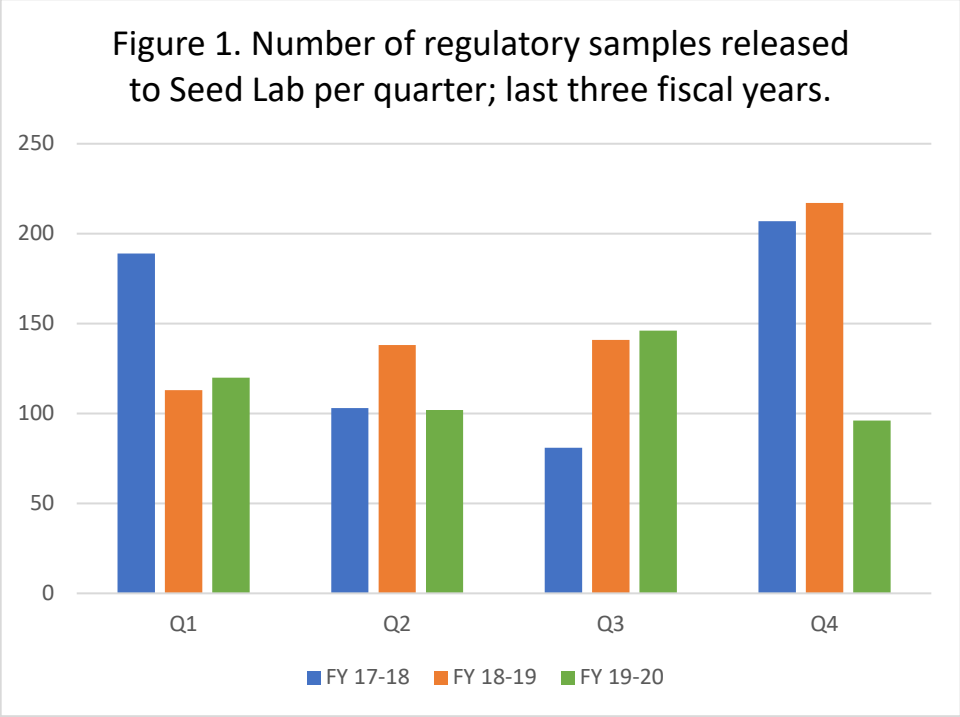
California Department of Food and Agriculture
Plant Pest Diagnostics Branch
Seed Laboratory
Report of Activities
FY19-20 (July 1, 2019-June 30, 2020)

10-12-2020

I. Label Compliance Testing

By the end of FY19-20, 464 regulatory samples were released to the Seed Lab (Fig. 1), well below the 600-sample target (approximately, 77% of testing goals). As in previous years, vegetable seed lots accounted for the majority of collected and tested samples. Vegetable seeds represented around 43% of all tested samples, followed by agricultural seeds (30%) and lawn seeds (27%).



II. Label Violations-Seed Regulatory Compliance Testing

There were 22 different types of violations, and these can be generally grouped into three categories: purity, germination, and non-compliance with labelling standards/other violations (Table 1). Out of 464 inspected lots, 68 (15%) were found to have at least one type of violation, a higher rate than reported in previous years. Even though vegetables constituted the majority of collected samples, agricultural seeds had the highest number of violations; 30 agricultural seed lots had at least one violation, compared to 20 lawn seed lots and 18 vegetable seed lots (Table 2). Several seed lots had multiple violations, and the violation type was largely dependent on the kind of seed lot tested (Table 2).

Table 1. The three categories of violations (purity, germination, and non-compliance with labelling standards/other), and types under each category.

Categories of Label Violations		
Purity	**Germination**	**Non-compliance/other**
Pure seed %	Germination %	Agricultural crop versus vegetable crop
Other crop seed %	Germination % not labeled below standard	Non-registered labeler
Inert matter %	Percent viability calculated incorrectly	No labeler address
Weed seed %	Germination date of test expired	PVP notification
Noxious weed seeds		No mediation statement
Total purity components not 100%		Sell by/Packed for season date mislabeled
Unlabeled coating material %		No treatment statement
Undeclared mixture		
Variety not stated		
Seed kind		
Incorrect labelling of a blend		

Table 2. Detected violations for agricultural, lawn and vegetable seeds. Many seed lots had multiple violations.

