

Seed Germination and Purity Analysis

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Official 321 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 2018. 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.

Among 306 vegetable samples, eight samples were not tested for seed germination rates because there were not enough seeds in the samples (Table 1). The results of the test for the rest of vegetable seed samples showed that 283 samples passed the germination test, but the other 15 samples did not meet their label claims and the Federal standard, in which, eight samples did not have enough seed for retesting (Table 1). Summarized by seed sources, one or more vegetable seed samples from all seed companies failed germination tests except the seed samples from Seedway LLC and The Page Seed Co. (Table 2). Grouped by vegetable species, chive, lima bean, and parsnip seeds showed poor 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.

All night crop seed samples were tested for purity and germination rates except the Australian Winter peas in the Plotspike Forage Feast sample and Daikon radish in the Soil Builder Plus Mix sample were not included in the germination test because they did not have enough seed for the test (Table 4). In purity tests, Oat LA 99016 and Australian Winter peas in the Plotspike Forage Feast sample and VNS Hairy Vetch in the Soil Builder Plus Mix sample did not meet the label claims (Table 4). The other samples met purity label claims or passed the tests within acceptable tolerances (Table 4). VNS Hairy vetch in the Soil Builder Plus Mix and the rye sample from Robert Mosher Transport Inc. failed seed germination tests (Table 4). All other samples passed the germination test except the two samples that had not enough seed for the test. No noxious weed seeds were found in the crop seed samples.

A total of six lawn grass seed and 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 three seed or seed mix samples passed both purity and germination tests by meeting the label claims or passing the tests within acceptable tolerances, but the other samples had one or more ingredients did not meet the label claims (Table 5). In the Agway Conservation Green Mixture, all ingredients met the label claims with the exception of white clover that did not meet the germination label claim (Table 5). In the Blue Seal Early Green Lawn Mixture, the purity of the VNS perennial ryegrass did not meet the label claim (Table 5). In the Blue Seal Shady Lawn Mixture sample, Gator 3 perennial ryegrass did not meet the purity claim and bluegrass and Chewings fescue did not meet the germination claims (Table 5). In the Blue Seal Classic Lawn Mixture, creeping red fescue did not meet the label claim (Table 5).

Official seed samples were collected by Wayne Nelson and Kate Ciarletta 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
Basil	Genovese	Seeds of Change	70	69****
Basil	Genovese Italian	Plantation Products LLC	70	63****
Basil	Italian Genovese	The Chas. C. Hart Seed Co	70	88
Basil	Italian Herb Leaf	New England Seed Co.	70	99
Basil	Italian Large Leaf	New England Seed Co.	70	76
Basil	Italian Pesto	Renee's Garden	70	95
Basil	Sweet	Ferry Morse-Plantation Products LLC	70	95
Basil	Sweet (<i>Ocimum basilicum</i>)	Burpee Garden Products Co.	70	98
Beans	Blue Lake	Ferry Morse-Plantation Products LLC	75	82
Beans	Borlotto Lingua di Fuoco	New England Seed Co.	75	N/A***
Beans	Bush Blue Cake	New England Seed Co.	75	80
Beans	Cherokee Wax	Ferry Morse-Plantation Products LLC	75	53**
Beans	Coco Bianco	New England Seed Co.	75	5**
Beans	French Horticultural	The Chas. C. Hart Seed Co	75	63**
Beans	Golden Wax Improved	New England Seed Co.	70	87
Beans	Kentucky Wonder	The Chas. C. Hart Seed Co	75	75
Beans	Kentucky Wonderland	New England Seed Co.	75	80
Beans	Royal Burgundy	New England Seed Co.	70	91
Beans	Royalty Purple Pod	Seedway LLC	75	86
Beans	Tender Green	Burpee Garden Products Co.	75	91
Beet	Chioggia	New England Seed Co.	65	72
Beet	Chioggia Guardsmen	Seedway LLC	65	95
Beet	Cylindra	New England Seed Co.	65	93
Beet	Detroit Dark Red	New England Seed Co.	65	97
Beet	Detroit Dark Red	The Page Seed Co.	65	93
Beet	Detroit Dark Red, Medium Top	Burpee Garden Products Co.	65	99
Beet	Early Wonder	Plantation Products LLC	65	89
Beet	Red Ace Hybrid	The Chas. C. Hart Seed Co	65	91
Beet	Early Wonder Tall Top	Ferry Morse-Plantation Products LLC	65	77
Beet	Touchstone Gold	Seedway LLC	65	72
Broccoli	Calabrese Green Sprouting	The Chas. C. Hart Seed Co	75	95
Broccoli	De Cicco	Ferry Morse-Plantation Products LLC	75	93
Broccoli	Di Cicco	Botanical Interests INC.	75	93
Broccoli	Early Green	Seeds of Change	75	92
Broccoli	Green Sprouting	The Page Seed Co.	75	92
Broccoli	Green Sprouting Calabrese	Plantation Products LLC	75	74
Broccoli	Raab Heirloom/Super Rapini	Renee's Garden	75	97

