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ABSTRACT

The report is a composite, compilation, and analysis of data collected from selected job titles (soil conservation technician, civil engineering technician, dairy herd improvement supervisor, and lay food inspector) in agricultural resources occupations. The study was conducted to obtain a comprehensive analysis of the occupations and the competencies needed to enter, perform, and advance in agricultural and agriculturally related jobs. The four job titles were decided upon after consultation with agencies and groups in Montana whose concern was agricultural resources. Competency statements were developed and mailed to 120 employees in the job area studied. Based on an 82 percent response, data on knowledge, skills, and attitudes were analyzed and mean rating comparisons made. Tables list and rank the competencies identified. The number of competencies identified varied among the selected job titles, but the study concluded there are definite professional, technical, and vocational competencies related to agriculture required by employees in agriculture resources job titles. Interpersonal competence ranks high across all the titles; other competencies have more specialized importance in a particular area. (The four competency instruments and correspondence related to the study are appended.) (AG)

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A study to determine

Competencies Needed in Selected Job Titles in Agricultural Resources Occupations

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A STUDY TO DETERMINE COMPETENCIES NEEDED IN SELECTED JOB TITLES IN AGRICULTURAL RESOURCES OCCUPATIONS

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Department of Agricultural and Industrial Education
Montana State University
Bozeman, Montana

ED103654

A STUDY TO DETERMINE COMPETENCIES NEEDED IN SELECTED JOB TITLES IN AGRICULTURAL RECOURCES OCCUPATIONS

by

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The work presented herein was performed by the Montana Agricultural Experiment Station and Supported by the Office of the Superintendent of Public Instruction, Vocational and Occupational Skills Component

The Montana State University
Department of Agricultural and Industrial Education
Room 126, Creative Arts Complex, Building 2
Bozeman, Montana
June, 1974

PREFACE

Since the spring of 1970, the Department of Agricultural and Industrial Education has studied rural youth and adult educational and employment opportunities in agri-business and agricultural production.

Two of the phases of the originally planned five-year, five-phased study have been completed. The results of these studies appear in the following eight reports available from the Office of the Superintendent of Public Instruction, Helena, Montana, 59601 and on microfiche in the library reference source, Educational Resource Information Center (ERIC):

PHASE I - (To assess current and projected manpower needs in agri-business and agricultural production).

ED 069 874 - Ag-Business Manpower Project Manual
ED 069 872 - Ag-Business Manpower Project Report
ED 069 875 - Agricultural Producer's Manpower Report Manual
ED 069 873 - Agricultural Production Manpower Report

PHASE II - (To determine the knowledge, skills, and attitudes needed by potential employees in order to quality for available jobs in agriculture).

- A Study to Determine Competencies Needed by Employees Entering the Grain, Seed and Feed Business (000-831)
- A Study to Determine Competencies Needed by Employees Entering Agricultural Mechanics Occupations
- A Study to Determine Competencies Needed by Employees Entering Sales and Services Occupations (000-831)
- A Study to Determine Competencies Needed by Employees Entering Agricultural Production Occupations

In the spring of 1973, an agreement was reached between the Department of Agricultural and Industrial Education and the project supervisors from The Research, Planning, Development and Evaluation Component of the Office of the

State Superintendent to extend Phase II an additional year. This extension, intended to determine competencies needed in selected job titles in agricultural resource occupations in Montana, was granted.

This report is a composite, compilation and analysis of the data collected from selected job titles in agricultural resources occupations. A section on research methodology is also included. The report is consistent with the major objective of the overall study - to provide essential information for curriculum development and ultimately the institution of agricultural education programs in order to meet manpower demands for areas of agricultural production and agri-business in Montana.

ACKNOWLEDGEMENTS

This report and the prerequisite research was made possible by grants from the Montana Experiment Station and the Office of the Superintendent of Public Instruction. The purpose of the research was to determine the nature and extent of rural youth and adult educational and employment opportunities associated with agricultural production and agri-business.

The cooperation and assistance of the personnel of several agencies facilitated the research. Those who helped validate the competencies were Calvin Horner, Kendal Pfieffer, Troy Helmick and Walter Anderson of the Soil Conservation Service. Dr. "Pete" Moss and Art Fox assisted in the validation of competencies for Dairy Herd Improvement Supervisors. Dr. H. C. Hariston, Area Supervisor of the Meat and Poultry Inspection Program of the USDA gave a great deal of his time to create a suitable instrument. Miss Marjory McTavish and Mrs. Phyllis Jenkins of the Soil Conservation were especially helpful. Sincere appreciation is extended to Mr. A. B. Linford of the State Conservationist Service who endorsed the study.

Appreciation is also expressed to the respondents for their participation in supplying the data.

Mrs. Carolyn Manley, Secretary of the Agricultural Manpower Project ably completed the execution of this manuscript.

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Chapter I

INTRODUCTION

The world's population is about 3,800,000,000. At the present rate of growth, the world's population will double in 35 years. The rapidly increasing world population haunts governments, planners, economists and educators because of the obvious impact upon available facilities, resources, and the environment. It has been estimated that agricultural land is being taken out of production at the rate of 1,000,000 acres per year.

Never has the demand for agricultural products been so great. Although agricultural production has increased steadily, the demand for these resources is catching up with the supply. Increased numbers of people plus increased purchasing power has increased the demand for agricultural resources. This demand is being reflected in agricultural markets and involves many agriculturally related occupations.

The application of new technological developments will certainly result in larger and more specialized farms and ranches. Thus, the farm and ranch becomes a complex agri-business and will operate much like a large business. One can only speculate as to the nature of Montana's Agriculture sector in the future, particularly when speaking about the employment picture.

As changes occur, Montana Agriculture will require increasing numbers of trained personnel to provide the technical services needed in producing, harvesting and marketing agricultural products. Agricultural Education programs must respond to this need.

It has been the objective of agricultural education to prepare people for potential employment. With the changing agricultural trends, Montana must keep pace with the demands for skilled and competent employees. The need to provide realistic, job oriented programs in all aspects of agriculturally related industries provides an important challenge for agricultural educators.

Montana's unique population problems, its limited industrial facilities, its emerging vocational offerings must be assessed, evaluated and coordinated to prepare employees to enter the world of work. It is anticipated that they will have an advantage over persons employed who do not possess training in agriculture and its related industrial opportunities. A corollary to the subjective aspects of such training is the availability of a trained work force to increase the efficiency and productivity of Montana's agriculturally related businesses.

Rationale for the Study

The objective of this phase of the study was to obtain information to identify the knowledge, skills and sttitudes needed by employees in selected job titles in agricultural resources occupations. Specifically these job titles are Civil Engineering Technician, Soil Conservation Technician, Dairy Herd Improvement Supervisor, and Lay Food Inspector. These job titles were chosen after a survey of a number of resource agencies and their respective job titles. These agencies included finance, land management, insurance and livestock brokerages.

The selection of job titles in agricultural resources in this study was made after several considerations. First, the researcher was interested in those job titles in which specific kinds of training is necessary, but does not necessarily require a four year degree. A second criteria for selection was the importance of this job title for the unique employment climate in Montana. A third criteria was the number of positions comprising the job title. The selection of lay meat inspectors, soil conservation and civil engineering technicians and dairy herd improvement supervisors adhered to the above criteria.

This study was conducted by the Department of Agricultural and Industrial Education as part of an overall research effort to obtain a comprehensive analysis of selected agricultural occupations in Montana and the competencies needed to enter, perform and advance in agricultural and agriculturally related jobs.

One of the major goals of the Department of Agricultural and Industrial Education of Montana State University is to construct and test research models which hopefully will provide improved employment for citizens of Montana. Thus, a specific extension of the study objective is the documentation of a survey research model.

Assumptions

The following statements were generally accepted and assumed by the researcher at the beginning of the study: (1) that management personnel in agricultural resources occupations would be interested in the potential outcome of the study and would cooperate with the researcher by providing information as to the employment tasks of selected job titles and would allow their personnel to be surveyed regarding their tasks; (2) persons whose job titles were being surveyed would respond to a mailed questionnaire and would be able to place an importance rating on a gradute scale (1 - 4) to previously validated competency statements; (3) that ratings would lend themselves to statistical analysis, thus the competency statements could be ordered; (4) an analysis would be possible to determine if there were commonalities among job tasks across identified job titles.

Definition of Terms

Agricultural and Natural Resources - are all of those naturally occurring materials of nature having human utility. This includes in all their forms, plant life, non-human animal life, air, water, soil, minerals, and mineral fuels and space on land and ocean surfaces.

(Natural) Agricultural Resources Occupations - are those occupations involved in the development, maintenance, protection and recreational utilization of these previously defined natural resources. National Agricultural Resources Occupations can be classified into the following occupational groups: air, fish, forestry, land-use planning, minerals and mineral fuels, grass and rangeland, recreational, soil, water and wildlife.

Competency - Competencies for purposes of this study are those qualities of knowledge, skill and attitude determined to be desirable by employees in order for them to perform effectively in an identified job title at the entry level.

Entry Level Employment - is the level at which individuals are normally hired in any particular job title by an industry.

Competencies Needed for Entry Employment - are those competencies without which the individual will not be hired.

Review of Related Literature and Research

An extensive review of literature preceded the several agricultural manpower studies and since this research effort was an extension of the second phase of the project, only pertinent information particular to (Natural) Agricultural Resources Occupations will be reported.

Need and Importance of the Study

Stevens and Hoover (1969) stated that agricultural education traditionally has been considered as preparation for agricultural production occupations. The Vocational Education Act of 1963 authorized federal funds for agricultural education programs that would provide vocational education in any occupation involving knowledge and skills in agriculture.

Hensel (1968) affirms that there is a need for definite information concerning the occupations for which a student is being trained. He suggested that there is a need to insure future instructional programs in agricultural education which are sound and of high quality.

Research activities conducted by Dillon and Cain (1966) provide further evidence of the importance and need for information regarding skills, knowledge and attitudes for agriculturally related employment. They stated that almost half of all workers employed in off-farm agricultural businesses need some knowledge or skills in agriculture.

Dillon and Cain (1966) predicted that there would be an increase in the hiring of persons with more than a high school education for entry level positions in agriculture and that advancement within an occupation would require a higher average level of competency than was required in the past to gain initial entry.

Review of Literature Related to Similar Efforts In Agricultural Resources

A search for similar studies dealing with job titles or clusters of occupations in agricultural resources revealed a study done by the University of Missouri, Your Career in Agriculture (1969) in which selected job titles in resources were found with accompanying agricultural occupation titles from the Dictionary of Occupational Titles. A study by Vestal (1972) defined and described fifteen occupational clusters identified by the U.S. Office of Education for the Dictionary of Occupational Titles. One of the clusters was Environment in which the researcher approached many of the same resource groups (SCS, FHA, Experiment Station) as was included in this research effort.

The study that most closely aligned itself to the objectives of this effort was the study by Dillon and Cain. One of the objectives was to determine the competencies required for selected job titles in occupational clusters and defined agriculturally oriented jobs. The position of employment in which the worker used agricultural knowledge and skills related to various areas including forestry, animal and dairy science, soils, etc.

The previously mentioned study by Stevens and Hoover (1969) researched the attitudes of individuals to determine the necessity of establishing programs of vocational education for occupations concerned with conservation, protection and regulation and recreational utilization of agricultural resources. This study proved helpful in establishing definitions and outlining occupational titles in agricultural resources. This study focused on the instructional programs.

Review of Research and Related Literature Related to Alternative Statistical Measures and Competency and Instrument Format

Consideration was also given to the statistical measures used in previous research efforts of the Agricultural Manpower Project. Weighted scores and standard deviations were employed in the production, mechanics and grain, seed and feed business studies. An assessment of these procedures and their inherent weaknesses led the research team to a decision to evaluate the data on the basis of the mean, providing frequencies and the "N" in the statistical analysis as well as providing a rank order of competencies under each job title.

Procedures recommended for identifying competencies for natural resources occupations were adapted and followed as a model for use in the present study. These procedures were compiled by Pennsylvania State University (1973) and distributed at the meeting of The American Vocational Association, attended by the researcher.

Procedures for Constructing and Using Task Inventories

A Research and Development Series No. 91 (1973) provided a criteria for properly stated and phrased competency statements and in its examples of follow-up letters as well as other suggestions.

METHODOLOGY

The task of locating and selecting job titles in agricultural resources occupations in Montana and determining the competencies which employees considered important in performing in these positions took the following form:

1. Selection of a sample of Montana agricultural resources agencies, organizations and businesses; surveying these groups to determine the job titles, educational requirements and numbers within these job titles.
2. Development of competency statements.
3. Distributing the competency instrument to the sample population; preparing a covering letter and initiating follow-up procedures.
4. Devising a coding rationale, initiating computer analysis and the interpretation of results.

Selecting a Sample

The agencies, organizations and businesses considered when selecting the sample included the Soil Conservation Service, Montana Meat and Poultry Inspection Program, Stockmen's Organizations, Agricultural Finance Organizations, The Bureau of Land Management, and Federal and Private Crop Insurance Agencies.

In order to determine the job titles within the agricultural resources job cluster which would be the subject of this study, it was necessary to seek assistance from agencies and other groups whose concern was agricultural resources to determine their personnel needs, their educational requirements and to make an assessment of the feasibility of designing curriculums at the secondary and post-secondary level for the job titles considered. This investigation revealed that agricultural resources occupations, as defined by the researchers, are generally characterized by the need for a professional degree. However,

several positions as technicians exist in the Soil Conservation Service and Food Inspection Programs and other government agencies with GS ratings of 4 to 6.

After a review of the activities of these groups and consideration given to time and resources available, it was decided to investigate the technician level positions of Civil Engineering and Soil Conservation Technicians, Lay Food Inspectors and Dairy Herd Improvement Supervisors (DHIS).

Development of Competency Statements

The initial competency statements were synthesized from the job description found in the Dictionary of Occupational Titles (DOT). These initial lists of competencies for each job title selected were augmented by referring to job descriptions and training manuals available from government agencies. The Dairy Herd Improvement Supervisors Competencies were validated by the Dairy Specialist of the Extension Service and by a presently employed supervisor. The other competencies were validated by those working in the actual position with a final review by their director or supervisor. Following validation, the competencies were printed in numerical order. No two competencies were given the same number in order to facilitate subsequent identification. The instruments used for SCS Technicians and DHIS and Food Inspector appear in Appendix A. Each Competency was given a number of a rating scale from 1 to 4 denoting "Not Important" to "Essential". The respondent was directed to circle the appropriate number giving his evaluation of the competency statement as to its importance in performing in his present position.

Data Collection

A cover letter accompanied each instrument. This letter was prepared by the administrator of the respective agency. The letter endorsed the study and urged the cooperation of the respondent. (Appendix B). The instruments were then mailed with a self-addressed, stamped, return envelope. A follow-up letter was mailed to Dairy Herd Improvement Supervisors. (Appendix C). Civil Engineering and Soil Conservation Technicians were telephoned to encourage them to complete the form and return it to the researcher. There was no follow-up done for Food Inspectors as the total return reached 44 or 73 per cent.

Devising a Coding Rationale, Initiating Computer Analysis and The Interpretation of Results

A coding rationale (Appendix D) was designed for each job title to yield the variable (competency statement) and the mean and frequency. This was accomplished by preparing a set of IBM cards for the variables and an additional set of IBM cards containing the data. The program used was the Statistical Package for the Social Sciences.

After mean ratings for each competency were obtained, the researcher arranged the competencies in rank order. This was done by hand as it took less time than key punching the mean and variable number on each card, sorting these in the sorter and running them through the computer to produce a card list.

To further analyze the data, the computer terminal was used to enter the frequencies for like competencies rated by both Soil Conservation Technicians and Civil Engineering Technicians.

Probability Values Ranked

Tables ranking the like competencies by probability values were prepared with an evaluation of their similarity. This is a common procedure but one for which no published reference can be cited.

It was arbitrarily determined that the top 25 percent of the probability values for the competencies for a particular job title were "Very Similar", that the next group of competencies, below the top 25 percent but with a probability value above the .05 level were "Similar" and that those competencies with a probability value below .05 were "Not Similar". This is simply a guideline or another means of identifying competency differences that are "Similar" or "Not Similar", and is in accordance with the usual .05 level test of significance. Competencies with probability values below .05 were then listed in tables displaying the frequencies which occurred in each industry. A short narrative explaining where the differences occurred in the rating is also included.

Chapter II

ANALYSIS OF THE DATA

Data gathered from the responses of employees in four separate job titles within the agricultural resources cluster are included. The data were analyzed to determine the importance of the various competencies identified as being a part of each specific job title.

The narrative discusses those competencies which received the highest and lowest mean rating (i.e. upper and lower 25 percent). The discussion will be presented as follows:

1. Soil Conservation Technician
2. Civil Engineering Technician
3. Federal Food Inspector (Meat)
4. Dairy Herd Improvement Association Supervisor

Response to Survey

A total of 120 questionnaires were mailed to employees in the selected job titles. Eighty-two percent of all the employees returned the questionnaires in time to be included in the analysis. Figure 1 presents a tabular summary of the individual responses received.

Figure 1. Sample Selection Responses

JOB TITLE	NUMBER SENT	VALID RETURNS	PERCENT OF RETURN
Dairy Herd Improvement Supervisors	7	5	71%
Soil Conservation Technicians	36	35	97%
Civil Engineering Technicians	17	15	88%
Federal Food Inspectors (Meat)	60	44	73%

Mean Rating Comparisons

The mean score was used to compare the responses and obtain some degree of objectivity among the employees regarding the importance of those specific competencies identified as being common among the employees within a selected job title. A lower mean rating means a competency was of lesser importance to the success of employees in the specific job title and does not mean the competency will not be performed by employees in the job title. The competencies in the respective tables are listed in descending order by mean rating. In the event two or more competencies received identical mean scores, they were listed in the numerical order of their competency numbers. No attempt was made to determine which of the competencies with identical mean scores was most important.

A Comparison of Soil Conservation Technician Competencies

Personal qualities are important to the Soil Conservation Technician. The respondents were asked to respond to 13 competencies related to personal qualities. The data presented in Table 1 indicate that ten of these 13 competencies received the highest mean rating among the 182 competencies rated by the respondents. The 3 remaining competencies were rated high among the first 25 percent of the competencies receiving the highest mean rating.

As expected, those competencies required to survey land and record the results of such surveys were given high mean ratings. The data indicate that, aside from personal competencies, the bulk of those competencies included in the upper 25 percent dealt with the actual handling and use of survey equipment. This would indicate there is a need to provide a great deal of experience in the actual use of surveying equipment.

Competencies requiring an understanding of conservation practices and crop cultural practices seemed somewhat less important to the Soil Conservation Technician. Technical agricultural competencies were generally given a mean rating of less than 3.00 and a number of these kinds of competencies appeared in the lower 25 percent. An understanding of crop cultural practices seemed to be of lesser importance than the understanding of conservation practices.

