

SEED GERMINATION AND PURITY ANALYSIS 2019

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Official 332 vegetable, crop and lawn seed samples were collected by inspectors from the Bureau of Regulation and Inspection of the Connecticut Department of Agriculture for testing in 2019. As the official seed testing laboratory, The Connecticut Agricultural Experiment Station performed germination and purity analyses of the seed samples for compliance with the Connecticut Seed Law Regulations and the Federal Seed Act. Seed tests and analyses were conducted by following the Association of Official Seed Analysts (AOSA) Rules for Testing Seeds.

A total of 317 vegetable seed samples were received in 2019. But, only 308 samples were tested for seed germination rates because the other nine samples did not have enough seeds for the test (Table 1). Among the tested vegetable seed samples, three hundred samples passed the germination test, but the other eight samples did not meet their label claims and the Federal standard (Table 1). Summarized by seed sources, all seed samples that were collected from Home Depot, Mackey's, Surplus Unlimited, and Walmart met their label claims, but one or more vegetable seed samples from Holdridge, New England Seed Co., Norwich Agway, and The Chas C Hart Seed Co. failed germination tests (Table 2). Grouped by vegetable species, chicory, chive, lima bean, and parsnip seeds showed lower germination rates compared to the other species (Table 3). Seed samples were examined for prohibited noxious weed seeds and no vegetable samples contained noxious weed contaminants.

In nine crop seed samples that were tested for purity and germination rates, the results of a rye sample from Crop Production Service were not compared to label claims because they were not provided (Table 4). Of the other eight crop samples, all samples passed purity tests with the exception of Perennial Ryegrass and Gulf-Annual Ryegrass from Thompson & Sons Inc. (Table 4). In germination tests, all samples passed tests except all three components in the Hay Mixture 2 Broad Brook from Crop Production Service (Table 4).

A total of six lawn grass seed mix samples were tested for purity and germination rates. Because most lawn seed samples were labeled with several varieties within a species or several species within a genus, purity and germination rates were tested in the combination of a genus and reported as the sums for the purity test and means for the germination test. The results of the tests showed that only the sample URI #2 Mix from Agway passed both purity and germination tests for all ingredients by meeting the label claims or passing the tests within acceptable tolerances, but all other samples had one or more ingredients in seed mixtures did not meet the label claims (Table 5).

Official seed samples were collected by Wayne Nelson at the Connecticut Department of Agriculture. The Seed Law is administered by the Seed Control Official for the Commissioner of the Department of Agriculture.

Table 1. Results of germination rates of vegetable seed samples in comparison to label claims

Plant	Cultivar	Seed Company	Germination (%)	
			Claimed	Found ^z
Basil	Italian Large Leaf	New England Seed Co.	70	77
Basil	Fine Verde	New England Seed Co.	75	72***
Basil	Opal A Foglia Violetta	New England Seed Co.	75	95
Basil	Italian Genovese	Holdridge	70	89
Basil	Sweet	Holdridge	70	97
Basil	Sweet Italian	Norwich Agway	70	14*
Basil	Italian Pesto Basil	Mackey's	70	99
Basil	Aton	Walmart	70	94
Basil	Spicy Globe	Walmart	70	92
Basil	Genovese	Home Depot	70	61***
Basil	Sweet Basil	Norwich Agway	70	99
Basil	Sweet Basil	Surplus Unlimited	70	99
Bean	Bush Blue Lake	New England Seed Co.	75	91
Bean	Cherokee Wax	New England Seed Co.	75	98
Bean	Kentucky Wonder Green	New England Seed Co.	75	99
Bean	Coco Bianco	New England Seed Co.	75	6*
Bean	Cannellini	New England Seed Co.	75	92
Bean	Black Turtle	Walmart	75	98
Bean	Pinto	Walmart	75	N/A**
Bean	French Filet	Walmart	75	76
Bean	Blue Lake	Home Depot	75	N/A**
Bean (Bush)	Golden Butterwax	Norwich Agway	75	95
Bean (Garden)	Bush Blue Lake 274	Norwich Agway	75	99
Bean (Garden)	Roma II	Norwich Agway	75	96
Bean (Garden)	Provider	Norwich Agway	75	90
Bean (Green)	Big Kahuna	Walmart	75	93
Bean (Green)	Burpee's Stringless Green Pod	Walmart	75	99
Beet	Detroit Dark Red	The Chas C Hart Seed Co.	65	94
Beet	Early Wonder	The Chas C Hart Seed Co.	65	95
Beet	Early Wonder G.T.	New England Seed Co.	65	96
Beet	Red Ace F1	New England Seed Co.	65	86
Beet	Chioggia	Holdridge	65	85
Beet	Early Wonder	Holdridge	65	95
Beet	Early Wonder Tall top	Norwich Agway	65	98
Beet	Detroit Dark Red	Norwich Agway	65	88
Beet	Touchstone Gold	Norwich Agway	65	93
Beet	Chioggia Guardsmark	Norwich Agway	65	99
Beet	Detroit Dark Red	Surplus Unlimited	65	93

