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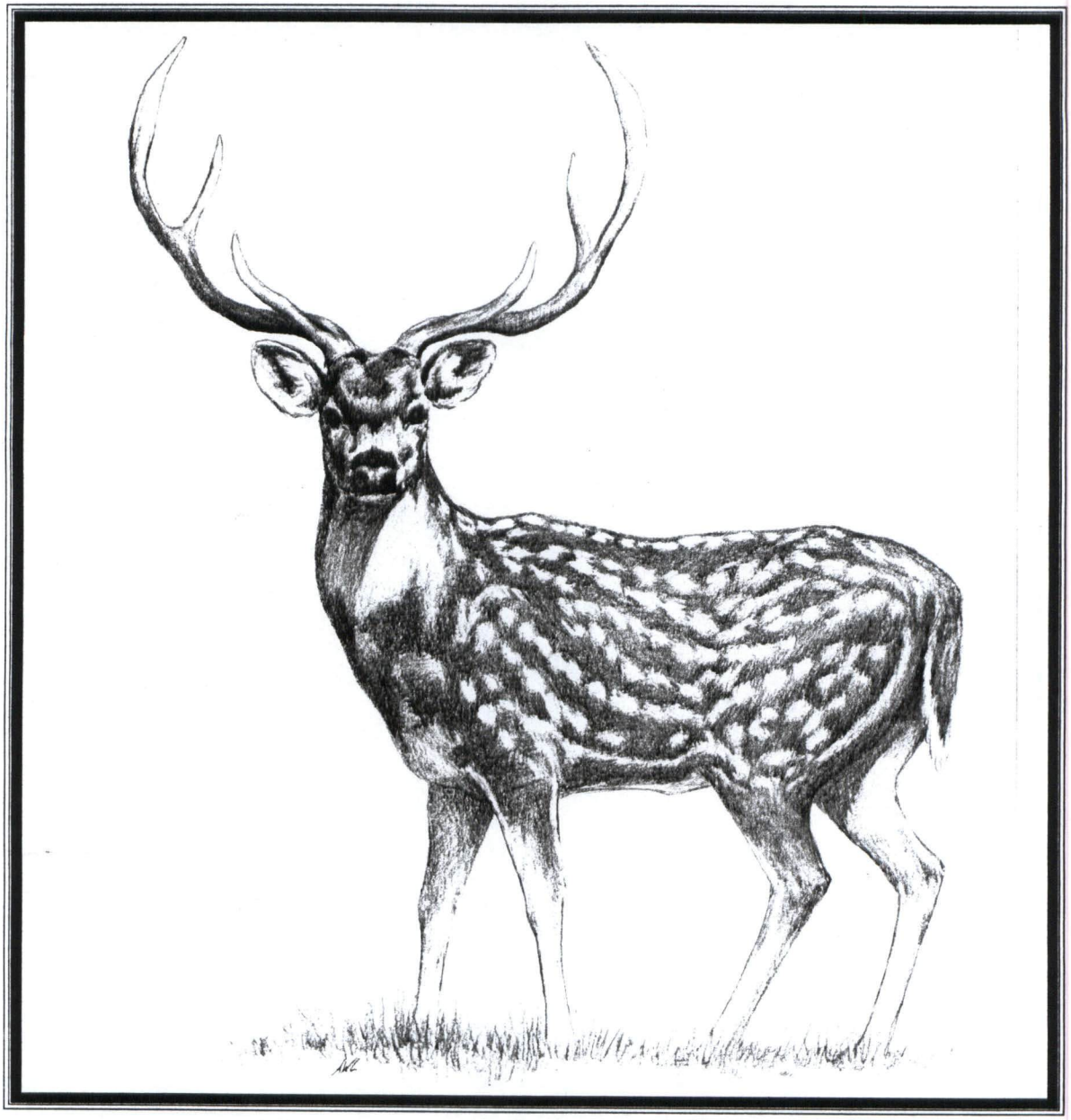

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CHAPTER 11

FARMING NON-NATIVE DEER ON IMPROVED PASTURES- ESTIMATED COSTS AND RETURNS

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One of the most important steps in planning a non-native deer farming operation is to estimate initial investment, operating costs and potential revenues. This analysis provides an outlook for profit under the production system which you plan to initiate. Farming non-native deer is by no means a " get rich quick" scheme. However, careful attention to production management and marketing can result in very acceptable rates of return when compared to other agricultural enterprises.