TABLE 1

SOIL CONSERVATION TECHNICIAN COMPETENCIES
RANK ORDERED BY MEAN

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
1	474	Demonstrate the ability to get along with others.			5	30	3.857
2	470	Demonstrate a willingness to work.			6	29	3.829
3	472	Demonstrate the ability to follow directions of supervisor.			8	27	3.771
4	471	Demonstrate a willingness to learn or take supervision.			9	26	3.743
5	475	Work safely and neatly.			9	26	3.743
6	476	Demonstrate the ability to work cooperatively as a member of a team.			9	26	3.743
7	473	Demonstrate the ability to work independently with limited supervision.			11	24	3.686
8	477	Demonstrate a desirable job attitude about the organization when working with fellow employees and producers.			11	24	3.686
9	482	Maintain a satisfactory attendance record.			11	24	3.686

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
10	479	Demonstrate the ability to project a desirable image for the SCS.			13	22	3.629
11	308	Cooperate with land owners.		2	11	22	3.571
12	478	Demonstrate acceptable personal appearance and personal hygiene.		1	14	20	3.543
13	374	Measure horizontal distances by chaining.		4	10	21	3.486
14	306	Consult with producers.		4	11	20	3.457
15	367	Read and interpret guides and procedural manuals.		4	11	20	3.457
16	302	Interpret SCS standards and specifications.		5	10	20	3.429
17	341	Recognize malfunction of survey instruments.	1	3	11	20	3.429
18	366	Record survey information.	1	4	9	21	3.429
19	343	Set up a transit.	1	6	6	22	3.400
20	344	Operate a transit.	1	6	6	22	3.400
21	372	Read and follow technical manuals.		4	13	18	3.400
22	416	Measure aerial photographs with a planimeter.	1	4	10	20	3.400

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
23	307	Consult with supervisors.		5	12	18	3.371
24	354	Set grade stakes.	1	4	11	19	3.371
25	369	Work as a chainman.	1	5	9	20	3.371
26	407	Identify soil and water problems.		3	16	16	3.371
27	351	Run centerlines and baselines.		6	11	18	3.343
28	365	Plot cross-section and profiles.		6	11	18	3.343
29	373	Use a dumpy or wye level.	1	5	10	19	3.343
30	414	Read aerial photographs.	1	3	14	17	3.343
31	353	Set alignment stakes.	1	4	13	17	3.314
32	360	Plot elevations.		6	12	17	3.314
33	362	Serve as a rodman.	1	6	9	19	3.314
34	363	Mark and set grade stakes.	2	4	10	19	3.314
35	480	Enjoy the opportunity of working outdoors.		6	13	16	3.286
36	352	Run cross-sectional surveys.	2	4	12	17	3.257

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
37	359	Plot distances.	1	6	11	17	3.257
38	361	Sketch contours.	1	7	10	17	3.229
39	368	Use a hand level.	1	8	8	18	3.229
40	375	Stake a contour line.	1	6	12	16	3.229
41	377	Run a profile.	1	6	12	16	3.229
42	378	Locate contour lines.		4	19	12	3.229
43	461	Survey irrigation ditches.	1	4	16	14	3.229
44	415	Interpret aerial photographs.	2	5	12	16	3.200
45	364	Make overlays on maps.	1	5	16	13	3.171
46	390	Make preliminary site surveys.	1	4	18	12	3.171
47	412	Run bench level circuits.	2	7	9	17	3.171
48	355	Use level to obtain percent of slope.	2	6	12	15	3.143
49	356	Make topographic surveys.	2	5	14	14	3.143
50	394	Determine compliance with cost-shared practices.	3	3	15	14	3.143

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
51	433	Use planimeter to determine drainage areas.	1	7	13	14	3.143
52	469	Understand the various irrigation systems.	1	7	13	14	3.143
53	393	Gather basic information for planning conservation activities.	1	6	16	12	3.114
54	460	Survey drainage ditches.	1	5	18	11	3.114
55	303	Use the telephone to transact business.	1	7	16	11	3.057
56	304	Make appointments with producers.	2	8	11	14	3.057
57	305	Schedule jobs.	2	6	15	12	3.057
58	324	Prepare narrative of daily accomplishments.	3	5	14	13	3.057
59	406	Explain the value of a farm and ranch conservation plan.	1	7	16	11	3.057
60	457	Explain how to control irrigation water.	3	6	12	14	3.057
61	321	Write clear, concise written reports.	2	4	20	9	3.029
62	322	Write clear, concise letters.	2	5	18	10	3.029

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
63	396	Explain conservation plans to cooperating operators.	3	5	15	12	3.029
64	417	Make computations from aerial photographs.	2	9	10	14	3.029
65	452	Stake water drainage ditches.	1	7	17	10	3.029
66	301	Report supporting data for cost sharing.	3	8	10	14	3.000
67	400	Interpret soil symbols.	2	7	15	11	3.000
68	401	Interpret land use capabilities.	3	5	16	11	3.000
69	413	Map contour lines.	2	7	15	11	3.000
70	300	Report compliance with conservation practices installed.	4	6	12	13	2.971
71	435	Use planimeter to determine areas of reservoir sites.	1	9	15	10	2.971
72	448	Explain how to prepare a site for a farm pond.	2	6	18	9	2.971
73	456	Explain proper irrigation procedures.	4	5	14	12	2.971
74	468	Discuss irrigation and drainage problems.	2	6	18	9	2.971

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency				Mean Rating
			1	2	3	4	
75	346	Demonstrate a basic understanding of trigonometry and geometry.	4	5	15	11	2.943
76	349	Pound stakes.	5	6	10	14	2.943
77	392	Assist district conservationist in pre-planning conservation activities.	1	9	16	9	2.943
78	402	Assist in the development of a farm plan.	1	10	14	10	2.943
79	410	Design and draft conservation practices.	4	7	11	13	2.943
80	466	Inspect the construction of open drains.	2	5	21	7	2.943
81	370	Make rough tracings of form maps.	3	7	15	10	2.914
82	391	Supervise construction of conservation structures.	3	9	11	12	2.914
83	395	Execute agreements for the district with operators to implement conservation plans.	4	7	12	12	2.914
84	436	Recommend grassed waterways.	2	10	12	11	2.914
85	459	Determine best method of applying irrigation water.	2	9	14	10	2.914
86	315	Change tires.	3	12	6	14	2.886

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
87	399	Interpret a soil survey.	3	7	16	9	2.886
88	411	Inspect and advise suggested practices.	2	9	15	9	2.886
89	434	Use planimeter to determine flood and sediment storage areas.	2	10	13	10	2.886
90	437	Recommend stockwater ponds.	3	6	18	8	2.886
91	446	Survey the watershed for a pond site.	3	6	18	8	2.886
92	326	Suggest alternative land treatments within established proper land use.	3	8	15	9	2.857
93	445	Select a farm pond site.	4	5	18	8	2.857
94	458	Solve irrigation problems.	2	9	16	8	2.857
95	313	Drive a truck.	5	10	7	13	2.800
96	316	Put on chains.	4	11	8	12	2.800
97	325	Do progress coding.	8	3	12	12	2.800
98	379	Explain principles of contour farming.	1	9	21	4	2.800
99	389	Inspect conservation sites.	4	5	20	6	2.800

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
100	424	Interpret a soil map.	2	9	18	6	2.800
101	429	Locate grassed waterways.	3	9	15	8	2.800
102	447	Design a spillway for a farm pond.	3	9	15	8	2.800
103	371	Prepare finished farm conservation maps.	5	8	12	10	2.771
104	425	Determine soil depths.		12	19	4	2.771
105	442	Layout grassed waterways.	3	10	14	8	2.771
106	451	Plan field drain ditches.	2	10	17	6	2.771
107	323	Do general filing.	1	12	17	5	2.743
108	327	Develop alternative land treatment plans within established proper land use.	4	8	16	7	2.743
109	431	Determine grassed waterway dimensions.	3	10	15	7	2.743
110	438	Recommend diversion dams.	4	9	14	8	2.743
111	443	Calculate water runoff.	4	10	12	9	2.743
112	454	Design and layout water diversion ditches.	3	10	15	7	2.743

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
113	467	Identify soil problems that may be due to a lack of drainage or lack of water.	2	10	18	5	2.743
114	481	Withstand extreme temperature conditions.	2	14	10	9	2.743
115	376	Stake terraces.	5	9	12	9	2.714
116	380	Determine the need for contour strip cropping.	3	9	18	5	2.714
117	382	Determine the need for wind strip cropping.	3	9	19	4	2.686
118	420	Make recommendations for grass plantings from information provided.	2	10	20	3	2.686
119	428	Use water runoff tables.	3	12	13	7	2.686
120	444	Determine watershed runoff.	5	9	13	8	2.686
121	464	Plan surface water drainage.	2	13	14	6	2.686
122	381	Determine the need for field strip cropping.	3	10	18	4	2.657
123	385	Compute areas of contour strips.	3	11	16	5	2.657
124	388	Determine land capability classes.	4	12	11	8	2.657
125	405	Provide basic data for land inventory and evaluation.	1	16	12	6	2.657

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
126	408	Prepare land capability maps.	3	13	12	7	2.657
127	430	Design grassed waterways.	4	12	11	8	2.657
128	432	Determine appropriate shape for grassed waterways.	4	10	15	6	2.657
129	453	Layout tile drains.	3	11	16	5	2.657
130	427	Determine soil texture.	4	10	16	5	2.629
131	384	Layout plan for contour strip cropping.	5	10	14	6	2.600
132	419	Layout conservation shelterbelts.	2	14	15	4	2.600
133	441	Advise in the construction of grassed waterways.	5	11	12	7	2.600
134	311	Demonstrate the experience of having had a farm background.	4	10	18	3	2.571
135	340	Recommend strip cropping practices.	3	13	15	4	2.571
136	345	Locate and stake a terrace line.	5	11	13	6	2.571
137	450	Design shelterbelts.	4	12	14	5	2.571
138	463	Recommend waterspreading systems.	3	12	17	3	2.571

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
139	465	Design open drains.	3	13	15	4	2.571
140	334	Classify land according to its capability to produce.	6	10	13	6	2.543
141	342	Adjust and clean survey instruments.	5	11	14	5	2.543
142	332	Prepare seedbeds.	4	12	16	3	2.514
143	335	Determine appropriate crop rotations.	4	12	16	3	2.514
144	339	Recommend crop rotation practices.	4	12	16	3	2.514
145	331	Understand weed control measures.	2	15	17	1	2.486
146	338	Recommend planting operations.	4	12	17	2	2.486
147	383	Determine the need for buffer strip cropping.	4	12	17	2	2.486
148	462	Survey for flood control.	5	12	14	4	2.486
149	329	Understand the operation of tillage equipment.	2	16	16	1	2.457
150	357	Plot map using planetable.	6	12	12	5	2.457
151	358	Use an alidade and planetable for topographic mapping.	7	11	12	5	2.429

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
152	409	Recommend land use conversion.	5	14	12	4	2.429
153	328	Understand the operation of planting equipment.	3	16	15	1	2.400
154	397	Recommend contour cultivation.	5	13	15	2	2.400
155	403	Determine range carrying capacity.	5	14	13	3	2.400
156	426	Determine water movement in the soil.	6	13	13	3	2.371
157	404	Inventory range conditions.	6	13	14	2	2.343
158	423	Determine soil texture grade.	7	12	13	3	2.343
159	312	Supervise work of subprofessional assistants.	6	17	7	5	2.314
160	440	Plan water drainage outlet.	6	14	13	2	2.314
161	333	Understand weed growth habits.	3	20	11	1	2.286
162	336	Determine soil tilth.	5	16	13	1	2.286
163	398	Collect soil samples.	5	20	5	5	2.286
164	387	Explain terrace construction procedure.	7	15	10	3	2.257
165	455	Determine size of tile drain pipe.	6	16	11	2	2.257

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
166	319	Carry out minor maintenance on vehicles.	7	17	7	4	2.229
167	330	Understand the operation of harvesting equipment.	6	16	12	1	2.229
168	422	Take a soil sample.	6	17	10	2	2.229
169	439	Develop a detailed water drainage map.	9	15	6	5	2.200
170	386	Plan a terrace system.	6	18	10	1	2.171
171	350	Shoot levels in wells.	9	17	5	4	2.114
172	449	Develop a plan to stabilize sandblows.	8	16	10	1	2.114
173	314	Make minor repairs to truck.	12	13	5	5	2.086
174	309	Prepare and present public presentations.	8	20	6	1	2.000
175	320	Possess a basic mechanical ability.	10	17	6	2	2.000
176	337	Carry out tillage operations.	12	12	10	1	2.000
177	347	Assist boring machine operator.	11	17	4	3	1.971
178	318	Make minor repairs to vehicles.	12	16	4	3	1.943

TABLE 1 - Continued

Rank Order No.	Comp. No.	Soil Conservation Technician Competencies as Rated by Soil Conservation Technicians N=35	Frequency 1	2	3	4	Mean Rating
179	310	Make slide presentations.	8	26		1	1.829
180	348	Handle bits.	17	12	4	2	1.743
181	421	Run a soil test.	17	14	3	1	1.657
182	418	Make snow survey.	18	14	2	1	1.600
183	317	Drive a snow cat.	27	8			1.229

Civil Engineering Technician

The data in Table 2 indicate that 15 or 88 percent of the Civil Engineering Technicians felt that recording of survey data was the most important single competency. Further study indicates these employees placed more importance on the use of the surveying equipment and the recording of survey data and less importance on the personal competencies than did the Soil Conservation Technicians. However, 10 of the 13 competencies that were considered Personal Qualities were ranked in the upper 25 percent of the competencies.

The understanding of agricultural practices was considered to be of lesser importance by the respondents. The bulk of these competencies were in the lower 25 percent and had a mean rating of less than 2.5. Those competencies requiring the employee to make recommendations for the use of certain conservation practices were also given lower priority. The latter tends to indicate that the job of the Civil Engineering Technician is quite specialized and that he performs assigned tasks given to him by a supervisor.

Of those 124 competencies identified as being a part of the repertoire of skills needed by the Civil Engineering Technicians, only 15 or approximately 11 percent were given a mean rating less than 2.5. Only one competency, recommending planting operations, was given a mean rating of less than 2.00.

TABLE 2

CIVIL ENGINEERING TECHNICIAN COMPETENCIES
RANK ORDERED BY MEAN

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
1	146	Record survey data.			2	13	3.867
2	132	Recognize malfunction of surveying instruments.			3	12	3.800
3	135	Set up a transit.			3	12	3.800
4	136	Operate a transit.			3	12	3.800
5	166	Record survey information.			3	12	3.800
6	219	Demonstrate a desirable job attitude about the organization when working with fellow employees and producers.			3	12	3.800
7	140	Use simple arithmetic formulas.			4	11	3.733
8	147	Plot data.			4	11	3.733
9	150	Care for and maintain engineering equipment.			4	11	3.733
10	212	Demonstrate a willingness to work.			4	11	3.733

TABLE 2 - Continued

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
11	213	Demonstrate a willingness to learn or take supervision.			4	11	3.733
12	214	Demonstrate the ability to follow directions of supervisor.			4	11	3.733
13	216	Demonstrate the ability to get along with others.			4	11	3.733
14	218	Demonstrate the ability to work cooperatively as a member of a team.			4	11	3.733
15	223	Maintain a satisfactory attendance record.			4	11	3.733
16	107	Consult with supervisors.		1	3	11	3.667
17	134	Demonstrate a basic understanding of trigonometry and geometry.			5	10	3.667
18	145	Use dumpy and hand level.		1	3	11	3.667
19	217	Work safely and neatly.			5	10	3.667
20	220	Demonstrate acceptable personal appearance and personal hygiene.			5	10	3.667
21	137	Serve as rodman.		1	4	10	3.600

TABLE 2 - Continued

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
22	138	Serve as a chainman.		1	4	10	3.600
23	139	Place stakes.		1	4	10	3.600
24	152	Run centerlines and baselines.			6	9	3.600
25	161	Determine plot elevations.			6	9	3.600
26	165	Plot cross-section and profiles.			6	9	3.600
27	221	Demonstrate the ability to project a desirable image for the SCS.		1	4	10	3.600
28	102	Interpret SCS standards and specifications.			7	8	3.533
29	141	Read and interpret standard tables.			7	8	3.533
30	142	Make elementary drawings.			7	8	3.533
31	149	Measure areas with a planimeter and/or scale.		1	5	9	3.533
32	153	Run cross-sectional surveys.			7	8	3.533
33	155	Set grade stakes.			7	8	3.533
34	160	Determine plot distances.		1	5	9	3.533

TABLE 2 - Continued

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
35	168	Calculate yardages.		1	5	9	3.533
36	173	Read and follow technical manuals.		1	5	9	3.533
37	182	Determine if engineering practices meet specifications.		1	5	9	3.533
38	215	Demonstrate the ability to work independently with limited supervision.		1	5	9	3.533
39	154	Set alignment stakes.		2	4	9	3.467
40	157	Make topographic surveys.		1	6	8	3.467
41	162	Sketch contours.		1	6	8	3.467
42	200	Survey irrigation ditches.		1	6	8	3.467
43	108	Cooperate with landowners.		1	7	7	3.400
44	116	Write clear, concise written reports.			9	6	3.400
45	164	Make overlays.		1	7	7	3.400
46	191	Use planimeter to determine drainage areas.		1	7	7	3.400
47	106	Consult with producers.		1	8	6	3.333

TABLE 2 - Continued

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
48	118	Drive a truck.		3	4	8	3.333
49	144	Use simple drafting procedures.		1	8	6	3.333
50	148	Draw simple curves.		1	8	6	3.333
51	156	Use level to obtain percent of slope.		2	6	7	3.333
52	169	Prepare maps.		3	4	8	3.333
53	211	Understand the various irrigation systems.		2	6	7	3.333
54	143	Use basic lettering.		2	7	6	3.267
55	151	Run work limit boundry.		3	5	7	3.267
56	187	Define drainage areas on maps.		3	5	7	3.267
57	193	Use planimeter to determine areas of reservoir sites.		2	7	6	3.267
58	199	Survey drainage ditches.		3	5	7	3.267
59	117	Write clear, concise letters.	1		9	5	3.200
60	120	Change tires.	2	2	2	9	3.200

TABLE 2 - Continued

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
61	133	Adjust and clean survey instruments.		4	4	7	3.200
62	170	Prepare field sheets.	1	2	5	7	3.200
63	203	Design open drains.	1	1	7	6	3.200
64	204	Layout open drains.	1	1	7	6	3.200
65	210	Discuss irrigation and drainage problems.	1	2	5	7	3.200
66	103	Use the telephone to transact business.		4	5	6	3.133
67	121	Put on chains.	3	1	2	9	3.133
68	171	Prepare job sheets.	1	3	4	7	3.133
69	183	Identify soil problems that may be due to a lack of drainage or lack of water.		3	7	5	3.133
70	192	Use planimeter to determine flood and sediment storage areas.		3	7	5	3.133
71	198	Layout diversions.	1	1	8	5	3.133
72	208	Prepare land for leveling.	2		7	6	3.133
73	105	Schedule jobs.		3	8	4	3.067

TABLE 2 - Continued

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
74	113	Enjoy working outdoors.	1	2	7	5	3.067
75	163	Operate spirit level.		4	6	5	3.067
76	177	Recommend proper maintenance of conservation structures.	2		8	5	3.067
77	181	Work with producers in determining conservation practices.	2	1	6	6	3.067
78	206	Layout closed drains.	1	2	7	5	3.067
79	207	Layout and design irrigation structure.	1	3	5	6	3.067
80	101	Report supporting data for cost sharing.	1	2	8	4	3.000
81	104	Make appointments with producers.		3	9	3	3.000
82	175	Read and interpret soil maps.		4	7	4	3.000
83	190	Survey for flood control.	1	3	6	5	3.000
84	195	Design range livestock watering devices.	2	2	5	6	3.000
85	196	Advise producers as to water use.	1	3	6	5	3.000

TABLE 2 - Continued

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
86	205	Design closed drains.	1	3	6	5	3.000
87	222	Withstand extreme temperature conditions.	1	2	8	4	3.000
88	174	Identify land capabilities classes.	1	2	9	3	2.933
89	176	Maintain a follow-up of engineering practices.	2		10	3	2.933
90	197	Design diversions.	2	1	8	4	2.933
91	209	Plan leveling practices.	2	3	4	6	2.933
92	110	Appear before groups to explain engineering plans.	2	2	7	4	2.867
93	114	Supervise work of subprofessional assistants.		5	7	3	2.867
94	158	Plot map using planetable.		6	5	4	2.867
95	167	Use the alidade and planetable to make surveys.		5	7	3	2.867
96	188	Design grassed waterways.	1	3	8	3	2.867
97	189	Layout grassed waterways.	1	4	6	4	2.867
98	194	Conduct hydrologic investigations.	1	4	6	4	2.867
99	100	Report compliance with conservation practices installed.	1	4	7	3	2.800

TABLE 2 - Continued

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
100	159	Use an alidade for topographic mapping.		6	6	3	2.800
101	172	Prepare work orders.	2	4	4	5	2.800
102	178	Recommend changes in engineering practices in farm plans.	2	2	8	3	2.800
103	180	Follow-up application of applied practices.	1	3	9	2	2.800
104	201	Determine effect of existing water rights.	1	3	9	2	2.800
105	202	Demonstrate a basic understanding of water law.	1	2	11	1	2.800
106	186	Determine soil texture grade.	2	3	7	3	2.733
107	185	Take a soil sample.	2	5	4	4	2.667
108	179	Establish contour strip cropping.	1	6	7	1	2.533
109	184	Run soil test.	1	8	3	3	2.533
110	119	Make minor repairs to truck.	1	7	7		2.400
111	122	Carry out minor maintenance on vehicles.	3	5	5	2	2.400
112	123	Possess a basic mechanical ability.	2	6	6	1	2.400

TABLE 2 - Continued

Rank Order No.	Comp. No.	Civil Engineering Technician Competencies as Rated by Civil Engineering Technicians N=15	Frequency 1	2	3	4	Mean Rating
113	111	Prepare and present public presentations.	3	5	6	1	2.333
114	115	Prepare time and attendance reports for employees.	4	4	5	2	2.333
115	125	Understand the operation of tillage equipment.	1	10	4		2.200
116	129	Understand weed control measures.	3	6	6		2.200
117	124	Understand the operation of planting equipment.	1	11	3		2.133
118	126	Understand the operation of harvesting equipment.	2	9	4		2.133
119	127	Prepare seedbeds.	4	6	4	1	2.133
120	112	Demonstrate the experience of having a farm background.	3	8	4		2.067
121	130	Recommend tillage operations.	3	8	4		2.067
122	109	Make slide presentations.	4	8	2	1	2.000
123	128	Understand weed growth habits.	5	5	5		2.000
124	131	Recommend planting operations.	4	8	3		1.933

Dairy Herd Improvement Supervisor

Seventy-four specific competencies were identified to be directly related to the Diary Herd Improvement Supervisor job title. Montana has only 7 persons performing this service within the state; 5 of whom returned the survey instrument. When reviewing the data in Table 3, one should keep in mind that all ratings are based on a very limited sample of workers.

As shown in Table 3, the first 6 competencies in the upper 25 percent received a 4.00 mean rating. Each of these competencies, with the exception of operating an automobile, relate directly to collecting, weighing and recording milk samples. It is interesting to note that 2 competencies in the upper 25 percent relate to the use of a computer for recording data. A most interesting competency, demonstrate cow-sense, was given a 2.6 mean rating.

A knowledge of animal health care was not considered to be extremely important to the performance of the supervisor's job as these competencies received some of the lowest ratings. Those competencies relating to dairy herd management were also in the lower 25 percent. The competency, demonstrate experience in dairy farming or a dairy background, was given a mean rating of 2.2, the same rating given to the bulk of the competencies which fall in the lower 25 percent.

