Creating a Resource Inventory

As a farmer, producers use resources such as land, labor, machinery, breeding stock, management and financial capital to produce commodities for sale. An accurate inventory of these resources is important for the evaluation of the current health of the operation and planning for the future. The use of an up to date resource inventory can help to:

- Complete a balance sheet;
- Provide a summary of collateral that can be used for a loan;
- Identify problems with the condition of your assets; and
- Provide information that can be used to evaluate options for growth and diversification.

Problems such as soil erosion in fields, or livestock manure stored too close to water sources may not be identified until a resource inventory is completed. Weakness in the financial situation of the business, due to excessive debt, large variable costs, or depreciation may also be found when completing a resource inventory. Furthermore, inefficiencies in human resources, labor, or time may also be found. Values should be assigned to these resources and current inventories should be maintained to make sure the operating foundation is known. Only after a resource inventory is completed can the current health and the future direction of operation be determined.

How do I develop a resource inventory?

The resource inventory of a farming operation should include all resources available and needed to carry out the goals of the operation. This list can be broken down into five areas. These five are: physical/natural, human/personnel, equipment, animal/crop, and financial resources and are discussed below.

Physical/Natural Resources

Physical/natural resources should include any maps detailing: land topography, range site descriptions, carrying capacities, and the location of any structures such as barns, working pens, fences, and water facilities available (not necessarily owned) to the farm. This map can either be drawn by hand or may be downloaded from several web-sites that offer aerial maps of the United States.

Results from soil surveys should be included to determine the effectiveness of fertilizer applications and identify crop enterprises that could be produced on the land.

An accurate description of any wildlife and their populations will help to determine potential predators or beneficial wildlife to the operation.

Bennett, Blake, Stan Bevers, Rob Borchardt, and Brenda Duckworth. Department of Ag Economics, Texas Cooperative Extension, Texas A&M University. May 2003.

The physical/natural resource inventory should also include a historical record of rainfall and weather patterns for the farm or local area. Finally, a value should be placed on the land that is owned by the farm. This value is generally the fair market value of the land if it were sold.

Human/Personnel Resources

Any person who works on the farm should be included in the human/personnel resources inventory. These include the farmer, family, paid full or part-time employees, custom hired operators, and any neighbors or friends that work on the farm. Along with the names of the individuals that work on the farm, the human/personnel resource list should include the assigned duties, salaries/wages, skills or talents, and work schedules for each person as well as a list of emergency personnel contacts if one of the current workers cannot perform their duties.

Equipment Resources

All equipment that is used by the farm should be included in the equipment resources inventory. This list should include any important information such as model or serial numbers found on the equipment and the size, age, and condition of each piece of equipment. Also indicate if the equipment is owned, leased, or borrowed. Finally, a current value should be included for each piece of equipment. Determining the value of equipment can be done two different ways. First, a fair market value can be placed on all equipment owned by the farm. A second way to determining the value of equipment resources is by examining the depreciation schedule which should also be included with the list of equipment resources. The depreciation schedule will provide a value of the equipment which is equal to the original cost minus any accumulated depreciation.

Animal/Crop Resources

An inventory of animal/crop resources for a farm can be one of the easiest inventories to create. This inventory list includes all animals and/or crops that are produced by the farm or those in storage. The total number of acres along with a history of yields and government payments that are used by each enterprise (crop and/or livestock) should also be indicated.

Keep in mind that some enterprises will use the same acreage. An example of this could be cattle and corn. Corn is planted and later harvested. The corn stalks are then used as a supplemental feed for the cattle. Both enterprises used the same acreage.

Finally, a value should be placed on all livestock and crops. The value of purchased breeding stock can be determined by either subtracting the accumulated depreciation from the original purchase price (found on the depreciation schedule) or by determining the fair market value of the stock. Determining the value of

raised livestock or stored crops can be done by estimating a fair market value for these commodities if they were sold.

