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ABSTRACT

To improve vocational educational programs in agriculture, occupational information on a common core of basic skills within the occupational area of the beef farmer is presented in the revised task inventory survey. The purpose of the occupational survey was to identify a common core of basic skills which are performed and are essential for success in the occupation. Objectives were accomplished by constructing an initial task inventory to identify duty areas and task statements for the occupation. The initial task inventory was reviewed by consultants in the field, and 279 tasks were identified. A random sample of 77 beef farmers based on the 1974-75 directory of the Ohio Young Farmers Association, Inc. was obtained. Data were collected utilizing a questionnaire. Thirty-five questionnaires were returned of which 30 were usable. A compilation of basic sample background information is presented on the size and type of beef organization, years as a beef farmer, and preparation as a beef farmer. A compilation of duty areas of work performed and work essential for the occupation is given. Percentage performance by incumbent workers and the average level of importance of specific task statements are presented in tabular form. (Author/EC)

DETERMINATION OF A COMMON CORE OF BASIC SKILLS IN AGRIBUSINESS AND NATURAL RESOURCES

An Emperical Determination Of Tasks Essential To Successful Performance As A Beef Farmer

DEPARTMENT OF AGRICULTURAL EDUCATION
THE OHIO STATE UNIVERSITY
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AN EMPERICAL DETERMINATION OF TASKS ESSENTIAL TO SUCCESSFUL PERFORMANCE AS A BEEF FARMER

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FOREWORD

The Department of Agricultural Education at The Ohio State University is involved in a major programmatic effort to improve the curricula in education programs in agriculture. One product in this effort is this report of the beef farmer task inventory survey. The data reported were collected as part of a more comprehensive thrust designed to develop a common core of basic skills in agribusiness and natural resources.

It is hoped that the revised task inventory contained in this report will be useful to curriculum developers working for improved occupational relevance in schools. Twenty-seven additional inventories in other occupational areas are also reported from this project.

The profession owes its thanks to J.Rick Byrd, graduate research associate, for his work in preparing this report. Special appreciation is also expressed to Richard Hummel, Executive Vice-President and Treasurer of the Ohio Young Farmers Association, Inc. and Area Supervisor for Vocational Education in Agriculture in Ohio, for his input and help in securing the cooperation of beef farmers throughout Ohio.

J. David McCracken
Project Director

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INTRODUCTION

Occupational information is needed to develop and revise vocational and technical education curricula. Teachers and curriculum developers generally determine which skills might be taught in a program based upon teacher expertise, advisory committee input, informal and formal community surveys, and/or task inventories.

The Agricultural Education Department at The Ohio State University has utilized and revised a system for obtaining and using occupational information as an effective aid in planning, improving, and updating occupational education curricula. This report presents the results of a survey of the occupation, beef farmer. The information contained herein may be used by curriculum development specialists, teachers, local and state administrators, and others involved in planning and conducting vocational and technical programs in agriculture.

Purpose and Objectives

The major purpose of the occupational survey was to identify the skills which are performed and essential for success as a beef farmer. The specific objectives of this survey were as follows:

1. Develop and validate an initial task inventory for the beef farmer.
2. Identify the specific tasks performed by the beef farmer.
3. Determine the relative importance of the specific tasks to successful employment as a beef farmer.

Definition of the Occupational Area

The beef farmer usually receives a major portion of his farm income from the beef enterprise. The beef farmer may maintain both a beef brood cow herd and a feeder herd. The specific duties he performs in relation to the beef enterprise usually involve maintaining the herd health, selecting animals, managing the breeding herd program, marketing animals, and formulating feeds and feeding the herd.

Because most beef farmers operate farms where crops are raised, the operational management responsibilities of the beef farmer include more than managing the beef enterprise. The beef farmer is usually responsible for the planting, cultivating, harvesting, storing, and marketing of grain and forage crops. The beef farmer also has a large investment in equipment and buildings and must manage that portion of the beef farm business. The beef farmer must operate equipment and machinery and maintain and repair such equipment. The beef farmer also will be involved in minor building construction and performs maintenance functions on the farm buildings and structures.

