEK (April22): Expecting 700

April 20

May 6th

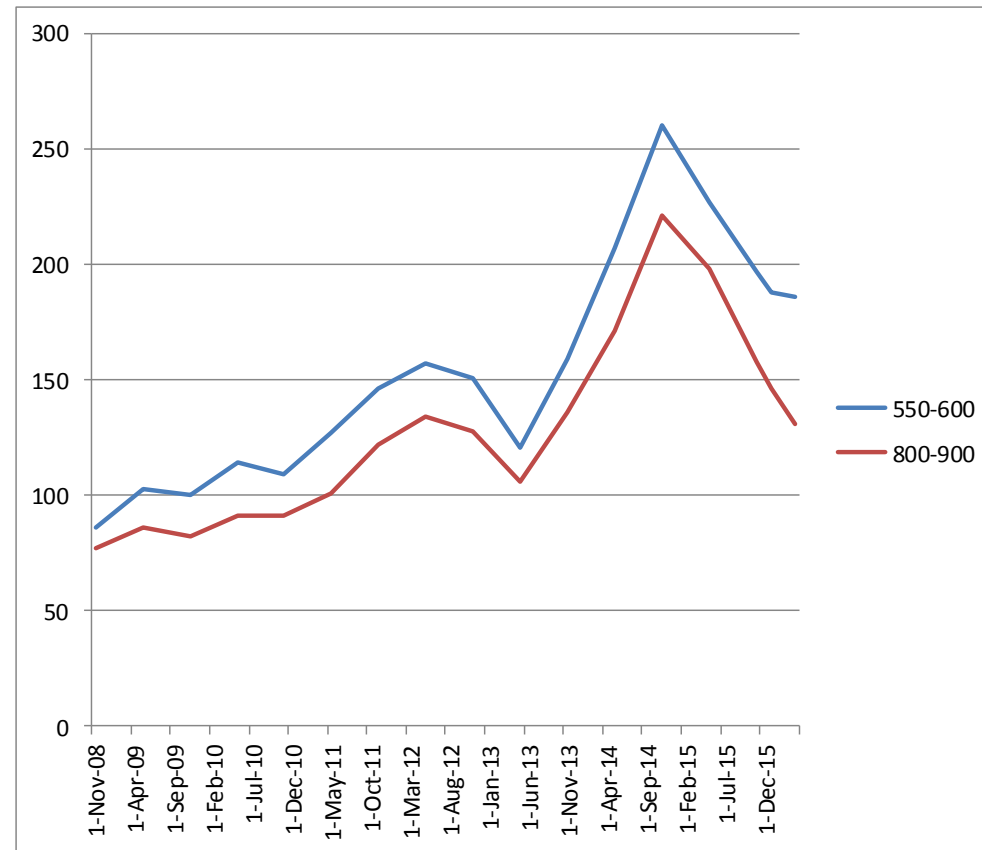
Catalog deadline for May 5 Western Video Sale

Mother's Day Special Feeder & Breeding Stock Sale

The difference a few months makes...



- This year will go down as the worst ever in terms of cattle feeder profitability. In contrast, last year (2014) was by LMIC return estimates the second best ever (back to the early 1970's).
- Over the last few months market prices have been adjusting - fed cattle prices have declined dramatically month-on-month and year-over-year, but feeder steer (700-to 800-pound) prices have adjusted even more. Those price relationships may not be done changing yet, but the most dramatic adjustments may have already occurred.





Feed Costs

| Item | Unit | Total | Per Cow |
|------------|-----------------------|-----------|---------|
| W. Range | 3000 acres | \$53,850 | \$180 |
| S. Pasture | 320 acres | 53,850 | 180 |
| Hay | 15 tons @\$160/ton | 9600 | 32 |
| Supplement | 6 tons @\$1125 | 6750 | 23 |
| Salt | 5 tons @\$240 | 1,200 | 4 |
| Total | | \$125,300 | \$418 |



Transportation

| Item | Unit | Total | Per Cow |
|-----------|----------------|----------|---------|
| Freight | | \$12,000 | \$40 |
| Pick-up | 25k@\$.58/mile | 14,375 | 48 |
| Trailer | 10k@\$.20/mile | 2000 | 7 |
| 4-Wheeler | Per year | 3000 | 10 |
| Total | | \$31,375 | \$105 |