TABLE 3

DAIRY HERD IMPROVEMENT SUPERVISOR COMPETENCIES
RANK ORDERED BY MEAN

Rank Order No.	Comp. No.	Dairy Herd Improvement Supervisor Competencies as Rated by Dairy Herd Improvement Supervisors N=5	Frequency 1	2	3	4	Mean Rating
1	009	Operate an automobile.				5	4.000
2	020	Weigh or measure daily milk production.				5	4.000
3	021	Take a representative milk sample.				5	4.000
4	022	Properly clean milk testing equipment.				5	4.000
5	030	Properly label milk samples for identification.				5	4.000
6	042	Record production information on a barn sheet.				5	4.000
7	006	Follow established rules and regulations for testing.			1	4	3.800
8	008	Be aware of fraudulent practices in DHI testing.			1	4	3.800
9	031	Properly pack milk samples for shipment.			1	4	3.800
10	041	Maintain, neat accurate records.			1	4	3.800
11	046	Record breeding records.			1	4	3.800

TABLE 3 - Continued

Rank Order No.	Comp. No.	Dairy Herd Improvement Supervisor Competencies as Rated by Dairy Herd Improvement Supervisors N=5	Frequency 1	2	3	4	Mean Rating
12	047	Enter breeding records into computer.			1	4	3.800
13	048	Provide cow identification.			1	4	3.800
14	003	Make minor repairs to testing or weighing equipment.		1		4	3.600
15	014	Use the telephone to transact business.			2	3	3.600
16	015	Make appointments for scheduling tests.			2	3	3.600
17	016	Read and follow technical manuals.			2	3	3.600
18	017	Be familiar with computer input procedures.			2	3	3.600
19	024	Run Babcock butterfat test.		1		4	3.600
20	036	Interpret butterfat tests.			2	3	3.600
21	045	Be aware of input changes for computer analysis.		1		4	3.600
22	049	Correct computer print-out of herd or cow information.			2	3	3.600
23	052	Make collections for services.		1		4	3.600

TABLE 3 - Continued

Rank Order No.	Comp. No.	Dairy Herd Improvement Supervisor Competencies as Rated by Dairy Herd Improvement Supervisors N=5	Frequency 1	2	3	4	Mean Rating
24	004	Be aware of all sanitary procedures.		1	1	3	3.400
25	007	Test at proper intervals.			3	2	3.400
26	012	Consult with dairy producers.			3	2	3.400
27	032	Interpret production records.		1	1	3	3.400
28	044	Obtain individual cow records for computer input.	1			4	3.400
29	051	Prepare clear, concise written reports.		1	1	3	3.400
30	011	Demonstrate the ability to get along with people.		1	2	2	3.200
31	019	Write clear, concise letters.		1	2	2	3.200
32	025	Conduct mastitis tests.	1		1	3	3.200
33	034	Interpret individual cow records.		1	2	2	3.200
34	050	Maintain supervisors performance record.			4	1	3.200
35	055	Have a knowledge of bookkeeping practices.			5		3.000

TABLE 3 - Continued

Rank Order No.	Comp. No.	Dairy Herd Improvement Supervisor Competencies as Rated by Dairy Herd Improvement Supervisors N=5	Frequency				Mean Rating
			1	2	3	4	
36	065	Add decimals.		1	3	1	3.000
37	002	Demonstrate a basic mechanical ability.	1		3	1	2.800
38	010	Purchase supplies.	1	1	1	2	2.800
39	013	Advise dairy producers.		2	2	1	2.800
40	035	Interpret mastitis test results.	1	1	1	2	2.800
41	063	Convert gallons to pounds.		2	2	1	2.800
42	001	Demonstrate cow-sense.		2	3		2.600
43	029	Maintain milk samples for later testing.	1	2		2	2.600
44	043	Record total pounds of milk produced per cow.	1	1	2	1	2.600
45	062	Convert pounds to ounces.	1	1	2	1	2.600
46	066	Convert decimals to percents.		2	3		2.600
47	026	Test solids (non-fat) by the Golding bead test.		3	2		2.400
48	027	Know the physical properties of milk.		3	2		2.400
49	064	Calculate parts per million.	1	2	1	1	2.400

TABLE 3 - continued

Rank Order No.	Comp. No.	Dairy Herd Improvement Supervisor Competencies as Rated by Dairy Herd Improvement Supervisors N=5	Frequency 1	2	3	4	Mean Rating
50	070	Convert fractions to decimals.		3	2		2.400
51	074	Convert percentage to decimals.		3	2		2.400
52	005	Demonstrate experience in dairy farming or a dairy background.	1	2	2		2.200
53	018	Prepare and give a public presentation.	1	3		1	2.200
54	023	Run TeSa butterfat test.	1	3		1	2.200
55	028	Know the chemical properties of milk.		4	1		2.200
56	037	Compute rations for dairy cows.		4	1		2.200
57	038	Measure feed consumption.		4	1		2.200
58	039	Analyze feeding practices in dairy production.		4	1		2.200
59	040	Interpret health standards.	1	2	2		2.200
60	057	Understand prcper care and maintenance of dairy herd.		4	1		2.200
61	058	Determine breeding cycles in dairy cattle.		4	1		2.200
62	067	Divide decimals.		4	1		2.200
63	068	Multiply decimals.		4	1		2.200

TABLE 3 - Continued

Rank Order No.	Comp. No.	Dairy Herd Improvement Supervisor Competencies as Rated by Dairy Herd Improvement Supervisors N=5	Frequency 1	2	3	4	Mean Rating
64	069	Add and subtract fractions.	1	2	2		2.200
65	071	Convert decimals to fractions.	1	2	2		2.200
66	053	Handle banking procedures.	1	3	1		2.000
67	054	Prepare government forms (social security, etc.)	1	3	1		2.000
68	056	Use a strip cup to detect udder infections.	1	3	1		2.000
69	059	Recognize disease in dairy cattle.	2	1	2		2.000
70	072	Divide fractions.	1	3	1		2.000
71	073	Multiply fractions.	1	3	1		2.000
72	033	Determine animal weights by using heart girth measurement.	2	2	1		1.800
73	060	Recognize symptoms of external parasites in dairy cattle.	2	2	1		1.800
74	C61	Recognize symptoms of internal parasites in dairy cattle.	2	3			1.600

Probability Values of Duplicate Competencies
For Soil Conservation and Civil Engineering Technicians

As the competencies for the Civil Engineering Technician and the Soil Conservation Technician were being validated, there appeared to be much similarity among the competencies for each job title. The final instruments contained 74 duplicate competencies.

The duplicate competencies were tested to determine if the respondents in both job titles ranked these competencies in a similar manner. Using the chi square, probability values (p-values) were established for each competency. These probability values appear in Table 4. For comparative purposes the competencies were categorized: (1) Very Similar, (2) Similar and (3) Not Similar. A confidence level of .05 was used to separate the "Similar" and "Not Similar" competencies. Approximately 25 percent of those competencies receiving the highest probability value were designated "Very Similar". A high p-value indicates that respondents representing various job titles viewed this competency in a like manner and does not necessarily indicate the importance of this competency as viewed by the respondents. As indicated when discussing methodology, this procedure was used as a guideline for determining differences; the statistical assumptions underlying the use of the Chi Square test, relations to cells containing "0" values and values less than "5" were known to be invalid. A review of the mean values appearing in Table 1 and 2 will indicate the level of importance of the specific competency in question for each job title. For example, the competency 213/471, demonstrate a willingness to learn or take supervision, received a mean rating of 3.733 by the Civil Engineering Technicians and a mean rating of 3.743 by the Soil Conservation Technicians. Thus, in this example, the competency was considered quite important by both groups of respondents.

TABLE 4

EVALUATION OF LIKE COMPETENCIES FOR
SOIL CONSERVATION AND CIVIL ENGINEERING TECHNICIANS
RANK ORDERED BY PROBABILITY VALUES

*COMP. NO.	COMPETENCY SYNOPSIS	P-VALUE	EVALUATION
471/213.	Learn or take supervision	.9998	
476/218.	Work cooperatively as team member	.9998	
472/214.	Follow directions	.9932	
482/223.	Satisfactory attendance	.9896	
442/189.	Layout grassed waterways	.9881	
475/215.	Work safely and neatly	.9587	
372/173.	Read & follow technical manuals	.9347	
470/212.	Willingness to work	.8975	
460/199.	Survey drainage ditches	.8920	
477/219.	Desirable job attitude	.8783	VERY SIMILAR
478/220.	Acceptable personal appearance	.8715	
469/211.	Understand various irrig. systems	.8457	
353/154.	Set alignment stakes	.7890	
355/156.	Use level	.7844	
474/216.	Get along with others	.7825	
369/138.	Work (serve) as chainman	.7805	
330/126.	Understand opr. of harvest equip.	.7701	
308/108.	Co-op. with land owners	.7643	
461/200.	Survey irrigation ditches	.7640	
364/164.	Make overlays on maps	.7622	

TABLE 4 - Continued

*COMP. NO.	COMPETENCY SYNOPSIS	P-VALUE	EVALUATION
303/103.	Use telephone	.7447	
305/105.	Schedule jobs	.7225	
319/122.	Carry out minor maintenance	.7183	
434/192.	Use planimeter	.6933	
359/160.	Plot (determine) distances	.6804	
362/137.	Serve as rodman	.6792	
435/193.	Determine reservoir sites	.6586	
356/157.	Make topographic surveys	.6215	
433/191.	Determine drainage areas	.5879	
361/162.	Sketch contours	.5612	
307/107.	Consult with supervisors	.5572	
300/100.	Compliance w/ conserv. practices	.5549	
306/106.	Consult with producers	.5437	SIMILAR
329/125.	Understand Opr. tillage equip.	.5187	
468/210.	Discuss irrig. & drain. prob.	.5157	
430/188.	Design grassed waterways	.5122	
423/186.	Determine soil texture grade	.5051	
322/117.	Write letters	.5001	
473/215.	Work w/ limited supervision	.4850	
332/127.	Prepare seedbeds	.4566	
479/221.	Project desirable image	.4431	
331/129.	Understand weed cont. measures	.4322	
354/155.	Set grade stakes	.4217	

TABLE 4 - Continued

*COMP. NO.	COMPETENCY SYNOPSIS	P-VALUE	EVALUATION
301/101.	Report supporting data	.4202	
315/120.	Change tires	.4100	
366/166.	Record survey information	.4052	
360/161.	Plot (determine) elevations	.4038	
351/152.	Run centerlines	.4021	
365/165.	Plot cross-sections, etc.	.4021	
352/153.	Run cross-sectional surveys	.3861	
480/113.	Work out of doors	.3849	
341/132.	Recog. malfunct. of survey instr.	.3832	
302/102.	Interpret SCS standards	.3650	
321/116.	Write reports	.3477	
313/118.	Drive a truck	.3468	SIMILAR
328/124.	Underst. oper. of plant. equip.	.3226	
320/123.	Have basic mechanical ability	.3224	
343/135.	Set up a transit	.3202	
344/136.	Operate a transit	.3202	
357/158.	Plot map	.3121	
309/111.	Prepare public presentations	.2719	
481/222.	Extreme temperature conditions	.2453	
304/104.	Make appointments	.2320	
422/185.	Take soil sample	.2104	
311/112.	Have farm background	.1638	

TABLE 4 - Continued

*COMP. NO.	COMPETENCY SYNOPSIS	P-VALUE	EVALUATION
316/121.	Put on chains	.1455	SIMILAR
338/131.	Recommend planting operation	.1385	
333/128.	Underst. weed growth habits	.1281	
310/109.	Make slide presentations	.1208	
312/114.	Supervise subprofessionsal assist.	.1097	
346/134.	Underst. geometry & trigometry	.0645	
342/133.	Adjust & clean survey instr.	.0609	
465/203.	Design open drains	.0481	
314/119.	Make minor repairs	.0179	NOT SIMILAR

* The competency numbers that appear in this column correspond to the competency numbers appearing on the instrument found in the Appendix.

The p-value appearing in Table 4 indicates that only one of the 74 dupliccate competencies was totally dissimilar. Making minor repairs to a truck had a p-value of .0034 indicating that there was little agreement between the two groups of respondents regarding the importance of this particular competency.

Table 5

Soil Conservation and Civil Engineering Technician Competency Number 314/119 with a Significant Probability Value (Below .05 Level)

COMPETENCY	JOB TITLE	FREQUENCY				P-VALUE
		1	2	3	4	
314/119. Make minor repairs to truck.	Soil Conservation Technician	12	13	5	5	.0034
	Civil Engineering Technician	1	7	7	0	

Food Inspector Competencies

A total of 337 specific competencies were identified as being valid for a person employed as a federal food inspector. The large number of competencies necessitated that the list be divided into a number of categories which included:

1. Ante-Mortem Inspection
2. Post-Mortem Inspection
3. Head Inspection
4. Viscera Inspection - Lungs, heart, spleen (Meat & Poultry)
5. Rail and Carcass Inspection (Meat & Poultry)
6. Disposition of Meat
7. Chilling and Moisture Control (Poultry)
8. Control of Restricted Products, Animal Food Products and Condemned and Inedible Materials
9. Lighting of Facilities
10. Management Control
    a. Products received from acceptable source
    b. Use and handling; storage of raw meat
    c. Formulation control and identification
11. Processing Controls
    a. Curing and pumping
    b. Smoking
    c. Trichinae control
    d. Inspection responsibilities
12. Security of Brands, Certificater, and Seals
13. Sampling and Interpretation of Laboratory Results
14. Sanitation-Processing Operations
15. Personnel (Clothing and Personal Equipment)
16. Employee Welfare Facilities: (i.e., Lunchroom & Toilet Facilities)
17. Coolers, Rails, Hooks, Drains and Equipment
18. Inedible and Condemned Rooms
19. Offal Rooms and Coolers
20. Retained Product Area
21. Product Handling
22. Marking and Labeling Controls
23. Required Label Features
24. Special Marking or Labeling Features
25. Blueprints
26. Rehabilitation, Modification, or Replacement of Equipment
27. Person-To-Person Work Relationships
28. Water Supply
29. Sewage and Waste Material Disposal
30. Pest Control

31. Mathematics
32. Canning
33. Incubation Control
34. Rendering and Refining
35. Miscellaneous
    a. Safety
    b. Maintenance of instruction and regulation
    c. File system and reports
    d. Transportation
    e. Cooperation with other authorities
    f. Application of inspection and other requirements
    g. Exemptions
36. Import
37. Export
38. Approved Plant Control Systems
39. Personal Work Traits

In the final ranking of the competencies appearing in Table 5, no separation was made among the competencies according to each category given above. All competencies were rated, one against the other.

Federal Food Inspector

Forty-four inspectors returned valid instruments. Among the 44 respondents there were 4 GS-5's, 9 GS-7's, 2 GS-8's, and 29 GS-9's. Because of the very limited number of GS-5's and GS-8's, a decision was made to group the responses of all respondents rather than analyze the responses of each grade level.

Each respondent was asked to rate each competency on the basis of its importance to the job he was performing at the time of the survey. If a particular competency related to a skill that the respondent did not perform at the time of the survey, it was to be given a rating of "not important". One would assume that an inspector with a GS-9 rating in a large processing plant to perform almost all competencies whereas a respondent with a GS-5 rating in a smaller plant may not be called on to perform many of the competencies listed.

A perusal of Table 6 indicate the upper 25 percent of the competencies received a mean rating of 3.5 or higher. Those competencies in the upper 25 percent receiving the highest ratings were related to the maintenance of clean, sanitary conditions within the plant. Maintaining personal cleanliness among the employees seemed quite important since five related competencies appeared in the upper 25 percent.

Seven of the 13 competencies on personal work traits appeared in the upper 25 percent of the competencies.

The competency receiving the lowest rating was the processing of poultry products. A further review of those competencies with a mean rating of less than 2.00 indicate that a high percentage of these competencies involve the processing of poultry and handling of products going into the export-import trade.

TABLE 6

FOOD INSPECTOR COMPETENCIES
RANK ORDERED BY MEAN

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
1	116	Determine that the walls and ceilings are free of mold and condensation.			7	37	3.841
2	127	Determine if the layout is such that will allow positive control of condemned materials.		1	5	38	3.841
3	182	Communicate with plant officials identifying immediate violations and corrective action required.			7	37	3.841
4	117	Determine if rails are clean, free of flaking paint, excessive oils and grease, rust, etc.			8	36	3.818
5	115	Determine if the equipment in the coolers is free of corrosion, rust, dust, dry blood, scrap meat and accumulation of fat.			9	35	3.795
6	119	Determine if the equipment is clean, in good repair and free of foreign material.			9	35	3.795
7	138	Require that condemned products be properly and adequately denatured or de-characterized to assure compliance with instructions.	1		6	37	3.795
8	195	Determine if approved insecticides and rodenticides are used, and are applied in an approved manner.	1		6	37	3.795
9	107	Maintain yourself in a neat and clean manner and demonstrate good working and sanitary practices.			10	34	3.773
10	111	Maintain personal equipment (knives, scabbards, steels, tool boxes, gloves, etc.) in a sanitary condition.			10	34	3.773
11	118	Determine if hooks are clean and in good repair.			10	34	3.773
12	124	Require that coolers be free of condensation and floors, walls, and ceilings are free of accumulation of dry blood, fat, scrap meat, mold, dirt and dust.			10	34	3.773
13	180	Confer with responsible plant management officials to secure prompt compliance with M&PIP requirements.			10	34	3.773
14	253	Determine if an official set of Meat and Poultry Inspection Regulations, Program Issuances, Manual Instructions and Revisions be maintained in the inspection office, as they are used regularly by inspectors.		1	8	35	3.773

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
15	186	Determine if potable water supply is tested and certified by the appropriate local or state health agency.	2	1	3	38	3.750
16	194	Determine those necessary measures be taken to control and eliminate insect and rodent pests in and around the plant.			11	33	3.750
17	256	Complete Time and Attendance Report as per instructions from Handbook (USDA).			11	33	3.750
18	103	Determine if ceilings and overhead are free of dust, scaling paint, scaling plaster, mold, rust, condensation, leaks, etc.	2		6	36	3.727
19	104	Determine if equipment is in good condition and free from contaminants, ie. rust, dust, dried blood, scrap meat, grease, etc.	2		6	36	3.727
20	108	Determine if plant management requires personnel to wash their hands as often as necessary and always after returning from toilet rooms.			12	32	3.727
21	125	Determine if chutes, tables, pans, etc. are constructed of rust-resistant materials and maintained in a clean and acceptable manner.			12	32	3.727
22	140	Determine if condensation is controlled so as not to contaminate product.			12	32	3.727
23	109	Require that plant management restrict the use of tobacco in any form, spitting, and smoking in rooms where edible product is handled.		2	9	33	3.705
24	183	Explain and interpret M&PIP rules and regulations and inspectional control procedures.		1	11	32	3.705
25	192	Determine if onsite handling is acceptable - no accumulation, rodent harborage, nuisance, or sanitary problems being created.	1		10	33	3.705
26	126	Determine if well arranged and adequate facilities for handling inedible and condemned material are provided.		1	12	31	3.682
27	129	Require a thorough cleanup and sanitizing of equipment prior to resuming handling of inspected product after slaughter or processing of custom exempt product.		1	12	31	3.682
28	074	Determine if raw meat, meat, emulsions and finished, perishable products are being stored at room temperature of 50 degree F. or lower, accessible to inspection and handled in a manner to avoid contamination.	2		9	33	3.659
29	092	Determine if all brands and devices used for marking articles with the inspection legend, self-locking seals, official certificates, or other accountable items are being kept under adequate security and that a current inventory is maintained of such security items.		2	11	31	3.659

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
30	114	Determine if the above areas are free of odor, properly maintained and kept clean at all times.			15	29	3.659
31	178	Confer with responsible plant officials to exchange information and secure cooperation in the development of plans and revision of existing inspectional programs in compliance with M&PIP requirements.			1:	29	3.659
32	193	Determine if there is any evidence of insects or rodents in or around premises.			15	29	3.659
33	077	Determine if the quantity of meat and non-meat materials is controlled to produce a product in compliance with published standards and label declarations.	4		4	36	3.636
34	089	Determine if inedible materials are in marked containers and under plant and inspector's control until effectively denatured or until packaged and identified as food not for human consumption.	3		7	34	3.636
35	120	Determine if the area and equipment for meat inedible or condemned products handling is adequate for the quantity of the product and separate from the edible products department and properly maintained.		1	14	29	3.636
36	123	Determine if acceptable water connections for cleanup are provided.		1	14	29	3.636
37	150	Determine if all products enclosed in cartons, wrappers, packages, cans or containers, bear an approved label.	2	1	8	33	3.636
38	324	Demonstrate ability to follow policy and procedures.	1	1	11	31	3.636
39	328	Demonstrate ability to accept responsibility and initiate action.	1		13	30	3.636
40	332	Demonstrate the ability to evaluate facts and make decisions.	1		13	30	3.636
41	079	Determine if restricted ingredients (nitrates, nitrites, phosphates, ascorbates, corn syrup) are used according to specific standards.	5		2	37	3.614
42	100	Require appropriate corrective action if standards are not met.	4		5	35	3.614
43	102	Determine if the walls are free of dirt, mold, blood, scaling paint and other contaminants.	2		11	31	3.614
44	110	Determine if plant management are permitting any practice which may be considered unsanitary.			17	27	3.614
45	128	Determine if unpackaged custom products are held separately from inspected products (separate rail, racks, etc.).	2	1	9	32	3.614

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
46	187	Determine if water supply, both hot and cold, are adequate and distributed to all parts of the plant for cleanup, etc.	1	2	10	31	3.614
47	252	Take proper safety precautions during the performance of your duties, including the use of required safety devices such as helmets, knife guards, etc.			17	27	3.614
48	063	Require that all restricted products are under direct control or lock or seal at all times until rendered acceptable for human consumption.	3	1	7	33	3.591
49	069	Determine if all lights in the processing rooms and areas where product is exposed have protective coverings.	2	1	10	31	3.591
50	084	Determine if pork products that are not customarily cooked in the home or elsewhere before being consumed have been treated to destroy trichinae.	5		3	36	3.591
51	141	Require that products, including cooked and ready-to-eat products, are being handled in a clean and acceptable manner.	4		6	34	3.591
52	148	Determine that all brands and labels are approved by inspection agency prior to use.	3	1	7	33	3.591
53	179	Advise plant officials of equipment, facilities and inspectional programs which need upgrading or improvement.		2	14	28	3.591
54	333	Demonstrate ability to plan and organize your own work.	1		15	28	3.591
55	003	Maintain control of all Four (4) D's (Dying, Dead, Diseased and Disabled) animals as required by federal regulations.	5		4	35	3.568
56	019	Retain and/or condemn affected area of carcasses and parts which are found to be contaminated or abnormal.	5	1	2	36	3.568
57	071	Determine if meat, carcasses, cuts and manufacturing meats bear legible marks of inspection where slaughtered and/or processed.	2		13	29	3.568
58	086	Maintain adequate inspectional knowledge of regulations and procedures to carry out inspection responsibilities.	3		10	31	3.568
59	105	Determine if plant management is requiring employees to wear clean, washable or disposable outer clothing or street clothing that is properly covered.		1	17	26	3.568
60	130	Determine if viscera separation and product handling is being conducted in a sanitary manner.	2		13	29	3.568
61	191	Determine if system is approved by local or state health authorities for official plants.	3	2	6	33	3.568