Categories and types of violations	Seed kind		
Purity	**Agriculture**	**Lawn seed**	**Vegetable**
Pure seed %	13	6	-
Other crop seed %	2	-	-
Inert matter %	4	12	-
Weed seed %	-	1	-
Noxious weed seeds	3	-	1
Total purity components not 100%	4	-	-
Unlabeled coating material %	5	-	1
Undeclared mixture	-	3	-
Variety not stated	-	-	3
Seed kind	8	5	5
Incorrect labelling of a blend	-	1	-
Germination			
Germination %	3	-	1
Germination % not labeled below standard	-	-	3
Percent viability calculated incorrectly	1	-	-
Germination date of test expired	1	-	-
Non-compliance/other			
Agricultural crop versus vegetable crop	-	-	1
Non-registered labeler	-	-	1
No labeler address	-	-	7
PVP notification	-	1	-
No mediation statement	-	-	-
Sell by/Packed for season date mislabeled	-	-	5
No treatment statement	-	-	1
Total	**44**	**29**	**29**
Number of lots with at least one violation	**30**	**20**	**18**

III. Service Samples

A total of 428 service (fee-based) samples were tested in FY19-20, which was almost the same as the number tested in the previous FY (427). Rice was the most frequently tested crop (138 samples), with vegetables (168 samples), especially tomatoes, lettuce, broccoli and cauliflower, making up the bulk of the remainder. In addition, more than 50 samples were submitted for seed identification.

IV. Feed Mill Inspection Samples

During FY19-20, the Seed Lab received 106 feed mill inspection samples, on which 106 visual inspections and 454 viability tests were conducted. Among these samples, 1034 common and noxious weed seeds were found and identified. The submitted samples were of two basic types: (1) pre-processing samples to be inspected only for noxious weed seeds, and (2) post-devitalization processing samples to be checked for viable weed seeds. The devitalization methods may include heat treatment, rolling, crushing, grinding, and/or pelletizing. Of the pre-processing samples, 9 contained seeds of one or more species of noxious weeds. Post-processing samples are supposed to be devoid of viable weed seed; however, of the 68 samples tested 15 contained viable weed seeds and two of these samples contained viable noxious weed seeds. The two noxious weed samples that were still viable after processing were both individual johnsongrass spikelets, one in a cleaned cracked corn grain sample to be used as bird feed, and one in a sample of corn grain screenings after cleaning, presumably representing an intermediate stage of processing prior to pelleting. Noxious weed seed species found include: Canada thistle, common Russian thistle, spineless Russian thistle, dodder, field bindweed, johnsongrass, jointed goatgrass, perennial sowthistle, purple mustard, and yellow starthistle. Due to field sampling issues related to Covid19, 39 samples that would normally have been analyzed in this fiscal year were received in July 2020 and analyzed in FY20-21.

V. Seed Regulatory Compliance Activities

Regulatory compliance was the main SL activity, and accounted for an estimated 63% of the work performed by SL staff members. The reduced number of hours spent on regulatory activities was due to the lower number of samples released to the Seed Lab. Approximately 68% of that time was devoted to laboratory label compliance testing; 8% on providing consultations and information services related to seed testing and performance issues, and provision of investigative services; 3% on validation of existing Rules governing regulatory testing; 5% on monitoring and inspection activities within the broad regulatory framework (seed identification of CA border stations submissions, solicited testing by counties, other regulatory labs and crop improvement associations, noxious weed seed exams for state and county quarantine purposes); 14% on training analysts on applications of test methods to enhance uniform and standardized testing for regulatory and labelling purposes, as well as development of guidelines to seed testing methods; and 2% on development and dissemination of seed testing protocols and procedures not covered by existing Federal and California seed laws.

VI. Changes in Staffing

Deborah Meyer - Retirement. Deborah Meyer, Environmental Program Manager I, retired after more than 41 years of state service with CDFA. Debbie is recognized as the authority on seed purity analysis and morphological seed identification. Debbie has made significant contributions to the improvement of national seed purity testing rules and mentored generations of seed analysts. As analyst, supervisor, manager and mentor, she has played a critical role in making the Seed Lab one of the leading centers of seed testing.

Evelyn Ramos - Retirement. Evelyn Ramos, Senior Environmental Scientist, retired after 25 years of service with CDFA. Evelyn was responsible for getting samples ready for testing by the Lab's Seed Botanists, performed her duties with a smile, and was always eager to help others whenever needed.

Emi Kuroiwa - New Hire. Emi Kuroiwa, Environmental Scientist, joined the Seed Lab in April of 2020. In addition to assuming Evelyn's duties, she is in training for certification as a Registered Seed Technologist. Emi previously worked as a research technician at the USDA's Agricultural Research Service Crop Improvement and Protection Research Unit in Salinas, CA, supporting a research program focusing on improvements of lettuce and spinach varieties against abiotic stresses.