The attached budgets are guides for estimating costs of two phases (breeding herd and growth of weaned fawns for venison production or breeding stock) of non-native deer production. Values included as examples in the breeding herd budget characterize a start-up situation with a herd of 30 or 200 does. The stocker budget illustrates the growing and marketing of the weaned fawns from the breeding herd. The 200 doe operation utilizes about the same acreage as a one-bull unit cow-calf enterprise on improved pastures in East Texas.

Budgets are good planning tools because preparing them requires you to think about production relationships and to gather information about prices, costs, quantities of feed required, etc. The following observations elaborate on some of the basic relationships included in the deer budgets and should be helpful as you start characterizing your operation.

1. Both budgets start with assumptions upon which the operating budgets are based. In addition, the breeding herd budget includes an estimated cost of the equipment, improvements and breeding stock necessary to start the enterprise. Most trucks, tractors and other rolling stock are assumed to be used primarily for other enterprises on the farm, so only a small portion of their cost is allocated to the deer enterprise. Nearly all single use items, such as fence, working facilities and deer handling equipment, are charged to deer enterprises.

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2. Stocking rates on a head per acre basis are much higher for deer than for most other forage-based livestock enterprises. For example, an estimated 35 acres are required to maintain a 200 doe breeding herd and to raise their fawns.

3. Management plays an important role in determining the weaning percentage. It is important to maintain inventory records so managers can determine where losses occur throughout the production process. Losses between the time does are exposed to bucks and when fawns are weaned may result from culling or losing does due to injury or disease; from loss of fawns due to abortion, failure to get pregnant, or to birthing problems; or from mishaps occurring between birth and weaning of fawns. An acceptable average weaning percentage is 85%.

4. Full cost accounting requires that interest costs be included even though owner's capital is used to finance the operation. Either the actual interest rate or an opportunity rate (what the owner would have received by placing the money in an interest earning account) should be included in the budget.

5. Bucks are replaced every two years to bring fresh genetics into the herd. Does may remain in the breeding herd for 10 years or more unless managers find reasons to cull them.

6. The 200 doe breeding herd and fawn raising operations require 35 acres of hybrid bermudagrass. Twenty acres are dedicated to the doe herd and 15 to raising fawns following weaning. About 29 acres (14 for the breeding herd and 15 for growing fawns) are overseeded with ryegrass for winter forage. Seven of the 14 acres are planted with cowpeas to supplement yearlings and other breeding stock in the summer. About one acre is allotted to working facilities and holding pens.

7. Supplemental feed for does and fawns during the period that winter pasture is not yet available consists of good quality hay fed free-choice and a supplemental ration of 50% rabbit pellets and 50% cracked corn. The supplemental ration is fed so deer consume approximately 3% of their body weight. Deer may consume very little hay during this period of supplementation. However, it should remain available at all times to supply sufficient roughage to maintain good quality rumen activity.

8. Budgets indicate that the breeding enterprise by itself is not expected to be profitable. It must be combined with a second value-added phase, such as stocker or growing, that carries animals to heavier weights for slaughter or breeding stock which results in higher values.