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
62	257	Maintain adequate knowledge of Agency rules governing use of annual and sick leave, etc.		3	13	28	3.568
63	326	Demonstrate ability to communicate orally.	1	1	14	28	3.568
64	330	Demonstrate the ability to adapt to new or different situations.	1	1	14	28	3.568
65	014	Inspect and require plant management to meet the minimal sanitation standards of facilities and equipment in slaughter and allied departments.	5		5	34	3.545
66	065	Control condemned carcasses or parts until tanked or properly denatured.	5		5	34	3.545
67	149	Determine if all meat or poultry carcasses and/or meat or poultry cuts and processed products are branded, if required.	3		11	30	3.545
68	190	Require that the use of nonpotable water be limited to prescribed areas with adequate identification of such lines.	5	1	3	35	3.545
69	078	Establish controls which will evaluate adequacy of the formulation.	4		9	31	3.523
70	090	Determine if restricted products are under direct M&PIP supervision or control until rendered capable for use as human food.	5		6	33	3.523
71	136	Determine if suitable compartment or refrigerated areas for holding retained or returned product pending disposition are available.	1	1	16	26	3.523
72	137	Determine if compartment is equipped for sealing to maintain security.	2		15	27	3.523
73	254	Determine if all reports and other required records are maintained on the official in-plant-file system.			21	23	3.523
74	259	Complete Travel Voucher in accordance with Travel Regulations for official travel.	1	1	16	26	3.523
75	004	Maintain control over dead animals and poultry by applying condemned tags and tanking or effectively denaturing them under direct supervision of a Program employee.	5		7	32	3.500
76	017	Require corrective action by retention, rejection and/or condemnation if the slaughtering procedures are conducted in a manner in which product contamination would occur.	5		7	32	3.500
77	021	Examine all surfaces of the head for pathological conditions and contaminations and properly incise and examine the mandibular, atlantal suprapharyngeal and parotid lymph nodes.	5		7	32	3.500

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
78	028	Examine the inner and outer surfaces of the heart and examine and incise the muscles of the left ventricle and enterventricular septum.	5		7	32	3.500
79	066	Determine if inedible material is being handled in a prompt, efficient manner, making use of properly marked inedible containers, under the inspector's supervision or control.	3	2	9	30	3.500
80	073	Determine if non-meat supplies are properly identified and labeled as required by the Federal Food and Drug Administration.	2	3	10	29	3.500
81	165	Determine special labeling requirements by referring to the Meat and Poultry Inspection Regulations and the Manual of Procedures.	5		7	32	3.500
82	251	Determine if adequate facilities and equipment are provided to prevent and minimize safety hazards.			22	22	3.500
83	329	Demonstrate ability to respond to the need for extra effort.	1	1	17	25	3.500
84	018	Use your senses to inspect and determine whether carcasses and parts are free from contamination and unacceptable material (ie. hair, hide, fecal matter, urine, dirt, ingesta, feathers and any other foreign material).	5		8	31	3.477
85	029	Inspect the opening of the bile duct and incision of the portal lymph nodes.	5	1	6	32	3.477
86	085	Determine if the treatment consists of heating, refrigerating or curing according to Section 318.10 of the Regulations.	4		11	29	3.477
87	094	Assure that samples are properly identified from the time they are taken until they reach the laboratory.	5		8	31	3.477
88	101	Determine if floors are free of accumulation of fats, blood and other foreign material.	2		17	25	3.477
89	106	Determine if suitable coverings adequately cover the hair.		1	21	22	3.477
90	184	Maintain records, reports and hold conferences.	2		17	25	3.477
91	258	Complete MP-11, Services Rendered Report as per instructions from USDA Employee Handbook.	2	2	13	27	3.477
92	261	Update and maintain adequate knowledge of Agency rules for standard of conduct both on the job and off the job.	1	2	16	25	3.477
93	335	Demonstrate ability to get along with co-workers and work as a team.	1	1	18	24	3.477

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
94	022	Incise external and internal muscles of mastication and inspect by incising them in such a manner as to split the muscles in a plane parallel with the lower jawbone.	5		9	30	3.455
95	026	Incise both mandibular lymph nodes and examine for abnormalities.	6		6	32	3.455
96	027	Inspect, incise and examine the tissues of the right and left bronchial and anterior, middle and posterior mediastinal lymph nodes and observe palpation of the parietal or curved surface and the ventral surface.	6		6	32	3.455
97	087	Maintain adequate knowledge of management's practices in all areas of your assignment.	3		15	26	3.455
98	091	Determine and require that immediate action be taken to correct deficiencies in all phases of the operation within his purview.	3	1	13	27	3.455
99	097	Require that procedures in sampling are carried out to provide the laboratory with as representative a sample as is possible.	5		9	30	3.455
100	112	Determine if the dressing rooms are equipped with lockers or alternate devices, toilet rooms (showers in meat slaughter plant), urinals and other than hand-operated wash basins, soap and towels.			24	20	3.455
101	153	Determine if marks of inspection and plant establishment number are accurate.	5		9	30	3.455
102	176	Advise plant management to assure that M&PIP requirements are met relative to installation and function of new equipment.	2	1	16	25	3.455
103	188	Determine if vacuum breakers of an acceptable type are provided on waterlines connected to various equipment to prevent contamination of waterlines by back-siphonage.	5	1	7	31	3.455
104	325	Demonstrate the ability to exercise technical or special skills.	3		15	26	3.455
105	011	Communicate with veterinarian and plant management representatives to maintain control of all animals and poultry passed, suspected, condemned or requiring special handling (a quarantine release, back tag information, bangs reactors, hog cholera quarantine, blood collection from market cattle testing program, TB reactors, biological residue animals and poultry, etc.).	5	1	8	30	3.432
106	015	Reject any equipment or physical structure which may cause contamination before, during or after slaughter operations.	5		10	29	3.432

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
107	016	Use all senses in inspecting the establishments' methods, operations and sanitary dressing procedures insuring that sanitary conditions and practices are maintained (ie. sterilization of knives, saws, ligation of intestines, esophagus, bladder, etc. and other requirements as specified).	5		10	29	3.432
108	020	Consult with veterinarian in those cases where determination cannot be made regarding contaminated carcasses and parts.	5	2	6	31	3.432
109	064	Control animal food products until packed and identified or denatured.	6		7	31	3.432
110	076	Determine if all ingredients, emulsions, mixtures, liquids, etc., are identified through all phases of processing.	4	1	11	28	3.432
111	088	Apply procedural requirements to all phases of processing to assure that products are in compliance with regulations.	4	1	11	28	3.432
112	095	Determine if information on forms which accompany the sample is complete and includes the name of the product as it will appear on the label.	5		10	29	3.432
113	098	Determine that ground samples are being prepared without delay and in a manner that will assure a representative sample for analysis.	5		10	29	3.432
114	142	Require that raw meat, emulsions and finished perishable products be stored at room temperature of 50° F. or lower (poultry 40° F.) and accessible to inspection.	4		13	27	3.432
115	151	Determine if the product name is listed as required.	5		10	29	3.432
116	164	Maintain an approved label filing control and record system.	5		10	29	3.432
117	168	Determine if the application of the label is both truthful and informative.	5		10	29	3.432
118	175	Observe the use and function of equipment and facilities and determine the need for their modification and/or replacement to preclude sources of real or potential contamination.	2		9	23	3.432
119	181	Communicate and cooperate with division employees concerning plant operations and inspection activities for the purpose of maintaining continuity of compliance with M&PIP requirements.	2	2	15	25	3.432
120	255	Follow the records disposal schedule.		3	19	22	3.432
121	002	Require plant management to provide adequate facilities for an effective and efficient ante-mortem inspection (U.S. suspect pens, proper lighting, thermometers, and animal restraining devices).	5	1	9	29	3.409

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
122	040	Observe all surfaces for pathology and cleanliness.	6		8	30	3.409
123	080	Determine if all formulas for pickling and curing solutions and all pumping and curing procedures are readily available for review by plant management and inspector.	5	1	9	29	3.409
124	152	Determine if list of ingredients, if made from two or more ingredients, is listed in descending order of predominance as used in formulation.	6		8	30	3.409
125	067	Determine if all inspection areas (boning tables, overgrinders, bacon presses, slicers, chippers, etc.) have 50 foot-candles of lighting.	2	2	17	23	3.386
126	135	Determine if product is effectively washed inside and out to remove excess blood, loose tissue particles and any foreign material.	3	2	14	25	3.386
127	337	Demonstrate the ability to establish cooperative relationships.	1	2	20	21	3.386
128	023	Observe tongue and palpate along its entire length. (Check for bruises, hair sores and other abnormalities).	5	2	9	28	3.364
129	032	Inspect and observe lung parietal and ventral surfaces and palpate the parietal surface, bronchial and mediastinal lymph nodes.	6	1	8	29	3.364
130	033	Inspect and observe both sides of the liver.	6		10	28	3.364
131	035	Observe and palpate heart, spleen and mesenteric lymph nodes.	6	1	8	29	3.364
132	068	Determine if all other areas contain at least 20 foot-candles (except dry storage) and 10 foot-candles at front shank level of carcass in coolers.	2	3	16	23	3.364
133	132	Require that pork hearts be completely opened and blood clots removed.	2	4	14	24	3.364
134	156	Determine if sausage products containing extenders or binders meet requirements in the Regulations.	7		7	30	3.364
135	189	Determine if ice is made from potable water, certified by appropriate local or state health agency and handled and stored in a manner to avoid contamination.	7		7	30	3.364
136	200	Convert fractions to decimals.	4	2	12	26	3.364
137	201	Convert fractions to percents.	4	2	12	26	3.364
138	202	Add and subtract decimals.	4	2	12	26	3.364
139	203	Multiply decimals.	4	2	12	26	3.364

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
140	204	Divide decimals.	4	2	12	26	3.364
141	205	Read decimals.	4	2	12	26	3.364
142	206	Convert decimals to percentages.	4	2	12	26	3.364
143	279	Explain to whom you would report consumer complaints that could vary from spoiled product to food poison epidemics.	2	2	18	22	3.364
144	327	Demonstrate ability to communicate in writing.	1	3	19	21	3.364
145	006	Inspect animals prior to slaughter for the detection of abnormalities.	5	1	12	26	3.341
146	045	Palpate the kidneys and observe for evidence of pathology.	6	2	7	29	3.341
147	054	Retain and/or condemn contaminated or diseased heads.	9		2	33	3.341
148	081	Determine if the product is uniformly pumped and cured.	5		14	25	3.341
149	096	List ingredients in order of their percentages at the start of preparation and establish the product origination.	5	1	12	26	3.341
150	099	Determine if interpretation of laboratory results are being made in accordance with published standards or criteria specified in the Meat and Poultry Inspection Manual.	6		11	27	3.341
151	113	Determine if toilet rooms and toilet room vestibules are separated from adjoining dressing rooms and do have solid, self-closing doors.	1	4	18	21	3.341
152	155	Determine if required features as listed in the Regulations and the Manual of Procedures are met.	6	2	7	29	3.341
153	005	Maintain control system to assure that animals receive ante-mortem inspection on the day of slaughter.	5	3	9	27	3.318
154	009	Retain livestock for clinical diagnosis and disposition and consult with veterinarian regarding animals and poultry suspected and/or showing abnormal behavior patterns.	7		9	28	3.318
155	043	Observe all parts of the carcass after remnants of liver and lungs, bruises, wounds and other abnormalities have been removed.	6		12	26	3.318
156	044	Carefully observe to detect parasitic infestations, particularly kidney worms.	6	2	8	28	3.318
157	177	Note deficiencies and report to immediate supervisor.	2	3	18	21	3.318

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
158	185	Communicate information to division employees such as unusual plant operations, verbal agreements and project progress.	4		18	22	3.318
159	196	Add fractions.	4	2	14	24	3.318
160	197	Subtract fractions.	4	2	14	24	3.318
161	198	Multiply fractions.	4	2	14	24	3.318
162	199	Divide fractions.	4	2	14	24	3.318
163	207	Convert percentages to decimals.	5	2	11	26	3.318
164	214	Convert pounds to ounces.	5	1	13	25	3.318
165	221	Determine amount of restricted ingredients allowed in pickle.	8		6	30	3.318
166	222	Determine percent pump permitted.	7	1	7	29	3.318
167	034	Palpate and incise parietal surfaces and portal lymph nodes, if necessary.	6	2	9	27	3.295
168	121	Determine if an acceptable area for truck sanitizing is available.	3	1	20	20	3.295
169	134	Prevent the accumulation of offal.	3	1	20	20	3.295
170	139	Determine if a place had been designated in which returned product is received and received only at such place and inspected in this area by a Program employee before further entrance into the establishment (excluding poultry).	3	2	18	21	3.295
171	334	Demonstrate the ability to assume leadership and influence others.	2	2	21	19	3.295
172	012	Refer to and follow applicable sections of the Federal Meat and Poultry Acts, Regulations, Manual of Procedures and other Program issuances and instructions regarding minimum ante-mortem inspection standards.	5	1	15	23	3.273
173	041	Palpate and observe the superficial inguinal (supermammary) internal iliac, lumbar and renal lymph nodes, exposed kidney and pillars and flat portion of the diaphragm.	5	3	11	25	3.273
174	154	Determine if name and address of manufacturer or distributor, ("packed for," "distributed by," or "prepared for") is correct.	8	1	6	29	3.273
175	336	Demonstrate the ability to deal with persons or groups outside your own Agency.	1	5	19	19	3.273
176	082	Determine if uniform procedures are used to shrink product into compliance with applicable regulations.	7		12	25	3.250

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
177	215	Convert ounces to pounds.	6	1	13	24	3.250
178	219	Determine amount of cereal, MFDM and ISP allowed in cooked sausage.	8		9	27	3.250
179	220	Determine amount of extender in Dry Sausage.	8		9	27	3.250
180	270	Demonstrate an adequate knowledge of the requirements dealing with the transportation and control of dead, dying, disabled or diseased livestock and products.	5	2	14	23	3.250
181	038	Examine the main bile duct for parasites after it has been opened.	9		7	28	3.227
182	093	Utilize laboratories to check on various products.	4	1	20	19	3.227
183	008	Observe livestock while at rest and also in motion.	5	3	14	22	3.205
184	055	Tag heads and corresponding carcasses when they show pathological conditions for examination by a veterinarian.	9	1	6	28	3.205
185	143	Determine if the finished frozen products are being maintained in a frozen state, reasonably free of overhead frost and accessible to inspection standards.	4	3	17	20	3.205
186	036	Incise spleen and mesenteric lymph nodes, if necessary.	6	4	10	24	3.182
187	037	Observe and palpate the lungs and related lymph nodes, heart, spleen, & liver.	9		9	26	3.182
188	039	Observe the viscera carefully.	9		9	26	3.182
189	042	Make incisions, if necessary.	6	3	12	23	3.182
190	263	Maintain knowledge of training opportunities available on the job.		5	26	13	3.182
191	273	Determine if the Animal Identification System used to identify animals back to origin is being complied with and that required reports concerning animals found to have lesions are submitted to the proper authorities.	6	4	10	24	3.182
192	049	Observe the internal and external surfaces of the entire carcass.	9		10	25	3.159
193	158	Determine if the product containing artificial smoke or smoke flavoring are labeled and in compliance with Regulations.	8	2	9	25	3.159
194	161	Determine if products treated with proteolytic enzymes are in compliance with Regulations.	10	2	3	29	3.159
195	166	Review labels prior to submission to higher authorities for possible approval and for conformance with extablished criteria.	5	3	16	20	3.159

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
196	272	Determine if reportable animal diseases are reported to Veterinary Services of Animal and Plant Health Inspection Services, U.S.D.A.	7	2	12	23	3.159
197	167	Submit information relative to approval or disapproval to higher authority.	7	1	15	21	3.136
198	174	Review, appraise and report to immediate supervisor relative to the proper installation and function of new or rehabilitated equipment.	5	1	21	17	3.136
199	217	Determine percent yield on raw weight.	7	3	11	23	3.136
200	218	Determine percent yield on finished weight.	7	3	11	23	3.136
201	265	Maintain knowledge of how to handle Accident and Injury Reports.	1	7	21	15	3.136
202	013	Complete, review and distribute all required forms and reports.	6	3	15	20	3.114
203	147	Require and maintain a suitable compartment or refrigerated area for holding return product to maintain security.	6	3	15	20	3.114
204	157	Determine if products containing antioxidants are labeled according to requirements defined in the Regulations.	11	1	4	28	3.114
205	274	Determine if blood samples are being collected for analysis for Brucellosis from back-tagged cattle and from mature cows, bulls two (2) years of age or older (except steers and spayed heifers).	7	2	14	21	3.114
206	025	Incise for node inspection confining the incision to the suprapharyngeal lymph nodes only, unless there is reason to believe that other nodes should be examined.	11	1	5	27	3.091
207	056	Retain contaminated, bruised or abnormal carcasses for trimming or examination by a veterinarian before final washing.	10	1	8	25	3.091
208	145	Require that product be received only at specified area until reviewed by an inspector.	5	4	17	18	3.091
209	159	Determine if products enclosed in colored casings are in compliance with Regulations.	10	1	8	25	3.091
210	160	Determine if artificially colored products are in compliance with Regulations.	10	1	8	25	3.091
211	169	Work with supervisor to determine that blueprints for proposed installations or modification of existing facilities meet M&PIP requirements.	6	3	16	19	3.091

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
212	173	Identify and require the rehabilitation, modification or replacement of plant facilities and equipment.	4	1	26	13	3.091
213	216	Determine parts per million.	8	1	14	21	3.091
214	227	Determine green weight when pumped weight and percent weight is known.	9	1	11	23	3.091
215	231	Compute pumped weight when green weight and percentage pump is known.	9	1	11	23	3.091
216	024	Visually inspect to determine if heads are free of hair, hide, horns and contamination.	11		8	25	3.068
217	030	Observe the spleen, mesenteric lymph nodes and abdominal viscera and palpate the rumino-reticular junction. Incise the mesenteric lymph nodes.	6	5	13	20	3.068
218	050	Palpate the prefemoral, superficial inguinal, popliteal, iliac lymph nodes and diaphragm, kidneys, spleen and prescapular lymph nodes.	9	2	10	23	3.068
219	171	Read and review blueprints and specifications on proposed projects to determine compliance with applicable M&PIP requirements, eg. floor pitch, drainage and building materials.	8		17	19	3.068
220	262	Acquire and maintain adequate knowledge of career development and promotional opportunities available to employees.	2	5	25	12	3.068
221	031	Observe and palpate the lungs, heart, liver and the viscera, including paunch and intestines.	10	1	10	23	3.045
222	144	Maintain an inventory of properly identified non-meat material, approved by the Federal Food and Drug Administration.	6	5	14	19	3.045
223	162	Determine if consumer-size products packaged in impervious film is in compliance with Regulations.	10	3	6	25	3.045
224	210	Work ratio and proportion.	8	3	12	21	3.045
225	212	Determine volumes of various shaped containers.	9	2	11	22	3.045
226	280	Explain the inter-relationship between Program Review and Compliance functions as they relate to Meat and Poultry Inspection functions (retail violations and similar violations of the law).	5	4	19	16	3.045
227	331	Demonstrate the ability to show creativity.	3	7	19	15	3.045
228	046	Visually inspect and observe the carcass.	10		13	21	3.023

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
229	213	Determine area of various shaped objects.	9	3	10	22	3.023
230	223	Determine amenable weight.	9	2	12	21	3.023
231	264	Maintain adequate knowledge of defensive driving practices, while driving official cars and other vehicles.	3	5	24	12	3.023
232	133	Determine if pork stomachs, chitterlings and/or ruffle fat are being cleaned and freed of ingesta or any other contaminants.	11	2	7	24	3.000
233	172	Make project progress reports, eg. completion, deferment or abandonment of project.	7	3	17	17	3.000
234	225	Figure running averages for cured pork products.	10	1	12	21	3.000
235	211	Drop and round numbers.	8	4	13	19	2.977
236	317	Maintain adequate knowledge of the mechanics involved in the various approved plant control systems, such as: Boneless Beef Reinspection System, Control of Fat and Added Water in Cooked Sausage System, Net Weight Systems, Bacteriological Monitoring System, Carcass Beef Reinspection System, etc.	12	2	5	25	2.977
237	170	Compare physical installation of equipment and facilities to approved blueprints to determine deficiencies and require corrective action.	8	3	15	18	2.977
238	047	Palpate the exposed kidneys and iliac nodes and excise when necessary.	10	2	11	21	2.977
239	001	Inspect and require cleanliness of facilities and equipment in the ante-mortem holding pen area.	5	4	23	12	2.955
240	268	Distinguish between requirements for handling U.S. Inspected, passed and marked product, as opposed to unmarked-inspected product; shipment of paunches, under seal; products requiring special supervision; undenatured lungs; returned products; undenatured and denatured inedible articles that are transported in commerce.	11	2	9	22	2.955
241	260	Understand, interpret and apply the various Labor Management Agreements at each level; National, Regional and Area Levels.	3	9	20	12	2.932
242	281	Distinguish between those species of animals and poultry that require inspection.	8	2	19	15	2.932
243	285	Explain retail store exemptions and their limitations and applications.	7	4	18	15	2.932
244	283	Distinguish between establishment that require inspection by law as opposed to those establishments that are exempted from full time inspection as defined by the Federal Meat and Poultry Inspection Acts.	8	3	18	15	2.909