Overhead and Other

| Item | Unit | Total | Per Cow |
|---------------|---------------------|----------|---------|
| Brand Inspec. | Per head | \$375 | 2 |
| Check off | Per head | 300 | 1 |
| Commission | 2.5% on gross sales | 11,400 | 38 |
| Insurance | Operation | 4,000 | 13 |
| Vet/Medical | Total | 16,800 | 56 |
| Bulls | 4@\$6000/hd | 24,000 | 80 |
| Misc. | Total | 3000 | 10 |
| Total | | \$59,875 | \$199 |



Total Cash Costs

| Item | Total | Per Cow |
|--------------------|-----------|---------|
| Feed | \$125,300 | \$418 |
| Transportation | 31,375 | 105 |
| Overhead and Other | 59,875 | 199 |
| Total | \$216,550 | \$722 |



Gross Income

| Class | Weight-lbs | \$/lbs | Gross |
|--------------------------------|------------|--------|-----------|
| Steers (128 hd @700 lbs net) | 89,600 | \$1.47 | \$131,712 |
| Heifers (54 hd@640 lbs net) | 34,560 | \$1.49 | \$51,944 |
| Y. Heifers (15 hd@860 lbs net) | 12,900 | \$1.27 | \$16,383 |
| Bulls (4 hd@ 1800 lbs net) | 7,200 | \$0.80 | \$5760 |
| C. Cows (39 hd@1250 lbs net) | 48,750 | \$0.69 | \$33,638 |
| Total | | | \$239,437 |



Return over Cash Costs

| Item | Total | Per Cow |
|------------------------|-----------|---------|
| Gross Income | \$239,437 | \$798 |
| Cash Costs | \$216,560 | \$722 |
| Return over Cash Costs | \$22,877 | \$76 |

