

SEED ANALYST, SENIOR

KIND OF WORK

Senior level para-professional/technical seed analysis lead work.

NATURE AND PURPOSE

Under general supervision, perform purity analysis of samples and/or provide analysis of service and regulatory samples; and provide leadwork direction to Seed Analysts and Laboratory Technicians working in the Seed Testing Laboratory; perform related work as required.

EXAMPLES OF WORK (A position may not include all the work examples given, nor does the list include all that may be assigned.)

Train and direct the activities of Seed Analysts in the Purity (Germination) Section of the Seed Testing Laboratory so that purity analyses of submitted samples are correctly and accurately determined and not subject to question or criticism by instructing and training purity analysts; explaining and demonstrating purity testing and reporting procedures, reviewing procedures with all purity analysts; distributing copies of rules, laws, regulations, and references needed for proper seed analysis; and interpreting rules and regulations as well as providing lead worker direction to seed analysts checking accuracy of completed work, assisting in the proper identification of rare or difficult crop and weed seeds, and determining when alternate methods or procedures should be used.

Organize purity (germination) testing workloads and coordinate with the germination (purity) section so that the seed samples are accurately and expeditiously processed by establishing priority of samples to be tested and assigning seed samples to Seed Analysts.

Monitor the application of the rules and procedures of seed testing so that the results obtained are consistent with results obtained by other laboratories on the same lot of seed by determining the rate of occurrence of normal, abnormal, weak and dead seedlings in test; determining and recording supplemental information; performing special tests; and expediting regulatory testing.

Make final judgments on all seedlings which deviate from normal and determine if special techniques are needed so that the full growth potential of the sample is obtained by making final determinations on seedling analysis; and determining if maximum germination results have been obtained or if further testing is required.

Analyze the purity of all kinds of seeds submitted to the seed laboratory, especially on more difficult species and those requiring special attention or procedures, so that farmers know the planting value of seed they intend to use; and so that seed lots which are to be offered for sale are labeled in accordance with the seed law and seed lots which are on the market are checked for compliance with the Seed Law by determining percentages of pure seed, weeds, other crop and inert components; by identifying and recording the botanical names of all weed seeds and naming other crop seeds; determining the rate of occurrence of noxious weeds; by determining and recording supplemental information; performing special tests; and expediting inspection testing.

Represent the Department in matters related to seed testing so that the public and the seed industry may be better served by assisting with educational meetings and exhibits of the Department and cooperating agencies; explaining the operations of the Seed Testing Laboratory to groups or individuals that may visit or tour the laboratory; and answer telephone inquiries from individuals and seed producers about seed testing, submitting samples, status of tests and state seed law.

Inspect and maintain laboratory equipment used in purity analysis so that it remains in good operating condition and can be used most efficiently by reporting malfunctions or making repairs and adjustments and doing preventative maintenance on laboratory equipment.

Inspect and set controls on laboratory equipment used in germination analysis so that the equipment will function properly to maintain necessary temperatures and growth conditions at all times by determining constant and alternate temperature and photo-period settings for each germination chamber; checking moisture and humidity conditions of germination chambers; ensuring that germination chambers are free of fungi and other organisms that may produce abnormal growth conditions; and reporting malfunctions and make repairs as needed.

Advise and assist Seed Analysts in entering test data into computer, and advise and assist analysts in accessing purity and germination test results for client queries.

Examine the sprouts of germinated seeds for evidence of disease or injury to prevent the spread of plant diseases by the microscopic observation of plant sprouts; by identifying and evaluating the nature of the injury or type of disease; and by following appropriate laboratory procedures to prevent the contamination of other seed samples.

### KNOWLEDGE, SKILLS AND ABILITIES REQUIRED

Knowledge of:

Rules and regulations of seed testing sufficient to instruct, train and conduct appropriate purity analyses and germination analyses.

Seed Laws of Minnesota and other states sufficient to answer inquiries from farmers and seed producers.

Practices and procedures of seed analysis sufficient to instruct, train and conduct the sampling of seeds ensuring that consistent results are obtain.

Seed taxonomy, seed morphology and seed physiology sufficient to identify pure seed, weeds, other crop, inert components and disease.

Laboratory techniques, equipment and terminology sufficient to instruct Seed Analysts and Laboratory Technicians on their use; to monitor and maintain test accuracy of equipment; and to inspect and set controls on laboratory equipment to ensure that they are functioning properly.

Skill in:

Human Relations sufficient to provide work direction and guidance to Seed Analysts and Laboratory Technicians, answer questions/inquiries about operations of the Seed Testing Laboratory, seed testing, submitting samples, status of tests and state seed laws.

Finger dexterity and eye/had coordination sufficient to operate seed testing laboratory equipment.

Verbal and written communication sufficient to write reports, provide information for individuals and groups in a clear and concise way, and to give clear directions to staff.

Ability to:

Identify a large number of weed seeds as well as crop seeds sufficient to properly identify and record all samples submitted to the seed laboratory.

Mathematical ability sufficient to determine weights in grams, ounces and percentage calculations.

Make repairs, adjustments and perform preventive maintenance to laboratory equipment sufficient to keep equipment in good operating condition and used more efficiently.