Financial Resources

The final resource that should be included in a farm's inventory is the financial resources. These include any cash or savings accounts that are used by the farm as well as any debts to banks or other lenders. It is important to include with the debts: the amount currently owed, the interest rate, and the amount of time remaining on the loan. Loans used for operating year after year should also be listed along with the expected amount that will be borrowed and the expected terms. Finally, additional credit that **may be** available should also be included.

Conclusion

Identifying all resources available to a farming operation is important when beginning the planning process. Making a complete list of all available resources makes it much easier to identify opportunities and weaknesses of a farming operation. The resource inventory should be in writing and should be updated at least once each year. After completing the resource inventory above, a full and accurate description of a farm should be complete. Only after a full resource inventory has been completed can the true health of a farm be determined.

Human Resources Inventory Worksheet

List all the Human Resources of the Operation
(Use additional Pages if Necessary)

Name	Assigned Duties	Salaries/Wages	Skills/Talents	Work Schedules	Emergency Contact

Equipment Resources Inventory Worksheet

List all the Equipment Resources of the Operation
(Use additional Pages if Necessary)

Equipment Name	Model #	Size	Purchase Year	Age	Condition			Ownership			Book Value	Market Value
					G	F	P	O	L	B		

Animal/Crop Resources Inventory Worksheet

List all the Animal/Crop Resources of the Operation
(Use additional Pages if Necessary)

Enterprise	Acres	Yield History per Acre	Government Payments	Market Value

Financial Resources Inventory Worksheet

List all the Financial Resources of the Operation
(Use additional Pages if Necessary)

Item		Amount
Cash & Savings		
Debt		
Lender Name		
Interest Rate		
Time Remaining		
Original Amount		
Debt		
Lender		
Interest Rate		
Time Remaining		
Original Amount		
Potential Credit		
Lender		
Interest Rate		
Amount		

Creating a Resource Inventory

Case Study Application

Below is an example of a resource inventory for the case farm. Crops produced on the farm include sweet corn, onions, tomatoes, and cantaloupe. Also, the farm produces cattle from its cow/calf herd. The following resource inventory was developed to gather a better picture of the farm operation.

Physical/Natural Resource Inventory

To begin a physical/natural resource inventory of the farm, a map of the farm was developed. Figure 1 shows that the 44 total acre farm is located at the intersection of CR 208 and FM 360. It has a purchased value of $44,000 and an average rainfall of 35 inches per year. Thirty acres of the farm is cross fenced and is devoted to 25 head of cows and is at its maximum stocking capacity. Three of the thirty acres of pasture land devoted to the cattle has timber. There are two water locations available to the cattle. There are working pens located in the western portion of the 30 acre pasture. The farm also grows four acres of corn, two acres of onions, two acres of cantaloupe, and two acres of tomatoes. There is also a house with a barn located in the far west portion of the property. Finally, wildlife that can be found on the property include: coyotes, skunks, deer, and birds.

A topography map (Figure 2) indicates the elevation of the land on and surrounding the farm. Figure 2 shows that the farm has a relatively flat elevation. There is one small hill that reaches an elevation of 260 feet above sea level located in the northern portion of the property. A small ridge can be found on the eastern side of the property which has an elevation of 230 feet. Finally, the elevation of the farm is lower where the watering facilities are found on the farm (see Figure 1).

The final physical/natural resource inventory item for this farm is a soil test result. Soil samples to perform this test can be taken by the farmer and sent to the state agency responsible for running the test. In return, the farmer will receive a soil test result (Table 1). From this analysis, it can be seen that the farm is mildly alkaline, low in nitrate, very high in phosphorus, high in potassium, very high in calcium, high in magnesium, has no salinity, and is high in sulphur.

Human Resource Inventory

All persons working on the farm are included in the human resource inventory. In this example farm, the people involved are presented in Table 2 and are discussed below. John Doe Sr. is the owner and farmer of the operation. His duties include: all major work on the farm; all major production decisions; and minor decision maker concerning the financial aspects of the operation. He is good at growing vegetables and managing cow herds. He draws $13,000 per

year from the farm for his family while working full time (seven days per week) on the farm. If work needs to be done or a decision has to be made on the farm and John Sr. was not available, the first contact person would be his son (John Doe Jr.), the second contact would be his brother (Jim Doe), and the final contact would be his wife (Jane Doe).

