



OFFICE OF INDIANA
STATE CHEMIST & SEED
COMMISSIONER
ANNUAL SEED
REGULATORY REPORT

Mark LeBlanc, Ph.D. - State Chemist & Seed Commissioner
Donald B. Robison, MBA - Seed Administrator

2021

**2021
Indiana Seed Regulatory Program
Annual Report**



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Indiana Seed Control 2021 Annual Report

Presented here within is the 2021 annual report of the Office of Indiana State Seed Commissioner. It represents a summary of official inspectional activities related to seed control in Indiana, as well as laboratory analyses performed on official samples collected under the authority of Indiana Seed Law for agricultural and vegetable seeds distributed in Indiana.



The activities of our seed regulatory program revolve around our mission statement: ***“Provide education and service to consumers of seed and the seed industry and assure a quality product is available in the marketplace and truthfully represented.”***

The Indiana Seed Law is a “truth-in-labeling” law requiring basic quality factors to be expressed to represent a level of quality to potential purchasers and consumers. The purpose of the law is to provide the consumers with adequate information, through fair and consistent labeling, to make intelligent purchases of agricultural and vegetable seed products.

The inspection staff of the Indiana State Chemist and Seed Commissioner provides marketplace surveillance throughout the state through inspectional visits to all retail sales outlets offering seed products for sale. These products routinely consist of various agricultural crop seeds, forage seeds, lawn and turf seeds, and vegetable seed kinds. Samples are obtained through official sampling methods and are analyzed in the Indiana State Seed Laboratory to determine compliance with labeled guarantees.

Our office is a charter member of the Association of American Seed Control Officials (AASCO) and the Association of Official Seed Analysts (AOSA) and we abide by the rules and protocols established by those associations. This report accurately reflects the dedication to our statutory responsibilities to enforce the Indiana Seed Law and provide consumer protection to Indiana farmers, consumers, and seedsmen.

Prepared and Submitted By:

A handwritten signature in black ink, appearing to read 'Donald B. Robison'.

Donald B Robison, MBA
Seed Administrator



ENFORCEMENT ACTIONS ...

Providing education, service and protection to Indiana consumers and industry to assure quality seed products of the highest integrity are truthfully represented and available in the marketplace

- **OUR PURPOSE**

The Indiana Seed Law (IC 15-15-1) is administered by the Office of Indiana State Chemist & Seed Commissioner. The purpose of the law is twofold: First, to give the purchaser sufficient information to enable them to buy good seed, and second, to protect the honest and reliable seedsman and the farmer from unscrupulous dealers. Our field, laboratory and office staffs strive to carry out our mission in administration and enforcement of the Act.

- **ENFORCEMENT ACTION TAKEN IN 2021**

Enforcement action initiated in 2021 was dictated by the seriousness of the violations found as a result of either laboratory analysis or inspectional observations discovered during facility inspections. Sample numbers were down due to the global pandemic.

Official Samples Tested in 2021:	1212	
Official Samples Correctly Labeled:	1075	(88.69%)
Samples Incorrectly Labeled:	137	(11.3%)
Samples Voided and/or Cancelled:	55	(duplicate/damaged)
Total Tests Completed on Samples:	4,044	

Breakdown of 2021 Violations: *multiple violations per sample in some cases

Minor Violations Based on Product Analysis: (Relabeling Orders):	109	(55.6%)
Serious Violations Based on Product Analysis: (Stop Sale Orders):	54	(27.5%)
Technical Violations Based on Label Analysis:	33	(16.9%)

Inspector-Issued Stop Sale Orders (Number of Seed Lot's Involved): 168

Laboratory analysis done to verify label claims of "mechanical purity" (included Pure Seed %, other crop seed %, inert matter %, weed seed %, noxious weed seed), seed count, and "viability" (germination, hard seed and dormancy). Additional claims evaluated included genetic trait verification for glyphosate tolerance (by lateral flow immunoassay) and BT traits including Cry1Ab, Cry3Bb, and Cry34, MCry3A, and Cry1F (utilizing lateral flow immunoassay test kits).

* Relabeling orders issued against seed lots classified as "minor" violations as a result of laboratory analysis

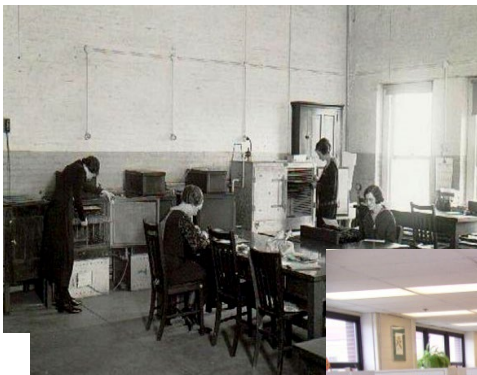
** Stop sale action taken against seed lots classified as "serious" violations as a result of laboratory analysis

- **USDA FEDERAL SEED ACT ENFORCEMENT**

39 samples were sent to the Federal Lab for apparent violations of the Federal Seed Act. 92.3 percent were found to be Federal Violations with a warning letter sent and/or federal fines.

OUR PRESENCE IN INDIANA ...

The Indiana Seed Commissioner was established in 1921 with the passage of House Bill No. 99 which was signed into law on February 24, 1921 to create the Indiana Seed Law, a “truth-in-labeling” law.



Seed testing facilities were established at Purdue University following passage of that first law to provide support to enforcement activities conducted under the authority of the law. Testing services were also provided for residents and consumers of the state to assess seed quality on seed purchased and grown by farmers.



