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COOPERATIVE EXTENSION
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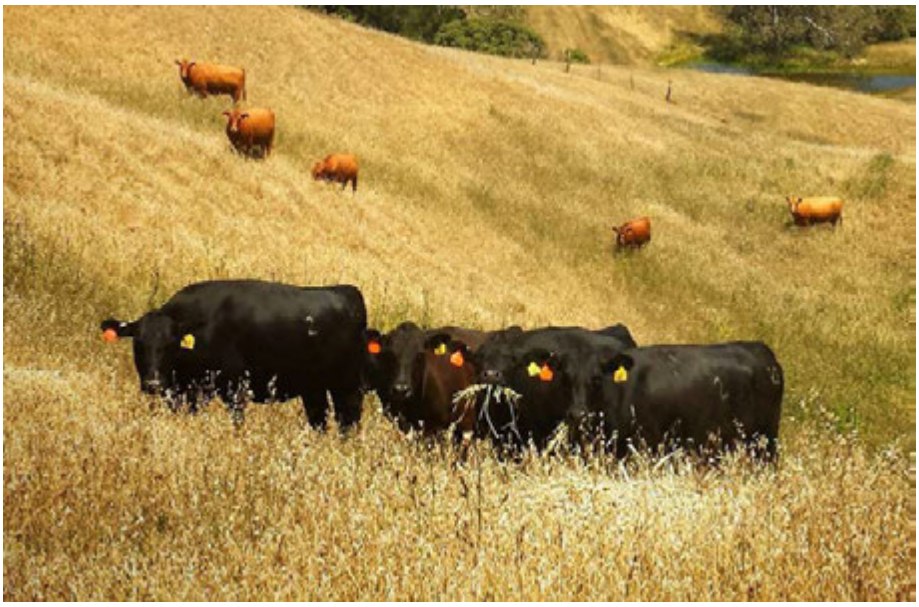
SAMPLE COSTS FOR BEEF CATTLE



COW – CALF PRODUCTION

300 Head Operation

SAN JOAQUIN VALLEY-SOUTH 2017

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300 Head Operation San Joaquin Valley-South-2017

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INTRODUCTION

The cattle industry in California has undergone dramatic changes in the last few decades. Ranchers have experienced increasing costs of production with a lack of corresponding increase in revenue. Issues such as international competition, and opportunities, new regulatory requirements, changing feed costs, changing consumer demand, economies of scale, and competing land uses all affect the economics of ranching. Rangeland makes up the largest share of agricultural acreage in the state-accounting for approximately 62 percent of the total land in farms (Census of Agriculture). Cattle operations play an important role in California's environment (16% of the total land area of California) and landscape. They need to be economically viable to maintain the current landscape.

Sample costs to raise beef calves from a cow-calf operation are presented in this study. This study is intended as a guide only. It can be used to guide production decisions, estimate potential returns, prepare budgets and evaluate production loans. Sample costs for labor, materials, equipment, and custom services are based on July 2017 figures. A blank column titled Your Costs is provided in Tables 1 to enter your estimated costs.

For an explanation of calculations used in the study refer to the section titled Assumptions. For more information contact Donald Stewart; University of California Agriculture and Natural Resources, Agricultural Issues Center, Department of Agricultural and Resource Economics, at 530-752-4651 or destewart@ucdavis.edu. The local extension office can be contacted through; Julie Finzel at 661-868-6219 or jafinzel@ucanr.edu.

Cost of Production studies for many commodities are available and can be down loaded from the website, http://coststudies.ucdavis.edu. Archived studies are also available on the website.

Costs and Returns Study Program/Acknowledgements. A costs and returns study is a compilation of specific crop data collected from meetings with professionals working in production agriculture from the area the study is based. The authors thank rancher cooperators, UC Cooperative Extension, and other industry representatives who provided information, assistance, and expert advice. *The University is an affirmative action/equal opportunity employer.*

ASSUMPTIONS

The assumptions refer to Tables 1 through 4 and pertain to sample costs to operate a beef cow–calf operation. Practices described represent production practices and materials considered typical of a well-managed ranch in the region. This ranch has multiple production alternatives including a separate Yearling/Stocker operation. Some of the cost associated with ranching can be shared between the production alternatives and operations. A percentage of these costs are spread across the operations accordingly and noted in the narrative sections and tables.

