

STATE OF SOUTH DAKOTA CLASS SPECIFICATION

Class Title: Senior Agricultural Research Technician

Class Code: 80608

Pay Grade: GF

A. Purpose:

Designs and conducts portions of research involving livestock, plants or trees by implementing research proposals by project leaders and recommending changes in these proposals to ensure data being collected and research results are accurate.

B. Distinguishing Feature:

Senior Agricultural Research Technician conducts research projects that have been developed by a project leader; designs and conducts research, summarizes the data collected and prepares the final report; and develops new flora or fauna lines and analyzes samples. The Agricultural Research Manager/Specialist is responsible for performing specialized functions or independently managing a major area or areas of an agricultural research project or livestock unit. The incumbent assists or serves as the project leader in one or more of the following areas: planning, supervising, and assigning tasks in such areas as a greenhouse, seed house, livestock unit and/or field operation; developing, maintaining and modifying computer systems and electronic equipment for agricultural research; working with co-operators; and/or performing agricultural laboratory management duties.

The Agricultural Foreman serves as a lead worker over senior agricultural research technicians and agricultural research technicians by assigning and reviewing work; feeds and cares for livestock; collects and records research data; repairs and maintains equipment, buildings and grounds; and operates feed processing mills and farm machinery.

The Farm Manager supervises and directs the activities of farm labor personnel at a research station or inmates if a Farm Manager is at a penitentiary.

The Agricultural Research Technician cares for livestock on a research farm or institution, performs field work, operates feed processing mills, weighs and packages seed for seeding research plots and pollinates and cross pollinates plants; records research data as prescribed by a project leader and prepares, maintains and harvests field research plots.

C. Functions:

(These are examples only; any one position may not include all of the listed examples nor do the listed examples include all functions that may be found in positions of this class.)

1. Maintains cultures of plant pathogenic organisms to ensure goals and objectives of project are met.
 - a. Prepares culture media.
 - b. Inoculates plants in the field and greenhouse with pathogens.
 - c. Takes notes on disease reactions.
 - d. Develops new germplasm lines in greenhouse and field cycles.
2. Processes lab samples for protein, milling and dough characteristics, and protein distribution within the kernel, oil content and groat size to analyze grain samples and prepare report on results of testing.
3. Takes notes on research being conducted; summarizes research data and prepares a final report upon completion to ensure project leader has accurate data to work from.

4. Encodes final research data on a computer terminal to be used for analysis by project leader.
5. Hires and acts as lead-worker over part-time, summer or work-study labor to ensure project is adequately covered and employees understand goals and objectives.
 - a. Evaluates their performance.
 - b. Assigns and reviews work.
6. Performs other work as assigned.

D. Reporting Relationships:

Reports to the Agricultural Foreman.

E. Challenges and Problems:

Challenged to determine the effectiveness of experiment treatments and what caused the results obtained; to analyze research data and ensure data being reported is accurate.

Typical problems include equipment failures, and managing daily operation of project.

F. Decision-making Authority:

Decisions made include scheduling of work, procedures and methods to be used for various tests, test quality evaluation, time table for preparing and processing test samples, method to use for collecting and recording data, determining when crop should be planted and harvested, provides input on selections of lines to be advanced, proper timing and application of pesticides and fertilizers, supplies needed to complete project, and when samples are to be prepared and analyzed.

Decisions referred include major purchases, long range decisions that affect the facilities, budget limitations, crops to plant and which pollinations are to be made, site selection for experiments, tests to be run on samples, and which samples to be retained from each harvest.

G. Contact with Others:

Daily contact with the part-time employees to assign and review work. Weekly contact with supervisor and project leaders to discuss problems and progress of project, with other staff to schedule use of the facilities, with veterinarians for consultation and purpose of medication, and with the general public to give tours and discuss the research taking place.

H. Working Conditions:

The Senior Agricultural Research Technician works both in and out of doors and is exposed to such physical hazards as insecticides, pesticides, herbicides, fungicides and farm machinery operation. The incumbent is also exposed to grain dust and extreme heat during the planting and harvesting season.

I. Knowledge, Skills and Abilities:

Knowledge of:

- basic procedures and techniques required to analyze laboratory results;

- basic horticultural, range and/or greenhouse management practices;
- safety requirements for working with or around machinery, chemicals, and/or large and small animals;
- basic physiology and genetics applicable to plants and trees;
- greenhouse operations including the propagation of plants.

Ability to:

- communicate information clearly and concisely;
- perform acceptable farming procedures and practices;
- operate and maintain field, research, and chemical application equipment;
- handle all sizes of animals including feeding, health care, and measuring responses to treatment;
- do hard physical labor for several hours at a time in all weather conditions;
- develop laboratory techniques and conduct laboratory analysis and calculations.