State Seed Laboratory, Today

The Office of Indiana State Chemist and Seed Commissioner (OISC) is located on the campus of Purdue University and housed in the Biochemistry Building in the College of Agriculture. This proximity to faculty, researchers and extension staff in the various agricultural sciences is beneficial in providing information on new technologies constantly emerging in the regulated industries OISC comes in contact with.



*Biochemistry Building
175 S. University Street, Purdue University
West Lafayette, IN 47907-2063*

THE INDIANA SEED INDUSTRY

Indiana Seed Permit* holders number 419

(Both in-state and out-of-state distributors)

(* distributors marketing seed under their private label, decrease from 2021 due to hemp seed suppliers going out of business)

SEED DISTRIBUTION IN INDIANA

The table on the next page illustrates a breakdown of reported pounds of agricultural and vegetable seeds distributed in Indiana during the calendar years of 2012 to 2021. These figures and categories reported represent those specified on the semi-annual reports submitted from all permit holders licensed to do business in Indiana, as required by the Indiana Seed Law.

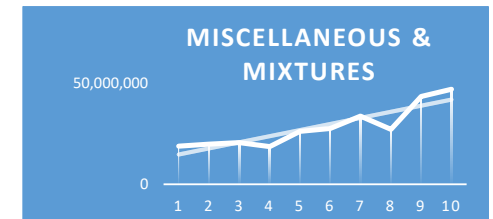
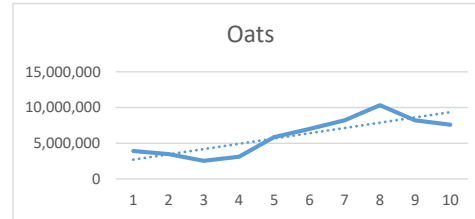
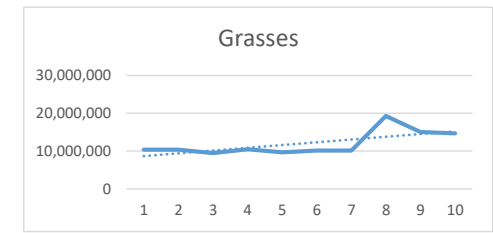
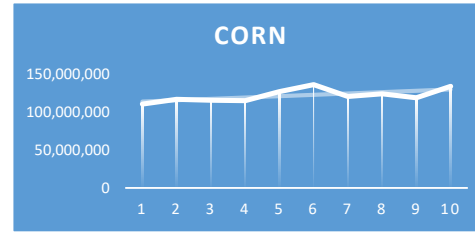
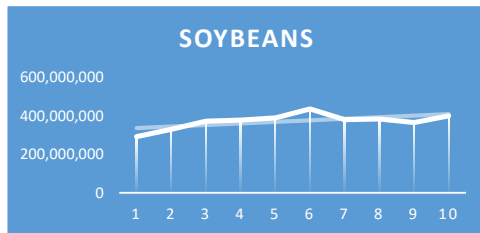
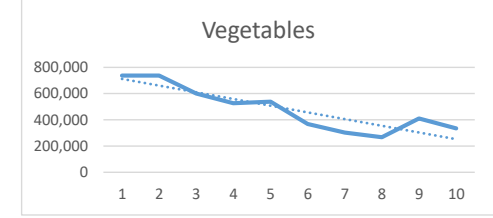
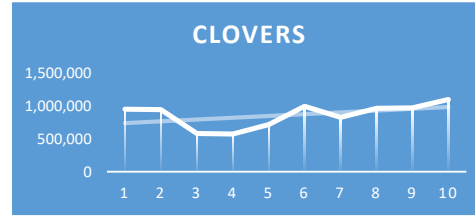
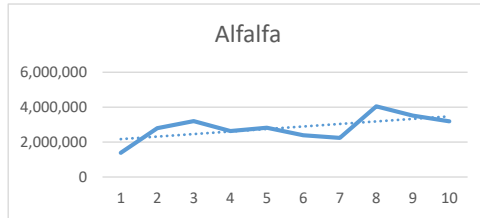
The law requires all distributors who cause seed to be distributed in the state to report total sales made. Inspection fees are assessed based on the kind and amount of seed sold. Current fees assessed on total distribution are 30 cents/100 pounds sold for alfalfas, clovers, grasses and vegetables, and 15 cents/100 pounds sold for all other seeds.

SEED DISTRIBUTION IN INDIANA ...

Seed Distribution Report
Ten Year

Seed	2,012	2,013	2,014	2,015	2,016	2,017	2,018	2,019	2,020	2,021
Alfalfa	1,385,900	2,796,000	3,197,650	2,632,000	2,818,360	2,393,880	2,241,891	4,047,138	3,515,391	3,186,541
Clovers	954,400	946,100	582,000	575,400	718,504	997,884	828,717	966,898	976,117	1,102,374
Vegetables	737,500	737,500	601,000	526,400	538,153	367,637	302,704	267,436	409,847	334,417
Grasses	10,353,400	10,353,400	9,468,000	10,503,000	9,664,594	10,164,299	10,127,232	19,292,354	15,057,196	14,694,328
Corn	111,039,000	117,270,700	116,224,000	115,441,800	127,427,645	136,766,089	121,013,741	124,524,106	119,422,562	134,591,992
Soybeans	291,915,700	329,752,700	372,345,700	377,653,900	389,585,289	435,986,679	380,653,045	383,253,413	365,735,697	399,855,883
Wheat	48,204,100	40,468,300	36,009,100	29,464,400	25,164,329	27,771,000	30,065,481	25,979,043	29,692,998	31,198,790
Oats	3,893,300	3,459,800	2,529,800	3,112,300	5,858,697	7,010,392	8,201,253	10,321,454	8,216,535	7,596,185
Miscellaneous & Mixtures	18,781,100	19,820,900	20,583,500	18,594,500	26,173,506	27,522,255	33,620,832	27,154,404	43,342,445	46,905,162

*White Charts represent decreases in seed pounds sold in Indiana from the previous year. Blue Charts represent increases in seed pounds sold in Indiana form the previous year.