Assumes no debt, labor costs or opportunity cost on invested capital.



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Table 3. RANGING ANALYSIS

300 Head Cow-Calf Operation
Sacramento Valley-2016

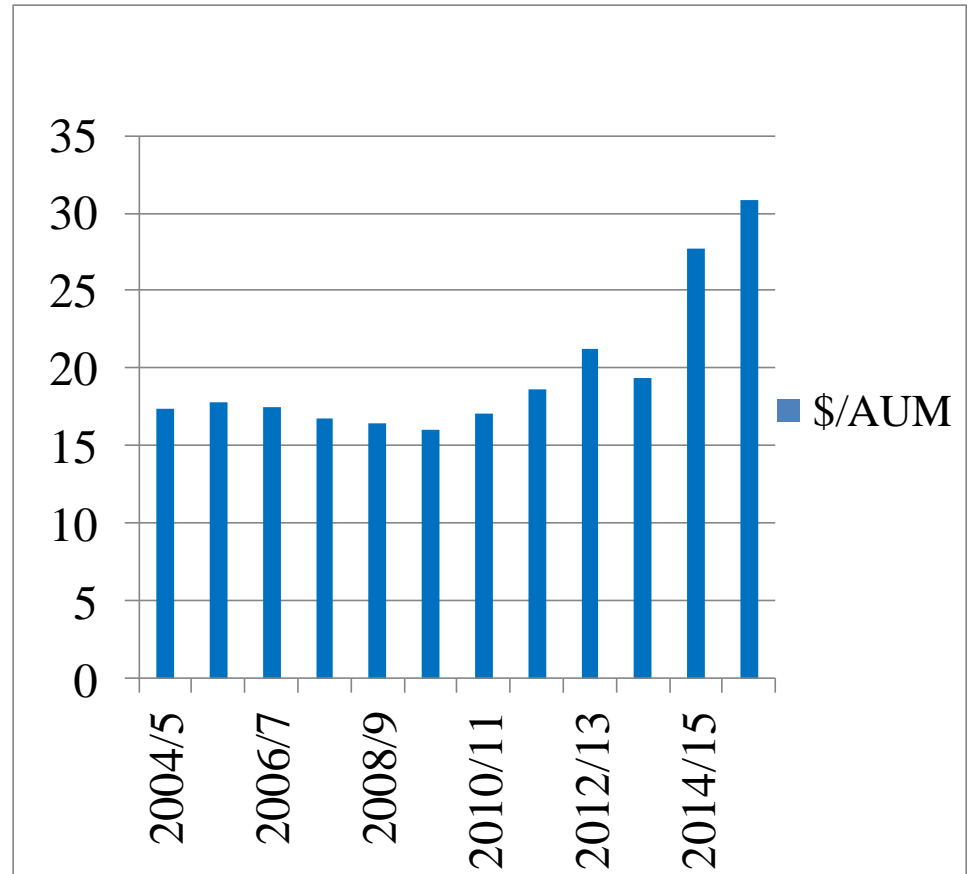
| | Total | Weight | Market Prices | | | | | | |
|----------------------------|--------------|---------------|----------------------|--------------|--------------|---------------|---------------|---------------|---------------|
| | Head | cwt | (\$ per cwt) | | | | | | |
| Steer Calves | 130 | 7.00 | 120.00 | 130.00 | 140.00 | 150.00 | 160.00 | 170.00 | 180.00 |
| *Heifer Calves | 70 | 6.40 | 121.20 | 131.30 | 141.40 | 151.50 | 161.60 | 171.70 | 181.80 |
| *Yearling Heifers | 20 | 8.60 | 104.40 | 113.10 | 121.80 | 130.50 | 139.20 | 147.90 | 156.60 |
| *Cull Cows | 33 | 12.50 | 56.40 | 61.10 | 65.80 | 70.50 | 75.20 | 79.90 | 84.60 |
| *Cull Bulls | 4 | 18.00 | 66.00 | 71.50 | 77.00 | 82.50 | 88.00 | 93.50 | 99.00 |
| Gross Income | | | 209,471 | 226,927 | 244,383 | 261,839 | 279,295 | 296,751 | 314,207 |
| †Total Operating Costs | | | 221,432 | 221,432 | 221,432 | 221,432 | 221,432 | 221,432 | 221,432 |
| Net Income | | | -11,961 | 5,495 | 22,951 | 40,407 | 57,863 | 75,319 | 92,775 |
| Net Income per Head | 300 | | -39.87 | 18.32 | 76.50 | 134.69 | 192.88 | 251.06 | 309.25 |

