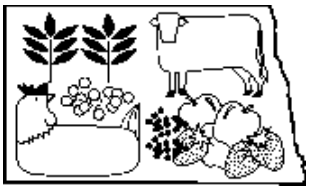

Rabbit

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Rabbits are raised world-wide for a variety of reasons. In Europe and Asia they are an important source of food. Rabbits produce white meat that is fine-grained, high in protein, low in fat, highly palatable, low in cholesterol, and that can be substituted for poultry in most recipes. Rabbit carcasses are only 20 percent bone. In the United States rabbits are raised predominantly for nonfood purposes. High quality rabbit skins are used in fur garments and trimmings. Medical and cosmetic research also requires a large number of rabbits each year. Many people raise rabbits for show or as pets.

Breeds of rabbits

Rabbits are generally classified according to size, weight and type of pelt. Small rabbits weigh about 3-4 pounds at maturity, medium breeds 9-12 pounds, and large breeds 14-16 pounds. The two most popular breeds for meat production are the New Zealand and the Californian. These breeds are most popular because they combine white fur (preferred by processors) and good growth characteristics. New Zealand rabbits are slightly larger than the Californian, 9-13 pounds versus 8-10 pounds. The New Zealand rabbit has a completely white, red or black body, whereas the Californian is white with colored nose, ears and feet.

The two most popular rabbits for fur production are the Rex and the American Chinchilla. The Rex is slightly smaller than the American Chinchilla, 7 pounds versus 10 pounds. Fur from the Rex rabbit is unique in that guard hairs and underfur are the same length. The markets for rabbit fur tend to be unstable, so be sure there is a sufficient demand to allow fur to be marketed in a reasonable amount of time.

Facilities and Equipment

Borrowing money to build a large building for rabbit production is not recommended. By the time production problems have been solved and the facility is at full production, the producer is usually so far behind in payments that financial recovery is impossible. The prospective producer is recommended to remodel an existing building and start small. In this way the producer may be able to begin production with a minimum of borrowed capital and avoid a great deal of financial risk. The best type of rabbit building is a modular design which can be expanded as needed. The typical building investment will be $40-$60 per cage.

Self-cleaning, wire cages elevated 2 to 3 feet from the ground are the recommended method of housing rabbits. Cages may be constructed with wood frames, but this is generally not recommended as wire cages are longer lasting, easier to construct, and more sanitary.

Each cage has a nest box for protection of young rabbits. A satisfactory nest box is 12 inches high, 12 inches wide, and 18

inches long. One end of the box is cut down to 6 inches. Ample straw should be added to the nest box before the does give birth. Low-pressure automatic waterers are recommended as they will not spray rabbits as they drink, are more sanitary, and require less labor than water dishes. Feeders should hold enough feed for a doe and her litter for one day. To prevent contamination of food by manure, feeders should be mounted between 2.5 to 3.5 inches above the cage floor. If the producer assembles cages and nest boxes, he/she can expect to save 50 percent of cash construction costs over purchasing preassembled cages and boxes (provided the producer's labor is relatively inexpensive).

Recommended Space Requirements for Rabbits

Size of Rabbit lbs.	Space Requirement Sq. inches
3-5	180
6-8	360
9-11	540
12 or more	720 (24"x30")

Recommended Space Requirements for Nursing Does

Size of Rabbit lbs.	Space Requirement Sq. inches
3-5	576
6-8	720
9-11	864
12 or more	1,080 (30"x36")

Management

Management involves breeding stock selection, production schedule, feeding, health maintenance, record keeping and marketing. Care must be taken in each phase of management because failure or neglect in any one phase will negatively impact other areas.

Selecting Breeding Stock

Once the type of rabbit to be raised is selected, a reputable breeder should be located. Prices of breeding stock will vary, but most rabbits can be purchased at $1 per week of age up to 20 weeks. Select rabbits with good maternal traits for your breeding stock. Rabbits should be purchased at 8 to 12 weeks of age. For general information about the rabbit industry and rabbit breeders in your area, contact The American Rabbit Breeders Association, Inc., PO Box 426, Bloomington, Illinois, 61702.

Production Schedule

Young does and bucks should be well grown and developed before being placed in the breeding herd. A mature buck will service about eight does. Bucks and does are housed separately. Always take the doe to the buck's cage for breeding. In hot weather rabbits may not breed as readily, so consider breeding early in the morning or late evening. The gestation period for the doe is 27 to 36 days. Does may be rebred 10 to 14 days after kindling (giving birth). Does which wean less than six young per litter should be culled. Typically 1/3 of the breeding herd is culled each year. If does are rebred 14 days after kindling and bunnies weaned after 28 days, eight cycles per year are possible per doe. Marketing as many fryers per doe as possible will maximize returns to fixed investment.

Feeding

Feed is the single largest operating expense. Feed costs often represent 75 percent of total operating expenses. Feed also represents an area where cost reduction is possible through shrewd management. Purchasing in bulk may result in a significant cost savings. Rabbit feed should be between 12 to 18 percent protein. Feeding of additional hay or fiber is not necessary if the rabbit feed has at least 8 percent crude fiber. Commercial rabbit pellets are available which meet the nutrient requirements for rabbits in various stages of production.

Health Maintenance

Disease prevention is essential for successful rabbit production. The following are several steps which will help maintain a rabbit herd's health.

1. Never loan bucks to others.
2. Isolate new rabbits (or those returning from shows) for 30 days.
3. Quickly dispose of dead rabbits. If disease is suspected, disinfect cage and all equipment, and burn droppings.
4. Clean cages regularly. Especially clean doe cage before the clean nest box is put in and before the litter comes out of the nest (about two weeks).
5. Wash and disinfect nest boxes after each litter.
6. Vacuum accumulated fur from cages and equipment.
7. Keep water clean and periodically flush lines.
8. Control flies and vermin.