This study explains the annual costs associated with an ongoing operation with the assumptions that the ranch was operated on this basis in prior years and will continue in subsequent years. The costs, materials, and practices shown in this study will not apply to all situations. Production practices vary by rancher and the differences can be significant. The study does not represent any single ranch and is intended as a guide only. **The use of trade names and ranching practices in this report does not constitute an endorsement or recommendation by the University of California nor is any criticism implied by omission of other similar products or cultural practices.**

Overview. The cattle producer rents all range and pasture land. The farm is a "typical" owner-operated cow-calf ranch operation in the southern San Joaquin Valley. Grazing requires 8 - 172 acres per cow-calf pair, depending upon the location and the amount of forage available. Actual herd numbers in California vary widely, ranging from part-time operations of less than 10 cows to operations running thousands. This cost study is based upon numbers from a herd of 300 cows.

Ranching operations in California can be generally classified into four types. The first type can be described as a part-time operation that runs a small number of animals (less than 50) in order to utilize existing forage resources, keep the grass down, or on a hobby-type basis. The second type includes medium-sized operations (75-200 cows) that are run as a business, but the ranch is supplemented with income from other enterprises or from off-ranch sources. The third type includes large operations (over 200 cows) where cattle production is the primary enterprise and source of income for the ranch. The final category applies to cattle ranches of varying sizes that are part of a larger diversified operation with farming and other businesses. Often the ranches in the first and second categories are not profitable as an individual enterprise, while in categories three and four, the ranches are generally a profitable business enterprise,

The cost calculations are based on economic principles that include all cash costs and non-cash overhead costs. This analysis has used a rental value of the Animal Unit Month, (AUM) as a cost of operation. An AUM is defined as the amount of forage it takes to feed one cow and her suckling calf for one month. This study assumes a mature cow weight of 1,200 pounds consuming about 2 percent of her body weight on a daily basis. Forage production per acre varies throughout California based on precipitation, elevation, soil type, range and pasture management, slope, aspect and more. For this reason, land taxes, fence and building depreciation, and land value are not considered in the costs.

Production Operations

Land/Pasture Rent, Hay and Supplements. This includes the market value of all feed (purchased or raised) that was used in the cow-calf operation.

Rangeland in the southern end of the San Joaquin Valley are under multi-year lease agreements with the land owner. The value is between $750 and $1,200 per acre and rents for $6 to $22 per acre. Mountain pasture is usually under a long-term lease with the United States Forest Service. Pasture rent is assumed to be $18 per acre and one AUM is assumed to use 1.2 acres. Under these assumptions, one AUM costs $21.60. The quantity of

forage for bulls and yearling heifers is calculated at 1.3 AUM & 0.7 AUM respectively.

Mineral supplements and salt are provided to the animals From May through October when the grass is dry. Livestock are fed alfalfa hay over short periods of time when there is limited feed available on rangeland and during weaning and shipping. Winter range grazing is from November through April, and summer grazing on mountain pasture or dry grass from May through October.

Table A. Operations Calendar. The Operations Calendar is for a beef breeding herd which shows approximate dates for the operations. Operations will vary according to management and seasonal weather.

Months	Operation
Summer:	
May1 to October 31	Cattle grazing- Summer range, Mountain pasture/Dry Grass
May	Heifer calves – booster vaccinations
May - Marketing	Calves - (steers & heifers) sold
May	Trucking - hauling cattle to summer pasture
August	Pre-breeding vaccines - cows & heifers
September 1 to December 1	Calving
October & November	Breeding soundness check - bulls (*Trich test)
Winter:	
November 1 to April 30	Cattle grazing - Winter Range
November	Yearling bulls purchased
November	Trucking - hauling cattle to winter pasture
December 1 to February 28	Breeding - bulls turned in
March	Open cows, open heifers and cull bulls sold
March	Brand inspection/check off
February & March	Veterinary/Medical-vaccinate, mark and brand calves

*Tritrichomonas foetus; "Trich," is a venereal disease of cattle.