PROFESSIONAL AFFILIATIONS ...

The Office of the Indiana Seed Commissioner maintains membership in national seed organizations and associations and agreements with federal agencies.

AASCO (Association of American Seed Control Officials) The Seed Commissioner's office participates as an active member of AASCO. The Association of American Seed Control Officials is an organization of seed regulatory officials from the United States and Canada. The Association was organized in 1949, from an outgrowth of regional meetings held in various parts of the United States. The members meet annually to discuss mutual concerns of seed law enforcement, to be updated on new developments in the seed industry, and to update the Recommended Uniform State Seed Law (RUSSEL) which the organization developed and maintains as a "model" law for states and federal programs.

AOSA (Association of Official Seed Analysts, Inc.) The State Seed Laboratory is a member of the Association of Official Seed Analysts, Inc., (AOSA) a national body responsible for development of uniform testing rules utilized in the U.S. and Canada and recognized internationally. AOSA was formed in 1908 in response to initial attempts by individual states to develop seed laws. This was the beginning of regulated seed commerce in the United States. Initial priorities included, as was defined in the constitution, an attempt to seek uniformity and accuracy in methods, results, and reports. It set as its objective an effort to perfect and make publicly known, through publication, uniform rules for seed testing. Primary functions include:

- Establish the AOSA Rules for Testing Seeds which are generally adopted by most states as the rules for testing seeds in their respective states
- Contribute to the refinement and modification of the rules and procedures for seed testing
- Ensure that testing procedures are standardized between analysts and between laboratories
- Influence and assist in enforcement of appropriate seed legislation at state and federal levels

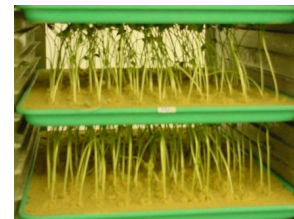
USDA Seed Regulatory & Testing Branch - The Indiana Seed Commissioner's Office maintains Cooperative Agreement #12-25-A-3330 with the USDA Seed Regulatory and Testing Branch for mutual assistance and cooperation in regulatory matters pertaining to seed shipped into the state from out-of-state vendors. The federal agency authorizes the State Seed Commissioner to sample seed and inspect records pertaining to seed shipments made into Indiana subject to the Federal Seed Act. The Federal Seed Act, by virtue of its basic similarity to the Indiana Seed Law, supplements the State Law.

ANALYSIS & TESTING METHODS

The Indiana State Seed Laboratory is an active member of the Association of Official Seed Analysts (AOSA) and the methods used for sample preparation and analysis are those approved by the Association. Under such “Rules for Testing Seeds” a standard analysis has been developed in conjunction with the



enforcement of labeling laws that furnishes information as to the composition of the seed sample and the ability of the seed to produce plants. The rules, which are routinely followed, summarize and make available the accumulated experience of seed analysts.



The laboratory also offers a service testing program available to the general public. Individuals and/or companies requesting analysis information may submit samples to the laboratory for testing and specify the type of test or tests desired (purity, germination, noxious weed seed exam). Testing fees are \$6 per sample for individual purity, germination and/or identification tests, and \$10 per sample for complete tests (purity, germination, noxious weed exam). Detailed reports of analysis are furnished to the sender at the completion of the testing.

The laboratory also offers immunoassay strip testing for traits in soybeans, corn and alfalfa. This testing is first level testing and can show the presence or absence of these traits. It is accurate to within roughly five percent. If a more detailed test is required, we partner with a lab that conducts PCR DNA testing and can quote those tests.

OUR PEOPLE...

Don Robison – Seed Administrator

Don came on board in 2016 as the Seed Administrator after a 30+ year career in the seed and agricultural industry. Don also took a two year sabbatical and helped teach middle school special education math and sciences in Johnson County. He holds a Master of Business Administration from Western Governors University and a BS in Agricultural Economics from Purdue University. His role is oversight of the seed, hemp, and microorganism programs.

Jessica McVay – Laboratory Coordinator/Feed Microscopist/Certified Seed Analyst – Germination and Purity

Jessica was hired in August 2012 in the laboratory as a Seed Analyst/Feed Microscopist. She holds a BS in Interdisciplinary Biology with a minor in Forensic Science and Sociology from Purdue University. Her role in the laboratory is to help direct the lab staff in both purity and germination and provide microscopic analysis on animal feed and bird feed products. Her new role of Laboratory Coordinator in June 2016 has her providing leadership to the lab staff and helping direct the workflow.