Jane Doe is the wife of the owner of the farm. Her major duties include all major decisions concerning the finances of the farm where she excels and minor work responsibilities of the farm. She does not draw any money from the farm for her assistance and is only available in the evenings to do any work for the farm. Jane is employed by the local school district as a teacher's aide. She earns $16,000 per year from this off-farm employment. Because her major farm responsibility is the farm finances, there is no emergency contact person at this time if she is not available.

John Doe Jr. is the 16 year-old son of the owner of the farm. He helps his dad by working about 10 hours per week on the farm after school. He makes $5.00 per hour for working which totals about $5,000 per year. The emergency contact for John Jr. is John Sr.'s brother Jim Doe.

The family also includes twin daughters, age nine years old. Currently, they role in the farming operations is small.

Jim Doe is the brother of the owner of the farm. He helps with labor on the farm when he is needed but does not get paid. He also has a farm and grows tomatoes and sweet corn which makes him a valuable resource for knowledge. The emergency contact for Jim is John Doe Jr.

Equipment Resource Inventory

Table 3 shows that the farm has both owned and borrowed equipment available. Specifically, the equipment and resource inventory gives a break-down of the equipment by name, the model number, size, age, condition, whether owned, leased, or borrowed, book value, and market value. The farm has a 80 horsepower tractor (Model # JD1940) that is 23 years old and in fair condition. It was purchased in 2000 and has a book value of $17,500. Its current market value is $11,000 if sold. Similarly, a 5 foot shredder (Model # JDLX4) is available to be used by the farm. It is 9 years old, in fair condition, and borrowed. Because it is borrowed, no entry is made in the book value or market value column.

Animal/Crop Resource Inventory

A list of all crops and animals produced on the farm are listed in Table 4. The farm produces 4 acres of sweet corn which has a historical yield of 0.5 tons per acre and a current market value of $1,333. The farm also produces two acres of cantaloupe, two acres of onions, and two acres of tomatoes. The yields are: 100 cwt per acre for the cantaloupe, 150 bags per acre for the onions, and 15 cwt per acre for the tomatoes. The current fair market values for the crops are: $3,400 for the cantaloupe, $7,500 for the onions, and $1,500 for the tomatoes. Finally, no government payments have been paid to the farm for any of the crops produced.

The cattle owned by the farm are listed on the animal/crop resource inventory by ear tag number. The first 30 entries are the cows, then the bull and, finally, the next 11 entries identify the calves that have not been weaned and the associated mother cow ear tag number. For example, cow #2287 is owned by the farm and has a value of $650. She has a calf that has not been weaned that has a market value equal to $351.

Financial Resource Inventory

The final resource inventory is the financial resources. In this example, the cash and savings, debt, and potential credit are identified. Specifically, the farm has $8,500 in cash and savings. It has an equipment note with the First National Bank totaling $15,000 that covers the purchase of the tractor. This loan has an interest rate of 6.0 percent and 4 years still remain on this note. The farm also has a land note with First National Bank which equals $22,000. The interest rate associated with this operating note is 10.0 percent. If the farm needed to borrow additional money, First National Bank would loan up to $30,000 at 7.0 percent interest.