Beet	Jupiter	Walmart	65	100
Beet	Early Wonder Tall Top	Walmart	65	97
Beets	Da Orto D'egitto	New England Seed Co.	65	89
Beets	Sweet Merlin	Mackey's	65	88
Bok Choy	Bok Choy	Home Depot	75	96
Broccoli	Fall Raab	The Chas C Hart Seed Co.	75	88
Broccoli	Athlete Hybrid	New England Seed Co.	75	96
Broccoli	Waltham 29	New England Seed Co.	75	99
Broccoli	Cima Di Rapa Sessantina Riccia Di Sarno	New England Seed Co.	75	98
Broccoli	Cavolfiore Romanesco Natalino	New England Seed Co.	75	99
Broccoli	Green Sprouting Calabrese	Holdridge	75	83
Broccoli	Calabrese Green Sprouting	Surplus Unlimited	75	92
Broccoli	De Cicco	Walmart	75	95
Broccoli	Early Green	Home Depot	75	94
Broccoli Raab	Rapini	Holdridge	75	95
Brussels sprouts	Long Island	The Chas C Hart Seed Co.	70	98
Brussels sprouts	Long Island Improved	New England Seed Co.	70	99
Brussels sprouts	Long Island Improved	Holdridge	70	93
Brussels sprouts	Catskill	Norwich Agway	70	97
Brussels sprouts	Long Island Improved	Walmart	70	97
Cabbage	Copenhagen	The Chas C Hart Seed Co.	75	98
Cabbage	Danish Ballhead	The Chas C Hart Seed Co.	75	72***
Cabbage	Chinese Cabbage Michihili	The Chas C Hart Seed Co.	75	93
Cabbage	Chieftain	New England Seed Co.	75	93
Cabbage	Golden Acre	New England Seed Co.	75	100
Cabbage	Cavolo Cappuccio Cuor di Bue	New England Seed Co.	75	75
Cabbage	Premium Flat Dutch Late	Holdridge	75	97
Cabbage	All Seasons	Walmart	75	100
Cabbage	Baby Choi	Walmart	75	99
Cabbage	Early Golden Acre	Walmart	75	98
Cantaloupe	Delicious 51	New England Seed Co.	75	82
Cantaloupe	Hale's Best Jumbo	Holdridge	75	98
Carrot	Scarlet Nantes Coreless	The Chas C Hart Seed Co.	55	90
Carrot	Little Finger	The Chas C Hart Seed Co.	55	78
Carrot	Red Core Chantenay	New England Seed Co.	55	89
Carrot	Imperator 58	New England Seed Co.	55	91
Carrot	Danvers 126	Holdridge	55	84
Carrot	Danvers Half Long	Holdridge	55	81
Carrot	Chantenay Red Core	Norwich Agway	55	82
Carrot	Long Imperator	Norwich Agway	55	87
Carrot	Purple Haze	Norwich Agway	55	92