Emily Morrison- Certified Seed Analyst – Germination and Purity

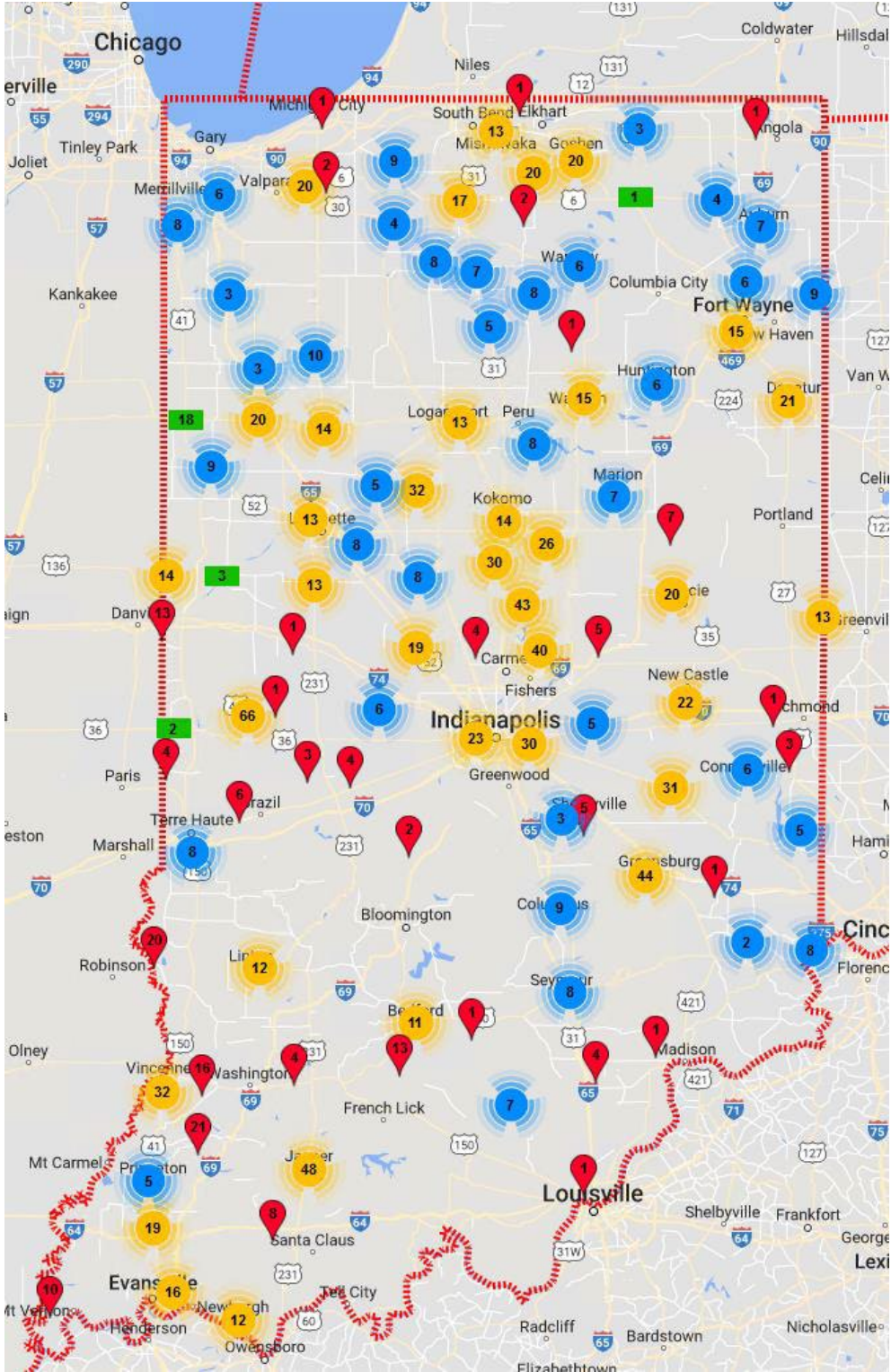
Emily was hired January 2016 as a Seed Analyst. Her primary role in the lab is to perform physical purity and germination. In 2016, Emily obtained certification in germination testing through AOSA and is continuing her education to pursue certification in physical purity, passing her Purity exam in 2018. Before starting in the seed lab, she has had previous experience in seed quality testing with Dow AgroScience. She graduated from Purdue University with a BS in Natural Resources and Environmental Science.

Scottie Brittsan – Certified Seed Analyst – Germination and Purity

Scottie was hired in June of 2017 as a Seed Analyst. Her primary role in the lab is to work with official samples in both data entry, sample entry and official seed reports. In 2019, Scottie obtained certification in germination and continues training with physical purity. She holds a BS in Entomology and Minors in Plant Sciences and History from Purdue University. Before starting in the seed lab, she worked in the Purdue Nematode Lab and for the USDA as a Biological Science Aid performing Northern Uniform Soybean Tests.

MAP OF INSPECTION LOCATIONS

(Map represents 1250 samples)



DETAILED ANNUAL REPORT ON FOLLOWING PAGES...

Table I

Classification of samples by kind and numbers of tests involved.

Number of Samples	Kinds	Purity	Noxious Weed Examinations	Germinations*
202	Vegetable	1	1	218
1,875	Agricultural	917	860	1,907
0	Flower	0	0	0
0	Tree	0	0	0
3	Feed	3	3	3
0	Health Food	0	0	0
0	Pasture Mix	0	0	0
0	Flower Mix	0	0	0
0	Vegetable Mix	0	0	0
0	Conservation Mix	0	0	0
0	Vegetable Kit	0	0	0
0	Lawn Mix	0	0	0
0	Unidentified	0	0	0
2,080	Totals	921	864	2,128

Other Tests	
Interstate Noxious Weed Test	0
Treated Germination Test	0
Cold Test	0
Sand Test	0
Roundup® Ready Test	1
Tetrazolium Test	0
Endophyte Test	0
Ryegrass Fluorescence Test	0
Oats Fluorescence Test	0
Identification Test	2
Miscellaneous Test	0
400 Seed Count Test	0
Seed Count Test	69
Canada Noxious Weed Test	0
Mechanical Seed Count Test	59
Total Tests	4,044

* Includes preliminary and final seedling counts.