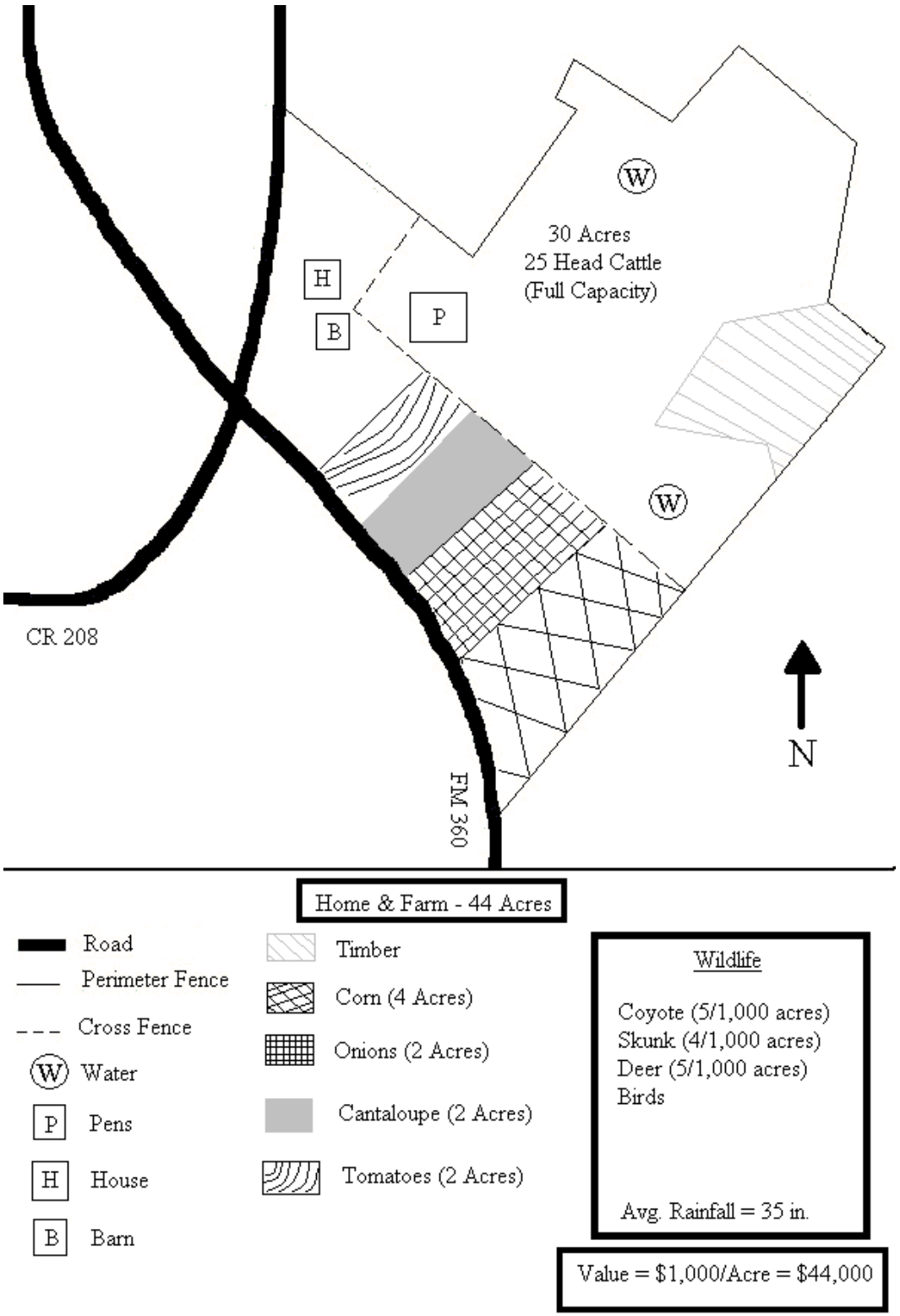

Figure1. Farm range site description

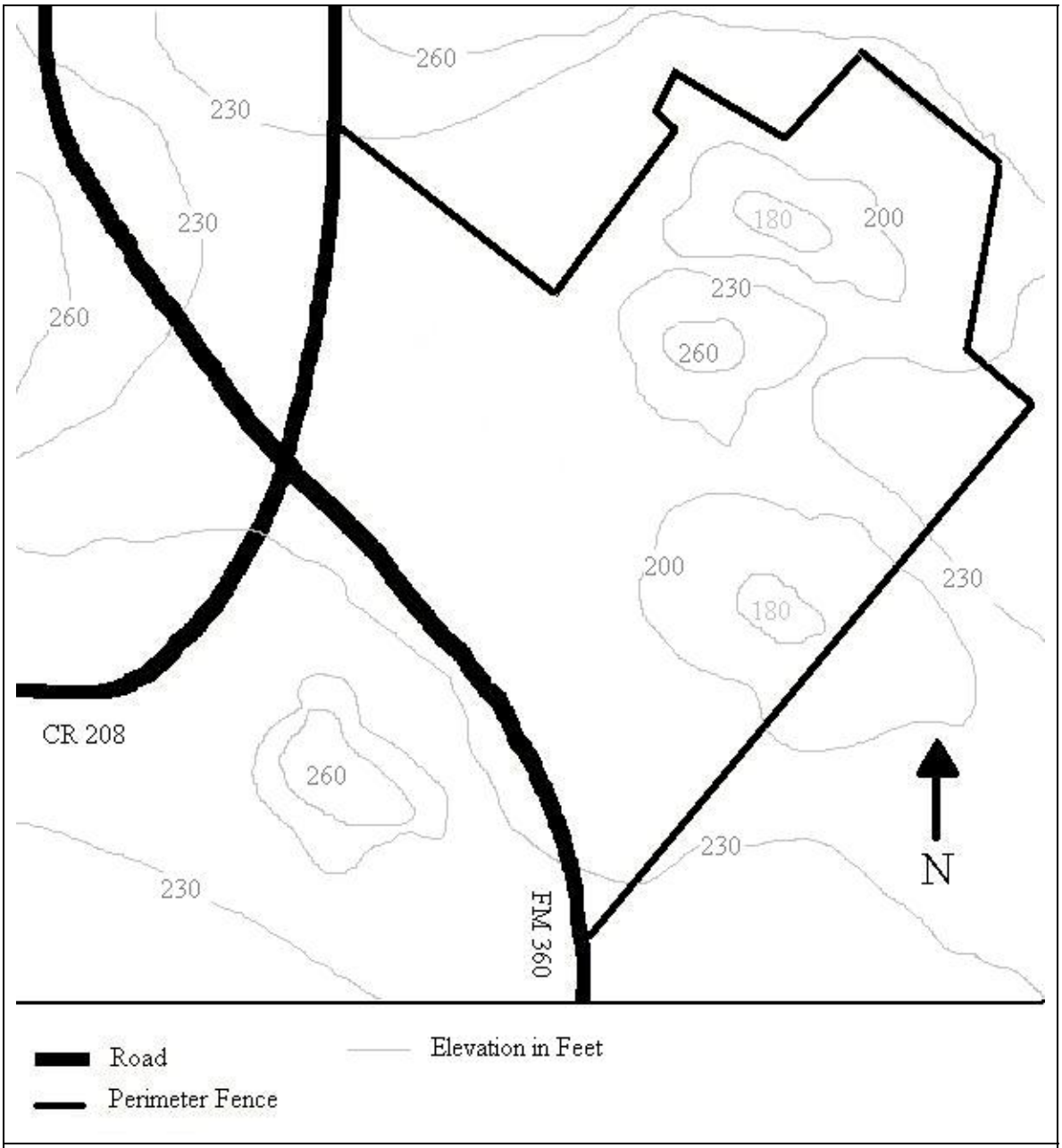

Figure 2. Farm topography map.

Table 1. Soil test results.

SAMPLE ID# FARM

SOIL ANALYSIS

| SOIL TEST RATINGS – PPM ELEMENT (AVAILABLE FORM) |

PH ACIDITY	NITRATE-N	PHOSPHO-RUS	POTASSIUM	CALCIUM	MAGNESIUM	SALINITY	SULPHUR
7.1 MILDLY ALKALINE	14. LOW	622. VERY HIGH	254. HIGH	5358 VERY HIGH	217. HIGH	343. NONE	45 HIGH

(PPM x 2 = LBS/ACRE 6 INCHES DEEP)

Table 2. Human resource inventory (as of 1/1/2002).