* Estimate based upon average price differential between classes of livestock from Shasta Livestock-five sales each year 2010-2014.

† Total operating costs based on 2016 data.



Pasture rents are up...



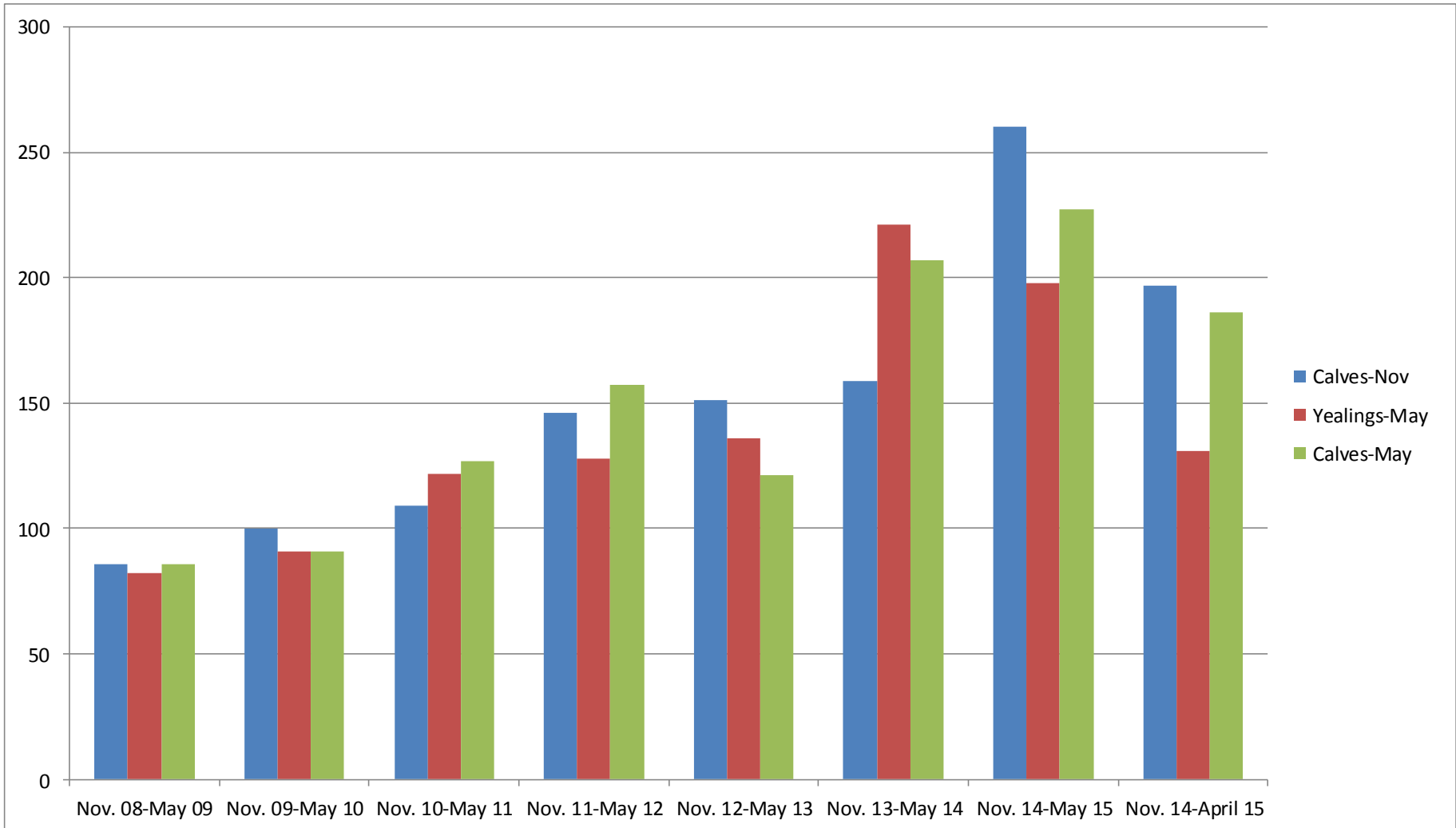


Looking at yearlings...

- Weaned calves run on grass seasonally (markets for spring and fall born calves.
- Winter yearlings landed in late fall and shipped in late spring (coast and annual grassland)
- Summer yearlings landed in late spring and shipped in early fall (mountains)
- Heavier calves straight to feedlot



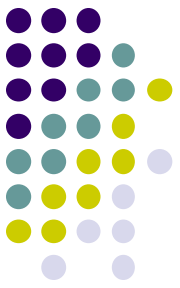
Market (\$/cwt) change on a winter yearling scenario by year



What happened in 2014/15 Winter Season?



| | No. | Wt. | Dollar Value | Gross Value | Per Calf |
|-----------------------|-----|-----|--------------|-------------|----------|
| Acquisition | 60 | 600 | \$2.60 | \$93,600 | \$1560 |
| Gross Sales | 59 | 870 | \$1.98 | \$101,633 | \$1723 |
| Gross Income | | | | \$8033 | \$136 |
| Cash Costs | | | | \$8880 | \$148 |
| Return over Cash Cost | | | | <\$847> | <\$14> |



What happened in 2015/16 Winter Season?

| | No. | Wt. | Dollar Value | Gross Value | Per Calf |
|-----------------------|-----|-----|--------------|-------------|------------|
| Acquisition | 60 | 600 | \$1.97* | \$70,920 | \$1182 |
| Gross Sales | 59 | 870 | \$1.31 | \$67,242 | \$1140 |
| Gross Income | | | | <\$3678> | <\$61.13> |
| Cash Costs | | | | \$8880 | \$148 |
| Return over Cash Cost | | | | <\$12,558> | <\$209.30> |

*Many winter yearlings were purchased in July/Aug for Nov/Dec delivery-SLA 7/17/2015
Average price for 550-600 lbs steers was \$2.36/lb—this would make return \$<424>/hd

Shifting to finishing cattle...