SEED ACT ENFORCEMENT

In the enforcement of the Seed Act, Plant Industry Inspectors visit wholesale and retail firms to inspect seed labeling and obtain samples for testing. The inspectors collected 1,212 seed samples. A total of 135 or 11.14 % of these samples were found to be in violation of the Act. The inspectors also placed 33 lots of seed (817 containers) under 'Stop Sale' at 29 locations. These 'Stop Sales' are released when the owner or custodian of the seed follows the recommended procedure to have it relabeled in compliance with the law or otherwise disposed.

The tables on the following pages summarize the Seed Act Activities.

Table II is a comparison of the percentage of all violations for the past three years for all classes of seeds.

Table III summarizes the kinds of agriculture, vegetable and flower seeds tested with the number and percentage violation of each.

Table IV summarizes the inspection record of individual wholesale distributors giving total samples and number correctly labeled or in violation.

Table V represents a summary of crops, varieties and acres inspected by the seed certification program.

Table II

A comparison of violations of seed samples taken by seed inspectors.

Kinds	Number of Samples*	% Violations		
		1/1/2021 - 12/31/2021	1/1/2020 - 12/31/2020	1/1/2019 - 12/31/2019
Vegetable	190	6.84 %	9.26 %	13.33 %
Agricultural	1,022	11.94 %	8.37 %	17.18 %
Flower	0	0.00 %	0.00 %	0.00 %
Tree	0	0.00 %	0.00 %	0.00 %
Feed	0	0.00 %	0.00 %	0.00 %
Health Food	0	0.00 %	0.00 %	0.00 %
Vegetable Mix	0	0.00 %	0.00 %	0.00 %
Conservation Mix	0	0.00 %	0.00 %	0.00 %
Vegetable Kit	0	0.00 %	0.00 %	0.00 %
Lawn Mix	0	0.00 %	100.00 %	0.00 %
Totals	1,212	11.14 %	8.63 %	16.61 %

* Samples collected by seed inspectors 1/1/2021 - 12/31/2021

Explanation of abbreviations used in tables.

- CL – Correctly labeled.
- SV – Serious violation, discrepancy exceeds double the tolerance.
- MV – Minor violation, discrepancy exceeds regular tolerance.
- TV – Technical violation, label does not bear all required information.
- #VIOL – Number of violations.
- %VIOL – Percentage of violations.

Table III

Total of each kind tested, number and percentage of violations.

Seed Kind Tested	Vegetable Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Bean, Garden	24	22	0	0	2	2	8.33 %
Bean, Lima	1	1	0	0	0	0	0.00 %
Bean, Pinto	1	1	0	0	0	0	0.00 %
Beets	6	6	0	0	0	0	0.00 %
Broccoli	7	7	0	0	0	0	0.00 %
Brussels-Sprouts	3	3	0	0	0	0	0.00 %
Buckwheat	1	1	0	0	0	0	0.00 %
Cabbage	4	3	0	0	1	1	25.00 %
Cantaloupe, Muskmelon	1	1	0	0	0	0	0.00 %
Carrot	21	21	0	0	0	0	0.00 %
Cauliflower	2	1	1	0	0	1	50.00 %
Celery and Celeriac	1	0	0	0	1	1	100.00 %
Collards	3	3	0	0	0	0	0.00 %
Corn, Sweet	28	28	0	0	0	0	0.00 %
Cucumber	3	2	1	0	0	1	33.33 %
Eggplant	1	1	0	0	0	0	0.00 %
Endive	1	1	0	0	0	0	0.00 %
Fescue, Tall	1	1	0	0	0	0	0.00 %
Kale	4	4	0	0	0	0	0.00 %
Kohlrabi	2	2	0	0	0	0	0.00 %
Leek	3	2	1	0	0	1	33.33 %
Lettuce	19	18	1	0	0	1	5.26 %
Mustard	1	1	0	0	0	0	0.00 %
Okra	1	1	0	0	0	0	0.00 %
Onion	13	12	1	0	0	1	7.69 %
Pak choi, pok choi or bok choy	2	2	0	0	0	0	0.00 %
Parsnip	1	1	0	0	0	0	0.00 %
Pea, Garden	9	6	0	3	0	3	33.33 %
Pepper	1	1	0	0	0	0	0.00 %
Radish	7	6	1	0	0	1	14.29 %
Rutabaga	1	1	0	0	0	0	0.00 %

Seed Kind Tested	Vegetable Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Spinach	6	6	0	0	0	0	0.00 %
Squash	2	2	0	0	0	0	0.00 %
Tomato	3	3	0	0	0	0	0.00 %
Turnip	4	4	0	0	0	0	0.00 %
Watermelon	1	1	0	0	0	0	0.00 %
Total	189	176	6	3	4	13	6.88 %