Carrot	Nantes Coreless	Surplus Unlimited	55	86
Carrot	Danvers 126	Walmart	55	89
Cauliflower	Early Snowball	The Chas C Hart Seed Co.	75	84
Cauliflower	Early Snowball	New England Seed Co.	75	93
Cauliflower	Snowball Y	Holdridge	75	97
Cauliflower	Snowball Y	Walmart	75	98
Cauliflower	Snowball X	Walmart	75	91
Celery	Tall Utah	New England Seed Co.	55	72
Celery	Sedano Dorato D'asti	New England Seed Co.	55	80
Celery	Cicoria Puntarelle Di Galatina	New England Seed Co.	55	81
Celery	Utah	Holdridge	55	66
Chicory	Cicoria di Bruxelles	New England Seed Co.	75	5*
Chicory	Radicchio Verona Red	New England Seed Co.	65	90
Chinese greens	Pak Choi	Norwich Agway	75	89
Chives	Chives	New England Seed Co.	50	86
Chives	Chives	Norwich Agway	50	40*
Cilantro	Coriander	New England Seed Co.	70	97
Cilantro	Long Standing	Holdridge	70	93
Cilantro	Coriander	Holdridge	70	86
Cilantro	Coriander	Norwich Agway	70	87
Cilantro	Common	Walmart	70	84
Cilantro	Common	Walmart	70	93
Cilantro	Slow Bolt	Home Depot	70	90
Collards	Georgia	New England Seed Co.	80	89
Corn	Providence	The Chas C Hart Seed Co.	75	58*
Corn	Honey Select	The Chas C Hart Seed Co.	75	85
Corn	Butter and Sugar	New England Seed Co.	75	100
Corn	Early Sunglow	New England Seed Co.	75	98
Corn	Silver Queen	New England Seed Co.	75	99
Corn	Incredible	Norwich Agway	75	99
Corn	Trinity	Norwich Agway	75	99
Corn	Butter & Sugar	Norwich Agway	75	100
Corn	Silver Queen	Norwich Agway	75	96
Corn	Burpee's Triple Crown Hybrid	Walmart	75	96
Corn	Bi-Licious Hybrid	Walmart	75	99
Cucumber	Boston Pickling	New England Seed Co.	80	92
Cucumber	Marketmore 76	New England Seed Co.	80	99
Cucumber	Straight Eight	New England Seed Co.	80	100
Cucumber	Cetriolo Melone Carosello Barese	New England Seed Co.	80	94
Cucumber	Straight Eight	Holdridge	80	98
Cucumber	Wisconsin SMR 58	Norwich Agway	80	96

Cucumber	Marketmore 76	Norwich Agway	80	99
Cucumber	Marketmore 76	Surplus Unlimited	80	96
Cucumber	Straight Eight	Walmart	80	98
Dill	Bill Bouquet	New England Seed Co.	60	89
Dill	Bouquet	Holdridge	60	91
Dill	Mammoth	Norwich Agway	60	83
Dill	Dukat	Norwich Agway	60	86
Dill	Dukat Leafy Dill	Mackey's	60	89
Dill	Dill	Home Depot	60	94
Eggplant	Black Beauty	The Chas C Hart Seed Co.	60	94
Eggplant	Black Beauty	New England Seed Co.	60	97
Eggplant	Melanzana Romanesca	New England Seed Co.	60	36*
Eggplant	Black Beauty	Holdridge	60	85
Endive	Broad Leaf	The Chas C Hart Seed Co.	70	97
Endive	Batavian Full Heart	New England Seed Co.	70	80
Endive	Indivia Riccia Santantuono	New England Seed Co.	70	97
Endive	Green Ruffic	Norwich Agway	70	94
Fennel	Florence	New England Seed Co.	60	92
Fennel	Finocchio Capo Rizzuto	New England Seed Co.	60	87
Kale	Vates Blue Curled	The Chas C Hart Seed Co.	75	81
Kale	Lacinato	New England Seed Co.	75	95
Kale	Vates	New England Seed Co.	75	93
Kale	Dwarf Blue Curled	Holdridge	75	93
Kale	Red Russian	Holdridge	75	97
Kale	Blue Scotch Curled	Holdridge	75	95
Kale	Red Russian	Norwich Agway	75	95
Kale	Blue Scotch	Norwich Agway	75	99
Kale	Lacinato "Dinosaur"	Mackey's	75	N/A**
Kale	Dwarf Blue Curled Vates	Walmart	75	98
Kale	Red Russian	Home Depot	75	N/A**
Kale	Dinosaur	Home Depot	75	N/A**
Kohlrabi	White Vienna	New England Seed Co.	75	99
Kohlrabi	Early White Vienna	Holdridge	75	93
Kohlrabi	Purple Vienna	Norwich Agway	75	93
Kohlrabi	White Vienna	Norwich Agway	75	96
Kohlrabi	Early White Vienna	Walmart	75	98
Leek	American Flag	The Chas C Hart Seed Co.	60	94
Leek	American Broad flag	New England Seed Co.	60	83
Leek	King Richard	Holdridge	60	51***
Leek	American flag	Holdridge	60	93
Leek	Striesen	Mackey's	60	92