METHODOLOGY

Objectives were accomplished by constructing an initial task inventory, validating the initial inventory, selecting a sample of workers, collecting data, and analyzing data.

Initial Task Inventory

Duty areas and task statements for the beef farmer were identified by searching existing task lists, job descriptions,

curriculum guides, and reference publications. Additionally, contacts with several beef specialists at The Ohio State University aided in clarifying the specific responsibilities of the beef farmer. All the tasks that the project staff thought to be performed were assembled into one composite list.

The initial tasks were grouped into functional areas called "Duties".

After the task statements were grouped under the proper duty areas, each task statement was reviewed for brevity, clarity, and consistency. In all, 361 task statements were included in the initial task inventory.

Initial Inventory Validation

After the initial task inventory was constructed, it was reviewed by 14 beef farmers.

The beef farmers were asked to respond to the initial task list inventory by performing the following activities:

1. Indicate whether any of the tasks listed were not appropriate.
2. Add any additional tasks they believed were performed by the beef farmer.
3. Make changes in the wording of tasks to help add clarity to the statements.

The comments from the 14 beef farmers were pooled and needed revisions were made. Two duty areas were combined as a result of the review process. The duty areas relating to the overall management of a beef farm which were not unique to the beef enterprise but common to several production agriculture occupations were removed from the beef farmer questionnaire and incorporated into a separate farm manager (owner-operator) questionnaire.

As a result of the initial task inventory review process, 279 tasks were identified.

Worker Sample Selection

An attempt was made to survey beef farmers from all areas of the state with various size beef operations. A sample of 77 beef farmers was obtained from the 1974-75 directory of the Ohio Young Farmers Association, Inc. using a multi-stage random

sampling approach: The stages used in the sampling approach were local Ohio Young Farmer Association, Inc. chapter and individual member.

Data Collection

A packet of materials was sent to the randomly selected beef farmers. The packet of materials included:

1. A cover letter from the Ohio Young Farmers Association, Inc.
2. A questionnaire printed on yellow.
3. A stamped and self-addressed return envelope.

The beef farmer was instructed to complete the questionnaire and return it in the stamped and self-addressed return envelope by the date specified in the cover letter.

A follow-up of non-respondents consisted of mailing a packet of materials two weeks after the initial mailing. The follow-up consisted of a packet of materials identical to the initial packet except that a cover letter on Ohio State University stationery replaced the cover letter on Ohio Young Farmer Association, Inc. stationery.

Data Analysis

The 35 questionnaires which were returned were checked for completeness and accuracy by the project staff. Information from the 30 usable responses was coded on Fortran coding sheets for key punching. In addition to coding appropriate respondent background information, each specific task statement was coded as to whether it was performed (1 = Task performed by respondent; blank = Task not performed by respondent) and the level of importance of the task (3 = Essential; 2 = Useful; 1 = Not Important). The information was keypunched on IBM cards and verified by personnel at the Instruction and Research Computer Center at The Ohio State University.

The data was analyzed using the SOUPAC computer program and the facilities of the Instruction and Research Computer Center. Consultant assistance for analyzing the data was provided by personnel at The Center for Vocational Education. The SOUPAC computer analysis resulted in the computation of relative frequencies, means, and rankings for each task statement. The results of the computer analyses were printed in tabular form for ease of interpretation.

FINDINGS

Objectives of the study resulted in the compilation of basic sample background information, the determination of tasks performed by the beef farmer, and the identification of tasks essential to successful performance as a beef farmer.

Description of the Sample

Information regarding the performance of tasks and the importance of the tasks to be successful as a beef farmer was obtained from beef farmers across Ohio.

Response to the Survey

A total of 77 questionnaires were mailed and 35 replies were received. This represented a 45.4% rate of return. The response to the questionnaire is summarized in TABLE I.

TABLE I

BEEF FARMER RESPONSE TO THE QUESTIONNAIRE

	N	Percent Of All Farmers In The Survey
Beef Farmers in Survey	77	100.0
Total Returns	35	45.4
Usable Returns	30	40.0
Unusable Returns	5	5.4
Nonrespondents	42	54.6

Size and Type of Beef Operation

Beef farmers from various size beef operations were included in the study. The size of the beef herd was used to assess the size of the beef operation.