9. Fawns are weaned in October and enter the stocker or growing phase which ends about the first of July the following year. Liveweights at the end of this phase are expected to average 115 lbs for bucks and 80 lbs for does. At the end of the growing phase, bucks can be marketed either for slaughter, as replacement breeder stock or as shooter/hunting stock. Only about 25% of the bucks are expected to sell as herd sires or shooters. Initially, owners might expect to sell all does for breeding stock. However, as the supply of breeding age does begins to exceed the demand, markets for these animals will become thin and prices received by producers will suffer. It is important to notice that higher prices expected for breeding stock greatly enhance the projected profitability of this operation. It probably should be anticipated that the demand for breeders eventually will diminish to the point where about 75% of does likely will sell for slaughter. Then the problem will become one of looking for a market that will accept the lighter weight carcasses.

10. Stocker animals require 15 acres of winter pasture along with hay and supplemental feed to reach desired weights. Animals sold as breeders require additional expenses for marketing functions such as promotion, transportation and special private treaty selling arrangements.

The example budgets are designed to evaluate the breeding herd and stocker enterprises separately. However, since the breeding herd by itself is unprofitable, the two are combined in the following:

Summary Budget - 200 Doe Herd

Revenue:	
Breeders-culls	$3,400
Stockers-breeders	$32,400
Stockers-slaughter	$7,843
Total revenue:	$43,643
Expenses:	
Breeding herd	$14,783
Stocker operations	$9,691
Depreciation	$8,740
Total expenses:	$33,214
Revenue less expenses:	$10,429
Return on total expenses	31%

This is clearly a profitable operation at the assumed levels of production, management and prices. How long it remains profitable depends largely on how long management is successful at sustaining the sale of breeding stock and shooters rather than slaughter animals.

Total production costs (adjusted for cull revenue) per finished animal produced with assumptions associated with the 200 doe herd is $182. Slaughter bucks currently are worth $127 while slaughter does are worth $61. This means that considerable restructuring of costs is necessary if most stockers are sold for slaughter.

Understandably, some producers may consider starting a much smaller operation than one with 200 does. Thus, a summary of a 30 doe herd (a one buck herd) is presented and illustrates that there are economies of size associated with non-native deer production. These economies result from utilizing the same equipment component to produce more animals. The main fixed costs that change are associated with land and fencing. Results indicate that the profitability of this smaller operation depends to even a greater extent on a producer's ability to sell breeders/shooters as the cost of production (adjusted for cull revenue) per fawn finished is $254.

Summary Budget - 30 Doe Herd

Revenue:	
Breeders-culls	$ 450
Stockers-breeders	$5,000
Stockers-slaughter	$1,139
Total revenue:	$6,589
Expenses:	
Breeding herd	$2,355
Stocker operations	$1,501
Depreciation	$2,940
Total expenses:	$6,796
Revenue less expenses:	-$ 207
Return on total expenses	-3.0%

Farming of non-native deer is not dissimilar from other agricultural enterprises in terms of its management requirements for profitability. Results of developing budgets indicate that successful producers must pay close attention to animal and forage production, to forage and feed utilization, to keeping costs as low as possible and to adding as much value to animals as possible before they are marketed.

Ranch Name: East Texas Example: 200 doe herd on 20 acres

Exotic Deer Production - Species: Fallow

Breeding Herd Annual Projected Costs and Returns 09/01/99

Projections for Planning Only: Update with Individual Farm/Ranch Information

ASSUMPTIONS

				Your ranch:
Exposed does:	200	(hd)		
Weight of does:	90	(lb per hd)		
Number of breeding bucks:	7	(hd)		
Total acres:	20	(ac)		
Doe replacement rate:	10.0%	(enter percents as decimals)		
Buck replacement rate:	50.0%			
Doe loss/cull (after exposed):	2.0%			
Fawning loss (thru birth):	10.0%			
Fawn death loss (birth to wean):	4.0%	Weaning pct:	84%	
Percent of fawns born female:	50.0%			
Breeding doe cost:	$200	(per hd)		
Breeding buck cost:	$800	(per hd)		
Breeding herd interest rate:	5.0%	(actual/opportunity rate)		
Oper. expenses int. rate:	8.5%	(actual/opportunity rate)		
Weaned doe price:	$60.00	(per hd)		
Weaned buck price:	$60.00	(per hd)		
Cull doe price:	$100.00	(per hd)		
Cull buck price:	$400.00	(per hd)		