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
245	284	Explain the difference between custom operated exemptions and their limitations.	8	4	17	15	2.886
246	048	Palpate the back of "hide-on" calves to detect grubs and dirt.	13	3	5	23	2.864
247	072	Determine if poultry is properly labeled and bears inspection legends.	14		8	22	2.864
248	208	Convert fahrenheit to centigrade.	8	7	12	17	2.864
249	209	Convert centigrade to fahrenheit.	8	7	12	17	2.864
250	223	Determine yield of cured semi-boneless products.	12	1	12	19	2.864
251	131	Determine if paunches are being emptied without contaminating outer surfaces.	11	3	12	18	2.841
252	230	Compute quantity of product needed when amount of extender used is known so as to be in compliance with the Public Standards.	13	1	10	20	2.841
253	266	Maintain working knowledge of Incentive Awards Program.	1	11	26	6	2.841
254	229	Determine amount of breading, batter, etc., needed to satisfy a known amount of meat as required by the Standards of Computation and/or Regulations as defined in the Meat and Poultry Regulations.	14		10	20	2.818
255	278	Explain the situations and conditions when it is necessary to contact local, municipal and state health authorities in regard to the handling of meat and poultry products.	8	8	13	15	2.795
256	163	Determine if canned perishable products are in compliance with Regulations.	16		6	22	2.773
257	243	Acquire a basic knowledge of rendering methods, requirements and controls at federally inspected establishments.	13	1	13	17	2.773
258	226	Determine amount of citric acid or sodium citrate in curing solutions.	13	2	12	17	2.750
259	010	Inspect handling of animals and poultry to determine whether humane or inhumane methods are followed (excessive use of persuasive devices such as prods, poles, etc).	5	11	19	9	2.727
260	250	List control requirements and the proper procedure to assure product is produced in compliance with Regulations.	14	2	10	18	2.727
261	244	List raw materials and their prescribed use in specific products as required in Regulations.	15	1	11	17	2.682
262	247	Differentiate between wet, dry, open kettle and continuous rendering.	14	2	13	15	2.659

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
263	248	List permitted additives to rendered fats, purpose and effect.	14	3	11	16	2.659
264	267	Relate the sections outlining the various certificates and their use required for transportation in commerce for certain type products, as outlined in the Regulations.	13	5	12	14	2.614
265	269	Describe the procedure for applying official seals, forms used, use of, breaking of, during diverting of loading and/or unloading during emergencies while in transit.	14	5	9	16	2.614
266	319	Determine if the approved plant system is or is not in control.	17	1	8	18	2.614
267	282	Explain voluntary inspection procedures available for those animal species or avian species that, though not required to have inspection, may have inspection if requested.	10	8	17	9	2.568
268	075	Determine if raw poultry meat, emulsions and finished perishable products shall be held at an internal temperature of 40 degrees F. or less and handled in a manner to avoid contamination.	20	1	3	20	2.523
269	275	Cooperate with U.S.D.A.'s Meat Grading Branch to do specification product-work when requested by grading officials.	16	2	13	13	2.523
270	323	Maintain essential records, control charts and reports and data in order to determine status of the plant control system on a continuous basis.	19	1	6	18	2.523
271	246	Describe various rendering methods.	15	5	11	13	2.500
272	321	Conduct reviews and take necessary samples to be submitted to appropriate laboratories to detect any deficiencies.	19	1	7	17	2.500
273	322	Maintain adequate knowledge of the operations of these systems in order to take necessary corrective action if the process is out of control as outlined.	19	1	7	17	2.500
274	249	Discuss various phases of further processing of rendered fats such as hydrogenation, deodorizing, filtering and plasticizing.	14	6	13	11	2.477
275	271	Determine if required certification is completed on weigh-bills, transfer-bills, etc., shipment by connecting carrier as outlined in the Manual of Procedures.	15	5	13	11	2.455
276	318	Monitor Quality Control Systems as directed by the Technical Services Division of our Agency.	20	1	7	16	2.432
277	245	Describe facilities and requirements for the rendering of inedible products.	19	1	11	13	2.409

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
278	276	Cooperate with the AMS Livestock Division Beef-Carcass Evaluation Service and Carcass-Beef Data Service upon request.	15	5	15	9	2.409
279	320	Determine if plant management is abiding by their plant control system agreement as approved by the Technical Services Division.	20	2	6	16	2.409
280	224	Make fahrenheit-celcius conversions.	17	4	13	10	2.364
281	309	Maintain security over brand, stamps, sample stamps and etc.	22	1	4	17	2.364
282	277	Cooperate with Packers and Stockyards Administration (P&SA) by assisting in carcass weighing surveillance at federally inspected plants.	15	8	13	8	2.318
283	146	Require that non-meat approval stickers be applied as applicable.	17	8	11	8	2.227
284	007	Inspect each class of poultry on the day of slaughter to detect disease and/or other conditions.	25		5	13	2.114
285	301	Collect and submit necessary laboratory samples for laboratory analysis to determine if they are in compliance.	25	1	6	12	2.114
286	236	Conduct a condition of container reinspection procedure.	24	3	6	11	2.091
287	235	Identify can defects as described in the Manual of Meat and Poultry Inspection Procedures.	25	2	6	11	2.068
288	237	Discuss specified requirements for reworking uncooked and cooked canned product as required by Regulations.	26	1	5	12	2.068
289	238	Relate the purpose of incubation and requirements in accordance with Regulations.	26	1	5	12	2.068
290	239	List the basic requirements for coding canned product as prescribed in Regulations.	26	1	5	12	2.068
291	242	Require that canned product not be passed unless they show the external characteristics of sound cans, are not over-filled, and have concaved sides and ends with no bulged sides and ends conform to the product.	27		5	12	2.045
292	298	Determine if boneless meat inspection procedures are being conducted according to Program Instructions.	26	1	6	11	2.045
293	234	Describe various types of containers, their purposes and use; as defined in Program Issuances and Training Publications.	24	3	9	8	2.023
294	240	Explain control requirements for domestic canned pork products and the proper procedure to assure that the product is in compliance with Regulations.	27	1	4	12	2.023

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
295	233	Distinguish between various classes of canned meat products which entail "Shelf Stable," "Perishable," "Keep Refrigerated" and "Acidified."	27	1	5	11	2.000
296	241	Select at least one can from each retort basket or one from each complete cycle of a continuous retort and incubate at 95° F. for ten days.	27	1	5	11	2.000
297	300	Determine if net weight of product is in compliance with Program Instructions.	27	1	5	11	2.000
298	083	Determine if poultry rolls are being heat processed in the proper manner.	28		5	11	1.977
299	122	Determine if poultry refuse facilities are entirely separate from other rooms and that they are properly constructed and vented, drained as required and kept in good repair.	28		5	11	1.977
300	232	Define terms related to canning; such as pasteurization, commercial sterilization and complete sterilization.	27	1	6	10	1.977
301	289	Determine if countries importing are eligible to export meat products into U.S.A. as outlined in Directory of Foreign Meat and Poultry Plants.	29	1	4	10	1.886
302	310	Determine if the procedure outlined concerning issuances of Export Stamps and Certificates for product destined to be exported from U.S.A. are in compliance.	30	1	1	12	1.886
303	316	Determine if product destined for export is handled under sanitary conditions and that required forms and certificates are distributed according to requirements listed in Regulations.	30		3	11	1.886
304	314	Determine if product destined for export is reinspected for condition and marked and/or labeled as required.	30	1	2	11	1.864
305	315	Determine if shipping containers are being identified with the appropriate Export Stamps, accompanied by official Export Certificate and other certifications required by importing countries.	30	1	2	11	1.864
306	070	Determine if there are 30 foot-candles of light in operating areas, 50 foot-candles at inspection station and 10 foot-candles in storage areas and coolers.	30		5	9	1.841
307	287	Determine if necessary forms such as MP-410, Foreign Export Certificate and/or special certifications are completed and distributed in accordance with instructions.	30	1	4	9	1.818
308	288	Determine if Foreign Meat Certificates are in compliance with the Manual of Procedures and Regulations.	30	1	4	9	1.818

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
309	311	Determine if the various methods of inspecting product destined for exportation both from official plants and outside of official plants meets the requirements for product examination as outlined in Regulations.	30	1	4	9	1.818
310	312	Distinguish between the eligibility requirements of various foreign countries to meet all provisions of importing countries as outlined in Regulations.	30	1	4	9	1.818
311	313	Distinguish between eligible products for exportation as opposed to exempted products and non-eligible products for exportation as outlined in Regulations.	30	1	5	8	1.795
312	286	Determine if Meat and Poultry Inspection requirements for Import Facilities and Equipment are in compliance.	31		5	8	1.773
313	302	Collect necessary incubation samples as needed to determine compliance of canned imported product.	31	1	3	9	1.773
314	290	Determine if Veterinary Services and Plant Protection and Quarantine's restriction on incoming shipments are in compliance.	31	1	4	8	1.750
315	294	Maintain adequate sanitation standards at Import Facility in accordance with Program instructions.	31	1	4	8	1.750
316	299	Determine if canned meat inspection procedures are being conducted according to Program Instructions.	31	1	5	7	1.727
317	305	Determine necessary steps to be taken when imported product is rejected.	32	1	2	9	1.727
318	306	Maintain control and security over sample or rejected lots of import product.	32	1	2	9	1.727
319	293	Identify products to determine if they comply with approved Import Labels.	32	1	3	8	1.705
320	295	Identify proper inspection procedure for type of product being imported.	32	1	3	8	1.705
321	307	Notify U.S. Customs when action taken on rejected product lots and identify product with official U.S. Rejected Placard.	32	1	3	8	1.705
322	308	Make necessary distribution of reports for passed and/or rejected import products.	32	1	3	8	1.705
323	304	Possess knowledge of fresh import meat inspection as per Program Instructions.	32	1	4	7	1.682
324	296	Identify improper product designation of meat and poultry products.	32	1	5	6	1.659
325	292	Maintain label file on all approved products imported into Port of Entry.	32	2	4	6	1.636

TABLE 6 - Continued

Rank Order No.	Comp. No.	Food Inspector Competencies as Rated by Food Inspectors N=44	Frequency 1	2	3	4	Mean Rating
326	303	Maintain import records of accepted or rejected product.	33	1	3	7	1.636
327	291	Identify Import or Custom Broker.	32	2	5	5	1.614
328	057	Correct disposition of carcasses and parts in accordance with Regulations.	34		4	6	1.591
329	297	Identify improper grading marks on import products.	33	1	5	5	1.591
330	053	Notify the trimmer of action to be taken with regard to removing defective parts and recording condemnations.	35		2	7	1.568
331	059	Determine whether carcasses are being chilled to an internal temperature of 40° F. by an approved method that will preclude adulteration after slaughter, evisceration and washing.	34		5	5	1.568
332	051	Observe all external and internal surfaces of the cavity of each carcass, including a careful examination of the air sacs, kidneys and sex organs.	35		3	6	1.545
333	052	Observe and palpate the legs, heart, liver and spleen.	35		3	6	1.545
334	058	Retain questionable birds for final post-mortem inspection by a veterinarian.	35	1	1	7	1.545
335	062	Determine if chilling of carcasses and parts are in compliance with approved moisture procedure.	34		6	4	1.545
336	060	Determine if giblets are being chilled within two (2) hours after their separation from the viscera, except when cooled within the carcass.	35	1	4	4	1.477
337	061	Determine if all poultry products are being cooled immediately after processing to an internal temperature of 40° F.or less, unless further processed immediately at the establishment.	37		4	3	1.386

Summary of Findings

A partial summary of the findings is included. A careful review of the data presented in the tables of this report will reveal additional findings with implications for program planning. The following are general findings relating to competencies in 4 job titles common to Montana in the area of Agricultural Resources.

Soil Conservation Technician

1. Competencies relating to personal qualities were given high ratings by the respondents.
2. Competencies relating to the use of surveying equipment generally ranked in the upper 25 percent.
3. Competencies requiring a detailed understanding of conservation practices and crop cultural practices were considered somewhat less important.

Civil Engineering Technician

1. Recording of survey data was considered very important by the respondents.
2. Ten of the 13 competencies relating to personal qualities were ranked in the upper 25 percent of the competencies.
3. Competencies relating to recommending conservation practices were ranked i· the lower 25 percent.
4. Competencies related to understanding and recommending cultural practices were generally in the lower 25 percent.

Dairy Herd Improvement Supervisor

1. The competency, Operating an Automobile, received the highest possible mean rating.
2. Other competencies receiving a 4.00 mean rating related to collecting, weighing and recording milk samples.

3. Two competencies in the upper 25 percent related to the use of the computer for recording data.

4. Competencies relating to dairy herd management were rated in the lower 25 percent.

Federal Food Inspector (Meat)

1. Competencies relating to the maintenance of clean, sanitary conditions within a plant were rated high among the competencies in the upper 25 percent.

2. Competencies associated with maintaining personal cleanliness among the employees were in the upper 25 percent.

3. Seven of the 13 competencies identified with personal work traits appeared in the upper 25 percent of the competencies.

4. Competencies relating to processing poultry products were ranked in the lower 25 percent.

5. Competencies relating to handling products for the export-import trade were rated in the lower 25 percent.

Chapter III

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

The purpose of this section is to present general conclusions, implications and recommendations based upon the analysis and summarization of data collected.

Conclusions

1. There is a wide divergence among the competencies required in the various Agricultural Resource job titles included in this study.

2. There are definite professional, technical and vocational competencies related to agriculture required by employees in agriculture resources job titles.

3. Competencies that relate to personal qualities are generally rated high among competencies needed by employees.

4. There is a very high similarity between the competencies needed by the Soil Conservation Technician and the Civil Engineering Technician.

5. Competencies which indicated the need for an indepth understanding of agricultural production practices were not rated as high as those competencies related to the speciality skills required by the organization for whom they work.

6. Many competencies considered important by the respondents will need to be acquired in post-secondary educational programs.

7. There is limited need for competencies among Agricultural Resources personnel that require mechanical ability.

8. Competencies required by the Dairy Herd Improvement Supervisor are non-technical in nature and could be acquired through the high school vocational agriculture program.

9. An understanding of basic mathematics is necessary for entry level into Agricultural Resources Occupations included in this study.

10. A high percentage of those competencies considered important by Federal Food Inspectors relate to supervisory activities.

11. Competencies related to being able to follow established regulations are very important to agricultural resources occupations.

12. Entry level employment as a Federal Food Inspector will require specialized post-secondary educational preparation.

Implications

The survey was conducted to evaluate the perceptions of individuals towards competencies identified to be important to employees working as Soil Conservation Technicians, Civil Engineering Technicians, Federal Meat Inspectors and Dairy Herd Improvement Supervisors in Montana. The following implications are drawn from the results of this study:

1. The results will be useful to assist prospective employees assess realistically their qualifications and interest in performing the tasks of a soil conservation technician, civil engineering technician, federal meat inspector or dairy herd improvement supervisor.

2. The results will be useful to teachers and counselors who are interested in providing realistic occupational information for their students.

3. The results will provide a basis for the development of curriculum material utilizing performance objectives.

4. The results will be helpful in developing training programs to prepare potential employees for entry level employment in specific job titles in Agricultural Resources.

5. The results should be useful in evaluating present training programs.

Recommendations for Program Improvement and Further Research

The recommendations for further efforts are drawn from the conclusions, observations and impressions gained while conducting the survey.

For Further Research

1. A more detailed task analysis is needed to provide a detailed breakdown of all competencies in their respective tasks. Such an analysis should provide insight into any changes in competencies that might occur due to changing technology.

2. Research is needed to determine the most effective and efficient way of assuring articulation at all educational levels in the preparation of prospective employees. Articulation should relate to:

   a. The identification of common cores of instruction which would serve as a foundation for the preparation of prospective employees.

   b. The minimization of repetition at the different levels of instruction.

   c. The preparation of performance objectives to enable curriculum planners to determine the level at which selected competencies should be taught.

3. Translate those competencies identified as important into more teachable tasks. Further professional interpretation will be needed to isolate what students must know in order to perform those tasks which are identified as being important to the employee's success.

For Program Improvement

1. A careful analysis should be conducted to determine how many of those competencies required in the Agricultural Resources Area could be taught within existing curriculums.

2. Future training programs should be based on the satisfactory completion of a series of designed competencies needed for entry level employment rather than on the number of skills that can be completed in a designated time period.

3. Program planners should make every effort to assure themselves that appropriate instructional activities are included in the curriculum to develop needed personal qualities.

4. Greater emphasis should be placed teaching those competencies related to the affective domain.

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Chapter V

APPENDICES

APPENDIX A

COMPETENCY INSTRUMENTS

Competency Rating Sheet for Soil Conservation Technician

Competency Rating Sheet for Civil Engineering Technician

Competency Rating Sheet for Dairy Herd Improvement Supervisor

Competency Rating Sheet for Food Inspector

Montana Agricultural Manpower Project
Department of Agricultural and Industrial Education
Montana State University, Bozeman, Montana

COMPETENCY RATING SHEET

Please rate each competency statement by circling the number that you believe rates the importance of each judgement, knowledge or skill. Each competency should be rated on a scale of 1 to 4, with 1 being NOT IMPORTANT and 4 being ESSENTIAL. Remember, you are being asked to indicate the judgement, knowledge and skills a Soil Conservation Technician needs at the time of job entry.

Soil Conservation Technician

General: Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
300. Report compliance with conservation practices installed.	1	2	3	4
301. Report supporting data for cost sharing.	1	2	3	4
302. Interpret SCS standards and specifications.	1	2	3	4
303. Use the telephone to transact business.	1	2	3	4
304. Make appointments with producers.	1	2	3	4
305. Schedule jobs.	1	2	3	4
306. Consult with producers.	1	2	3	4
307. Consult with supervisors.	1	2	3	4
308. Cooperate with land owners.	1	2	3	4
309. Prepare and present public presentations.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
310. Make slide presentations.	1	2	3	4
311. Demonstrate the experience of having had a farm background.	1	2	3	4
312. Supervise work of subprofessional assistants.	1	2	3	4
313. Drive a truck.	1	2	3	4
314. Make minor repairs to truck.	1	2	3	4
315. Change tires.	1	2	3	4
316. Put on chains.	1	2	3	4
317. Drive a snow cat.	1	2	3	4
318. Make minor repairs to vehicles.	1	2	3	4
319. Carry out minor maintenance on vehicles.	1	2	3	4
320. Possess a basic mechanical ability.	1	2	3	4
321. Write clear, concise written reports.	1	2	3	4
322. Write clear, concise letters.	1	2	3	4
323. Do general filing.	1	2	3	4
324. Prepare narrative of daily accomplishments.	1	2	3	4
325. Do progress coding.	1	2	3	4

General Farm Practice:

Be Able To:				
326. Suggest alternative land treatments within established proper land use.	1	2	3	4
327. Develop alternative land treatment plans within established proper land use.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
328. Understand the operation of planting equipment.	1	2	3	4
329. Understand the operation of tillage equipment.	1	2	3	4
330. Understand the operation of harvesting equipment.	1	2	3	4
331. Understand weed control measures.	1	2	3	4
332. Prepare seedbeds.	1	2	3	4
333. Understand weed growth habits.	1	2	3	4
334. Classify land according to its capability to produce.	1	2	3	4
335. Determine appropriate crop rotations.	1	2	3	4
336. Determine soil tilth.	1	2	3	4
337. Carry out tillage operations.	1	2	3	4
338. Recommend planting operations.	1	2	3	4
339. Recommend crop rotation practices.	1	2	3	4
340. Recommend strip cropping practices.	1	2	3	4

Engineering Instruments and Practices:

Be Able To:				
341. Recognize malfunction of survey instruments.	1	2	3	4
342. Adjust and clean survey instruments.	1	2	3	4
343. Set up a transit.	1	2	3	4
344. Operate a transit.	1	2	3	4

Be Able To:		NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
345.	Locate and stake a terrace line.	1	2	3	4
346.	Demonstrate a basic understanding of trigonometry and geometry.	1	2	3	4
347.	Assist boring machine operator.	1	2	3	4
348.	Handle bits.	1	2	3	4
349.	Pound stakes.	1	2	3	4
350.	Shoot levels in wells.	1	2	3	4
351.	Run centerlines and baselines.	1	2	3	4
352.	Run cross-sectional surveys.	1	2	3	4
353.	Set alignment stakes.	1	2	3	4
354.	Set grade stakes.	1	2	3	4
355.	Use level to obtain percent of slope.	1	2	3	4
356.	Make topographic surveys.	1	2	3	4
357.	Plot map using planetable.	1	2	3	4
358.	Use an alidade and planetable for topographic mapping.	1	2	3	4
359.	Plot distances.	1	2	3	4
360.	Plot elevations.	1	2	3	4
361.	Sketch contours.	1	2	3	4
362.	Serve as a rodman.	1	2	3	4
363.	Mark and set grade stakes.	1	2	3	4
364.	Make overlays on maps.	1	2	3	4
365.	Plot cross-section and profiles.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
366. Record survey information.	1	2	3	4
367. Read and interpret guides and procedural manuals.	1	2	3	4
368. Use a hand level.	1	2	3	4
369. Work as a chainman.	1	2	3	4
370. Make rough tracings of form maps.	1	2	3	4
371. Prepare finished farm conservation maps.	1	2	3	4
372. Read and follow technical manuals.	1	2	3	4
373. Use a dumpy or wye level.	1	2	3	4
374. Measure horizontal distances by chaining.	1	2	3	4
375. Stake a contour line.	1	2	3	4
376. Stake terraces.	1	2	3	4
377. Run a profile.	1	2	3	4

Conservation Practices:

Be Able To:				
378. Locate contour lines.	1	2	3	4
379. Explain principles of contour farming.	1	2	3	4
380. Determine the need for contour strip cropping.	1	2	3	4
381. Determine the need for field strip cropping.	1	2	3	4
382. Determine the need for wind strip cropping.	1	2	3	4
383. Determine the need for buffer strip cropping.	1	2	3	4
384. Laycut plan for contour strip cropping.	1	2	3	4

Be Able To:		NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
385.	Compute areas of contour strips.	1	2	3	4
386.	Plan a terrace system.	1	2	3	4
387.	Explain terrace construction procedure.	1	2	3	4
388.	Determine land capability classes.	1	2	3	4
389.	Inspect conservation sites.	1	2	3	4
390.	Make preliminary site surveys.	1	2	3	4
391.	Supervise construction of conservation structures.	1	2	3	4
392.	Assist district conservationist in pre-planning conservation activities.	1	2	3	4
393.	Gather basic information for planning conservation activities.	1	2	3	4
394.	Determine compliance with cost-shared practices.	1	2	3	4
395.	Execute agreements for the district with operators to implement conservation plans.	1	2	3	4
396.	Explain conservation plans to cooperating operators.	1	2	3	4
397.	Recommend contour cultivation.	1	2	3	4
398.	Collect soil samples.	1	2	3	4
399.	Interpret a soil survey.	1	2	3	4
400.	Interpret soil symbols.	1	2	3	4
401.	Interpret land use capabilities.	1	2	3	4
402.	Assist in the development of a farm plan.	1	2	3	4
403.	Determine range carrying capacity.	1	2	3	4