Lettuce	Bibb	The Chas C Hart Seed Co.	80	99
Lettuce	Oakleaf	The Chas C Hart Seed Co.	80	78**
Lettuce	Iceberg	The Chas C Hart Seed Co.	80	99
Lettuce	Merveille des Quartes Seasons	The Chas C Hart Seed Co.	80	96
Lettuce	Black Seeded Simpson	New England Seed Co.	80	99
Lettuce	Cavolo Di Napoli	New England Seed Co.	80	91
Lettuce	Quattro Stagioni	New England Seed Co.	80	5*
Lettuce	Black Seeded Simpson	Holdridge	80	82
Lettuce	Marvel of Four Seasons	Holdridge	80	98
Lettuce	Buttercrunch	Holdridge	80	94
Lettuce	Parris Island Romaine	Holdridge	80	81
Lettuce	Simpson Elite	Holdridge	80	98
Lettuce	Black Seeded Simpson	Norwich Agway	80	98
Lettuce	Summer Bibb	Norwich Agway	80	92
Lettuce	Black Seeded Simpson	Norwich Agway	80	96
Lettuce	Buttercrunch	Surplus Unlimited	80	98
Lettuce	Parris Island Cos	Surplus Unlimited	80	91
Lettuce	Rhapsody	Mackey's	80	92
Lettuce	Sea of Red	Mackey's	80	98
Lettuce	Burpee Bibb	Walmart	80	98
Lettuce	Black Seeded Simpson	Walmart	80	98
Lettuce	Red Salad Bowl	Walmart	80	97
Lettuce	Parris Island Cos	Walmart	80	98
Lettuce	Emerald Oak	Home Depot	80	98
Lettuce	Green Romaine	Home Depot	80	80
Lima Bean	Jackson Wonder	New England Seed Co.	70	16*
Mustard	Florida Broad Leaf	New England Seed Co.	75	99
Mustard	Tendergreen	Walmart	75	98
Mustard	Spinach Tender green	Walmart	75	N/A**
Mustard	Green Wave	Home Depot	75	87
Onion	Sweet Spanish	New England Seed Co.	70	93
Onion	White Bunching	New England Seed Co.	70	96
Onion	Cipolla Tropeana Lunga	New England Seed Co.	70	77
Onion	Evergreen Bunching	Holdridge	70	64***
Onion - Scallion	White Lisbon	Holdridge	70	96
Onion - Scallion	Sprint	Mackey's	70	89
Onions	Golden Sweet Spanish	Mackey's	70	93
Onion	Yellow Spanish	Home Depot	70	95
Onion	White Lisbon Bunching	Norwich Agway	70	8*
Onion	Walla Walla	Walmart	70	86
Onion	Granex Hybrid	Walmart	70	81