Of the 35 questionnaires received, 30 included information regarding the size of the beef operation. TABLES II and III summarize the responses to the question, "How many brood cows and feeder cattle do you have?" Twenty respondents indicated they maintained a beef brood cow herd. The size of the brood cow herd ranged from 10 - 200 cows with a mean size of 40. Twenty-four of the respondents indicated they fed-out feeder

cattle for market. The size of the feeder herd ranged from 11 - 600 feeders with a mean size of 89.4.

TABLE II

SIZE OF OPERATION
(Brood Cows)

Number of Brood Cows	N	Percent of Respondents
0-30	12	60.0
31-60	4	20.0
61-90	2	10.0
91 or more	2	10.0
Total	20	100.0

$\bar{X}$ number of brood cows = 40.0

TABLE III

SIZE OF OPERATION
(Feeder Cattle)

Number of Feeder Cattle	N	Percent of Respondents
0-45	9	37.6
46-90	7	29.2
91-135	2	8.3
136-180	2	8.3
181-300	2	8.3
300 or more	2	8.3
Total	24	100.0

$\bar{X}$ number of feeder cattle = 89.4

Years as a Beef Farmer

Beef farmers with varying amounts of experience in beef farming were included in the study. TABLE IV summarizes the responses to the question, "How many total years have you been a beef farmer?" Nine beef cattle farmers or 30% had been beef farmers from 14 - 17 years. Eight beef farmers or 26.7% had been beef farmers from four to eight years. Seven or 23.3% had been beef farmers from 9 - 13 years. Six or 20% had been beef farmers from 18 - 30 years. The range was 4 - 30 years with a mean of 13.2 years.

TABLE IV

TOTAL AMOUNT OF WORK EXPERIENCE IN BEEF FARMING

Years	N	Percent of Respondents
1-8	8	26.7
9-13	7	23.3
14-17	9	30.0
18-30	6	20.0
Total	30	100.0

$\bar{X}$ experience as a beef farmer = 13.2

Preparation as a Beef Farmer

Beef farmers obtained training for their occupation from various sources. TABLE V summarizes their responses to the question, "Where did you receive your preparation for farming?" Thirty beef farmers or 100% indicated they received training on-the-job. Twenty-two beef farmers or 73.3% indicated they attended a high school course to receive training as a beef farmer. Eighteen beef farmers or 60% indicated they had received training as a beef farmer by attending adult education courses. Six beef farmers or 20% had received their training from other sources. Three or 6.7% received training in beef production at technical schools.

Duty Areas of Work-Performed by the Beef Farmer

The 279 tasks were grouped under 15 duty areas. Each

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TABLE V

SOURCE OF TRAINING RECEIVED AS A BEEF FARMER

Source	N	Percent of All Farmers in Survey
On-The-Job	30	100.0
High School Program	22	73.3
College/University Program	3	10.0
Adult Education Program	18	60.0
Technical Program	2	6.7
Other	6	20.0

respondent indicated whether he performed the specific tasks in his current position as a beef farmer. The percentages of respondents performing each task were averaged for all tasks under each duty area. The mean percentage of incumbents who performed specific tasks in specified duty areas is presented in TABLE VI.

Duty areas of work in which 50% or more of the incumbent workers performed the tasks were:

1. Observing Legal Practices in Cattle Operations
2. Following General Safety Precautions
3. Maintaining Beef Cattle Operations Equipment and Vehicles
4. Using and Maintaining Hand and Power Tools
5. Operating Equipment and Vehicles
6. Constructing and Maintaining Cattle Operation Buildings and Structures
7. Assembling and Installing Cattle Operations Equipment
8. Maintaining Beef Cattle Herd Health
9. Formulating Feeds and Feeding Beef Cattle
10. Marketing and Shipping Beef Cattle
11. Selecting Breeding and Feeder Stock
12. Handling and Disposing of Animal Wastes
13. Handling and Caring for Animals

Duty Areas of Work Essential for Successful Performance as a Beef Farmer

A level of importance rating was obtained for each task. The respondent could rate the task as essential, useful, or not important for successful performance as a beef farmer. A ranking

of essential was assigned a numerical rating of "3", useful a numerical rating of "2", and not important a numerical rating of "1". The level of importance ratings for each task were averaged for all tasks under each duty area. The average level of importance ratings for the specific tasks in the specified duty areas are presented in TABLE VI.