Health, Veterinary Services, Medicine. This includes the cost of vaccines, medicines, veterinary services, breeding soundness exams, etc. Pre-breeding vaccinations are done in November or December, dry cow vaccinations and deworming in April. Steer and heifer calves are branded, dehorned, and vaccinated in March. The bull calves are also castrated in March. Heifer calves booster vaccinations are given in May. It is assumed the majority of the costs occur in May and the rest is equally split between the other three months. Some of the ranchers participating in the budget review may not invest in pregnancy testing of their cows in an effort to reduce veterinary costs when sale prices are low.

Horses/Dogs Care and Feeding. Costs for replacement animals, shoeing horses, feed, and veterinary expenses are based on costs reported by the participating producers. Cattle dogs are for herding. Charges are for food, veterinary care and training. A percentage of the costs for the horses and dogs are included since they are used over the entire ranch.

Freight/Trucking-Transportation of cattle. Trucking costs apply to commercial hauling of the cattle between summer and winter grazing. Each load, for a large operation can haul approximately 50,000 pounds (35 mature cows). The majority of operations in the study area utilize a 4WD 1-ton Pickup-single rear axle with duel tires

and a 5th wheel stock trailer for the bulk of their cattle transportation needs. This setup can haul 8 mature cows or 12,000 lbs. per load.

Vehicles. 1-Ton 5th Wheel-4WD Pickup, Stock Trailer, All-Terrain Vehicle (ATV-4WD). Business vehicle mileage for the pickup truck is estimated at 16,750 miles per year and calculated at $0.535 per mile. The stock trailer is estimated at 6,700 miles per year at $.20 per mile. Estimated mileage of the All-Terrain Vehicle (ATV) 4-wheeler is 2,345 miles per year at $.35 per mile.

Lube/Repairs-Vehicle/Equipment. Repair and maintenance charges for equipment are listed as a separate line item in tables 1 & 2.

Fencing Materials, Maintenance, and Repair of Infrastructure. This includes fencing wire, t-posts, and miscellaneous purchases of wood and other construction materials and supplies.

Labor. This study does not include any wages for hired labor or costs associated with volunteer labor. Most ranches use little or no hired labor. Some ranches use volunteer help, especially on weekends for gathering cattle from individuals that supply their own horses. Some ranches hire cowboys to work the cows and some provide housing, tack, horse feeding and care.

Owner/Operator/Management. Returns to operator labor and management are included in net revenue. Assignment of Ranch Management costs differ by operation. Some ranches hire direct labor and some hire management that is paid a monthly salary. Owner/Operator labor for hauling, turnout, gathering, feeding, fence repair, irrigation, salting, checking cows, and moving pastures is not included as an explicit cost, but the value of management time and effort must be considered in assessing ranch profits.

Risk. Production and marketing risks are significant in the cattle business. This study makes every effort to model a production system based on typical, real world practices. However, it cannot fully represent financial and market risks, which affect the profitability and economic viability of cattle operations. Because there are so many potential risk factors, effective risk management must combine specific tactics in a detailed manner and in various combinations for a sustainable operation.

Revenue

Livestock. Livestock includes 300 bred cows, 60 replacement heifers, 15 bulls, and 4 horses. The ranch has an 89 percent calf crop (267 calved) with 3 percent mortality before weaning (8 calves). Half of the 259 weaned calves are steers and of the heifers, 60 are retained as candidates for replacements. A 13 percent cull rate is applied to the cow herd. One percent of the cows (3 cows) die each year. Based on these assumptions, the rancher sells 39 cull cows, 199 calves; (69 heifer calves and 130 steer calves). The rancher sells 18 yearling heifers, (keeping 42 yearling heifers for replacements).

There are 15 bulls included in inventory overhead. It is assumed that the producer will cull and sell 5 bulls per year. The bull sales and purchase transactions are included (Tables 1 & 2). The cow to bull ratio is assumed to be 20:1, with each bull lasting an average of 3 years. Horses and dogs are purchased as needed. Inventory overhead includes 4 horses and 2 dogs (Table 4).