Onion	Sweet Spanish Utah Strain	Walmart	70	83
Oregano	Oregano	Walmart	60	74
Parsley	Moss Curled	New England Seed Co.	60	87
Parsley	Prezzemolo Gigante	New England Seed Co.	60	78
Parsley	Flat Leaf	Holdridge	60	95
Parsley	Italian Giant	Norwich Agway	60	86
Parsley	Sweet Curly Parsley	Mackey's	60	88
Parsley	Italian Dark Green	Walmart	60	97
Parsley	Gigante D' Italia	Walmart	60	89
Parsley	Italian Flat Leaf	Walmart	60	86
Parsley	Italian Flat Leaf	Home Depot	60	81
Parsnip	All American	New England Seed Co.	60	89
Parsnip	Turga	Holdridge	60	89
Parsnip	Hollow Crown	Holdridge	60	8*
Pea	Sugar Snap	Walmart	80	93
Pea	Burpeeana Early	Walmart	80	97
Peas	Lincoln	New England Seed Co.	80	96
Peas	Progress #9	Norwich Agway	80	95
Peas	Mr. Big	Norwich Agway	80	81
Peas	Sugar Sprint	Norwich Agway	80	99
Peas (Snow)	Dwarf Grey Sugar	New England Seed Co.	80	100
Pepper	Early Jalapeno	New England Seed Co.	55	59
Pepper	Cubanelle Sweet Fryer	New England Seed Co.	55	93
Pepper	Red Cherry Hot	New England Seed Co.	55	91
Pepper	Peperone Giapponese	New England Seed Co.	55	68
Pepper	California Wonder	Holdridge	55	93
Pepper	California Wonder	Norwich Agway	55	94
Pepper	Cal Wonder Red	Home Depot	55	N/A**
Pepper	Shishito	Home Depot	55	89
Pepper	Jalapeno Early	Walmart	55	93
Pumpkin	Dill's Atlantic Giant	New England Seed Co.	75	65***
Pumpkin	Jack BE Little	New England Seed Co.	75	86
Pumpkin	Wee – B – Little	New England Seed Co.	75	88
Pumpkin	Silver Moon	New England Seed Co.	75	90
Radish	Champion	The Chas C Hart Seed Co.	75	98
Radish	Red Arrow Pink Daikon	The Chas C Hart Seed Co.	75	99
Radish	French Breakfast	The Chas C Hart Seed Co.	75	99
Radish	Cherry Belle	New England Seed Co.	75	98
Radish	White Icicle	New England Seed Co.	75	99
Radish	French Breakfast	New England Seed Co.	75	99
Radish	Cherry Belle	Holdridge	75	95

Radish	French Breakfast	Holdridge	75	99
Radish	Cherry Belle	Norwich Agway	75	99
Radish	Champion	Norwich Agway	75	97
Radish	Early Scarlet Globe	Surplus Unlimited	75	99
Radish	Crimson Crunch	Mackey's	75	100
Radish	Watermelon	Mackey's	75	98
Radish	French Dressing	Walmart	75	100
Radish	Burpee White	Walmart	75	97
Radish	Black Spanish	Walmart	75	98
Radish	Cherry	Home Depot	75	99
Rosemary	Rosemary	New England Seed Co.	30	N/A**
Rosemary	Rosemary	New England Seed Co.	30	70
Rosemary	Rosemary	Holdridge	30	N/A**
Rutabaga	Improved Purple Top Yellow	New England Seed Co.	75	99
Rutabaga	American Purple Top	Norwich Agway	75	98
Sage	Broadleaf	New England Seed Co.	60	82
Sage	Sage	New England Seed Co.	60	100
Sage	Italian Aromatic Sage	Mackey's	60	77
Spinach	Bloomsdale	The Chas C Hart Seed Co.	60	93
Spinach	Bloomsdale Savoy	New England Seed Co.	60	99
Spinach	New Zealand	New England Seed Co.	60	72
Spinach	Bietola Verde Da Taglio	New England Seed Co.	75	97
Spinach	Bloomsdale	Holdridge	60	95
Spinach	Bloomsdale Long Standing	Holdridge	60	83
Spinach	Bloomsdale Long Standing	Norwich Agway	60	98
Spinach	Winter Bloomsdale	Norwich Agway	60	94
Spinach	Bloomsdale Long Standing	Surplus Unlimited	60	94
Spinach	Bloomsdale Long Standing	Walmart	60	94
Spinach	Butterfly	Home Depot	60	98
Squash	Blue Hubbard	The Chas C Hart Seed Co.	75	94
Squash	Summer Crookneck	The Chas C Hart Seed Co.	75	86
Squash	Angel Hair HYB	New England Seed Co.	75	99
Squash	San Pasquale	New England Seed Co.	75	92
Squash	Di Faenza	New England Seed Co.	75	47*
Squash	Summer Crookneck Early	Holdridge	60	98
Squash	Zucchini Dark	Holdridge	75	82
Squash	Daisy Mae HYB	New England Seed Co.	75	94
Squash (Winter)	Festival HYB	New England Seed Co.	75	95
Squash (Winter)	Turks Turban	New England Seed Co.	75	70***
Swish chard	Fordhook Giant	Holdridge	65	99
Swish chard	Fordhook Giant	Holdridge	65	99