Duty areas of work which received a 2.0 or higher level of importance rating by incumbent workers were:

1. Observing Legal Practices in Cattle Operations
2. Following General Safety Precautions
3. Maintaining Beef Cattle Operations Equipment and Vehicles
4. Using and Maintaining Hand and Power Tools
5. Operating Equipment and Vehicles
6. Constructing and Maintaining Cattle Operation Buildings and Structures
7. Assembling and Installing Cattle Operations Equipment
8. Maintaining Beef Cattle Herd Health
9. Formulating Feeds and Feeding Beef Cattle
10. Marketing and Shipping Beef Cattle
11. Selecting Breeding and Feeder Stock
12. Breeding Brood Cows and Heifers
13. Handling and Disposing of Animal Wastes
14. Handling and Caring for Animals

Percentage Performance and Level of Importance Ratings of Specific Tasks

The percentage performance by incumbent workers and the level of importance for each specific task is also presented in TABLE VI.

It is recommended that the results for each specific task be examined by educators and others who are developing educational programs to determine curriculum content for preparing beef farmers. Specific tasks with a high level of performance and a high level of importance rating should be given more emphasis in the educational program than specific tasks with a low level of performance and a low level of importance rating.

TABLE VI

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE* OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Observing Legal Practices in Cattle Operations		
Follow laws relating to chemical use	83	2.8
Interpret feed additive withdrawal laws and regulations	83	2.8
Interpret feed additive mixing regulations	66	2.6
Identify shipping regulations for cattle	46	2.4
Identify EPA regulations which apply to cattle operations	33	2.1
Mean Rating	53.0	2.5
Following General Safety Precautions		
Follow safe work habits	96	2.7
Identify potential safety hazards	86	2.5
Store chemicals	89	2.4
Use fire extinguishers	69	2.5
Wear appropriate protective clothing	50	2.3
Ventilate work areas	59	2.5
Interpret information on labels and signs	83	2.6
Use proper lifting and carrying methods	63	2.4
Store inflammable materials	73	2.5
Wear appropriate work clothes	76	2.3
Adjust safety devices	83	2.6
Install safety devices	63	2.4
Determine when climatic conditions provide unsafe work situations	50	2.1
Correct potential safety hazards	83	2.6
Remove debris from work areas	76	2.4
Use electrical connectors and safety devices	86	2.6
Dispose of chemical containers	89	2.8
Mean Rating	74.9	2.5
Maintaining Beef Cattle Operations Equipment and Vehicles		
Add coolant to cooling systems	93	2.7
Add oil to equipment	96	2.7

*Average rating of importance may range from 1-3 with 3 being the highest

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Adjust carburetors	83	2.4
Adjust clutch pedal free travel	89	2.6
Bleed diesel fuel system	79	2.6
Change oil and oil filters	100	2.9
Change thermostats	63	2.3
Clean debris from equipment	96	2.6
Grease equipment	100	2.9
Inflate tires	100	2.9
Inspect cooling system for leaks	96	2.6
Install and adjust belts	100	2.8
Install and adjust chains	96	2.8
Install and service battery	100	2.7
Interpret maintenance directions in operator's manuals	93	2.6
Remove equipment from storage	93	2.7
Repack bearings	93	2.7
Replace and adjust spark plugs	93	2.7
Replace bearings and seals	93	2.6
Replace diesel fuel nozzles	53	2.3
Replace spark plug wires	83	2.5
Replace radiator hoses	89	2.6
Replace universal joints	76	2.5
Service air cleaners	93	2.7
Service fuel strainer, fuel filters, and sediment bowl on gas fuel system	100	2.8
Time engines	53	2.3
Prepare equipment for storage	96	2.7
Install carburetor repair kit	33	2.0
Mean Rating	86.9	2.6
Using and Maintaining Hand and Power Tools		
Adjust tools	83	2.5
Clean tools	89	2.4
Identify tools	79	2.5
Interpret tool operation instructions	79	2.5
Recondition tools	59	2.2
Select tools for specific jobs	79	2.4
Sharpen tools	76	2.3
Store tools	86	2.6