Estimated Investment Costs

Item	Description		Cost	Loan length (years)		Annual Repair Cost	Percent Used for Deer		Depreciation
Pickup	3/4 ton	$	-	7	$	-	10%	$	-
Pickup	1/2 ton	$	5,000.00	5	$	1,000	10%	$	200.00
Trailer	16 ft	$	2,500.00	10	$	100	10%	$	35.00
Trailer		$	-	10	$	-	10%	$	-
Flatbed trailer		$	1,500.00	10	$	100	10%	$	25.00
Dump truck		$	-	10	$	-	10%	$	-
Tractor	40 hp	$	10,000.00	10	$	700	10%	$	170.00
Tractor	100 hp	$	-	10	$	-	10%	$	-
8' Perimeter fence		$	8,910.00	20	$	100	100%	$	545.50
Length 660	Width		1320	Cost/foot	$	2.25			
6' Paddock fence		$	3,960.00	15	$	50	100%	$	314.00
1980	feet at	$	2.00	per foot					
Barn		$	-	20	$	-	10%	$	-
Working facilities/gates		$	5,000.00	20	$	200	100%	$	450.00
Crush		$	1,500.00	15	$	100	100%	$	200.00
Office/shop		$	-	10	$	-	10%	$	-
Shades		$	-	5	$	-	100%	$	-
Purchased breeding does		$	40,000.00	10	$	-	100%	$	4,000.00
Purchased breeding bucks		$	5,600.00	2	$	-	100%	$	2,800.00
Total investment:		$	85,292						
Total annual depreciaton:		$	8,740						

REVENUE

	Weight (lbs)	Number (hd)	Per exposed doe	Total herd	Your ranch:
Weaned bucks:	50	84	$25	$5,040	
Weaned does:	45	84	$25	$5,040	
Cull doe revenue:	90	20	$10	$2,000	
Cull buck revenue:	200	3.5	$7	$1,400	
Other:			$0	$0	
Total revenue:			$67	$13,480	

EXPENSES

	units:	unit cost:	Per exposed doe	Total herd	Your ranch
Coastal	20	$87.20	$9	$1,744	
Interseed ryegrass	14	$112.98	$8	$1,582	
Prepared seedbed rye-ryegrass	0	$162.65	$0	$0	
Summer annual grazing: cowpeas	7	$35.00	$1	$245	
Land lease/opportunity cost	20	$10.00	$1	$200	
Hay (90 days) (rolls)	10.00	$40.00	$2	$400	
Supplemental feed	3% of body weight for		90	days	
pellets	24300	$0.100	$12	$2,430	
corn	24300	$0.075	$9	$1,823	
Salt & mineral ($/doe)		$3.00	$3	$600	
Vet & medicine ($/doe)		$5.00	$5	$1,000	
Contract labor/management ($/doe)		$5.00	$5	$1,000	
Fuel, lube, repairs ($)		$100.00	$1	$100	
Overhead ($/doe)		$2.00	$2	$400	
Other ($/doe)		$0.00	$0	$0	
Other ($/doe)		$0.00	$0	$0	
Breeding stock ownership interest			$11	$2,280	
Interest on operating funds			$5	$979	
Total expenses:			$164	$14,783	
Depreciation			$44	$8,740	
Total revenue minus total expenses			($140)	($10,042)	
Total costs minus non-fawn revenue:			$101	$20,122	
Total cost per fawn weaned (adjusted by cull sales and other revenue)				$120	

Ranch ID: East Texas Example: Growing fawns from 200 doe herd on 15 acres

EXOTIC DEER STOCKER PRODUCTION - Species: Fallow

Projected Costs and Returns 09/01/99

Projections for Planning Purposes Only: Update with Your Ranch Info.