Be Able To:		NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
404.	Inventory range conditions.	1	2	3	4
405.	Provide basic data for land inventory and evaluation.	1	2	3	4
406.	Explain the value of a farm and ranch conservation plan.	1	2	3	4
407.	Identify soil and water problems.	1	2	3	4
408.	Prepare land capability maps.	1	2	3	4
409.	Recommend land use conversion.	1	2	3	4
410.	Design and draft conservation practices.	1	2	3	4
411.	Inspect and advise suggested practices.	1	2	3	4
412.	Run bench level circuits.	1	2	3	4
413.	Map contour lines.	1	2	3	4
414.	Read aerial photographs.	1	2	3	4
415.	Interpret aerial photographs.	1	2	3	4
416.	Measure aerial photographs with a planimeter.	1	2	3	4
417.	Make computations from aerial photographs.	1	2	3	4
418.	Make snow survey.	1	2	3	4
419.	Layout conservation shelterbelts.	1	2	3	4
420.	Make recommendations for grass plantings from information provided.	1	2	3	4
421.	Run a soil test.	1	2	3	4
422.	Take a soil sample.	1	2	3	4
423.	Determine soil texture grade.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
424. Interpret a soil map.	1	2	3	4
425. Determine soil depths.	1	2	3	4
426. Determine water movement in the soil.	1	2	3	4
427. Determine soil texture.	1	2	3	4

Watershed:

Be Able To:

428. Use water runoff tables.	1	2	3	4
429. Locate grassed waterways.	1	2	3	4
430. Design grassed waterways.	1	2	3	4
431. Determine grassed waterway dimensions.	1	2	3	4
432. Determine appropriate shape for grassed waterways.	1	2	3	4
433. Use planimeter to determine drainage areas.	1	2	3	4
434. Use planimeter to determine flood and sediment storage areas.	1	2	3	4
435. Use planimeter to determine areas of reservoir sites.	1	2	3	4
436. Recommend grassed waterways.	1	2	3	4
437. Recommend stockwater ponds.	1	2	3	4
438. Recommend diversion dams.	1	2	3	4
439. Develop a detailed water drainage map.	1	2	3	4
440. Plan water drainage outlet.	1	2	3	4
441. Advise in the construction of grassed waterways.	1	2	3	4

Be Able To:		NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
442.	Layout grassed waterways.	1	2	3	4
443.	Calculate water runoff.	1	2	3	4
444.	Determine watershed runoff.	1	2	3	4
445.	Select a farm pond site.	1	2	3	4
446.	Survey the watershed for a pond site.	1	2	3	4
447.	Design a spillway for a farm pond.	1	2	3	4
448.	Explain how to prepare a site for a farm pond.	1	2	3	4
449.	Develop a plan to stabilize sandblows.	1	2	3	4
450.	Design shelterbelts.	1	2	3	4

Irrigation Practices:

Be Able To:

451.	Plan field drain ditches.	1	2	3	4
452.	Stake water drainage ditches.	1	2	3	4
453.	Layout tile drains.	1	2	3	4
454.	Design and layout water diversion ditches.	1	2	3	4
455.	Determine size of tile drain pipe.	1	2	3	4
456.	Explain proper irrigation procedures.	1	2	3	4
457.	Explain how to control irrigation water.	1	2	3	4
458.	Solve irrigation problems.	1	2	3	4
459.	Determine best method of applying irrigation water.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
460. Survey drainage ditches.	1	2	3	4
461. Survey irrigation ditches.	1	2	3	4
462. Survey for flood control.	1	2	3	4
463. Recommend waterspreading systems.	1	2	3	4
464. Plan surface water drainage.	1	2	3	4
465. Design open drains.	1	2	3	4
466. Inspect the construction of open drains.	1	2	3	4
467. Identify soil problems that may be due to a lack of drainage or lack of water.	1	2	3	4
468. Discuss irrigation and drainage problems.	1	2	3	4
469. Understand the various irrigation systems.	1	2	3	4

Personal Qualities:

Be Able To:				
470. Demonstrate a willingness to work.	1	2	3	4
471. Demonstrate a willingness to learn or take supervision.	1	2	3	4
472. Demonstrate the ability to follow directions of supervisor.	1	2	3	4
473. Demonstrate the ability to work independently with limited supervision.	1	2	3	4
474. Demonstrate the ability to get along with others.	1	2	3	4
475. Work safely and neatly.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
476. Demonstrate the ability to work cooperatively as a member of a team.	1	2	3	4
477. Demonstrate a desirable job attitude about the organization when working with fellow employees and producers.	1	2	3	4
478. Demonstrate acceptable personal appearance and personal hygiene.	1	2	3	4
479. Demonstrate the ability to project a desirable image for the SCS.	1	2	3	4
480. Enjoy the opportunity of working outdoors.	1	2	3	4
481. Withstand extreme temperature conditions.	1	2	3	4
482. Maintain a satisfactory attendance record.	1	2	3	4

Montana Agricultural Manpower Project
Department of Agricultural and Industrial Education
Montana State University, Bozeman, Montana

COMPETENCY RATING SHEET

Please rate each competency statement by circling the number that you believe rates the importance of each judgement, knowledge or skill. Each competency should be rated on a scale of 1 to 4, with 1 being NOT IMPORTANT and 4 being ESSENTIAL. Remember, you are being asked to indicate the judgement, knowledge and skills a Civil Engineering Technician needs at the time of job entry.

Civil Engineering Technician

General: Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
100. Report compliance with conservation practices installed.	1	2	3	4
101. Report supporting data for cost sharing.	1	2	3	4
102. Interpret SCS standards and specifications.	1	2	3	4
103. Use the telephone to transact business.	1	2	3	4
104. Make appointments with producers.	1	2	3	4
105. Schedule jobs.	1	2	3	4
106. Consult with producers.	1	2	3	4
107. Consult with supervisors.	1	2	3	4
108. Cooperate with landowners.	1	2	3	4
109. Make slide presentations.	1	2	3	4

Be Able To:		NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
110.	Appear before groups to explain engineering plans.	1	2	3	4
111.	Prepare and present public presentations.	1	2	3	4
112.	Demonstrate the experience of having a farm background.	1	2	3	4
113.	Enjoy working outdoors.	1	2	3	4
114.	Supervise work of subprofessional assistants.	1	2	3	4
115.	Prepare time and attendance reports for employees.	1	2	3	4
116.	Write clear, concise written reports.	1	2	3	4
117.	Write clear, concise letters.	1	2	3	4
118.	Drive a truck.	1	2	3	4
119.	Make minor repairs to truck.	1	2	3	4
120.	Change tires.	1	2	3	4
121.	Put on chains.	1	2	3	4
122.	Carry out minor maintenance on vehicles.	1	2	3	4
123.	Possess a basic mechanical ability.	1	2	3	4

General Farm Practices:

Be Able To:

124.	Understand the operation of planting equipment.	1	2	3	4
125.	Understand the operation of tillage equipment.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
126. Understand the operation of harvesting equipment.	1	2	3	4
127. Prepare seedbeds.	1	2	3	4
128. Understand weed growth habits.	1	2	3	4
129. Understand weed control measures.	1	2	3	4
130. Recommend tillage operations.	1	2	3	4
131. Recommend planting operations.	1	2	3	4

Engineering Instruments and Practices:

Be Able To:

132. Recognize malfunction of surveying instruments.	1	2	3	4
133. Adjust and clean survey instruments.	1	2	3	4
134. Demonstrate a basic understanding of trigonometry and geometry.	1	2	3	4
135. Set up a transit.	1	2	3	4
136. Operate a transit.	1	2	3	4
137. Serve as rodman.	1	2	3	4
138. Serve as a chainman.	1	2	3	4
139. Place stakes.	1	2	3	4
140. Use simple arithmetic formulas.	1	2	3	4
141. Read and interpret standard tables.	1	2	3	4
142. Make elementary drawings.	1	2	3	4
143. Use basic lettering.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
144. Use simple drafting procedures.	1	2	3	4
145. Use dumpy and hand level.	1	2	3	4
146. Record survey data.	1	2	3	4
147. Plot data.	1	2	3	4
148. Draw simple curves.	1	2	3	4
149. Measure areas with a planimeter and/or scale.	1	2	3	4
150. Care for and maintain engineering equipment.	1	2	3	4
151. Run work limit boundry.	1	2	3	4
152. Run centerlines and baselines.	1	2	3	4
153. Run cross-sectional surveys.	1	2	3	4
154. Set alignment stakes.	1	2	3	4
155. Set grade stakes.	1	2	3	4
156. Use level to obtain percent of slope.	1	2	3	4
157. Make topographic surveys.	1	2	3	4
158. Plot map using planetable.	1	2	3	4
159. Use an alidade for topographic mapping.	1	2	3	4
160. Determine plot distances.	1	2	3	4
161. Determine plot elevations.	1	2	3	4
162. Sketch contours.	1	2	3	4
163. Operate spirit level.	1	2	3	4
164. Make overlays.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
165. Plot cross-section and profiles.	1	2	3	4
166. Record survey information.	1	2	3	4
167. Use the alidade and planetable to make surveys.	1	2	3	4
168. Calculate yardages.	1	2	3	4
169. Prepare maps.	1	2	3	4
170. Prepare field sheets.	1	2	3	4
171. Prepare job sheets.	1	2	3	4
172. Prepare work orders.	1	2	3	4
173. Read and follow technical manuals.	1	2	3	4

Conservation Practices:

Be Able To:

174. Identify land capabilities classes.	1	2	3	4
175. Read and interpret soil maps.	1	2	3	4
176. Maintain a follow-up of engineering practices.	1	2	3	4
177. Recommend proper maintenance of conservation structures.	1	2	3	4
178. Recommend changes in engineering practices in farm plans.	1	2	3	4
179. Establish contour strip cropping.	1	2	3	4
180. Follow-up application of applied practices.	1	2	3	4
181. Work with producers in determining conservation practices.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
182. Determine if engineering practices meet specifications.	1	2	3	4
183. Identify soil problems that may be due to a lack of drainage or lack of water.	1	2	3	4
184. Run soil test.	1	2	3	4
185. Take a soil sample.	1	2	3	4
186. Determine soil texture grade.	1	2	3	4

Watershed:

Be Able To:

187. Define drainage areas on maps.	1	2	3	4
188. Design grassed waterways.	1	2	3	4
189. Layout grassed waterways.	1	2	3	4
190. Survey for flood control.	1	2	3	4
191. Use planimeter to determine drainage areas.	1	2	3	4
192. Use planimeter to determine flood and sediment storage areas.	1	2	3	4
193. Use planimeter to determine areas of reservoir sites.	1	2	3	4
194. Conduct hydrologic investigations.	1	2	3	4
195. Design range livestock watering devices.	1	2	3	4

Irrigation Practices:

Be Able To:

196. Advise producers as to water use.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
197. Design diversions.	1	2	3	4
198. Layout diversions.	1	2	3	4
199. Survey drainage ditches.	1	2	3	4
200. Survey irrigation ditches.	1	2	3	4
201. Determine effect of existing water rights.	1	2	3	4
202. Demonstrate a basic understanding of water law.	1	2	3	4
203. Design open drains.	1	2	3	4
204. Layout open drains.	1	2	3	4
205. Design closed drains.	1	2	3	4
206. Layout closed drains.	1	2	3	4
207. Layout and design irrigation structure.	1	2	3	4
208. Prepare land for leveling.	1	2	3	4
209. Plan leveling practices.	1	2	3	4
210. Discuss irrigation and drainage problems.	1	2	3	4
211. Understand the various irrigation systems.	1	2	3	4

Personal Qualities:

Be Able To:				
212. Demonstrate a willingness to work.	1	2	3	4
213. Demonstrate a willingness to learn or take supervision.	1	2	3	4
214. Demonstrate the ability to follow directions of supervisor.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
215. Demonstrate the ability to work independently with limited supervision.	1	2	3	4
216. Demonstrate the ability to get along with others.	1	2	3	4
217. Work safely and neatly.	1	2	3	4
218. Demonstrate the ability to work cooperatively as a member of a team.	1	2	3	4
219. Demonstrate a desirable job attitude about the organization when working with fellow employees and producers.	1	2	3	4
220. Demonstrate acceptable personal appearance and personal hygiene.	1	2	3	4
221. Demonstrate the ability to project a desirable image for the SCS.	1	2	3	4
222. Withstand extreme temperature conditions.	1	2	3	4
223. Maintain a satisfactory attendance record.	1	2	3	4

Montana Agricultural Manpower Project
Department of Agricultural and Industrial Education
Montana State University, Bozeman, Montana

COMPETENCY RATING SHEET

Please rate each competency statement by circling the number that you believe rates the importance of each judgement, knowledge or skill. Each competency should be rated on a scale of 1 to 4, with 1 being NOT IMPORTANT and 4 being ESSENTIAL. Remember, you are being asked to indicate the judgement, knowledge and skills a D.H.I. - Supervisor needs at the time of job entry.

Dairy Herd Improvement - Supervisor

	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
General:				
Be Able To:				
1. Demonstrate cow-sense.	1	2	3	4
2. Demonstrate a basic mechanical ability.	1	2	3	4
3. Make minor repairs to testing or weighing equipment.	1	2	3	4
4. Be aware of all sanitary procedures.	1	2	3	4
5. Demonstrate experience in dairy farming or a dairy background.	1	2	3	4
6. Follow established rules and regulations for testing.	1	2	3	4
7. Test at proper intervals.	1	2	3	4
8. Be aware of fraudulent practices in DHI testing.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
9. Operate an automobile.	1	2	3	4
10. Purchase supplies.	1	2	3	4
11. Demonstrate the ability to get along with people.	1	2	3	4
12. Consult with dairy producers.	1	2	3	4
13. Advise dairy producers.	1	2	3	4
14. Use the telephone to transact business.	1	2	3	4
15. Make appointments for scheduling tests.	1	2	3	4
16. Read and follow technical manuals.	1	2	3	4
17. Be familiar with computer input procedures.	1	2	3	4
18. Prepare and give a public presentation.	1	2	3	4
19. Write clear, concise letters.	1	2	3	4

Testing:

Be Able To:

20. Weigh or measure daily milk production.	1	2	3	4
21. Take a representative milk sample.	1	2	3	4
22. Properly clean milk testing equipment.	1	2	3	4
23. Run TeSa butterfat test.	1	2	3	4
24. Run Babcock butterfat test.	1	2	3	4
25. Conduct mastitis tests.	1	2	3	4
26. Test solids (non-fat) by the Golding bead test.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
27. Know the physical properties of milk.	1	2	3	4
28. Know the chemical properties of milk.	1	2	3	4
29. Maintain milk samples for later testing.	1	2	3	4
30. Properly label milk samples for identification.	1	2	3	4
31. Properly pack milk samples for shipment.	1	2	3	4

Analysis:

Be Able To:

32. Interpret production records.	1	2	3	4
33. Determine animal weights by using heart girth measurement.	1	2	3	4
34. Interpret individual cow records.	1	2	3	4
35. Interpret mastitis test results.	1	2	3	4
36. Interpret butterfat tests.	1	2	3	4
37. Compute rations for dairy cows.	1	2	3	4
38. Measure feed consumption.	1	2	3	4
39. Analyze feeding practices in dairy production.	1	2	3	4
40. Interpret health standards.	1	2	3	4

Record Keeping:

Be Able To:

41. Maintain, neat accurate records.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
42. Record production information on a barn sheet.	1	2	3	4
43. Record total pounds of milk produced per cow.	1	2	3	4
44. Obtain individual cow records for computer input.	1	2	3	4
45. Be aware of input changes for computer analysis.	1	2	3	4
46. Record breeding records.	1	2	3	4
47. Enter breeding records into computer.	1	2	3	4
48. Provide cow identification.	1	2	3	4
49. Correct computer print-out of herd or cow information.	1	2	3	4
50. Maintain supervisors performance record.	1	2	3	4
51. Prepare clear, concise written reports.	1	2	3	4
52. Make collections for services.	1	2	3	4
53. Handle banking procedures.	1	2	3	4
54. Prepare government forms (social security, etc.)	1	2	3	4
55. Have a knowledge of bookkeeping practices.	1	2	3	4

Animal Care:

Be Able To:

56. Use a strip cup to detect udder infections.	1	2	3	4
57. Understand proper care and maintenance of dairy herd.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
58. Determine breeding cycles in dairy cattle.	1	2	3	4
59. Recognize disease in dairy cattle.	1	2	3	4
60. Recognize symptoms of external parasites in dairy cattle.	1	2	3	4
61. Recognize symptoms of internal parasites in dairy cattle.	1	2	3	4

Math:

Be Able To:

62. Convert pounds to ounces.	1	2	3	4
63. Convert gallons to pounds.	1	2	3	4
64. Calculate parts per million.	1	2	3	4
65. Add decimals.	1	2	3	4
66. Convert decimals to percents.	1	2	3	4
67. Divide decimals.	1	2	3	4
68. Multiply decimals.	1	2	3	4
69. Add and subtract fractions.	1	2	3	4
70. Convert fractions to decimals.	1	2	3	4
71. Convert decimals to fractions.	1	2	3	4
72. Divide fractions.	1	2	3	4
73. Multiply fractions.	1	2	3	4
74. Convert percentage to decimals.	1	2	3	4
75. Solve equations.				

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COMPETENCY RATING SHEETS

Please rate each competency statement by circling the number that you believe rates the importance of each judgement, knowledge or skill. Each competency should be rated on a scale of 1 to 4, with 1 being NOT IMPORTANT and 4 being ESSENTIAL. Remember, you are being asked to indicate the minimal judgement, knowledge and skills a FOOD INSPECTOR in respective GS and SJ Grades needs to perform in that position. If the statement relates to a skill that you do not perform in your present position, rate it as NOT IMPORTANT.

Please fill in the GS and/or SJ Grade of your position: GS_____; SJ_____.

FOOD INSPECTOR

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Ante-Mortem Inspection:				
1. Inspect and require cleanliness of facilities and equipment in the ante-mortem holding pen area.	1	2	3	4
2. Require plant management to provide adequate facilities for an effective and efficient ante-mortem inspection (U.S. suspect pens, proper lighting, thermometers, and animal restraining devices).	1	2	3	4
3. Maintain control of all Four (4) D's (Dying, Dean, Diseased, and Disabled) animals as required by federal regulations.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
4. Maintain control over dead animals and poultry by applying condemned tags and tanking or effectively denaturing them under direct supervision of a Program employee.	1	2	3	4
5. Maintain control system to assure that animals receive ante-mortem inspection on the day of slaughter.	1	2	3	4
6. Inspect animals prior to slaughter for the detection of abnormalities.	1	2	3	4
7. Inspect each class of poultry on the day of slaughter to detect disease and/or other conditions.	1	2	3	4
8. Observe livestock while at rest and also in motion.	1	2	3	4
9. Retain livestock for clinical diagnosis and disposition and consult with veterinarian regarding animals and poultry suspected and/or showing abnormal behavior patterns.	1	2	3	4
10. Inspect handling of animals and poultry to determine whether humane or inhumane methods are followed (excessive use of persuasive devices such as prods, poles, etc).	1	2	3	4
11. Communicate with veterinarian and plant management representatives to maintain control of all animals and poultry passed, suspected, condemned, or requiring special handling (a quarantine release, back tag information, bangs reactors, hog cholera quarantine, blood collection from market cattle testing program, TB reactors, biological residue animals and poultry, etc.).	1	2	3	4

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Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
12. Refer to and follow applicable sections of the Federal Meat and Poultry Acts, Regulations, Manual of Procedures and other Program issuances and instructions regarding minimum ante-mortem inspection standards.	1	2	3	4
13. Complete, review, and distribute all required forms and reports.	1	2	3	4
Post-Mortem Inspection:				
14. Inspect and require plant management to meet the minimal sanitation standards of facilities and equipment in slaughter and allied departments.	1	2	3	4
15. Reject any equipment or physical structure which may cause contamination before, during, or after slaughter operations.	1	2	3	4
16. Use all senses in inspecting the establishments' methods, operations and sanitary dressing procedures insuring that sanitary conditions and practices are maintained (ie. sterilization of knives, saws, ligation of intestines, esophagus, bladder, etc. and other requirements as specified).	1	2	3	4
17. Require corrective action by retention, rejection and/or condemnation if the slaughtering procedures are conducted in a manner in which product contamination would occur.	1	2	3	4
18. Use your senses to inspect and determine whether carcasses and parts are free from contamination and unacceptable material (ie. hair, hide, fecal matter, urine, dirt, ingesta, feathers, and any other foreign material).	1	2	3	4