Marketing. Cull cows, cull bulls are sold in March. Heifer calves and steer calves (8 months old) are sold via video or auction in May. Some retained heifers not used for replacements are sold as yearlings in September. Marketing costs include video and/or auction fees, brand inspection and an assessment for beef promotion (Checkoff).

Revenue/Sales. Returns are based on the livestock sales operations listed above. The range of prices are shown in Table 3. Sale price data are from Western Livestock Market (Famoso) and Visalia Livestock Market. Months of sales are shown in Table A and receipts by month are in Table 2.

Pricing/Ranging Analysis. Cattle prices vary with age, size and quality. Price per head usually increases with size while price per pound decreases with size. Prices for livestock purchased or carried over from a Cow-Calf operation for resale are dependent on the expected value of the animal at resale and the expected costs of holding the animal until resale including the operating costs. Table 3 shows a range of returns using a range of prices.

Table B. **Animal Inventory per Month.** This table shows one year of a multi-year operation that starts with 300 cows and bred heifers for the beginning of the breeding season in December. October and November shows that some of the calves, heifers & steers are born during those months. The heifer calves (60) are called yearling heifers in June which are carried over as potential replacements. The following March, 18 yearling heifers are sold, keeping 42 bred heifers. The calendar for February and March, (297 cows) is showing the loss of cows over winter. The pasture charges remain at 300 cows from December through March, Tables 1 & 2.

Animals	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Cows	258	258	258	258	258	258	300	300	297	297	258	258
Steer Calves	0	0	0	0	65	110	130	130	130	130	130	130
Heifer Calves	0	0	0	0	65	110	129	129	129	129	129	129
*Yearling Heifers	60	60	60	60	60	60	60	60	60	0	0	0
Bred Heifers	42	42	42	42	42	42	**0	0	0	42	42	42
Bulls	10	10	10	10	10	15	15	15	15	10	10	10

*Open yearling heifers are sold after pregnancy checking in March. The 42 bred yearling heifers are kept as replacements.
**Yearling heifers are bred during the winter (at 10-14 months old - bred heifers) and become cows after calving (at 18-22 months old). The 42 bred heifers would be carried over from the previous year to have 300 cows and heifers in December.

Cash Overhead

Cash overhead consists of various cash expenses paid out during the year that are assigned to the whole farm and not to a particular operation. These costs can include property taxes, interest on operating capital, office expense, liability and property insurance, equipment repairs, sanitary services, and management.

Insurance. Insurance for farm investments varies depending on the assets included and the amount of coverage.

Liability Insurance. In this study, $4,000 is charged to the entire ranch as a standard farm liability insurance policy. This insurance will help cover the expenses for which you become legally obligated to pay for bodily injury claims on your property and damages to another person's property as a result of a covered accident. Common liability expenses covered under your policy include attorney fees and court costs, medical expenses for people injured on your property, injury or damage to another's property caused by your animals. The Cow-Calf study is charged at 67 percent of the total cost. The remaining insurance costs are charged to the Yearling/Stocker operation.

Livestock Insurance. No amount of livestock insurance is specified as the most common way to cover livestock is to insure them as a herd. Livestock (cows, swine, goats, lambs and sheep) and poultry (chickens and turkeys) coverages can vary widely among farm insurance companies. It's important to understand what is covered in your farm insurance policy and what is not. Insurance packages provide broad causes of loss protection for

livestock, which includes the following: accidental shooting, attacks by dogs or wild animals (does not apply to sheep), earthquake loss, electrocution, flood loss, loading and unloading accidents, and sudden and accidental collision damage causing death. Individual policies and blanket policies are available to cover all of your farm property (livestock, equipment, structures, etc.) in one lump sum amount.

Fire Insurance. No amount of fire insurance is specified. Some operations opt to purchase fire insurance for high-risk rangeland, such as areas near busy roads or areas prone to burn frequently.