Recordkeeping

Accurate records allow objective data to be maintained which allows good management decisions to be made, and proper identification of all animals is necessary for accurate records. The most efficient method of rabbit identification is an ear tattoo. Records of breeding, rebreeding, nesting, kindling, purchases, weight, culling, replacement selection, feed conversion, mortality and marketing should be maintained.

Marketing

The single most important step before building a rabbitry or beginning commercial rabbit production is to develop a market for the rabbits. In most cases producers must develop their own markets. Rabbits produced for their meat must have good loins, shoulders, hips and pelts. The rabbit meat industry will not buy unhealthy rabbits; therefore, rabbit producers must furnish healthy, high-quality, disease-free rabbits to the processors.

Rabbits raised for meat are generally marketed as fryers, weighing 4.5 to 5 pounds, live weight. Rabbits will reach market weight at about 8 weeks of age. The market price for live fryer rabbits ranges from $.30 to $.60 per pound.

The fur market requires that the rabbits have meaty carcasses and clean, top-quality pelts. A large number of pelts are usually required to obtain a satisfactory price. Pelt prices depend on quality and vary from $4.00 to $16.00 per pelt.

Research laboratories may specify rigid guidelines for their rabbits. Laboratories may require a specific sex, size, age or breeding. The market for rabbits raised for research is generally handled on a contract basis.

Economics

Including rabbits on the farm or ranch is intended to be a supplemental income source, not a primary income source. Producing rabbits is not going to make North Dakota producers rich, but it can help farmers make use of some underutilized resources like labor or buildings. Good advice is not to go into the rabbit business, but to grow into it. A rabbitry requires attention every day. A 400-doe rabbitry is generally considered a full-time operation for one person.

Economic and cash flow enterprise budgets indicate that a well managed and marketed rabbitry can generate positive returns to the owner's equity and labor (Table 2). Caution is advised: potential rabbit producers need to remember that these budgets are based upon assumptions of good production and good market prices. Potential producers should contact potential market outlets to insure that the rabbits they raise can readily be turned into cash instead of flooding their freezer. Also, time and money spent investigating and analyzing existing operations is a crucial investment.

Table 1. Production coefficients and prices for North Dakota rabbit producers

Mature does in flock	50
Does per buck	8
Litters per doe per year	8
Marketable fryers per litter	6
Cull buck and doe weight (lbs)	10
Fryer market weight (lbs)	4.5
Fryer market age (weeks)	8
Culling rate (%)	33
Fryer market price per lb	$0.60
Cull buck and doe selling price per lb	$0.20
Mature doe value	$15
Mature buck value	$15
Pelleted feed cost per ton	$215
Feed requirements	
Buck and Doe(ounces/day)	5.3
Fryers weaning to market (lbs)	40
Facility Investment	
Cages per flock (#)	80
Total cost per cage	$15
Building Investment	$4,000

Table 2. Estimated annual enterprise budget for a 50-doe rabbitry established in North Dakota, 1992

			Economic		Cash flow	
Returns		per doe	per flock	per doe	per flock
Fryers		$128.70	$6,435	$128.70	$6,435
Cull does	0.65	32	0.65	32	
Gross Revenue		$129.35	$6,467	$129.35	$6,467
Variable Costs					
Feed		75.26	3,763	75.26	3,763
Breeding expense	0.41	20	0.41	20	
Utilities and fuel	3.60	180	3.60	180	
Miscellaneous		1.20	60	1.20	60
Interest	7.85	392	7.85	392	
Total Variable Costs	$88.31	$4,415	$88.31	$4,415	
Fixed Costs					
Equipment and cages ownership	0.96	48	0.96	48	
Building & land ownership	3.20	160	3.20	160	
Breeding stock ownership	0.68	34	0.62	31	
Depreciation on fixed assets	10.40	520	xxxx	xxxx	
Depreciation on does	2.60	130	xxxx	xxxx	
Replacement does	1.43	72	1.43	72	
Insurance	0.17	8	0.17	8	
Total Fixed Costs	$19.44	$972	$6.38	$319	
TOTAL LISTED COSTS	$107.75	$5,387	$94.69	$4,734	
Returns over variable costs	$41.04	$2,052	$41.04	$2,052	
Return to labor, management and equity	$21.60	$1,080	xxxx	xxxx	
Cash flow (debt repay & family living)	xxxx	xxxx	$34.66	$1,733	

Note: Budget developed under assumption of established 50-head doe flock.

The economic budget is generated by charging market rates for all resources needed for production. It helps answer the question "Is this enterprise profitable?" The bottom line represents a return to labor and management.

The cash flow budget is an estimate of the out-of-pocket cash needed to run the enterprise, including not only direct costs but indirect cash costs such as principle and interest payments, insurance and taxes. It helps answer the question "Can I make meet my cash obligations if I go into this enterprise?" Total cash expenses are subtracted from total cash receipts to calculate the net cash which is available for family living and other needs.

References

McNitt, James I. *Starting a Commercial Rabbit Enterprise*. Baton Rouge: Center for Small Farm Research Southern University and A&M College.

Ralston-Purina Company. *Rabbit Book*. St. Louis: Special Chows Division-Checkerboard Square.

Virginia Cooperative Extension Service. *Producing Domestic Rabbits*, Publication 916. Blacksburg: Virginia Polytechnic Institute and State University.

United States Department of Agriculture. *Selecting and Raising Rabbits*, Agricultural Information Bulletin No. 358. 1972.

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