Swish chard	Ruby Red	Norwich Agway	65	65
Swish chard	Fordhook Giant	Walmart	65	97
Thyme	English	Holdridge	50	78
Thyme	Thyme	Norwich Agway	50	73
Thyme	Thyme	Norwich Agway	50	89
Tomatillo	Morada	Walmart	75	89
Tomato	Amish Paste	The Chas C Hart Seed Co.	75	99
Tomato	Brandy Wine	The Chas C Hart Seed Co.	75	99
Tomato	Container Choice	The Chas C Hart Seed Co.	75	99
Tomato	Sweet 100	The Chas C Hart Seed Co.	75	90
Tomato	San Marzano Roma	The Chas C Hart Seed Co.	75	98
Tomato	Brandywine Yellow	New England Seed Co.	75	90
Tomato	Arkansas Traveler	New England Seed Co.	75	83
Tomato	Better Boy VFN HYB	New England Seed Co.	75	99
Tomato	Aunt Ruby's German Green	New England Seed Co.	75	94
Tomato	S. Marzano	New England Seed Co.	75	92
Tomato	S. Marzano 2	New England Seed Co.	75	99
Tomato	Rio Grande	New England Seed Co.	75	79
Tomato	Crimson Cushion Beefsteak	Holdridge	75	97
Tomato	Roma	Holdridge	75	93
Tomato	Red Cherry Large Fruited	Norwich Agway	75	98
Tomato	Cherry	Surplus Unlimited	75	99
Tomato	Roma	Walmart	75	93
Turnip	Purple Top White Globe	Holdridge	80	92
Turnip	Purple Top White Globe	Norwich Agway	80	92
Turnip	Seven Top	Surplus Unlimited	80	98
Turnip	Mikado	Mackey's	80	97
Turnip	Purple-Top White Globe	Walmart	80	95
Watermelon	Moon Stars	The Chas C Hart Seed Co.	70	61***
Watermelon	Sugar Baby	The Chas C Hart Seed Co.	70	86
Watermelon	Crimson Sweet	New England Seed Co.	70	91
Watermelon	Florida Giant	New England Seed Co.	70	90
Watermelon	Black Diamond	New England Seed Co.	70	89

^z *: did not meet the label claim;

**: did not have enough seed for the germination test;

***: did not meet the claim, but passed the test within the acceptable tolerance.

Table 2. Results of percent vegetable seed samples that met label claims of germination rates by seed source

Seed Source	Number of Tested Samples	Samples Meeting Label Claims (%)
Holdridge	47	98
Home Depot	13	100
Mackey's	13	100
New England Seed Co.	96	97
Norwich Agway	49	96
Surplus Unlimited	11	100
The Chas C Hart Seed Co.	33	97
Walmart	46	100

Table 3. Results of average seed germination rates by vegetable crops and percentages of samples that met the label claims

Plant	Number of Tested Samples	Germination (%)		Samples Meeting the Label Claim (%)
		Label Claim	Average Found	
Basil	12	70	82	92
Bean	13	75	87	92
Bean (Lima)	1	70	16	0
Beet	15	65	93	100
Bok choy	1	75	96	100
Broccoli	10	75	94	100
Brussels sprouts	5	70	97	100
Cabbage	10	75	93	100
Cantaloupe	2	75	90	100
Carrot	11	55	86	100
Cauliflower	5	75	93	100
Celery	4	55	75	100
Chicory	2	65	47	50
Chinese green	1	75	89	100
Chives	2	85	63	50
Cilantro	7	70	90	100
Collards	1	80	89	100
Corn	11	75	94	91
Cucumber	9	80	97	100
Dill	6	60	89	100
Eggplant	4	60	78	75
Endive	4	70	92	100
Fennel	2	60	89	100
Kale	9	75	94	100
Kohlrabi	5	75	96	100
Leek	5	60	83	100
Lettuce	25	80	90	96
Mustard	3	75	95	100
Onion	12	70	80	92
Oregano	1	60	74	100
Parsley	9	60	87	100
Parsnip	3	60	62	67
Peas	7	80	94	100
Pepper	8	55	85	100
Pumpkin	4	75	82	100
Radish	17	75	98	100
Rosemary	1	30	70	100