Be Able To:	Not Important	Of Some Importance	Importance	Essential
19. Retain and/or condemn affected area of carcasses and parts which are found to be contaminated or abnormal.	1	2	3	4
20. Consult with veterinarian in those cases where determination cannot be made regarding contaminated carcasses and parts.	1	2	3	4
Head Inspection - Meat - Cattle:				
21. Examine all surfaces of the head for pathological conditions and contaminations and properly incise and examine the mandibular, atlantal suprapharyngeal, and paratid lymph nodes.	1	2	3	4
22. Incise external and internal muscles of mastication and inspect by incising them in such a manner as to split the muscles in a plane parallel with the lower jawbone.	1	2	3	4
23. Observe tongue and palpate along its entire length. (Check for bruises, hair sores, and other abnormalities).	1	2	3	4
Calves:				
24. Visually inspect to determine if heads are free of hair, hide, horns, and contamination.	1	2	3	4
25. Incise for node inspection confining the incision to the suprapharyngeal lymph nodes only, unless there is reason to believe that other nodes should be examined.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Swine:				
26. Incise both mandibular lymph nodes and examine for abnormalities.	1	2	3	4
Viscera Inspection - Lungs, Heart, Liver, Spleen (Meat and Poultry):				
Cattle:				
27. Inspect, incise, and examine the tissues of the right and left bronchial and anterior, middle and posterior mediastinal lymph nodes and observe palpation of the parietal or curved surface and the ventral surface.	1	2	3	4
28. Examine the inner and outher surfaces of the heart and examine and incise the muscles of the left ventricle and enterventricular septum.	1	2	3	4
29. Inspect the opening of the bile duct and incision of the portal lymph nodes.	1	2	3	4
30. Observe the spleen, mesenteric lymph nodes and abdominal viscera and palpate the runino-reticular junction. Incise the mesenteric lymph nodes.	1	2	3	4
Calves:				
31. Observe and palpate the lungs, heart, liver, and the viscera, including paunch and intestines.	1	2	3	4
Swine:				
32. Inspect and observe lung parietal and ventral surfaces and palpate the parietal surface, bronchial, and mediastinal lymph nodes.	1	2	3	4
33. Inspect and observe both sides of the liver.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
34. Palpate and incise parietal surfaces and portal lymph nodes, if necessary.	1	2	3	4
35. Observe and palpate heart, spleen and mesenteric lymph nodes.	1	2	3	4
36. Incise spleen and mesenteric lymph nodes, if necessary.	1	2	3	4
Sheep and Goats:				
37. Observe and palpate the lungs and related lymph nodes, heart, spleen, & liver.	1	2	3	4
38. Examine the main bile duct for parasites after it has been opened.	1	2	3	4
39. Observe the viscera carefully.	1	2	3	4
Rail or Carcass Inspection (Meat and Poultry)				
Cattle:				
40. Observe all surfaces for pathology and cleanliness.	1	2	3	4
41. Palpate and observe the superficial inguinal (supermammary) internal iliac, lumbar and renal lymph nodes, exposed kidney and pillars and flat portion of the diaphragm.	1	2	3	4
42. Make incisions, if necessary.	1	2	3	4
Swine:				
43. Observe all parts of the carcass after remnants of liver and lungs, bruises, wounds, and other abnormalities have been removed.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
44. Carefully observe to detect parasitic infestations, particularly kidney worms.	1	2	3	4
45. Palpate the kidneys and observe for evidence of pathology.	1	2	3	4
Calves:				
46. Visually inspect and observe the carcass.	1	2	3	4
47. Palpate the exposed kidneys and iliac nodes and excise when necessary.	1	2	3	4
48. Palpate the back of "hide-on" calves to detect grubs and dirt.	1	2	3	4
Sheep and Goats:				
49. Observe the internal and external surfaces of the entire carcass.	1	2	3	4
50. Palpate the prefemoral, superficial inguinal, popliteal, iliac lymph nodes, and diaphragm, kidneys, spleen and prescapular lymph nodes.	1	2	3	4
Poultry:				
51. Observe all external and internal surfaces of the cavity of each carcass, including a careful examination of the air sacs, kidneys, and sex organs.	1	2	3	4
52. Observe and palpate the legs, heart, liver, and spleen.	1	2	3	4
53. Notify the trimmer of action to be taken with regard to removing defective parts and recording condemnations.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Disposition - Meat:				
54. Retain and/or condemn contaminated or diseased heads.	1	2	3	4
55. Tag heads and corresponding carcasses when they show pathological conditions for examination by a veterinarian.	1	2	3	4
56. Retain contaminated, bruised, or abnormal carcasses for trimming or examination by a veterinarian before final washing.	1	2	3	4
Poultry:				
57. Correct disposition of carcasses and parts in accordance with the regulations.	1	2	3	4
58. Retain questionable birds for final post-morter inspection by a veterinarian.	1	2	3	4
Chilling and Moisture Control (Poultry):				
59. Determine whether carcasses are being chilled to an internal temperature of 40° F. by an approved method that will preclude adulteration after slaughter, evisceration, and washing.	1	2	3	4
60. Determine if giblets are being chilled within two (2) hours after their separation from the viscera, except when cooled within the carcass.	1	2	3	4
61. Determine if all poultry products are being cooled immediately after processing to an internal temperature or 40° F. or less, unless further processed immediately at the establishment.	1	2	3	4

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Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
62. Determine if chilling of carcasses and parts are in compliance with approved moisture procedures.	1	2	3	4
Control of Restricted Products, Animal Food Products, and Condemned and Inedible Materials:				
63. Require that all restricted products are under direct control or lock or seal at all times until rendered acceptable for human consumption.	1	2	3	4
64. Control animal food products until packed and identified or denatured.	1	2	3	4
65. Control condemned carcasses or parts until tanked or properly denatured.	1	2	3	4
66. Determine if inedible material is being handled in a prompt, efficient manner, making use of properly marked inedible containers, under the inspector's supervision or control.	1	2	3	4
Reinspection (Processing) - Facilities Sufficient Lighting in all Areas:				
Lighting - Meat:				
67. Determine if all inspection areas (boning tables, overgrinders, bacon presses, slicers, chippers, etc.) have 50 foot-candles of lighting.	1	2	3	4
68. Determine if all other areas contain at least 20 foot-candles (except dry storage) and 10 foot-candles at front shank level of carcass in coolers.	1	2	3	4
69. Determine if all lights in the processing rooms and areas where product is exposed have protective coverings.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Lighting - Poultry:				
70. Determine if there are 30 foot-candles of light in operating areas, 50 foot-candles at inspection station and 10 foot-candles in storage areas and coolers.	1	2	3	4
Management Controls - Products Received from Acceptable Source:				
71. Determine if meat, carcasses, cuts, and manufacturing meats bear legible marks of inspection where slaughtered and/or processed.	1	2	3	4
72. Determine if poultry is properly labeled and bears inspection legends.	1	2	3	4
73. Determine if non-meat supplies are properly identified and labeled as required by the Federal Food and Drug Administration.	1	2	3	4
Management Controls - Use and Handling; Storage of Raw Meat:				
74. Determine if raw meat, meat, emulsions, and finished, perishable products are being stored at room temperature of 50 degree F. or lower, accessible to inspection, and handled in a manner to avoid contamination.	1	2	3	4
75. Determine if raw poultry meat, emulsions, and finished perishable products shall be held at an internal temperature of 40 degrees F. or less and handled in a manner to avoid contamination.	1	2	3	4
Management Controls - Formulation Control and Identification:				
76. Determine if all ingredients, emulsions, mixtures, liquids, etc., are identified through all phases of processing.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
77. Determine if the quantity of meat and non-meat materials is controlled to produce a product in compliance with published standards and label declarations.	1	2	3	4
78. Establish controls which will evaluate adequacy of the formulation.	1	2	3	4
<u>Processing Controls - Curing and Pumping</u>:				
79. Determine if restricted ingredients (nitrates, nitrites, phosphates, ascorbates, corn syrup) are used according to specific standards.	1	2	3	4
80. Determine if all formulas for pickling and curing solutions and all pumping and curing procedures are readily available for review by plant management and inspector.	1	2	3	4
81. Determine if the product is uniformly pumped and cured.	1	2	3	4
<u>Processing Controls - Smoking</u>:				
82. Determine if uniform procedures are used to shrink product into compliance with applicable regulations.	1	2	3	4
83. Determine if poultry rolls are being heat processed in the proper manner.	1	2	3	4
<u>Processing Controls - Trichinae Control</u>:				
84. Determine if pork products that are not customarily cooked in the home or elsewhere before being consumed have been treated to destroy trichinae.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
85. Determine if the treatment consists of heating, refrigerating, or curing according to Section 318.10 of the Regulations.	1	2	3	4
Processing Controls - Inspection Responsibilities:				
86. Maintain adequate inspectional knowledge of regulations and procedures to carry out inspection responsiblities.	1	2	3	4
87. Maintain adequate knowledge of management's practices in all areas of your assignment.	1	2	3	4
88. Apply prodecural requirements to all phases of processing to assure that products are in compliance with regulations.	1	2	3	4
89. Determine if inedible materials are in marked containers and under plant and inspector's control until effectively denatured or until packaged and identified as food not for human consumption.	1	2	3	4
90. Determine if restricted products are under direct M&PIP supervision or control until rendered capable for use as human food.	1	2	3	4
91. Determine and require that immediate action be taken to correct deficiencies in all phases of the operation within his purview.	1	2	3	4
Security of Brands, Certificates, and Seals:				
92. Determine if all brands and devices used for marking articles with the inspection legend, self-locking seals, official certificates, or other accountable items are being kept under adequate security and that a current inventory is maintained of such security items.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Sampling and Interpretation of Laboratory Results:				
93. Utilize laboratories to check on various products.	1	2	3	4
94. Assure that samples are properly identified from the time they are taken until they reach the laboratory.	1	2	3	4
95. Determine if information on forms which accompany the sample is complete and includes the name of the product as it will appear on the label.	1	2	3	4
96. List ingredients in order of their percentages at the start of preparation and establish the product origination.	1	2	3	4
97. Require that procedures in sampling are carried out to provide the laboratory with as representative a sample as is possible.	1	2	3	4
98. Determine that ground samples are being prepared without delay and in a manner that will assure a representative sample for analysis.	1	2	3	4
99. Determine if interpretation of laboratory results are being made in accordance with published standards or criteria specified in the Meat and Poultry Inspection Manual.	1	2	3	4
100. Require appropriate corrective action if standards are not met.	1	2	3	4
Sanitation - Processing Operations:				
101. Determine if floors are free of accumulation of fats, blood and other foreign material.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
102. Determine if the walls are free of dirt, mold, blood, scaling paint, and other contaminants.	1	2	3	4
103. Determine if ceilings and overhead are free of dust, scaling paint, scaling plaster, mold, rust, condensation, leaks, etc.	1	2	3	4
104. Determine if equipment is in good condition and free from contaminants, i.e. rust, dust, dried blood, scrap meat, grease, etc.	1	2	3	4
PERSONNEL - (Clothing and Personal Equipment):				
105. Determine if plant management is requiring employees to wear clean, washable or disposable outer clothing or street clothing that is properly covered.	1	2	3	4
106. Determine if suitable coverings adequately cover the hair.	1	2	3	4
107. Maintain yourself in a neat and clean manner and demonstrate good working and sanitary practices.	1	2	3	4
108. Determine if plant management requires personnel to wash their hands as often as necessary and always after returning from toilet rooms.	1	2	3	4
109. Require that plant management restrict the use of tobacco in any form, spitting, and smoking in rooms where edible product is handled.	1	2	3	4
110. Determine if plant management are permitting any practice which may be considered unsanitary.	1	2	3	4
111. Maintain personal equipment (knives, scabbards, steels, tool boxes, gloves, etc.) in a sanitary condition.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Employee Welfare Facilities; ie. Lunchroom, Locker and Toilet Facilities:				
112. Determine if the dressing rooms are equipped with lockers or alternate devices, toilet rooms (showers in meat slaughter plant), urinals, and other than hand-operated wash basins, soap and towels.	1	2	3	4
113. Determine if toilet rooms and toilet room vestibules are separated from adjoining dressing rooms and do have solid, self-closing doors.	1	2	3	4
114. Determine if the above areas are free of odor, properly maintained, and kept clean at all times.	1	2	3	4
Coolers, Rails, Hooks, Drains, and Equipment:				
115. Determine if the equipment in the coolers is free of corrosion, rust, dust, dry blood, scrap meat, and accumulation of fat.	1	2	3	4
116. Determine that the walls and ceilings are free of mold and condensation.	1	2	3	4
117. Determine if rails are clean, free of flaking paint, excessive oils and grease, rust, etc.	1	2	3	4
118. Determine if hooks are clean and in good repair.	1	2	3	4
119. Determine if the equipment is clean, in good repair, and free of foreign material.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Inedible and Condemned Rooms:				
120. Determine if the area and equipment for meat inedible or condemned products handling is adequate for the quantity of the product, and separate from the edible products department and properly maintained.	1	2	3	4
121. Determine if an acceptable area for truck sanitizing is available.	1	2	3	4
122. Determine if poultry refuse facilities are entirely separate from other rooms and that they are properly constructed and vented, drained as required, and kept in good repair.	1	2	3	4
123. Determine if acceptable water connections for cleanup are provided.	1	2	3	4
Offal Rooms and Coolers - Facilities and Equipment:				
124. Require that coolers be free of condensation, and floors, walls, and ceilings are free of accumulation of dry blood, fat, scrap meat, mold, dirt, and dust.	1	2	3	4
125. Determine if chutes, tables, pans, etc. are constructed of rust-resistant materials and maintained in a clean and acceptable manner.	1	2	3	4
126. Determine if well arranged and adequate facilities for handling inedible and condemned material are provided.	1	2	3	4
127. Determine if the layout is such that will allow positive control of condemned materials.	1	2	3	4
128. Determine if unpackaged custom products are held separately from inspected products (separate rail, racks, etc.).	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
129. Require a thorough cleanup and sanitizing of equipment prior to resuming handling of inspected product after slaughter or processing of custom exempt product.	1	2	3	4
130. Determine if viscera separation and product handling is being conducted in a sanitary manner.	1	2	3	4
131. Determine if paunches are being emptied without contaminating outer surfaces.	1	2	3	4
132. Require that pork hearts be completely opened and blood clots removed.	1	2	3	4
133. Determine if pork stomachs, chitterlings, and/or ruffle fat are being cleaned and freed of ingesta or any other contaminants.	1	2	3	4
134. Prevent the accumulation of offal.	1	2	3	4
135. Determine if product is effectively washed inside and out to remove excess blood, loose tissue particles, and any foreign material.	1	2	3	4
Retained Product Area:				
136. Determine if suitable compartment or refrigerated areas for holding retained or returned product pending disposition are available.	1	2	3	4
137. Determine if compartment is equipped for sealing to maintain security.	1	2	3	4
138. Require that condemned products be properly and adequately denatured or decharacterized to assure compliance with instructions.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Returned Product Area:				
139. Determine if a place had been designated in which returned product is received and received only at such place and inspected in this area by a Program employee before further entrance into the establishment (excluding poultry).	1	2	3	4
Condensation:				
140. Determine if condensation is controlled so as not to contaminate product.	1	2	3	4
Product Handling:				
141. Require that products, including cooked and ready-to-eat products, are being handled in a clean and acceptable manner.	1	2	3	4
142. Require that raw meat, emulsions, and finished perishable products be stored at room temperature of 50° F. or lower (poultry 40° F.) and accessible to inspection.	1	2	3	4
143. Determine if the finished frozen products are being maintained in a frozen state, reasonably free of overhead frost, and accessible to inspection standards.	1	2	3	4
144. Maintain an inventory of properly identified non-meat material, approved by the Federal Food and Drug Administration.	1	2	3	4
145. Require that product be received only at specified area until reviewed by an inspector.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
146. Require that non-meat approval stickers be applied as applicable.	1	2	3	4
147. Require and maintain a suitable compartment or refrigerated area for holding return product to maintain security.	1	2	3	4
Marking and Labeling Controls:				
148. Determine that all brands and labels are approved by inspection agency prior to use.	1	2	3	4
149. Determine if all meat or poultry carcasses and/or meat or poultry cuts and processed products are branded, if required.	1	2	3	4
150. Determine if all products enclosed in cartons, wrappers, packages, cans, or containers, bear an approved label.	1	2	3	4
Required Label Features:				
151. Determine if the product name is listed as required.	1	2	3	4
152. Determine if list of ingredients, if made from two or more ingredients, is listed in descending order of predominance as used in formulation.	1	2	3	4
153. Determine if marks of inspection and plant establishment number are accurate.	1	2	3	4
154. Determine if name and address of manufacturer or distributor, ("packed for," "distributed by," or "prepared for") is correct.	1	2	3	4
155. Determine of required features as listed in the Regulations and the Manual of Procedures are met.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Special Marking or Labeling Features:				
156. Determine if sausage products containing extenders or binders meet requirements in the Regulations.	1	2	3	4
157. Determine if products containing antioxidants are labeled according to requirements defined in the Regulations.	1	2	3	4
158. Determine if the product containing artifical smoke or smoke flavoring are labeled and in compliance with Regulations.	1	2	3	4
159. Determine if products enclosed in colored casings are in compliance with Regulations.	1	2	3	4
160. Determine if artifically colored products are in complaince with Regulations.	1	2	3	4
161. Determine if products treated with proteolytic enzymes are in compliance with Regulations.	1	2	3	4
162. Determine if consumer-size products packaged in impervious film is in compliance with Regulations.	1	2	3	4
163. Determine if canned perishable products are in compliance with Regulations.	1	2	3	4
164. Maintain an approved label filing control and record system.	1	2	3	4
165. Determine special labeling requirements by referring to the Meat and Poultry Inspection Regulations and the Manual of Procedures.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
166. Review labels prior to submission to higher authorities for possible approval and for conformance with established criteria.	1	2	3	4
167. Submit information relative to approval or disapproval to higher authority.	1	2	3	4
168. Determine if the application of the label is both truthful and informative.	1	2	3	4
Blueprints:				
169. Work with supervisor to determine that blueprints for proposed installations or modification of existing facilities meet M&PIP requirements.	1	2	3	4
170. Compare physical installation of equipment and facilities to approved blueprints to determine deficiencies and require corrective action.	1	2	3	4
171. Read and review blueprints and specifications on proposed projects to determine compliance with applicable M&PIP requirements, eg. floor pitch, drainage, and building materials.	1	2	3	4
172. Make project progress reports, eg. completion, deferment, or abandonment of project.	1	2	3	4
Rehabilitation, Modification, or Replacement of Equipment and Facilities:				
173. Identify and require the rehabilitation, modification, or replacement of plant facilities and equipment.	1	2	3	4
174. Review, appraise, and report to immediate supervisor relative to the proper installation and function of new or rehabilitated equipment.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
175. Observe the use and function of equipment and facilities and determine the need for their modification and/or replacement to preclude sources of real or potential contamination.	1	2	3	4
176. Advise plant management to assure that M&PIP requirements are met relative to installation and function of new equipment.	1	2	3	4
177. Note deficiencies and report to immediate supervisor.	1	2	3	4
Person-To-Person Work Relationships - Program:				
178. Confer with responsible plant officials to exchange information and secure cooperation in the development of plans and revision of existing inspectional programs in compliance with M&PIP requirements.	1	2	3	4
179. Advise plant officials of equipment, facilities, and inspectional programs which need upgrading or improvement.	1	2	3	4
Person-To-Person Work Relationships - Daily:				
180. Confer with responsible plant management officials to secure prompt compliance with M&PIP requirements.	1	2	3	4
181. Communicate and cooperate with division employees concerning plant operations and inspection activities for the purpose of maintaining continuity of compliance with M&PIP requirements.	1	2	3	4
182. Communicate with plant officials identifying immediate violations and corrective action required.	1	2	3	4
183. Explain and interpret M&PIP rules and regulations and inspectional control procedures.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
184. Maintain records, reports, and hold conferences.	1	2	3	4
185. Communicate information to division employees such as unusual plant operations, verbal agreements and project progress.	1	2	3	4
Water Supply:				
186. Determine if potable water supply is tested and certified by the appropriate local or state health agency.	1	2	3	4
187. Determine if water supply, both hot and cold, are adequate and distributed to all parts of the plant for cleanup, etc.	1	2	3	4
188. Determine if vacuum breakers of an acceptable type are provided on water-lines connected to various equipment to prevent contamination of waterlines by back-siphonage.	1	2	3	4
189. Determine if ice is made from potable water, certified by appropriate local or state health agency and handled and stored in a manner to avoid contamination.	1	2	3	4
190. Require that the use of nonpotable water be limited to prescribed areas with adequate identification of such lines.	1	2	3	4
Sewage and Waste Material Disposal:				
191. Determine if system is approved by local or state health authorities for official plants.	1	2	3	4
192. Determine if onsite handling is acceptable - no accumulation, rodent harborage, nuisance, nor sanitary problems being created.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Pest Control:				
193. Determine if there is any evidence of insects or rodents in or around premises.	1	2	3	4
194. Determine those necessary measures be taken to control and eliminate insect and rodent pests in and around the plant.	1	2	3	4
195. Determine if approved insecticides and rodenticides are used, and are applied in an approved manner.	1	2	3	4
196. Add fractions.	1	2	3	4
197. Subtract fractions.	1	2	3	4
198. Multiply fractions.	1	2	3	4
199. Divide fractions.	1	2	3	4
200. Convert fractions to decimals.	1	2	3	4
201. Convert fractions to percents.	1	2	3	4
202. Add and subtract decimals.	1	2	3	4
203. Multiply decimals.	1	2	3	4
204. Divide decimals.	1	2	3	4
205. Read decimals.	1	2	3	4
206. Convert decimals to percentages.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
207. Convert percentages to decimals.	1	2	3	4
208. Convert fahrenheit to centigrade.	1	2	3	4
209. Convert centigrade to fahrenheit.	1	2	3	4
210. Work ratio and proportion.	1	2	3	4
211. Drop and round numbers.	1	2	3	4
212. Determine volumes of various shaped containers.	1	2	3	4
213. Determine area of various shaped objects.	1	2	3	4
214. Convert pounds to ounces.	1	2	3	4
215. Convert ounces to pounds.	1	2	3	4
216. Determine parts per million.	1	2	3	4
217. Determine percent yield on raw weight.	1	2	3	4
218. Determine percent yield on finished weight.	1	2	3	4
219. Determine amount of cereal, MFDM and ISP allowed in cooked sausage.	1	2	3	4
220. Determine amount of extender in Dry Sausage.	1	2	3	4
221. Determine amount of restricted ingredients allowed in pickle.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
222. Determine percent pump permitted.	1	2	3	4
223. Determine amenable weight.	1	2	3	4
224. Make fahrenheit-celcius conversions.	1	2	3	4
225. Figure running averages for cured pork products.	1	2	3	4
226. Determine amount of citric acid or sodium citrate in curing solutions.	1	2	3	4
227. Determine green weight when pumped weight and percent weight is known.	1	2	3	4
228. Determine yield of cured semi-boneless products.	1	2	3	4
229. Determine amount of breading, batter, etc., needed to satisfy a known amount of meat as required by the Standards of Computation and/or Regulations as defined in the Meat and Poultry Regulations.	1	2	3	4
230. Compute quantity of product needed when amount of extender used is known so as to be in compliance with the Public Standards.	1	2	3	4
231. Compute pumped weight when green weight and percentage pump is known.	1	2	3	4
Canning:				
232. Define terms related to canning; such as pasteurization, commercial sterilization and complete sterilization.	1	2	3	4
233. Distinguish between various classes of canned meat products which entail "Shelf Stable," "Perishable," "Keep Refrigerated" and "Acidified."	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
234. Describe various types of containers, their purposes, and use; as defined in Program Issuances and Training Publications.	1	2	3	4
235. Identify can defects as described in the Manual of Meat and Poultry Inspection Procedures.	1	2	3	4
236. Conduct a condition of container reinspection procedure.	1	2	3	4
237. Discuss specified requirements for reworking uncooked and cooked canned product as required by Regulations.	1	2	3	4
238. Relate the purpose of incubation and requirements in accordance with Regulations.	1	2	3	4
239. List the basic requirements for coding canned product as prescribed in Regulations.	1	2	3	4
240. Explain control requirements for domestic canned pork products and the proper procedure to assure that the product is in compliance with Regulations.	1	2	3	4
Incubation Control:				
241. Select at least one can from each retort basket or one from each complete cycle of a continuous retort and incubate at 95° F. for ten days.	1	2	3	4
242. Require that canned product not be passed unless they show the external characteristics of sound cans, are not over-filled, and have concaved sides and ends with no bulged sides and ends conform to the product.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Rendering and Refining:				
243. Acquire a basic knowledge of rendering methods, requirements and controls at Federally inspected establishments.	1	2	3	4
244. List raw materials and their prescribed use in specific products as required in Reguations.	1	2	3	4
245. Describe facilities and requirements for the rendering of inedible products.	1	2	3	4
246. Describe various rendering methods.	1	2	3	4
247. Differentiate between wet, dry, open kettle and continuous rendering.	1	2	3	4
248. List permitted additives to rendered fats, purpose and effect.	1	2	3	4
249. Discuss various phases of further processing of rendered fats such as hydrogenation, deodorizing, filtering and plasticizing.	1	2	3	4
250. List control requirements and the proper procedure to assure product is produced in compliance with Regulations.	1	2	3	4
Miscellaneous - Safety:				
251. Determine if adequate facilities and equipment are provided to prevent and minimize safety hazards.	1	2	3	4
252. Take proper safety precautions during the performance of your duties, including the use of required safety devices such as helmets, knife guards, etc.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Miscellaneous - Maintenance of Instructions and Regulations:				
253. Determine if an official set of Meat and Poultry Inspection Regulations, Program Issuances, Manual Instructions and Revisions be maintained in the inspection office, as they are used regularly by inspectors.	1	2	3	4
Miscellaneous - File System and Reports:				
254. Determine if all reports and other required records are maintained on in the official in-plant-file system.	1	2	3	4
255. Follow the records disposal schedule.	1	2	3	4
256. Complete Time and Attendance Report as per instructions from Handbook (USDA).	1	2	3	4
257. Maintain adequate knowledge of Agency rules governing use of annual and sick leave, etc.	1	2	3	4
258. Complete MP-11, Services Rendered Report as per instructions from USDA Employee Handbook.	1	2	3	4
259. Complete Travel Voucher in accordance with Travel Regulations for official travel.	1	2	3	4
260. Understand, interpret and apply the various Labor Management Agreements at each level; National, Regional and Area Levels.	1	2	3	4
261. Update and maintain adequate knowledge of Agency rules for standard of conduct both on the job and off the job.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
262. Acquire and maintain adequate knowledge of career development and promotional opportunities available to employees.	1	2	3	4
263. Maintain knowledge of training opportunities available on the job.	1	2	3	4
264. Maintain adequate knowledge of defensive driving practices, while driving official cars and other vehicles.	1	2	3	4
265. Maintain knowledge of how to handle Accident and Injury Reports.	1	2	3	4
266. Maintain working knowledge of Incentive Awards Program.	1	2	3	4
Transportation:				
267. Relate the sections outlining the various certificates and there use required for transportation in commerce for certain type products, as outlined in the Regulations.	1	2	3	4
268. Distinguish between requirements for handling U.S. Inspected, passed and marked product, as oppcsed to unmarked-inspected product; shipment of paunches, under seal; products requiring special supervision; undenatured lungs; returned products; undenatured and denatured inedible articles that are transported in commerce.	1	2	3	4
269. Describe the procedure for applying official seals, forms used, use of, breaking of, during diverting of loading and/or unloading during emergencies while in transit.	1	2	3	4
270. Demonstrate an adequate knowledge of the requirements dealing with the transportation and control of dead, dying, disabled, or diseased livestock and products.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
271. Determine if required certification is completed on weigh-bills, transfer-bills, etc., for shipment by connecting carrier as outlined in the Manual of Procedures.	1	2	3	4
Cooperation With Other Authorities:				
272. Determine if reportable animal diseases are reported to Veterinary Services of Animal and Plant Health Inspection Services, U.S.D.A.	1	2	3	4
273. Determine if the Animal Identification System used to identify animals back to origin is being complied with, and that required reports concerning animals found to have lesions are submitted to the proper authorities.	1	2	3	4
274. Determine if blood samples are being collected for analysis for Brucellosis from back-tagged cattle and from mature cows, bulls two (2) years of age or older (except steers and spayed heifers).	1	2	3	4
275. Cooperate with U.S.D.A.'s Meat Grading Branch to do specification product-work when requested by grading officials.	1	2	3	4
276. Cooperate with the AMS Livestock Division Beef-Carcass Evaluation Service and Carcass-Beef Data Service upon request.	1	2	3	4
277. Cooperate with Packers and Stockyards Administration (P&SA) by assisting in carcass weighing surveillance at federally inspected plants.	1	2	3	4
278. Explain the situations and conditions then it is necessary to contact local, municipal and state health authorities in regard to the handling of meat and poultry products.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
279. Explain to whom you would report consumer complaints that could vary from spoiled product to food poison epidemics.	1	2	3	4
280. Explain the inter-relationship between Program Review and Compliance functions as they relate to Meat and Poultry Inspection functions (retail violations and similar violations of the law).	1	2	3	4
<u>Application of Inspection and Other Requirements</u>:				
281. Distinguish between those species of animals and poultry that require inspection.	1	2	3	4
282. Explain voluntary inspection procedures available for those animal species or avian species that, though not required to have inspection, may have inspection if requested.	1	2	3	4
283. Distinguish between establishment that require inspection by law as opposed to those establishments that are exempted from full time inspection as defined by the Federal Meat and Poultry Inspection Acts.	1	2	3	4
<u>Exemptions</u>:				
284. Explain the difference between custom operated exemptions and their limitations.	1	2	3	4
285. Explain retail store exemptions and their limitations and applications.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Import:				
286. Determine if Meat and Poultry Inspection requirements for Import Facilities and Equipment are in compliance.	1	2	3	4
287. Determine if necessary forms such as MP-410, Foreign Export Certificate and/or special certifications are completed and distributed in accordance with instructions.	1	2	3	4
288. Determine if Foreign Meat Certificates are in compliance with the Manual of Procedures and Regulations.	1	2	3	4
289. Determine if countries importing are eligible to export meat products into U.S.A. as outlined in Directory of Foreign Meat and Poultry Plants.	1	2	3	4
290. Determine if Veterinary Services and Plant Protection and Quarantine's restriction on incoming shipments are in compliance.	1	2	3	4
291. Identify Import or Custom Broker.	1	2	3	4
292. Maintain label file on all approved products imported into Port of Entry.	1	2	3	4
293. Identify products to determine if they comply with approved Import Labels.	1	2	3	4
294. Maintain adequate sanitation standards at Import Facility in accordance with Program instructions.	1	2	3	4
295. Identify proper inspection procedure for type of product being imported.	1	2	3	4
296. Identify improper product designation of meat and poultry products.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
297. Identify improper grading marks on import products.	1	2	3	4
298. Determine if boneless meat inspection procedures are being conducted according to Program Instructions.	1	2	3	4
299. Determine if canned meat inspection procedures are being conducted according to Program Instructions.	1	2	3	4
300. Determine if net weight of product is in compliance with Program Instructions.	1	2	3	4
301. Collect and submit necessary laboratory samples for laboratory analysis to determine if they are in compliance.	1	2	3	4
302. Collect necessary incubation samples as needed to determine compliance of canned imported product.	1	2	3	4
303. Maintain import records of accepted or rejected product.	1	2	3	4
304. Possess knowledge of fresh import meat inspection as per Program Instructions.	1	2	3	4
305. Determine necessary steps to be taken when imported product is rejected.	1	2	3	4
306. Maintain control and security over sample or rejected lots of import product.	1	2	3	4
307. Notify U.S. Customs when action taken on rejected product lots, and identify product with official U.S. Rejected Placard.	1	2	3	4
308. Make necessary distribution of reports for passed and/or rejected import products.	1	2	3	4
309. Maintain security over brand, stamps, sample stamps and etc.	1	2	3	4