UCD/UCCE Ranch to Rail 2015

| | A | B | C | D | E | F | G |
|--------------------------|---------|---------|---------|----------|---------|---------|---------|
| In Weight, lb | 897 | 809 | 816 | 832 | 727 | 797 | 823 |
| Out Weight, lb | 1,325 | 1,302 | 1,428 | 1,243 | 1,326 | 1,200 | 1,256 |
| Days on Feed | 133 | 113 | 134 | 125 | 141 | 128 | 99 |
| Daily Gain, lb | 3.22 | 4.36 | 4.58 | 3.3 | 4.24 | 3.15 | 4.39 |
| Feed Intake, lb/d | 22.3 | 23.6 | 28.2 | 18.9 | 24.8 | 19.7 | 24.1 |
| Feed/Gain | 6.95 | 5.40 | 6.15 | 5.74 | 5.86 | 6.27 | 5.49 |
| Cost of Gain, cwt | \$76.06 | \$63.59 | \$66.09 | \$61.45 | \$69.38 | \$73.13 | \$64.20 |
| Dressing % | 63.5% | 62.70% | 61.60% | 63.20% | 65.10% | 63.70% | 62.50% |
| Back Fat, in | 0.28 | 0.53 | 0.6 | 0.5 | 0.54 | 0.49 | 0.56 |
| REA, in ² | 15.2 | 14.2 | 13.2 | 13.6 | 13.7 | 13.1 | 13.6 |
| Quality Grade | 50% Ch | 90% Ch | 100% Ch | 70% Ch/P | 85% Ch | 60% Ch | 92% Ch |
| Yield Grade | 2.1 | 2.8 | 3.5 | 2.9 | 3.2 | 2.9 | 3 |
| Purchase Price, cwt | \$2.16 | \$2.13 | \$1.90 | \$1.95 | \$2.10 | \$2.05 | \$2.00 |
| Sale Price, carcass, cwt | \$2.37 | \$2.46 | \$2.40 | \$2.39 | \$2.37 | \$2.12 | \$2.11 |

*



UCCE/UCD Ranch to Rail 2015

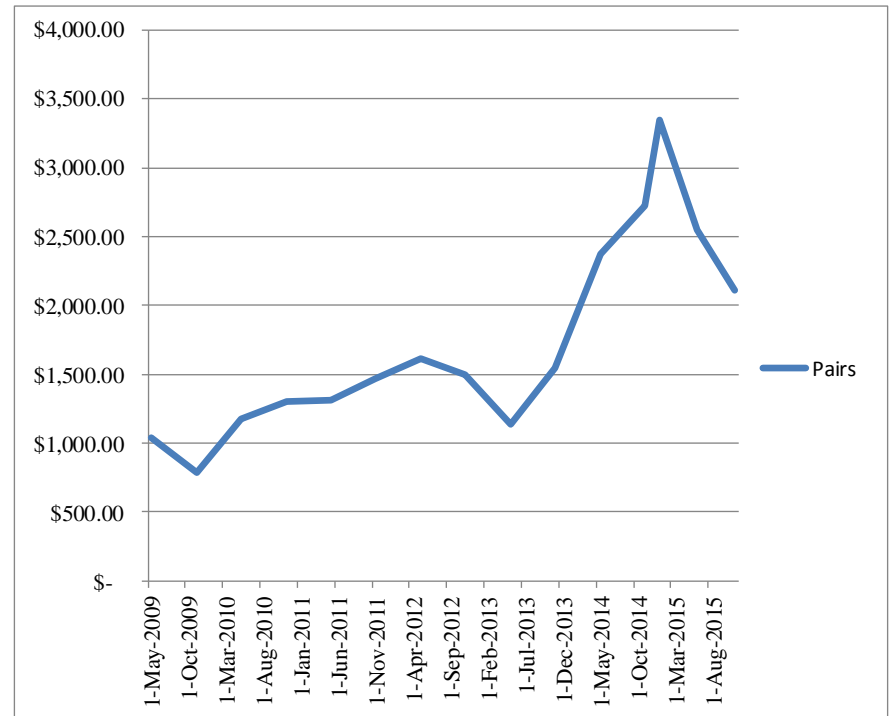
| Group | In Wt-lbs | In Price | Gross \$ In | Out Wt-lbs | Out Price | Gross \$ Out | Buy/Sell Differential | Cost of Gain/cwt |
|-------|-----------|----------|--------------------|------------|-----------|--------------------|-----------------------|------------------|
| A | 897 | \$ 2.16 | \$ 1,937.52 | 1325 | \$ 1.50 | \$ 1,987.50 | \$ 49.98 | \$ 76.06 |
| B | 809 | \$ 2.13 | \$ 1,723.17 | 1302 | \$ 1.54 | \$ 2,005.08 | \$ 281.91 | \$ 63.59 |
| C | 816 | \$ 1.90 | \$ 1,550.40 | 1428 | \$ 1.52 | \$ 2,170.56 | \$ 620.16 | \$ 66.09 |
| D | 832 | \$ 1.95 | \$ 1,622.40 | 1243 | \$ 1.45 | \$ 1,802.35 | \$ 179.95 | \$ 61.45 |
| E | 727 | \$ 2.10 | \$ 1,526.70 | 1326 | \$ 1.54 | \$ 2,042.04 | \$ 515.34 | \$ 69.38 |
| F | 797 | \$ 2.05 | \$ 1,633.85 | 1201 | \$ 1.35 | \$ 1,621.35 | (\$ 12.50) | \$ 73.13 |
| G | 823 | \$ 2.00 | \$ 1,646.00 | 1256 | \$ 1.33 | \$ 1,664.20 | \$ 18.20 | \$ 64.20 |