Rutabaga	2	75	98	100
Sage	3	60	86	100
Spinach	11	60	92	100
Squash	10	60	86	88
Swish chard	4	65	90	100
Thyme	3	50	80	100
Tomatillo	1	75	89	100
Tomato	17	75	94	100
Turnip	5	80	95	100
Watermelon	5	70	83	100
Basil	12	70	82	92
Bean	13	75	87	92

Table 4. Results of purity and germination rates of crop samples in comparison to the label claims

Seed Source	Seed Sample and Ingredient	Purity (%)		Germination (%)	
		Claim	Found ^z	Claim	Found ^z
Agway	Winter Rye Winter rye	96.1	97.6	85	90
V-Town Ag Supply	Rye Rye	99.2	99.1	94	99
Crop Production Service	Rye Rye	N/A	98.1	N/A	92
Crop Production Service	Rye Rye	99.0	99.5	85	94
Crop Production Service	Hay Mixture 2 Broad Brook				
	Laura meadow fescue	36.11	34.98**	90	72*
	Fleet meadow brome	35.60	35.96	90	42*
	Lyra orchardgrass	24.09	25.45	85	73*
Holdridge	Buckwheat VNS Buckwheat	99.0	99.3	90	84**
Thompson & Sons Inc	Rye Seed Rye	99.0	99.7	94	94
Thompson & Sons Inc	Perennial Ryegrass VNS perennial ryegrass	97.43	94.06*	90	97
Thompson & Sons Inc	Gulf-Annual Ryegrass Gulf-annual ryegrass	99.71	86.68*	90	99

^z: * fail to meet the claim;

** did not meet claim, but passed the test within acceptable tolerance.

Table 5. Results of purity and germination rates of lawn seed samples in comparison to the label claims

Sample Source	Seed Mixture Sample	Purity (%)		Germination (%)	
		Claim	Found ^z	Claim	Found ^z
Agway	URI #2 Mix				
	Camas Kentucky bluegrass	19.69	40.83	85	84
	Bluegrass –VNS	12.89		80	
	ASP 6001 perennial ryegrass	19.57	19.42**	90	94
	Creeping red fescue	39.21	36.33**	85	91
Agway	Wear Green Mix				
	Kentucky bluegrass – VNS	4.92	4.85**	85	94
	ASPO112 perennial ryegrass	9.61	5.96*	90	91
	AST 1001 tall fescue	39.31			
	AST 7003 tall fescue	24.54	85.44	85	96
	Inferno tall fescue	19.90			
Crop Production Service	Trio Mixture				
	Kenblue Kentucky bluegrass	32.58	30.26**	85	91
	Paragon GLR perennial ryegrass	11.91			
	Aspire perennial ryegrass	10.90	33.77		93
	Green supreme perennial ryegrass	10.81		90	
	Boreal creeping red fescue	32.24	32.24	85	72*
Holdridge	Holdridge Shady Lawn Seed Mixture				
	Deschutes perennial ryegrass	19.75	19.27**	90	88**
	Rogue intermediate ryegrass	19.67	14.82*	90	88**
	Creeping red fescue VNS	29.26		85	
	Chewing fescue VNS	19.65	63.09	85	92
	Epic creeping red fescue	9.81		85	
Thompson & Sons Inc	Blue Seal Early Green Lawn Mixture				
	VNS Kentucky bluegrass	13.90	12.29**	80	74**
	VNS perennial ryegrass	49.22	51.29	90	95
	Annual ryegrass	9.98	7.04**	98	95**
	Maxima 1 creeping red fescue	24.54	26.46	85	36*
Thompson & Sons Inc	Shady Area Lawn Seed Mixture				
	Rugby 11 Kentucky bluegrass	4.97	16.28*	90	92
	<i>Poa trivialis</i>	14.91		90	
	Creeping red fescue	34.47	56.98	85	72*
	Chewings fescue	19.93		89	
	Gator 2 perennial ryegrass	24.74	24.61**	90	92

^z: *: did not meet the label claim;

** : did not meet the claim, but passed the test within the acceptable tolerance