Seed Kind Tested	Agricultural Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Alfalfa	19	15	0	1	3	4	21.05 %
Barley	6	3	0	3	0	3	50.00 %
Bean, Garden	1	1	0	0	0	0	0.00 %
Bluegrass, Kentucky	88	66	9	1	12	22	25.00 %
Bluegrass, Texas	1	1	0	0	0	0	0.00 %
Brassica spp.	2	1	0	0	1	1	50.00 %
Brome, Smooth	1	1	0	0	0	0	0.00 %
Buckwheat	2	2	0	0	0	0	0.00 %
Chicory	4	3	0	0	1	1	25.00 %
Clover, Arrowleaf	2	1	0	0	1	1	50.00 %
Clover, Balansa	2	1	0	1	0	1	50.00 %
Clover, Berseem	1	1	0	0	0	0	0.00 %
Clover, Crimson	16	13	1	1	1	3	18.75 %
Clover, Ladino and White	10	6	0	0	4	4	40.00 %
Clover, Red	19	15	0	0	4	4	21.05 %
Corn, Hybrid Field	144	144	0	0	0	0	0.00 %
Corn, Sweet	1	1	0	0	0	0	0.00 %
Crabgrass	1	0	1	0	0	1	100.00 %
Fescue, Chewings	9	8	1	0	0	1	11.11 %
Fescue, Creeping Red	25	15	5	0	5	10	40.00 %
Fescue, Fine	22	18	1	1	2	4	18.18 %
Fescue, Meadow	1	1	0	0	0	0	0.00 %
Fescue, Tall	180	138	9	0	33	42	23.33 %
Festulolium	1	1	0	0	0	0	0.00 %
Lespedeza, Korean	2	1	0	1	0	1	50.00 %
Mustard	1	1	0	0	0	0	0.00 %
Oat and red oat	29	25	0	0	4	4	13.79 %
Orchardgrass	13	9	0	0	4	4	30.77 %
Pea, Field	9	7	0	1	1	2	22.22 %
Phacelia spp.	1	0	0	1	0	1	100.00 %

Seed Kind Tested	Agricultural Seeds						
	Total	CL	SV	TV	MV	#VIOL	%VIOL
Popcorn	8	8	0	0	0	0	0.00 %
Radish	20	15	2	1	2	5	25.00 %
Rape, Turnip; Rape, Bird	8	6	0	1	1	2	25.00 %
Rye	49	38	4	1	6	11	22.45 %
Ryegrass (mixes)	40	30	3	0	7	10	25.00 %
Ryegrass, Annual; Ryegrass, Italian	21	19	0	2	0	2	9.52 %
Ryegrass, Intermediate	2	2	0	0	0	0	0.00 %
Ryegrass, Perennial	64	52	6	1	5	12	18.75 %
Sorghum-Sudangrass Hybrid	3	3	0	0	0	0	0.00 %
Soybean	283	276	4	1	2	7	2.47 %
Spelt	3	1	0	2	0	2	66.67 %
Timothy	14	12	0	0	2	2	14.29 %
Triticale	7	5	0	2	0	2	28.57 %
Turnip	3	3	0	0	0	0	0.00 %
Vetch, Hairy	5	4	0	0	1	1	20.00 %
Wheat	81	68	2	8	3	13	16.05 %
Total	1,224	1,041	48	30	105	183	14.95 %

Table IV

Vegetable Seeds Wholesale Distributors			Vegetable Seeds			
			CL	SV	TV	MV
AGRIGOLD	SAINT FRANCISVILLE	IL	3	0	0	0
AMERICAN SEED CORP	NORTON	MA	5	0	0	0
BACK TO THE ROOTS	OAKLAND	CA	7	0	0	0
BAKER CREEK HEIRLOOM SEED CO. LLC	MANSFIELD	MO	1	0	0	0
BENTLEY SEED CO	CAMBRIDGE	NY	3	0	0	0
BERLIN SEEDS	MILLERSBURG	OH	3	0	0	0
BFG SUPPLY CO	HARRISONBURG	VA	6	1	0	0
BOTANICAL INTERESTS, INC	BROOMFIELD	CO	4	1	0	0
BURPEE GARDEN PRODUCTS	WARMINSTER	PA	23	2	0	0
CAUDILL SEED COMPANY	MOREHEAD	KY	11	0	0	0
CORNUCOPIA SEEDS	FELTON	CA	3	0	0	0
COUNTRY GARDEN GREENHOUSE	NEW PARIS	IN	1	0	1	0
CROOKHAM COMPANY	CALDWELL	ID	2	0	0	0
CROP TECH SEED COMPANY	VINCENNES	IN	4	0	0	0
DIRECT ENTERPRISES INC	WESTFIELD	IN	10	0	0	0
DLF	HALSEY	OR	1	0	0	0
E & R SEED	MONROE	IN	6	0	0	0
GREEN GARDEN PRODUCTS	NORTON	MA	1	0	0	1
HARRIS SEEDS	ROCHESTER	NY	1	0	0	0
HIGH MOWING ORGANIC SEEDS	WOLCOTT	VT	2	0	0	0
LAKE VALLEY SEED	BOULDER	CO	7	1	0	0
LIVINGSTON SEED COMPANY	NORTON	MA	8	0	2	0
OLDS GARDEN SEED	HALL	NY	16	0	0	1
PLANTATION PRODUCTS LLC	NORTON	MA	26	1	0	2
RENEE'S GARDEN	FELTON	CA	2	0	0	0
RISPENS SEED INC	BEECHER	IL	2	0	0	0
RUPP SEEDS INC	WAUSEON	OH	5	0	0	0
SEEDS OF CHANGE	COMPTON	CA	6	0	0	0
SEEDWAY LLC	HALL	NY	1	0	0	0
THE CHARLES C. HART SEED CO	WETHERSFIELD	CT	1	0	0	0
THE PAGE SEED COMPANY	GREENE	NY	4	0	0	0
WALNUT CREEK SEEDS LLC	CARROLL	OH	1	0	0	0
		Total	176	6	3	4