USDA Insurance Programs. The USDA, through the Risk Management Agency and the Farm Services Agency, offers a number of insurance programs to livestock producers. Livestock Risk Protection (LRP) policy offers protection against a decline in feeder cattle prices during the term of the endorsement. Non-insured Crop Disaster Assistance Program (NAP) provides payments to producers based on percent forage loss over 50 percent and number of acres insured. There are limitations to the number of head insured with application deadlines and endorsement ranges from 13 to 52 weeks that apply to all programs. Other insurance programs are offered through federal assistance programs. This study assumes no participation in government insurance programs.

Office Expense. Office and business expenses are estimated at $4,000 per year for the entire ranch and charged at 67 percent of the total to the Cow-Calf operation. The other 33 percent is charged to the Yearling/Stocker operation. These expenses include office supplies, social media, bookkeeping, accounting, permits and miscellaneous administrative charges.

Interest on Operating Capital. Interest on operating capital is based on cash operating costs and is calculated monthly until sale months at a nominal rate of 6.0 percent per year.

Interest charge is the cost of your money that is tied up in the cattle production. It reflects the amount of money you pay on borrowed money (Line of Credit) or that amount you could have earned had you invested your own resources in alternative uses. The interest cost of post animal sales is discounted back to the last sale month using a negative interest charge. The interest rate will vary depending upon various factors, the rate in this study is considered a typical lending rate by a farm lending agency as of July 2017. As revenue is received from animal sales it is used to pay back the operating loan (Table 2).

Non-Cash Overhead

Non-cash overhead is calculated as the capital recovery cost for equipment and other farm investments.

Capital Recovery Costs. Capital recovery cost is the annual depreciation and interest costs for a capital investment. This includes equipment, machinery and livestock. It is the amount of money required each year to recover the difference between the purchase prices and salvage value (unrecovered capital). It is equivalent to the annual payment on a loan for the investment with the down payment equal to the discounted salvage value. This is a more complex method of calculating ownership costs than straight-line depreciation and opportunity costs, but more accurately represents the annual costs of ownership because it takes the time value of money into account (Boehlje and Eidman). The formula for the calculation of the annual capital recovery costs is: ((Purchase Price – Salvage Value) x Capital Recovery Factor) + (Salvage Value x Interest Rate).

Salvage Value. Salvage value is an estimate of the remaining value of an investment at the end of its useful life. For farm machinery (tractors and implements), the remaining value is a percentage of the new cost of the investment (Boehlje and Eidman). For other investments including irrigation systems, buildings, and miscellaneous equipment, the value at the end of its useful life is zero. The purchase price and salvage value for equipment and investments are shown in Table 4.

Capital Recovery Factor. Capital recovery factor is the amortization factor or annual payment whose present value at compound interest is 1. The amortization factor is a table value that corresponds to the interest rate used and the life of the machine.

Interest Rate. The interest rate of 5.0 percent used to calculate capital recovery cost is the effective long term interest rate effective July 2017. The interest rate is provided by a local farm lending agency and will vary according to risk and amount of loan.

Equipment. Annual ownership costs for equipment and other investments are shown in Table 4, Equipment, Investment, and Business Overhead. These charges are allocated across the different production operations on this ranch including the Cow-Calf operation. The remaining costs are spread across the production alternatives accordingly and are listed in Tables 1, 2, and 3 as Capital Recovery.

Portable Cattle Working Facilities. Facilities consist of a portable loading chute and portable corral panels. Depending upon the type and number of squeeze chutes and corral panels, the price will vary. An estimated price for livestock handling equipment required by a typical 300 head operation is used in this study.

Water Tanks (3,000 gal)/Troughs. Water tanks and troughs are included to account for necessary range improvements on leased pasture and United States Forest Service allotments.

Shop & Fencing Tools. This includes hand tools, gloves, a chainsaw, portable welder and other miscellaneous tools.

Tack. This category includes four saddles and related necessary equipment (blanket, headgear, lariat, etc.).

Table Values. Due to rounding, the totals may be slightly different from the sum of the components.