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Use hand tools safely	86	2.8
Use power tools safely	86	2.8
Set-up tools	76	2.4
Mean Rating	79.8	2.5
Operating Equipment and Vehicles		
Interpret gauge readings on equipment	96	2.7
Operate equipment and vehicles on highways	100	2.8
Add wheel and front end weights	100	2.6
Adjust equipment safety shields	93	2.8
Connect front end operated equipment	86	2.5
Connect hydraulic systems and hydraulic operated equipment	100	2.9
Correct equipment safety hazards	89	2.7
Connect 3-point hitch equipment	100	2.9
Hitch towed equipment	93	2.8
Identify equipment safety hazards	89	2.8
Install safety shields	93	2.8
Interpret hand operating signals	89	2.6
Interpret operating and safety instructions in operator's manuals	93	2.7
Interpret safety symbols on equipment	89	2.7
Operate equipment under field conditions	96	2.9
Refuel power units	100	2.9
Use appropriate equipment for specific jobs	82	2.7
Mean Rating	93.4	2.8
Constructing and Maintaining Cattle Operation Buildings and Structures		
Apply wood and metal preservatives	86	2.4
Clean and oil electric motors on structures	79	2.4
Build and remove concrete forms	93	2.3
Determine cost of repairs	78	2.5
Develop bill of materials needed for repairs	65	2.3
Repair and hang gates and doors	86	2.5
Install electrical motors	82	2.4
Lay blocks	51	1.9

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Mix, pour, finish, and cure concrete.	86	2.1
Read and interpret blueprints	55	2.0
Install and repair bracing in buildings and structures.	82	2.4
Repair electrical cords and broken wires.	89	2.6
Repair minor leaks in roof of buildings	100	2.4
Replace belts and pulleys	96	2.6
Reset circuit breakers.	100	2.7
Replace electrical switches	86	2.3
Replace fuses	100	2.7
Replace lighting fixtures	93	2.4
Replace valves in water system.	89	2.4
Repair faucets.	89	2.4
Replace water pipe.	93	2.4
Replace window panes.	89	2.2
Wire simple electrical circuit.	86	2.4
Construct and repair fences and gates	100	2.6
Install and repair wood siding on buildings and structures.	100	2.4
Repair metal structures with arc or oxyacetylene welder	72	2.3
Mean Rating	85.6	2.4
Assembling and Installing Cattle Operations Equipment		
Adjust belts on equipment	100	2.8
Adjust chains on equipment.	87	2.6
Adjust controls on equipment.	96	2.7
Adjust safety shields on equipment.	96	2.7
Check for missing equipment parts or hardware	96	2.8
Follow written assembly instructions.	96	2.7
Identify hardware	76	2.5
Inspect equipment for operating defects	89	2.8
Install equipment in proper places.	89	2.8
Interpret assembly diagrams	89	2.4
Interpret assembly instructions	89	2.5
Use proper equipment and tools to assemble and install equipment.	89	2.5
Mean Rating	91.0	2.7

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Maintaining Beef Cattle Herd Health		
Evaluate influence animal health has on production.	96	2.8
Identify common livestock internal and external parasites	96	2.8
Identify sanitation problems which may affect herd health	86	2.8
Identify symptoms of nutritional imbalance.	93	2.8
Select materials to control internal and external parasites	100	2.9
Work with veterinarians in developing herd health program	86	2.7
Disinfect buildings and equipment	78	2.5
Select proper chemicals to clean buildings and equipment.	79	2.4
Use insecticide repellants in buildings	73	2.2
Apply insecticides to cattle to control external parasites.	93	2.6
Identify symptoms of common cattle diseases	93	2.7
Identify symptoms of major cattle parasites	79	2.6
Evaluate life cycles of parasites to determine control procedures	56	2.1
Calculate cost of treatments.	63	2.3
Supply medication through feed and water.	89	2.6
Isolate animals with transmissible diseases	86	2.8
Select appropriate method to control diseases	89	2.7
Worm animals.	93	2.8
Vaccinate animals	79	2.6
Determine amount of medication or materials needed in specific situations	83	2.7
Interpret labels on medications and insecticide containers.	93	2.9
Give intra-muscular injections.	93	2.7
Determine when to rotate pastures to control diseases and parasites.	63	2.3
Observe new animals for symptoms of diseases and parasites.	96	2.9
Determine when the veterinarian should be called.	96	2.8
Apply medication to cuts and bruises.	89	2.7
Identify and isolate injured animals.	96	2.8
Mean Rating	85.8	2.7
Formulating Feeds and Feeding Beef Cattle		
Develop rations	89	2.6
Calculate cost of rations and feed mixtures	83	2.6
Calculate feed efficiency	73	2.5