UCCE/UCD Ranch to Rail 2015

| Group | In Wt-lbs | In Price | Gross \$ In | Feed & Vet/Freight | Total Cost | Gross \$ Out | Net | Buy/Sell Differential | Cost of Feed & Vet/Freight |
|-------|-----------|-----------------|--------------------|--------------------|------------|--------------------|------------|-----------------------|----------------------------|
| A | 897 | \$ 2.16 | \$ 1,937.52 | \$ 358.23 | \$2,295.75 | \$ 1,987.50 | (\$308.25) | \$ 49.98 | \$ 358.23 |
| B | 809 | \$ 2.13 | \$ 1,723.17 | \$ 355.30 | \$2,078.47 | \$ 2,005.08 | (\$73.39) | \$ 281.91 | \$ 355.30 |
| C | 816 | \$ 1.90 | \$ 1,550.40 | \$ 450.61 | \$2,001.01 | \$ 2,170.56 | \$169.55 | \$ 620.16 | \$ 450.61 |
| D | 832 | \$ 1.95 | \$ 1,622.40 | \$ 292.48 | \$1,914.88 | \$ 1,802.35 | (\$112.53) | \$ 179.95 | \$ 292.48 |
| E | 727 | \$ 2.10 | \$ 1,526.70 | \$ 455.80 | \$1,982.50 | \$ 2,042.04 | \$59.54 | \$ 515.34 | \$ 455.80 |
| F | 797 | \$ 2.05 | \$ 1,633.85 | \$ 336.86 | \$1,970.71 | \$ 1,621.35 | (\$349.36) | (\$ 12.50) | \$ 336.86 |
| G | 823 | \$ 2.00 | \$ 1,646.00 | \$ 316.52 | \$1,962.52 | \$ 1,664.20 | (\$298.32) | \$ 18.20 | \$ 316.52 |
| H | 832 | \$ 1.825 | \$ 1504.86 | \$ 374.81 | \$1,879.67 | \$ 1,681.83 | (\$197.84) | \$ 176.97 | \$374.81 |

Price of pairs has increased over time—with a recent notable increase





In the early 70's we bought a bunch of calves from Florida and Louisiana and sent them to the Imperial Valley of California to graze them on sugar beet tops and alfalfa stubble, thinking we could raise them up and make a few bucks. Naturally, the price dropped so we decided to keep them hoping for the prices to go up again, I had rented a ranch in Elko County, Nevada, so we sent them there and kept them through the summer. Then we sent the whole mess of them to Harris feedlot and fed them out. By the time we were through we figured that if we had shot every one of them the day we bought them we would have been money ahead.

Phil Stadtler. 2007. I Made a Lot of Tracks. (In print again through Cowboy Museum, Oakdale, CA)

At some point you place your bet...George McArthur, Winter Ag Meeting 1/6/2015





Couple of parting thoughts before I stop...

- Lots to manage—
 - Changing market
 - Biological needs of cow changes over time
 - Production varies
 - Dynamic quantity/quality of forage over the year(s) (drought)
 - Vegetation Grows



Questions?