Broccoli	Riccio Di Sarno	New England Seed Co.	75	91
Broccoli	Sun King Hybrid	Burpee Garden Products Co.	75	85
Broccoli	Waltham 29	New England Seed Co.	75	99
Brussels sprouts	Catskill	Seedway LLC	70	98
Brussels sprouts	Catskill	Ferry Morse-Plantation Products LLC	70	98
Brussels sprouts	Long Island Improved	The Chas. C. Hart Seed Co	70	99
Brussels sprouts	Long Island Improved	New England Seed Co.	70	95
Brussels sprouts	Long Island Improved	Plantation Products LLC	70	92
Brussels sprouts	Oven Roaster	Burpee Garden Products Co.	70	N/A***
Cabbage	Cappuccio Cuar di Bue	New England Seed Co.	75	71****
Cabbage	Chieftain	New England Seed Co.	75	95
Cabbage	Chinese Bok Choi	The Chas. C. Hart Seed Co	75	100
Cabbage	Copenhagen	The Chas. C. Hart Seed Co	75	98
Cabbage	Copenhagen Market Early	Ferry Morse-Plantation Products LLC	75	94
Cabbage	Danish Ball Head	New England Seed Co.	75	85
Cabbage	Di Napoli Tardivo	New England Seed Co.	75	73****
Cabbage	Early Jersey Wakefield	The Chas. C. Hart Seed Co	75	91
Cabbage	Premium Flat Dutch Late	Plantation Products LLC	75	97
Cabbage	Red Acre	Seeds of Change	75	N/A****
Cabbage	Salad Delight	Burpee Garden Products Co.	75	82
Cabbage	Stone Head	Seedway LLC	75	97
Cantaloupe	Delicious 51	New England Seed Co.	75	80
Cantaloupe	Hale's Best Jumbo	Ferry Morse-Plantation Products LLC	75	85
Cantaloupe	Hearts of Gold	Burpee Garden Products Co.	75	91
Cantaloupe	Hale's Best	New England Seed Co.	75	95
Cantaloupe	Honey Rock	Plantation Products LLC	75	94
Carrot	Burpee A#1 Hybrid	Burpee Garden Products Co.	55	53****
Carrot	Chantenay Red Core	Seedway LLC	55	89
Carrot	Coreless Nantes	New England Seed Co.	55	83
Carrot	Danvers 126	Seedway LLC	55	94
Carrot	Danvers Half Long	New England Seed Co.	55	90
Carrot	Garden Blend	Seeds of Change	55	74
Carrot	Imperator	Plantation Products LLC	55	80
Carrot	Long Sweet/King Midas	Renee's Garden	55	93
Carrot	Rainbow	The Chas. C. Hart Seed Co	55	81
Carrot	Tendersweet	Ferry Morse-Plantation Products LLC	55	84
Cauliflower	Early Snowball	The Chas. C. Hart Seed Co	75	86
Cauliflower	Early Snowball	New England Seed Co.	75	92
Cauliflower	Romanesco Natalino	New England Seed Co.	75	99
Cauliflower	Snowball	Seeds of Change	75	94

