Associate Seed Botanist

Essential Task Ratings Results

Task #	Task Statement
1	Evaluate quality of agricultural, vegetable and other seed by examination of seedling development and morphology in laboratory germination tests for client inquires on seed physiology issues.
2	Diagnose seed germination and seedling development problems using other methodology, including, but not limited to, examination of the internal anatomy and morphology of the seed/fruit and seed embryo.
3	Perform biochemical tests on various seed samples to assess seed quality for clients.
4	Assess seed/seedling performance in response to variables such as temperature, moisture, light, plant hormones, and chemical agents, and paired laboratory/greenhouse or plant growth chamber grow-outs.
5	Maintain records for samples submitted for seed germination, viability, and vigor testing by updating the seed sample database.
6	Identify research needs to solve problems in seed quality testing including: design and conduct experiments, collect data to describe and solve problems, performance of statistical analyses of experimental data, interpretation and oral presentation of findings, or publication of findings in recognized scientific publications.
7	Continually develop professional expertise by reading and analyzing published research reports, participating in professional meetings, professional continuing education workshops and seminars as approved, collaborating with seed scientists worldwide
8	Provide training in workshops and on individual basis to counties, state and university facilities on topics related to seed physiology and seed quality testing, as requested by the Seed Laboratory training director.
9	Participate on committees of professional associations to represent the Department in standardize procedures for measuring seed quality.
10	Perform highly specialized and complex analyses, evaluations, and research on an independent basis.

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11	Under the direction of a lead scientist, the Associate Seed Botanist interprets and applies the rules and regulations of the California Seed Law in relation to seed sample purity.
12	Identifies seeds and for the enforcement of quarantine regulations of the Food and Agricultural Code.
13	Working independently, the Associate Seed Botanist examines and identifies noxious and other weed seeds in quarantine samples, service samples, and other samples submitted to the Plant Pest Diagnostics laboratory.
14	Prepares technical reports of examination results that serve as legal forensic documents, and, in addition to the identification of weed seeds, may or may not also include information such as statistical analyses, percentage content of all species in the samples, or other relevant information.
15	Serves as a scientific information resource for various agencies and clients, providing timely information on weed seed identification and biology, including scientific and taxonomic information pertaining to noxious weed seed identification and sample collection.
16	Serves as emergency backup to the Senior Plant Taxonomist in the Botany laboratory making identifications of weeds and other plants, particularly those involving quarantine issues, in the absence of the Senior Plant Taxonomist.
17	Under the direction of a lead scientist, using a high degree of knowledge of seed and plant taxonomy, seed and plant anatomy, and seed and plant biology, the Associate Seed Botanist manages and oversees the seed herbarium, ensuring accuracy of identifications, as well as proper categorizing and filing of reference specimens.
18	Develops methods for other scientists to access information pertaining to the collection contents.
19	Trains laboratory employees, government officials, commercial seed analysts and student interns on topics related to seed physiology and seed quality testing as requested by the Seed Laboratory training director.
20	Prepares training materials and lectures for university and industry sponsored seminars and CDFA Seed Testing Workshops.
21	Identifies and develops, under the direction of a lead scientist, a research program that results in improved diagnostic capabilities in the Seed Laboratory.