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Table 1. COSTS AND RETURNS FOR BEEF COW - CALF PRODUCTION

300 Head Operation, San Joaquin Valley South-2017

Production/Sales:	**Head**	**Units/ Head**	**Unit**	**Price/Unit**	**Total Value**	***Value/Head**	**Your Costs**
Steer Calves	130	6.00	cwt	$ 146.97	$ 114,637	$ 382.12	
Heifer Calves	69	5.25	cwt	$ 148.81	$ 53,906	$ 179.69	
Yearling Heifers	18	8.00	cwt	$ 127.45	$ 18,353	$ 61.18	
Cull Cows	39	12.00	cwt	$ 69.36	$ 32,460	$ 108.20	
Cull Bulls	5	18.00	cwt	$ 80.16	$ 7,214	$ 24.05	
GROSS Revenue:					**$ 226,571**	**$ 755.24**	
Operating Inputs:	**Units**		**Units**	**Cost/Unit**	**Total Costs**	***Cost/Cow**	
Alfalfa Hay	105	tons	1 year	$ 180.00	$ 18,900	$ 63.00	
Supplements-(Combined)	27	tons	1 year	$ 300.00	$ 8,100	$ 27.00	
Pasture-(cows@ 1.2/AUM)	258	cows	8 months	$ 21.60	$ 44,582	$ 148.61	
Pasture-(cows@ 1.2/AUM)	300	cows	4 months	$ 21.60	$ 25,920	$ 86.40	
Pasture-(yearling heifers@ 0.7/AUM)	60	heifers	9 months	$ 15.12	$ 8,165	$ 27.22	
Pasture-(bred heifers@ 0.7/AUM)	42	heifers	9 months	$ 15.12	$ 5,715	$ 19.05	
Pasture-(bulls@ 1.3/AUM)	15	bulls	4 months	$ 28.08	$ 1,685	$ 5.62	
Pasture-(bulls@ 1.3/AUM)	10	bulls	8 months	$ 28.08	$ 2,246	$ 7.49	
Veterinary Service-cows	258	cows	1 each	$ 2.25	$ 581	$ 1.94	
Veterinary Service -heifers	60	heifers	1 each	$ 7.25	$ 435	$ 1.45	
Veterinary Service-bulls	15	bulls	1 each	$ 40.00	$ 600	$ 2.00	
Vaccine/Wormer/Etc.-cows	258	cows	1 each	$ 9.00	$ 2,322	$ 7.74	
Vaccine/Wormer/Etc.-heifers	60	heifers	1 each	$ 12.50	$ 750	$ 2.50	
Vaccine/Wormer/Etc.-bulls	15	bulls	1 each	$ 15.50	$ 233	$ 0.78	
Brand Inspection	258	head	1 inspection	$ 1.25	$ 323	$ 1.08	
Marketing Order Promo (checkoff)	258	head	1 checkoff	$ 1.00	$ 258	$ 0.86	
Freight/trucking	300	head	1 each	$ 20.00	$ 6,000	$ 20.00	
Marketing-Video/Auction Fees	258	head	1 each	$ 35.00	$ 9,030	$ 30.10	
Horse (Shoes, Vet, Feed)	2	horses	1 each	$ 3,015.00	$ 6,030	$ 20.10	
Dogs (Food, Vet)	1	dogs	1 each	$ 500.00	$ 500	$ 1.67	
Yearling Bulls Purchased	5	bulls	1 each	$ 5,000.00	$ 25,000	$ 83.33	
Pickup Truck-1Ton 4WD	1	pickup	16,750 miles	$ 0.535	$ 8,961	$ 29.87	
Stock Trailer-5th Wheel	1	trailer	6,700 miles	$ 0.20	$ 1,340	$ 4.47	
ATV	1	ATV	2,345 miles	$ .35	$ 821	$ 2.74	
Fencing Materials-Maint/Repair	1	ALL	1 year	$ 5,000.00	$ 5,000	$ 16.67	
Equipment (maintenance and repair)	1	ALL	1 year	$ 2,000.00	$ 2,000	$ 6.67	
Operating Costs:					**$ 185,496**	**$ 618.32**	
Interest on Operating Capital @ 6.0%	(Table 2)				$ 4,218	$ 14.06	
Total Operating Costs:					**$ 189,714**	**$ 632.38**	
Cash Overhead Costs:							
Liability Insurance					$ 2,680	$ 8.93	
Office Expenses					$ 2,680	$ 8.93	
Total Cash Overhead:					**$ 5,360**	**$ 17.87**	
Total Cash Costs:					**$ 195,074**	**$ 650.25**	
Revenue Above Cash Costs:					**$ 31,497**	**$ 104.99**	
**Annual Capital Recovery	(Table 4)				$ 50,623	$ 168.74	
Total Costs:					**$ 245,697**	**$ 818.99**	
Revenue Above Total Costs:					**-$19,127**	**-$63.76**	