Name	Assigned Duties	Salaries/Wages	Skills/Talents	Work Schedules	Emergency Contact
John Doe Sr. (Farmer)	All major work on the farm. All major production decisions. Minor decision maker concerning finances.	$13,000/year	Growing and selling vegetables, managing cattle herd.	7 days per week.	John Doe Jr. (Son) Jim Doe (Brother) Jane Doe (wife)
Jane Doe (Wife)	All major decisions concerning finances. Minor work responsibilities.	$16,000/year from teaching	Financial Management	Evenings	N/A
John Doe Jr (Son)	Minor labor assistance.	$5.00/hr (10 hrs/wk) ($5,000/yr)	Strong and willing to work.	10 hrs/wk after school.	Jim Doe (Brother)
Twin Daughters	None	$0.00			
Jim Doe (Brother)	Minor labor assistance.	$0.00	Growing and selling vegetables (has 5 acres of tomatoes and 3 acres of sweet corn)	When needed	John Doe Jr. (Son

Table 3. Equipment resource inventory (as of 1/1/2002).

Equipment Name	Model #	Size	Purchase Year	Age	Condition			Ownership			Book Value	Market Value
					G	F	P	O	L	B		
Tractor	JD2940	80 hp	1999	23 yrs		X		X			$17,500	$11,000
Planter	JD7300	8 row	1997	15 yrs	X			X			$4,688	$6,000
Disk	JD225	7 ft		21 yrs			X			X		
Shredder	JDLX4	5 ft		9 yrs		X				X		
Hay Bailer	JD510	N/A	1992	20 yrs			X	X			$2,750	$2,000
Hay Trailer	N/A	N/A	1992	10 yrs	X			X			$367	$500
Pickup	Chevy	½ ton	1995	13 yrs		X		X			2,450	$1,000
Stock Trailer	8925	10 ft.	1999	10 yrs	X			X			$6,667	$5,000
Irrigation Pump	8890	111 hp	1996	8 yrs		X		X			$450	$750
Irrigation Equip.	N/A	N/A	1992	6 yrs	X			X			$394	$250
Shop Equipment	N/A	N/A				X		X			$1,367	$1,500

Table 4. Animal/Crop resource inventory (as of 1/1/2002).

Enterprise	Acres	Yield History per Acre	Government Payments	Market Value
Sweet Corn	4	1,000 lbs	No	$1,333
Cantaloupe	2	100 cwt	No	$3,400
Onions	2	150 bags	No	$7,500
Tomatoes	2	15 cwt	No	$1,500
Cattle	30		No	
#2285				$650
#2286				$650
#2287				$650
#2288				$650
#2294				$650
#2295				$600
#2296				$600
#2297				$600
#2299				$600
#2301				$600
#2303				$550
#2304				$550
#2306				$550
#2307				$550
#2314				$550
#2319				$500
#2322				$500
#2323				$500
#2325				$500
#2326				$500
#2327				$450
#2328				$450
#2329				$450
#2330				$450
#2331				$450
Bull				$500
Calf (#2287)				$351
Calf (#2294)				$351
Calf (#2295)				$351
Calf (#2304)				$351
Calf (#2306)				$351
Calf (#2319)				$351
Calf (#2323)				$351
Calf (#2326)				$351
Calf (#2328)				$351
Calf (#2329)				$351
Calf (#2331)				$400

Table 5. Financial resource inventory.

Item		Amount
Cash & Savings		$8,500
Equipment Debt		
Lender Name	1st National Bank	
Interest Rate	6.0%	
Time Remaining	4 years	
Original Amount		$15,000
Loan Maturity	9/30/2006	
Land Note		
Lender	1st National Bank	
Interest Rate	10.0%	
Time Remaining	10 years	
Original Amount		$22,000
Loan Maturity	1/14/2012	
Potential Credit		
Lender	1st National Bank	
Interest Rate	7.0%	
Amount		$30,000