Agricultural Seeds Wholesale Distributors			Agricultural Seeds			
			CL	SV	TV	MV
1ST CHOICE SEEDS	RUSHVILLE	IN	6	0	0	0
ADVANCED TURF SOLUTIONS	FISHERS	IN	2	1	0	0
ADVANTA US	HEREFORD	TX	2	0	0	0
AG PLUS TURF CENTER	NEW HAVEN	IN	2	1	0	0

Agricultural Seeds Wholesale Distributors			Agricultural Seeds			
			CL	SV	TV	MV
AG PLUS, INC	SOUTH WHITLEY	IN	1	0	0	0
AGRICULTURAL ALUMNI SEED IMPROVEMENT ASSOC, INC	ROMNEY	IN	2	0	0	0
AGRIGOLD	SAINT FRANCISVILLE	IL	6	0	0	0
AGRIMAXX WHEAT COMPANY, LLC	MASCOUTAH	IL	8	0	0	0
AGVENTURE D&M	KENTLAND	IN	6	0	0	0
AGVENTURE, INC	JOHNSTON	IA	14	0	0	0
ANI-LOGICS OUTDOORS, LLC	WORTHINGTON	MN	1	0	0	0
ARKANSAS COUNTY SEED CO INC	FAYETTEVILLE	AR	1	0	0	0
ASGROW SEED CO	CREVE COEUR	MO	38	0	0	0
BAKER SEED LLC	WEST SALEM	IL	5	0	1	1
BARENBRUG USA INC	TANGENT	OR	28	0	1	6
BASF CORPORATION	RESEARCH TRIANGLE PARK	NC	7	0	0	0
BECK'S SUPERIOR HYBRIDS, INC	ATLANTA	IN	44	0	0	0
BENNETT'S GREENHOUSES INC	LAFAYETTE	IN	1	0	0	0
BFG SUPPLY CO	HARRISONBURG	VA	1	0	0	0
BIO-TOWN SEEDS INC	REYNOLDS	IN	4	0	0	0
BIOLOGIC LLC	WEST POINT	MS	1	0	0	0
BONIDE PRODUCTS LLC.	ORISKANY	NY	1	0	0	0
BOSS BUCK	NEW ROADS	LA	1	0	0	0
BOTANICAL INTERESTS, INC	BROOMFIELD	CO	1	0	0	0
BURTCH SEED CO, INC	CELINA	OH	3	0	0	1
BYRON SEEDS, LLC	ROCKVILLE	IN	33	1	4	3
CAUDILL SEED & WAREHOUSE CO, INC	GRANITE	OK	6	0	1	0
CAUDILL SEED COMPANY	MOREHEAD	KY	10	3	0	0
CENTRAL CROP CARE	CRAB ORCHARD	KY	1	0	0	0
CENTRAL FARM SUPPLY OF KY, INC	LOUISVILLE	KY	1	1	0	0
CHANNEL BIO LLC	CREVE COEUR	MO	21	0	0	0
COLUMBIA GRAIN INT. LLC	CLARKSTON	WA	0	0	0	1
CONSERV FS, INC	WOODSTOCK	IL	0	0	0	1
CORTEVA AGRISCIENCE MCS LLC	JOHNSTON	IA	59	0	0	0
COVER CROP PARTNERS LLC	SHIPSHEWANA	IN	1	0	1	1
CROOKHAM COMPANY	CALDWELL	ID	1	0	0	0
CROP TECH SEED COMPANY	VINCENNES	IN	6	0	1	0
DEKALB GENETICS CORP	CREVE COEUR	MO	19	0	0	0
DENZLER SEEDS INC	MILTON	IN	4	0	1	0
DLF	HALSEY	OR	66	3	0	23
EAGLE EYE MARKETING INC	GOLETA	CA	1	0	0	0
EBBERTS FIELD SEEDS INC	COVINGTON	OH	4	0	0	0
EL-PAR SEEDS	VERSAILLES	MO	1	0	0	0
FEDERAL HYBRIDS INC	WEST BEND	IA	2	0	0	0