*Value/Head and Cost/Cow are based on 300 head.

** Capital Recovery costs are allocated between different production operations on the ranch and charged at 67% of the total from Table 4.

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Table 2. MONTHLY COSTS FOR COW-CALF PRODUCTION

300 Head Operation, San Joaquin Valley South-2017

	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Total
Production/Sales:													
Steer Calves	0	0	0	0	0	0	0	0	0	0	0	114,637	114,637
Heifer Calves	0	0	0	0	0	0	0	0	0	0	0	53,906	53,906
Yearling Heifers	0	0	0	0	0	0	0	0	0	18,353	0	0	18,353
Cull Cows	0	0	0	0	0	0	0	0	0	32,460	0	0	32,460
Cull Bulls	0	0	0	0	0	0	0	0	0	7,214	0	0	7,214
GROSS Revenue	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**58,027**	**0**	**168,543**	**226,570**
Operating Inputs:													
Alfalfa Hay	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	1,575	18,900
Supplements-(Combined)	1,350	1,350	1,350	1,350	1,350	0	0	0	0	0	0	1,350	8,100
Pasture (Cows@ 1.2/AUM)	7,430	7,430	7,430	7,430	4,320	4,320	4,320	4,320	4,320	4,320	7,430	7,430	70,502
Pasture (yearling Heifers@ 0.7/AUM)	907	907	907	907	907	907	907	907	907	0	0	0	8,165
Pasture-(bred heifers@ 0.7/AUM)	635	635	635	635	635	635	0	0	0	635	635	635	5,715
Pasture (Bulls@ 1.3/AUM)	281	281	281	281	281	421	421	421	421	281	281	281	3,931
Veterinary/Vaccines (All Costs)	0	0	308	0	0	308	308	0	0	308	0	3,690	4,920
Brand Inspection	0	0	0	40	0	0	0	0	0	40	0	242	323
Marketing Order Promo (Checkoff)	0	0	0	32	0	0	0	0	0	32	0	194	258
Freight/trucking	0	0	0	1,500	0	1,500	0	0	0	1,500	0	1,500	6,000
Marketing-Video or Auction Fees	0	0	0	0	0	0	0	0	0	0	0	9,030	9,030
Horse-2 (Shoes, Vet, Feed)	503	503	503	503	503	503	503	503	503	503	503	503	6,030
Dogs (Food, Training, Vet)	42	42	42	42	42	42	42	42	42	42	42	42	500
Yearling Bulls Purchased	0	0	0	0	0	25,000	0	0	0	0	0	0	25,000
Vehicles/Trailer (Fuel, Lube, Repair)	927	927	927	927	927	927	927	927	927	927	927	927	11,122
Fencing Materials-Maint/Repair	417	417	417	417	417	417	417	417	417	417	417	417	5,000
Equipment (Repair)	167	167	167	167	167	167	167	167	167	167	167	167	2,000
Operating Costs:	**14,233**	**14,233**	**14,540**	**15,805**	**11,122**	**36,720**	**9,585**	**9,278**	**9,278**	**10,745**	**11,976**	**27,981**	**185,496**
Net Returns above Op. Costs (Cumulative)	-14,233	-28,465	-43,006	-58,811	-69,933	-106,654	-116,239	-125,517	-134,794	-87,513	-99,488	41,074	41,074
Interest on Operating Capital @ 6.0%	71	142	215	294	350	533	581	628	674	438	497	-205	4,218
Total Operating Costs:	**14,304**	**14,375**	**14,755**	**16,099**	**11,472**	**37,254**	**10,166**	**9,905**	**9,952**	**11,183**	**12,473**	**27,776**	**189,714**
Net Revenue above Operating Costs:													**36,856**