SYSTEM ASSUMPTIONS

Your ranch:

Bucks	onto pasture:		84	(head)
Does	onto pasture:		84	(head)
	Month	Day	Year	
In date:	10	1	96	
Out date:	7	1	97	

	Bucks	Does		Your ranch:
Average in-weight:	50	45	(lbs)	
Net purchase price:	$60.00	$60.00	(per hd)	
Average daily gain:	0.24	0.13	(lbs; deads-in average)	
Stocker death loss:	2	2	(head)	
Slaughter price:	$2.00	$1.50	(per lb carcass wgt.)	
Dressing percent:	55%	55%		
Breeder price:	$800.00	$200.00		
Livestock interest rate:	5.0%	5.0%	(actual/opportunity rate)	
Oper. expenses int. rate:	8.5%	8.5%	(actual/opportunity rate)	
In pay-weight:	4200	3780	(lbs)	
Length of grazing period:	273	273	(days)	
Total head-days on pasture:	22932	22932	(hd-days)	
Net gain per head:	65	35	(lbs)	
Out pay-weight:	9660	6720	(lbs)	
Average out-weight:	115	80	(lbs)	

REVENUE

		Per stocker	Total herd	Your ranch:
Bucks-breeding/hunting	20	$800	$16,000	
Bucks-slaughter:	62	$127	$7,843	
Does-breeding:	82	$200	$16,400	
Does-slaughter:	0	$66	$0	
Cull sales:			$0	
Other sales:			$0	
Total revenue:			$40,243	

EXPENSES

		unit	Per	Total	
	units	cost	stocker	herd	Your ranch:
Stockers:	164		$61	$10,080	
Prepared seedbed ryegrass pasture	15	$162.65	$15	$2,440	
Summer pasture	0	$87.20	$0	$0	
Supplemental protein	0	$82.00	$0	$0	
Land lease/opportunity cost	15	$10.00	$1	$150	
Hay (1 roll per 20 head)	8	$30.00	$1	$240	
Other feed	16.44	$225.00	$23	$3,700	
3% of body weight for		90	days		
Salt & mineral ($/head)		$1.00	$1	$164	
Marketing - slaughter	62	$2.00	$1	$124	
Marketing - breeders	102	$10.00	$6	$1,020	
Vet & medicine ($/head)		$3.00	$3	$492	
Contract labor/management	0	$8.00	$0	$0	
Fuel, lube, repairs ($)		$100.00	$1	$100	
Overhead ($/head)		$2.00	$2	$328	
Other		$0.00	$0	$0	
Other		$0.00	$0	$0	
Other		$0.00	$0	$0	
Other		$0.00	$0	$0	
Stocker ownership interest	$10,080	5.0%	$2	$377	
Interest on operating funds	$8,757	8.5%	$3	$557	
Total Expenses:			$121	$19,771	
Total revenue minus total expenses			$125	$20,472	
Total expenses minus other revenue:				$19,771	
Total expense per lb of deer sold (adjusted)				$1.21	
Total cost of gain (adjusted)				$1.11	
Summary:					
Total revenue (breeding/stocker)				$43,643	
Total expense (breeding/stocker)				$33,213	
Revenue less expense (breeding/stocker)				$10,430	
Cash flow (breeding/stocker)				$19,169	
Return on capital (breeding & stocker):				31.4%	

Ranch Name: East Texas Example: One buck herd (30 doe on 3 acres)