Cauliflower	Snowball X	Ferry Morse-Plantation Products LLC	75	95
Celery	Dorato D'Asti	New England Seed Co.	55	87
Celery	Tall Utah	New England Seed Co.	55	86
Celery	Utah	Botanical Interests INC.	55	85
Celery	Utah	Seeds of Change	55	N/A***
Chervil	N/A	The Chas. C. Hart Seed Co	65	59****
Chicory	Radicchio Verona Red	New England Seed Co.	65	94
Chicory	Red Radicchio	The Chas. C. Hart Seed Co	65	82
Chives	Garlic	The Chas. C. Hart Seed Co	50	3*
Cilantro	Coriander	New England Seed Co.	70	86
Cilantro	<i>Coriandrum sativum</i>	Burpee Garden Products Co.	70	43*
Cilantro	Slow Bolt	Seeds of Change	70	82
Collards	Georgia	Burpee Garden Products Co.	80	96
Collards	Georgia	New England Seed Co.	80	96
Collards	Georgia Green	The Chas. C. Hart Seed Co	80	97
Collards	Georgia Southern or Creole	Ferry Morse-Plantation Products LLC	80	96
Collards	N/A	Seeds of Change	80	93
Corn	Golden Cross	The Chas. C. Hart Seed Co	75	100
Corn	Honey Select	The Chas. C. Hart Seed Co	75	99
Corn	Silver Queen	The Chas. C. Hart Seed Co	75	39*
Corn, Sweet	Bi-Licious Hybrid	Burpee Garden Products Co.	75	99
Cucumber	Boston Pickling	The Chas. C. Hart Seed Co	80	86
Cucumber	Long Green	The Chas. C. Hart Seed Co	80	92
Cucumber	Marketmore 76	New England Seed Co.	80	90
Cucumber	Marketmore 76	The Page Seed Co.	80	96
Cucumber	Marketmore 76	The Chas. C. Hart Seed Co	80	89
Cucumber	Marketmore 76	New England Seed Co.	80	88
Cucumber	Cetriolo Melone Tortarello	New England Seed Co.	80	96
Cucumber	Muncher	Plantation Products LLC	80	95
Cucumber	Straight 8	Seedway LLC	80	96
Cucumber	Straight 8	Ferry Morse-Plantation Products LLC	80	95
Cucumber	Tortarello Verde Scuro	New England Seed Co.	80	88
Dandelion	Cicoria Italian	The Chas. C. Hart Seed Co	60	89
Dill	Bouquet	The Chas. C. Hart Seed Co	60	87
Dill	Bouquet	Botanical Interests INC.	60	89
Dill	Bouquet	Ferry Morse-Plantation Products LLC	60	87
Dill	Dukat	Seedway LLC	60	86
Dill	Dukat	Burpee Garden Products Co.	60	89
Dill	Dukat Leafy	Renee's Garden	60	90
Dill	Mammoth	Plantation Products LLC	60	76

Dill	Mammoth	Seedway LLC	60	77
Dill	Mammoth Long Island	The Page Seed Co.	60	83
Eggplant	Black Beauty	The Chas. C. Hart Seed Co	60	84
Eggplant	Black Beauty	New England Seed Co.	60	92
Eggplant	Black Beauty	Plantation Products LLC	60	57****
Eggplant	Romanesca	New England Seed Co.	60	87
Endive	Escarole Broad Leaf	The Chas. C. Hart Seed Co	70	95
Endive	Full Heart	Seedway LLC	70	93
Endive	Green Curled	Burpee Garden Products Co.	70	87
Endive	Salad King	New England Seed Co.	70	88
Endive	Santantuono	New England Seed Co.	70	95
Fennel	Capo Rizzuto	New England Seed Co.	60	69
Fennel	Florence	New England Seed Co.	60	85
Fennel	N/A	The Chas. C. Hart Seed Co	60	73
Kale	Blue Scotch	Seedway LLC	75	95
Kale	Blue Scotch Curled	Plantation Products LLC	75	94
Kale	Dinosaur	Seeds of Change	75	97
Kale	Dwarf Blue Curled, Vates	Burpee Garden Products Co.	75	96
Kale	Dwarf Blue Curled, Vates' Strain	Ferry Morse-Plantation Products LLC	75	99
Kale	Heirloom Italian/Tuscan Baby Leaf	Renee's Garden	75	95
Kale	Lacinato	New England Seed Co.	75	85
Kale	Lacinato	New England Seed Co.	75	23*
Kale	Red Russian	The Chas. C. Hart Seed Co	75	98
Kale	Red Russian	Seedway LLC	75	92
Kale	Red Russian	Seeds of Change	75	92
Kale	Red Winter	Botanical Interests INC.	75	95
Kohlrabi	Early White Vienna	Plantation Products LLC	75	89
Kohlrabi	Purple Vienna	Seedway LLC	75	96
Kohlrabi	White Vienna	The Chas. C. Hart Seed Co	75	91
Kohlrabi	White Vienna	New England Seed Co.	75	95
Kohlrabi	White Vienna	Seedway LLC	75	95
Leek	American Broad Flag	New England Seed Co.	60	10**
Leek	American Flag	The Chas. C. Hart Seed Co	60	96
Leek	American Flag	Ferry Morse-Plantation Products LLC	60	N/A***
Leek	American Flag	Plantation Products LLC	60	85
Lettuce	Big Boston	New England Seed Co.	80	99
Lettuce	Black Seeded Simpson	Seedway LLC	80	99
Lettuce	Black Seeded Simpson	Ferry Morse-Plantation Products LLC	80	94
Lettuce	Black Seeded Simpson	Burpee Garden Products Co.	80	99
Lettuce	Black Seeded Simpson	New England Seed Co.	80	98