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Classify feeds.	50	2.3
Determine amount of feed additives to add to mixtures	79	2.7
Determine amount to feed per animal	86	2.7
Determine appropriate form for preparing feed	69	2.5
Substitute for various feedstuffs in rations.	56	2.3
Determine nutrient level requirements for animals	66	2.5
Determine purpose of various classes of feedstuffs in rations and mixtures	63	2.2
Determine why various nutrients are needed in rations and mixtures	63	2.4
Determine relative nutritive value of feedstuffs.	66	2.4
Determine total amount of feed needed for herds	76	2.6
Determine water requirements for animals.	76	2.6
Determine when feed additives should be withdrawn from animals	83	2.8
Determine when rations and mixtures should be changed	83	2.6
Determine which feeds and additives may be included in animal feed mixtures	86	2.7
Determine which feedstuffs and amount of feedstuffs may be substituted in rations.	76	2.5
Evaluate the influence the quality of feedstuffs has on production	79	2.6
Evaluate how ration imbalance may affect production	63	2.5
Evaluate influence residues in meat have on marketing problems	56	2.3
Identify factors that influence feed requirements and feed efficiency	69	2.4
Identify factors that influence the quality of feedstuffs	63	2.5
Determine purpose of various feedstuffs in rations and mixtures	66	2.2
Evaluate the influence the digestive system has on feedstuffs that may be fed.	46	2.1
Interpret feed analysis reports	53	2.2
Interpret feed tags and labels.	83	2.6
Interpret feeding charts and tables	76	2.5
Select appropriate feeding methods.	86	2.7
Determine how feed palatability may be improved	73	2.5
Work with veterinarian and feed salesman in formulating feed mixtures and planning feeding program.	69	2.5
Identify essential nutrients needed in rations and mixtures	73	2.5
Evaluate how feed additives influence production and efficiency	73	2.5
Determine amount of weight animals should gain.	69	2.5
Fill feed troughs and bunks	100	2.8

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC T[redacted]S

TASK STATEMENTS	Percent Performing	Average Level of Importance
Fill and clean waterers	100	2.7
Prepare feed mixtures	100	2.7
Flush animals	29	2.0
Calculate rations and creep feed calves up to weaning	53	2.1
Calculate ration and feed ration for gestating brood cows and heifers	43	2.3
Calculate ration and feed ration for lactating brood cows and heifers	43	2.3
Calculate and feed ration for wintering brood cows and heifers	46	2.3
Calculate and feed ration for replacement heifers	46	2.2
Calculate and feed ration for weaned beef calves	56	2.4
Calculate and feed ration for feeder cattle	86	2.5
Calculate and feed ration for beef bulls	46	2.2
Calculate and feed ration for beef show animals	26	2.0
Precondition animals for shipping	36	2.1
Evaluate influence of using pasture on feeding requirements	46	2.4
Wean animals	63	2.3
Precondition animals for feedlot	53	2.3
Evaluate affect of various feeding practices on carcass composition and feed efficiency	53	2.3
Determine when calves may be started on roughages and grains	76	2.5
Replace salt and mineral blocks	100	2.8
Identify moldy or spoiled feedstuffs	93	2.8
Mean Rating	67.5	2.4
Marketing and Shipping Beef Cattle		
Calculate expected returns and profits on sales	83	2.7
Classify animals for market purposes	76	2.5
Determine feasibility of participating in futures market	39	2.0
Evaluate influence of market grade on returns	66	2.4
Load animals	96	2.7
Prepare carriers for hauling animals	86	2.6
Select markets	96	2.8
Prepare advertising announcements for selling animals	19	1.9
Interpret market reports	83	2.8
Analyze market cycles	79	2.5
Select appropriate marketing system	71	2.4