Exotic Deer Production - Species: Fallow

Breeding Herd Annual Projected Costs and Returns 09/01/99

Projections for Planning Only: Update with Individual Farm/Ranch Information

ASSUMPTIONS

				Your ranch:
Exposed does:	30	(hd)		
Weight of does:	90	(lb per hd)		
Number of breeding bucks:	1	(hd)		
Total acres:	3	(ac)		
Doe replacement rate:	10.0%	(enter percents as decimals)		
Buck replacement rate:	50.0%			
Doe loss/cull (after exposed):	2.0%			
Fawning loss (thru birth):	10.0%			
Fawn death loss (birth to wean):	4.0%	Weaning pct:	84%	
Percent of fawns born female:	50.0%			
Breeding doe cost:	$200	(per hd)		
Breeding buck cost:	$800	(per hd)		
Breeding herd interest rate:	5.0%	(actual/opportunity rate)		
Oper. expenses int. rate:	8.5%	(actual/opportunity rate)		
Weaned doe price:	$60.00	(per hd)		
Weaned buck price:	$60.00	(per hd)		
Cull doe price:	$100.00	(per hd)		
Cull buck price:	$300.00	(per hd)		

Estimated Investment Costs

Item	Description		Cost	Loan length (years)		Annual Repair Cost	Percent Used for Deer		Depreciation
Pickup	3/4 ton	$	-	7	$	-	10%	$	-
Pickup	1/2 ton	$	5,000.00	5	$	1,000	10%	$	200.00
Trailer	16 ft	$	2,500.00	10	$	100	10%	$	35.00
Trailer		$	-	10	$	-	10%	$	-
Flatbed trailer		$	1,500.00	10	$	100	10%	$	25.00
Dump truck		$	-	10	$	-	10%	$	-
Tractor	40 hp	$	10,000.00	10	$	700	10%	$	170.00
Tractor	100 hp	$	-	10	$	-	10%	$	-
8' Perimeter fence		$	8,910.00	20	$	100	100%	$	545.50
Length 660	Width		1320	Cost/foot	$	2.25			
6' Paddock fence		$	3,960.00	15	$	50	100%	$	314.00
1980	feet at	$	2.00	per foot					
Barn		$	-	20	$	-	10%	$	-
Working facilities/gates		$	5,000.00	20	$	200	100%	$	450.00
Crush		$	1,500.00	15	$	100	100%	$	200.00
Office/shop		$	-	10	$	-	10%	$	-
Shades		$	-	5	$	-	100%	$	-
Purchased breeding does		$	6,000.00	10	$	-	100%	$	600.00
Purchased breeding bucks		$	800.00	2	$	-	100%	$	400.00
Total investment:		$	46,492						
Total annual depreciaton:		$	2,940						

REVENUE

	Weight (lbs)	Number (hd)	Per exposed doe	Total herd	Your ranch:
Weaned bucks:	50	12	$24	$720	
Weaned does:	45	13	$26	$780	
Cull doe revenue:	90	3	$10	$300	
Cull buck revenue:	200	0.5	$5	$150	
Other:			$0	$0	
Total revenue:			$65	$1,950	

EXPENSES

		units:	unit cost:	Per exposed doe	Total herd	Your ranch
Coastal		3	$87.20	$9	$262	
Interseed ryegrass		2.5	$112.98	$9	$282	
Prepared seedbed annual ryegrass		0	$162.65	$0	$0	
Summer annual grazing: cowpeas		1	$35.00	$1	$35	
Land lease/opportunity cost		3	$10.00	$1	$30	
Hay (90 days) (rolls)		1.50	$40.00	$2	$60	
Supplemental feed	3% of body weight for			90	days	
pellets		3645	$0.100	$12	$365	
corn		3645	$0.075	$9	$273	
Salt & mineral ($/doe)			$3.00	$3	$90	
Vet & medicine ($/doe)			$5.00	$5	$150	
Contract labor/management ($/doe)			$5.00	$5	$150	
Fuel, lube, repairs ($)			$100.00	$3	$100	
Overhead ($/doe)			$2.00	$2	$60	
Other ($/doe)			$0.00	$0	$0	
Other ($/doe)			$0.00	$0	$0	
Breeding stock ownership interest				$11	$340	
Interest on operating funds				$5	$158	
Total expenses:				$168	$2,355	
Depreciation				$98	$2,940	
Total revenue minus total expenses				($201)	($3,344)	
Total costs minus non-fawn revenue:				$161	$4,844	
Total cost per fawn weaned (adjusted by cull sales and other revenue)					$194	