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Table 3. RANGING ANALYSIS FOR BEEF COW-CALF PRODUCTION

300 Head Operation, San Joaquin Valley South-2017

Production/Sales	Total Head	Weight cwt	*Market Prices ($ per cwt)									
Steer Calves	130	6.00	$110	$120	$130	$140	$150	$160	$170	$180	$190	$200
Heifer Calves	69	5.25	$111	$121	$131	$141	$152	$162	$172	$182	$192	$202
Yearling Heifers	18	8.00	$96	$104	$113	$122	$131	$139	$148	$157	$165	$174
Cull Cows	39	12.00	$52	$56	$61	$66	$71	$75	$80	$85	$89	$94
Cull Bulls	5	18.00	$61	$66	$72	$77	$83	$88	$94	$99	$105	$110
Gross Revenue			**$169,467**	**$184,874**	**$200,280**	**$215,686**	**$231,092**	**$246,498**	**$261,904**	**$277,310**	**$292,716**	**$308,123**
†Total Operating Costs			$189,714	$189,714	$189,714	$189,714	$189,714	$189,714	$189,714	$189,714	$189,714	$189,714
Net Revenue			**-$20,247**	**-$4,841**	**$10,565**	**$25,971**	**$41,378**	**$56,784**	**$72,190**	**$87,596**	**$103,002**	**$118,408**
Net Revenue per Head	300		**-$67**	**-$16**	**$35**	**$87**	**$138**	**$189**	**$241**	**$292**	**$343**	**$395**

*Market price differential between classes of livestock from Famosa Livestock Auction and Visalia Livestock Market.

† Total operating costs based on 2017 data.

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Table 4. EQUIPMENT, INVESTMENT AND BUSINESS OVERHEAD

300 Head Operation, San Joaquin Valley South-2017

OVERHEAD	Purchase Price	Salvage/Cull Value	Livestock Share (%)	Useful Life (yr.)	Annual Taxes and Insurance	Annual Capital Recovery
BUILDINGS, IMPROVEMENTS AND EQUIPMENT						
Squeeze/Loading Chute & Corral Panels	17,000	1,190	100	15	0	1,582
Water Tanks 3,000 gal, troughs (4)	6,400	448	100	20	0	500
Shop/Fencing Tools	3,850	270	100	20	0	301
Saddles (4)/Tack	11,400	798	100	10	0	1,413
TOTAL FOR BUILDINGS, IMPROVEMENTS AND EQUIPMENT	**38,650**	**2,706**			**0**	**3,795**
ˣLIVESTOCK INVENTORY						
Bulls (15)	90,000	21,643	100	3	0	26,183
Cows Bred (300)	360,000	260,100	100	8	0	28,460
Heifers (60)	85,500	90,480	100	0.7	0	4,381
Horses (4)	12,000	0	100	10	0	1,554
Dogs (2)	1,000	0	100	7	0	173
TOTALS FOR LIVESTOCK INVENTORY	**548,500**	**372,223**			**0**	**60,750**
MACHINERY AND VEHICLES						
ATV	8,500	2,125	100	5	63	1,579
Stock Trailer-5th Wheel (Hauling cattle)	16,000	1,120	100	10	93	1,983
Pickup 1-Ton 4X4 Duel Rear Tires	60,000	17,500	100	8	2,100	7,450
TOTALS MACHINERY AND VEHICLES	**84,500**	**20,745**			**2,256**	**11,012**
TOTAL OVERHEAD	**671,650**	**395,674**			**2,256**	**75,557**

*This table accounts for all equipment, investment, overhead, and depreciation costs. Total overhead costs from this table are shown as Annual Capital Recovery at 67% of the total in Table 1. The charges are allocated between the different operations on the ranch. The remaining 33% is charged to the yearling/stocker operation.

The interest rate for capital recovery is calculated at 5%.

The costs of insurance on the cattle is not included in this study.