Agricultural Seeds Wholesale Distributors			Agricultural Seeds			
			CL	SV	TV	MV
FOSTERS INC	EAST PEORIA	IL	4	2	0	2
FRENCH'S HYBRIDS INC	WAKEMAN	OH	0	0	2	0
FRONTIERSMEN INC	KENTLAND	IN	7	0	0	0
GREEN COVER SEED	BLADEN	NE	3	0	1	0
GREENBUSH SEED & SUPPLY INC	HUTCHINSON	KS	1	0	0	0
HOOSIER PRIDE GENETICS, INC	VINCENNES	IN	4	1	0	1
HUBNER SEEDS CO	CREVE COEUR	MO	4	0	0	0
HUNDLEY SEED CO	CHAMPLAIN	VA	0	0	1	0
HURT SEED CO INC	HALLS	TN	1	0	0	0
J.R. SIMPLOT COMPANY	LIBERTY LAKE	WA	4	0	0	0
JONATHAN GREEN & SONS INC	HOWELL	NJ	9	2	0	1
KLETKE HAY & STRAW	BRUNKILD	MB	1	0	0	2
L&M GLICK SEED	COLUMBUS	IN	3	0	0	0
LA CROSSE FORAGE & TURF SEED LLC	ELWOOD	IN	1	0	0	0
LA CROSSE SEED LLC	LA CROSSE	WI	29	0	0	3
LAKEVIEW FARMS	MIDDLETOWN	MO	3	0	1	0
LANDSCAPE SUPPLY, INC	ROANOKE	VA	3	0	0	0
LEABROOK AG LLC	LANCASTER	PA	1	0	0	0
LEBANON SEABOARD CORP	LEBANON	PA	0	0	0	1
LEGG SEEDS LLC	WINDFALL	IN	2	0	0	0
LESCO INC	CLEVELAND	OH	4	0	0	0
LEWIS SEED CO, INC	LOUISVILLE	KY	6	0	1	1
LG SEEDS	ELMWOOD	IL	8	0	0	0
LOVELAND PRODUCTS INC	LOVELAND	CO	41	0	0	2
M.S. TECHNOLOGIES LLC	WEST POINT	IA	6	0	0	0
MARTIN SEEDS COMPANY	WEST LEBANON	IN	2	0	0	0
MCKILLIP SEEDS INC	WABASH	IN	3	0	0	0
MERSCHMAN SEEDS INC	WEST POINT	IA	1	0	0	0
MISSOURI-SOUTHERN SEED CORP	ROLLA	MO	1	0	0	0
MOUNTAIN VIEW SEEDS LTD	SALEM	OR	1	1	0	1
MURPHREE SEED FARM	COLLINSVILLE	AL	1	0	0	0
NEXGRO GENETICS	NAMPA	ID	1	0	0	0
NRG AG SERVICES & SUPPLIES	NEW ROSS	IN	3	0	0	1
NUTECH SEED LLC	AMES	IA	1	0	0	0
OSBORN SEED CO	CULVER	IN	1	0	0	0
PARTNERS BRAND SEED CO. LLC	HOWE	IN	5	0	0	0
PENCE GROUP	LAFAYETTE	IN	2	0	0	0
PENN-PLAX, INC	HAUPPAUGE	NY	1	0	0	0
PENNINGTON SEED CO	LEBANON	OR	1	0	0	0
PENNINGTON SEED INC	GREENFIELD	MO	8	0	0	1
PERFORMANCE SEED	WAITE PARK	MN	3	0	0	0
PETRUS SEED & GRAIN CO INC	HAZEN	AR	1	0	0	0

Agricultural Seeds Wholesale Distributors			Agricultural Seeds			
			CL	SV	TV	MV
PLANTATION PRODUCTS LLC	NORTON	MA	2	0	0	0
PREFERRED ALFALFA GENETICS	STORY CITY	IA	1	0	1	0
PRINCE CORPORATION	MARSHFIELD	WI	3	0	0	0
PRO HARVEST SEEDS INC	ASHKUM	IL	3	0	0	0
PURPLE RIBBON SEEDS INC	MARSHALL	IN	10	0	0	0
RAGAN & MASSEY INC	PONCHATOULA	LA	1	0	0	1
RON MARTIN SEED & SUPPLY LLC	ELKHART	IN	2	0	0	0
ROSE AGRI-SEED INC.	HUBBARD	OR	5	1	0	0
RUPP SEEDS INC	WAUSEON	OH	1	0	0	0
RURAL KING	WAVERLY	OH	2	0	0	0
RURAL KING	MATTOON	IL	17	2	0	0
SADDLE BUTTE AG INC	TANGENT	OR	5	0	1	0
SAUDER FARM COUNTRY	ELKTON	KY	1	0	0	0
SCOTT PET PRODUCTS	ROCKVILLE	IN	1	0	0	1
SEED CONSULTANTS INC	WASHINGTON COURT HOUSE	OH	2	0	0	0
SPECIALTY HYBRIDS	MONTICELLO	IN	3	0	0	0
SPECIALTY HYBRIDS	ST. LOUIS	MO	2	0	0	0
SPECTRUM AG HOLDINGS	KENTLAND	IN	4	0	0	0
STEWART SEED CO	GREENSBURG	IN	16	1	0	0
STINE SEED COMPANY	ADEL	IA	26	2	0	0
STONE SEED CO	CREVE COEUR	MO	6	0	0	0
SUNSTAR HYBRIDS	CULVER	IN	5	0	0	0
SUPERIOR AG RESOURCES CO-OP	HUNTINGBURG	IN	1	1	1	1
SUPERIOR SEED INC	RUSHVILLE	IN	4	0	0	0
SYNGENTA	DOWNERS GROVE	IL	13	0	0	1
SYNGENTA SEEDS LLC	NAMPA	ID	1	0	0	0
TENBARGE SEED	HAUBSTADT	IN	10	0	0	0
THE CISCO COMPANIES	INDIANAPOLIS	IN	28	4	1	5
THE SCOTTS COMPANY	MARYSVILLE	OH	8	0	0	0
TRI-STAR SEED CO., INC.	SPRING HILL	KS	5	0	0	3
TRUGREEN	MEMPHIS	TN	1	0	0	0
TURNER SEED INC	ANTIOCH	TN	29	0	1	3
TURNER SEED INC	ANTIOCH	TN	1	0	0	0
TURNER SEED INC OF KY	WINCHESTER	KY	0	0	0	1
VOID OR MISC SAMPLE OISC	WEST LAFAYETTE	IN	1	0	0	1
WEAVER POPCORN HYBRIDS, LLC	NEW RICHMOND	IN	6	0	0	0
WESTERN EXCELSIOR	EVANSVILLE	IN	2	0	0	0
WINFIELD SOLUTIONS LLC	NAMPA	ID	37	0	0	0
WYATT SEED COMPANY	PETERSBURG	IN	1	0	0	1
WYCKOFF HYBRIDS INC	VALPARAISO	IN	13	0	1	0

Agricultural Seeds Wholesale Distributors			Agricultural Seeds			
			CL	SV	TV	MV
YERKS SEED INC	WOODBURN	IN	0	0	2	0
		Total	882	27	24	71