Ranch ID: East Texas Example: Growing fawns from 30 doe herd

EXOTIC DEER STOCKER PRODUCTION - Species: Fallow

Projected Costs and Returns 09/01/99

Projections for Planning Purposes Only: Update with Your Ranch Info.

SYSTEM ASSUMPTIONS

Your ranch:

Bucks	onto pasture:		12	(head)
Does	onto pasture:		13	(head)
	Month	Day	Year	
In date:	10	1	96	
Out date:	7	1	97	

	Bucks	Does	
Average in-weight:	50	45	(lbs)
Net purchase price:	$60.00	$60.00	(per hd)
Average daily gain:	0.24	0.13	(lbs; deads-in average)
Stocker death loss:	0	0	(head)
Slaughter price:	$2.00	$1.50	(per lb carcass wgt.)
Dressing percent:	55%	55%	
Breeder price:	$800.00	$200.00	
Livestock interest rate:	5.0%	5.0%	(actual/opportunity rate)
Oper. expenses int. rate:	8.5%	8.5%	(actual/opportunity rate)
In pay-weight:	600	585	(lbs)
Length of grazing period:	273	273	(days)
Total head-days on pasture:	3276	3549	(hd-days)
Net gain per head:	65	35	(lbs)
Out pay-weight:	1380	1040	(lbs)
Average out-weight:	115	80	(lbs)

REVENUE

		Per stocker	Total herd	Your ranch:
Bucks-breeding/hunting	3	$800	$2,400	
Bucks-slaughter:	9	$127	$1,139	
Does-breeding:	13	$200	$2,600	
Does-slaughter:	0	$66	$0	
Cull sales:			$0	
Other sales:			$0	
Total revenue:			$6,139	

EXPENSES

		unit	Per	Total	
	units	cost	stocker	herd	Your ranch:
Stockers:	25		$60	$1,500	
Prepared seedbed ryegrass pasture	2	$162.65	$13	$325	
Summer pasture	0	$87.20	$0	$0	
Supplemental protein	0	$82.00	$0	$0	
Land lease/opportunity cost	2	$10.00	$1	$20	
Hay (1 roll per 20 head)	1.25	$30.00	$2	$38	
Other feed	2.43	$225.00	$22	$548	
3% of body weight for		90	days		
Salt & mineral ($/head)		$1.00	$1	$25	
Marketing - slaughter	9	$2.00	$1	$18	
Marketing - breeders	16	$10.00	$6	$160	
Vet & medicine ($/head)		$3.00	$3	$75	
Contract labor/management	0	$8.00	$0	$0	
Fuel, lube, repairs ($)		$100.00	$4	$100	
Overhead ($/head)		$2.00	$2	$50	
Other		$0.00	$0	$0	
Other		$0.00	$0	$0	
Other		$0.00	$0	$0	
Other		$0.00	$0	$0	
Stocker ownership interest	$1,500	5.0%	$2	$56	
Interest on operating funds	$1,358	8.5%	$3	$86	
Total Expenses:			$120	$3,001	
Total revenue minus total expenses			$126	$3,138	
Total expenses minus other revenue:				$3,001	
Total expense per lb of deer sold (adjusted)				$1.24	
Total cost of gain (adjusted)				$1.17	
Summary:					
Total revenue (breeding/stocker)				$6,589	
Total expense (breeding/stocker)				$6,795	
Revenue less expense (breeding/stocker)				($206)	
Cash flow (breeding/stocker)				$2,733	
Return on capital (breeding & stocker):				-3.0%	