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Select truckers	83	2.5
Identify characteristics of USDA grades	63	2.1
Determine affect middlemen and retailers have on producers' prices	43	2.1
Determine whether animals should be held over for another year's income	83	2.4
Determine most economical weights to market	71	2.6
Calculate shrinkage	73	2.3
Calculate dressing percent	76	2.4
Estimate market grades	73	2.3
Develop plan to spread marketing throughout year	59	2.2
Determine the affect meat substitutes have on prices and demands	59	2.2
Take pictures of animals for advertising announcements	39	1.7
Sort animals according to size and weight	86	2.5
Determine when animals are ready to market	96	2.8
Determine number of animals to load	96	2.7
Evaluate influence grass-fed cattle have on meat prices	56	2.1
Mean Rating	71.2	2.4
Selecting Breeding and Feeder Stock		
Calculate percentage and value of lean and prime cuts found in animals	43	2.0
Determine age of animals	73	2.5
Establish production goals for culling purposes	46	2.2
Evaluate advantages of various breeds	73	2.4
Evaluate general condition of animals	79	2.6
Evaluate influence of consumers' demands on type of animal to select	69	2.5
Evaluate overall performance and health records of animals	73	2.5
Evaluate the degree various traits and characteristics are inherited	56	2.3
Identify major retail cuts of animals	46	2.1
Identify parts of animals	63	2.3
Identify reputable sources for obtaining stock	79	2.6
Inspect animals for defects	86	2.7
Inspect animals for desirable traits and characteristics	79	2.6
Select breeding system to follow	53	2.4

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Select feeder animals	79	2.7
Select foundation stock	53	2.3
Identify breeds	83	2.6
Mean Rating	66.6	2.4
Breeding Brood Cows and Heifers		
Determine due date for animals	53	2.5
Determine number of bulls needed for brood herd	56	2.5
Determine when to breed	53	2.5
Identify various causes of breeding difficulty	43	2.5
Select a breeding method	43	2.3
Mean Rating	49.0	2.5
Fitting and Showing Cattle		
Fit animals for show	33	1.9
Register animals for show	29	1.8
Show animals	26	1.7
Mean Rating	29.3	1.8
Handling and Disposing of Animal Wastes		
Evaluate how animal wastes decay	50	1.9
Prevent waste runoff from feedlots	76	2.5
Remove dead animals	96	2.9
Remove manure from quarters or pens	93	2.7
Spread manure on fields	100	2.8
Mean Rating	83.0	2.6
Handling and Caring for Animals		
Assist animals in delivering young	59	2.8
Castrate animals	73	2.5
Check animals milk supply	46	2.4
Clean newborn animals	39	2.2

TABLE VI (Cont.)

PERCENTAGE PERFORMANCE AND AVERAGE RATING OF IMPORTANCE OF SPECIFIC TASKS

TASK STATEMENTS	Percent Performing	Average Level of Importance
Dehorn animals	66	2.5
Determine space needed for animals	76	2.5
Disinfect and clip naval cord	39	2.2
Evaluate influence of stress on growth and condition of animals	50	2.3
Exercise animals	29	2.0
Help young to nurse	50	2.3
Identify signs of approaching birth	56	2.5
Identify due dates for animals	56	2.5
Isolate newly purchased animals for observation	89	2.8
Mark animals for identification	66	2.5
Move brood cows to calving pens	19	2.0
Move calves to nurse cows	16	1.8
Move feeder animals into proper feedlots	83	2.5
Observe animals regularly	93	2.9
Pen animals according to size, weight, and sex	59	2.4
Remove afterbirth	43	2.3
Remove non-compatible animals	66	2.3
Trim hoofs	39	1.9
Weigh animals	43	2.0
Bed animals	86	2.7
Prevent animals from stampeding	53	2.3
Mean Rating	55.8	2.4