Be Able To:	NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Export:				
310. Determine if the procedure outlined concerning issuances of Export Stamps and Certificates for product destined to be exported from U.S.A. are in compliance.	1	2	3	4
311. Determine if the various methods of inspecting product destined for exportation both from official plants and outside of official plants meets the requirements for product examination as outlined in Regulations.	1	2	3	4
312. Distinguish between the eligibility requirements of various foreign countries to meet all provisions of importing countries as outlined in Regulations.	1	2	3	4
313. Distinguish between eligible products for exportation as opposed to exempted products and non-eligible products for exportation as outlined in Regulations.	1	2	3	4
314. Determine if product destined for export is reinspected for condition and marked and/or labeled as required.	1	2	3	4
315. Determine if shipping containers are being identified with the appropriate Export Stamps, accompanied by official Export Certificate and other certifications required by importing countries.	1	2	3	4
316. Determine if product destined for export is handled under sanitary conditions and that required forms and certificates are distributed according to requirements listed in Regulations.	1	2	3	4

Be Able To:

		Not Important	Of Some Importance	Important	Essential
	Approved Plant Control Systems:				
317.	Maintain adequate knowledge of the mechanics involved in the various approved plant control systems, such as: Boneless Beef Reinspection System, Control of Fat and Added Water in Cooked Sausage System, Net Weight Systems, Bacteriological Monitoring System, Carcass Beef Reinspection System, etc.	1	2	3	4
318.	Monitor Quality Control Systems as directed by the Technical Services Division of our Agency.	1	2	3	4
319.	Determine if the approved plant system is or is not in control.	1	2	3	4
320.	Determine if plant management is abiding by their plant control system agreement as approved by the Technical Services Division.	1	2	3	4
321.	Conduct reviews and take necessary samples to be submitted to appropriate laboratories to detect any deficiencies.	1	2	3	4
322.	Maintain adequate knowledge of the operations of these systems in order to take necessary corrective action if the process is out of control as outlined.	1	2	3	4
323.	Maintain essential records, control charts and reports and data in order to determine status of the plant control system on a continuous basis.	1	2	3	4

Be Able To:

		NOT IMPORTANT	OF SOME IMPORTANCE	IMPORTANT	ESSENTIAL
Personal Work Traits:					
324.	Demonstrate ability to follow policy and procedures.	1	2	3	4
325.	Demonstrate ability to exercise technical or special skills.	1	2	3	4
326.	Demonstrate ability to communicate orally.	1	2	3	4
327.	Demonstrate ability to communicate in writing.	1	2	3	4
328.	Demonstrate ability to accept responsibility and initiate action.	1	2	3	4
329.	Demonstrate ability to respond to the need for extra effort.	1	2	3	4
330.	Demonstrate the ability to adapt to new or different situations.	1	2	3	4
331.	Demonstrate the ability to show creativity.	1	2	3	4
332.	Demonstrate the ability to evaluate facts and make decisions.	1	2	3	4
333.	Demonstrate ability to plan and organize your own work.	1	2	3	4
334.	Demonstrate the ability to assume leadership and influence others.	1	2	3	4
335.	Demonstrate ability to get along with co-workers and work as a team.	1	2	3	4
336.	Demonstrate the ability to deal with persons or groups outside your own Agency.	1	2	3	4
337.	Demonstrate the ability to establish cooperative relationships.	1	2	3	4

APPENDIX B

COVER LETTERS

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
1 East Broadway, 5th Floor
Prudential Tower Bldg.
Butte, MT 59701

Subject: Questionnaire Regarding Basic Job Skills Needed For Food Inspectors

May 7, 1974

To: All Food Inspectors (GS-5 through GS-9)

The Butte, Montana Area Office of the USDA, APHIS, Meat and Poultry Inspection Service is cooperating with the Montana State University's Department of Agricultural and Industrial Education and the Montana State University's Agricultural Experiment Station located in Bozeman, Montana in conducting a study of competencies needed by employees in agricultural resources. The purpose of this study is to identify the important agriculturally related knowledge, skills and attitudes (competencies) needed by food inspectors. This study may serve as the basis for the improvement of current vocational education programs designed to provide relevant training for the occupational area.

The attached questionnaire contains those basic, fundamental job standards (competencies) considered essential to the function of a food inspector; however they are by no means all inclusive. The researchers are requesting you to rate each job standard (competency) according to its importance in your present job. This is not an attempt to determine how well an employee is performing in his job. It is important that you indicate a rating for all of the job standards (competencies) that are listed pertaining to your current grade level and job description; however you are not required to rate those that are beyond the requirements of your current grade level eg. GS-5 employees are not expected to answer statements regarding export and import; however GS-9 processing inspectors that performs import and export inspection should be able to rate all of the statements on the questionnaire.

We feel that this study developed by Dr. Douglas Bishop, Project Director, and his staff of researchers can be an important tool both to the development of Nongovernmental Training curricula and to our own Agency Training Program objectives. We are asking each of you to contribute extra effort in participating in completing this questionnaire so that our teams effort can be measured at 100%. All completed questionnaires are to be returned to the Butte Area Office prior to May 31, 1974. Thanking you for your cooperation in this matter.

Dr. H. C. Hairston
Area Supervisor - Montana and Wyoming

Montana State University
College of Agriculture
Agricultural Experiment Station
Bozeman, Montana 59715 Tel. 406-994-3721
Animal and Range Sciences Department

March 29, 1974

Mr. Ed Bratton
County Agent
P. O. Box 0
Ronan, Montana 59864

Dear Ed:

The Department of Agricultural and Industrial Education and the Agricultural Experiment Station of Montana State University in Bozeman are conducting a study of competencies needed by employees in agricultural resources occupations. They have included dairy herd improvement supervisors in this group. The purpose of the study is to identify the important agriculturally related knowledge, skills ar attitudes needed by employees. This study may serve as a basis for future vocational education programs for the purpose of providing trained personnel for agricultural resources occupations.

The attached questionnaire contains these competency statements. They are requesting the supervisor to rate them according to their importance. I presently do not know the tester for the Lake Association. Would you pass this information on to the individual? A stamped, self-addressed envelope is provided for the return.

I feel that this effort is worthy of our support and request your cooperation in completing this form. The information that you give is vital to the success of the study. Since there are only seven DHI Supervisors in the state, it is important that we receive a response from each supervisor.

They extend to you their appreciation for your assistance.

Sincerely yours,

B. R. (Pete) Moss
Asst. Prof. in Anim. Sci.
and
Extension Dairy Specialist

P. S. Would you send me the name of the DHI Supervisor for the Lake Association? Thanks.

BRM:clm

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Bozeman, Montana 59715

April 17, 1974

The Department of Agricultural and Industrial Education and the Agricultural Experiment Station of Montana State University in Bozeman are conducting a study of competencies needed by employees in agricultural resources. The purpose of this study is to identify the important agriculturally related knowledge, skills and attitudes (competencies) needed by soil conservation and civil engineering technicians. This study may serve as the basis for future vocational education programs for the purpose of providing trained personnel for agricultural resources occupations.

The attached questionnaire contains these competency statements. They are requesting you to rate them according to their importance and return the questionnaire by May 3rd. A stamped, self-addressed envelope is provided for your return.

I feel that this effort is worthy of our support and request your cooperation in completing this form. The information that you give is vital to the success of the study.

They extend to you their appreciation for your assistance.

Sincerely,

A. B. Linford

A. B. Linford, State Conservationist
Soil Conservation Service

ABL:cbm

Enclosures

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APPENDIX C

FOLLOW-UP LETTER

J U S T A R E M I N D E R

We are depending on you to complete and return the "Dairy Herd Improvement Competency Questionnaire" sent to you last week. Would you please take a few minutes to complete and return it to us today?

Thanks for your cooperation,

B. R. (Pete) Moss
Asst. Prof. in Anim. Sci.
and
Extension Dairy Specialist

APPENDIX D

CODING RATIONALES

CODING SHEET FOR DHIS

CARD 01

Columns 1, 2, 3	Respondent Code	000	
Columns 4 & 5	Card 01		
Columns 6 - 80	Competencies 001 - 074		74 comp.

CODING SHEET FOR SOIL CONSERVATION TECHNICAN

CARD 01

Columns 1, 2, 3	Job Title Code 300	
Columns 4 & 5	Card 01	
Columns 6 & 7	Respondent number	
Columns 8 - 80	Competencies 300 - 372	73 comp.

CARD 02

Columns 1, 2, 3	Job Title Code 300	
Columns 4 & 5	Card 02	
Columns 6 & 7	Respondent number	
Columns 8 - 80	Competencies 373 - 445	73 comp.

CARD 03

Columns 1, 2, 3	Jot Title Code 300	
Columns 4 & 5	Card 03	
Columns 6 & 7	Respondent number	
Columns 8 - 44	Competencies 446 - 482	37 comp.
	TOTAL	183 comp.

CODING SHEET FOR CIVIL ENGINEERING TECHNICIAN

CARD 01

Columns 1, 2, 3	Job Title Code 100	
Columns 4 & 5	Card 01	
Columns 6 & 7	Respondent number	
Columns 8 - 80	Competencies 100 - 172	73 comp.

CARD 02

Columns 1, 2, 3	Job Title Code 100	
Columns 4 & 5	Card 02	
Columns 6 & 7	Respondent number	
Columns 8 - 58	Competencies 173 - 223	51 comp.
	TOTAL	124 comp.

BEST COPY AVAILABLE

CODING RATIONALE FOR FOOD INSPECTOR

CARD 01

Columns 1 & 2	I.D. Number	
Columns 3 & 4	Card Number	
Columns 5 - 80	Competencies 001 - 076	76 comp.

CARD 02

Columns 1 & 2	I.D. Number	
Columns 3 & 4	Card Number	
Columns 5 - 80	Competencies 077 - 152	76 comp.

CARD 03

Columns 1 & 2	I.D. Number	
Columns 3 & 4	Card Number	
Columns 5 - 80	Competencies 153 - 228	76 comp.

CARD 04

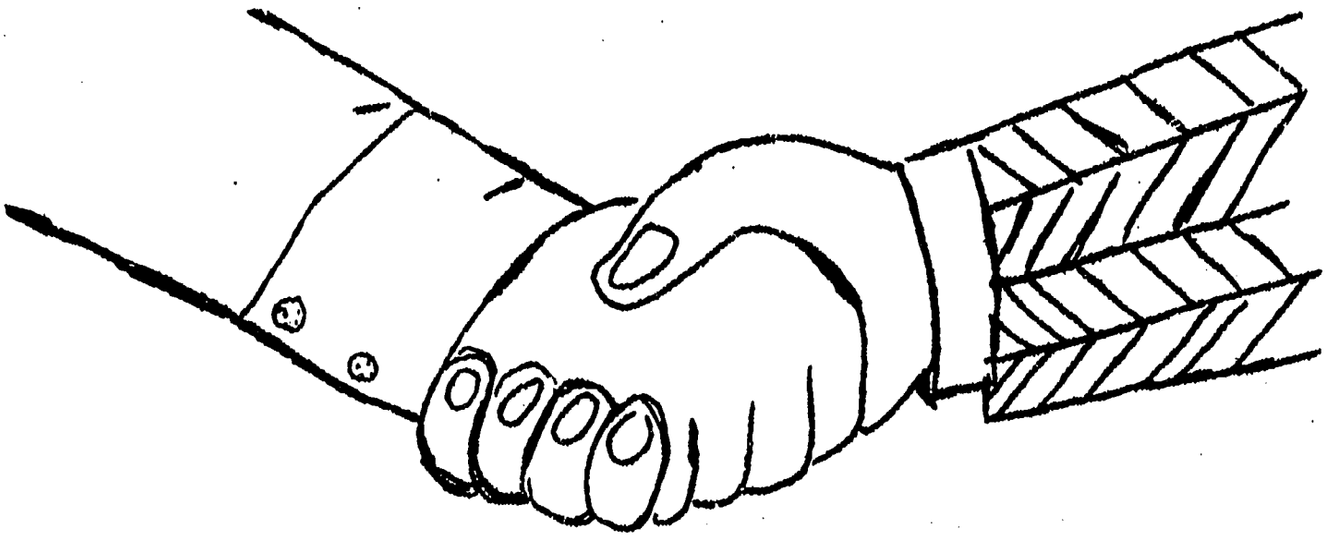
Columns 1 & 2	I.D. Number	
Columns 3 & 4	Card Number	
Columns 5 - 80	Competencies 229 - 304	76 comp.

CARD 05

Columns 1 & 2	I.D. Number	
Columns 3 & 4	Card Number	
Columns 5 - 38	Competencies 305 - 337	33 comp.

APPENDIX E

THANK YOU LETTERS



T H A N K Y O U !!!!!!

for taking the time to complete and return the Soil Conservation Technician's Competency Rating Sheet.

We appreciate YOUR help!!!!!!!!!!!!

Sincerely,

Doug Bishop
Project Director
Agricultural Manpower Project

DB:cbm