Lettuce	Black Seeded Simpson	Plantation Products LLC	80	91
Lettuce	Butter Crunch	New England Seed Co.	80	95
Lettuce	Butter Crunch	The Page Seed Co.	80	98
Lettuce	Cavolo di Napoli	New England Seed Co.	80	76****
Lettuce	Concept	Seeds of Change	80	97
Lettuce	Crisphead/Queen of Crunch	Renee's Garden	80	97
Lettuce	Green Romaine	Seeds of Change	80	96
Lettuce	Iceberg	The Chas. C. Hart Seed Co	80	98
Lettuce	Iceberg	Ferry Morse-Plantation Products LLC	80	99
Lettuce	Marvel of Four Seasons	Botanical Interests INC.	80	91
Lettuce	Oakleaf	The Chas. C. Hart Seed Co	80	87
Lettuce	Oakleaf	Seedway LLC	80	97
Lettuce	Parris Island Cos	New England Seed Co.	80	98
Lettuce	Parris Island Romaine	Plantation Products LLC	80	92
Lettuce	Prizehead	Seedway LLC	80	98
Lettuce	Red Velvet	Burpee Garden Products Co.	80	23*
Lettuce	Romana Lentissima a Montare 3	New England Seed Co.	80	96
Lettuce	Rouge d'Hiver	Botanical Interests INC.	80	95
Lettuce	Salad Bowl	New England Seed Co.	80	98
Lettuce	Summer Bibb	Seedway LLC	80	100
Lettuce	Waldmann's Dark Green	Seeds of Change	80	100
Lima Bean	Henderson	The Chas. C. Hart Seed Co	70	16*
Lima Bean	Jackson Wonder	New England Seed Co.	70	13**
Marjoram	Sweet	The Chas. C. Hart Seed Co	50	66
Marjoram	Sweet	New England Seed Co.	50	73
Mustard	Southern Giant Curled	The Chas. C. Hart Seed Co	75	96
Mustard	Tender Green	Burpee Garden Products Co.	75	98
Mustard	Green Wave (Spinach)	New England Seed Co.	75	92
Okra	Emerald	The Chas. C. Hart Seed Co	50	57
Okra	Red Burgundy	New England Seed Co.	50	47****
Onion	Evergreen Bunching	Plantation Products LLC	70	27*
Onion	Heirloom Salad/Italian Scallion	Renee's Garden	70	62****
Onion	Sweet Spanish	New England Seed Co.	70	94
Onion	Sweet Spanish	Seedway LLC	70	92
Onion	Texas Grano 502	Ferry Morse-Plantation Products LLC	70	2**
Onion	White Bunching	New England Seed Co.	70	98
Onion	White Lisbon	Botanical Interests INC.	70	92
Onion	White Portugal	The Chas. C. Hart Seed Co	70	89
Onion	Yellow Spanish	The Chas. C. Hart Seed Co	70	76
Onion	Flavor King (Bunching)	Burpee Garden Products Co.	70	90

Oregano	Halion	New England Seed Co.	60	53****
Pakchoi	Baby/Green Fortune	Renee's Garden	75	99
Pakchoi	Chinese Greens	Seedway LLC	75	98
Pakchoi	Pechay	Burpee Garden Products Co.	75	96
Parsley	Extra Triple Curled	Ferry Morse-Plantation Products LLC	60	54****
Parsley	Big Italy	Burpee Garden Products Co.	60	81
Parsley	Dark Green Italian	The Page Seed Co.	60	86
Parsley	Gigante	New England Seed Co.	60	96
Parsley	Italian Dark Green Flat	Botanical Interests INC.	70	91
Parsley	Italian Giant	Seedway LLC	60	83
Parsley	Italian Plain Leaf	Seedway LLC	60	90
Parsley	Mass Curled	The Chas. C. Hart Seed Co	60	82
Parsley	Moss Curled	New England Seed Co.	60	81
Parsley	Sweet Curly	Renee's Garden	60	81
Parsley	Triple Curled	Plantation Products LLC	60	84
Parsnip	English/Gladiator	Renee's Garden	60	N/A ****
Parsnip	Hollow Crown	The Chas. C. Hart Seed Co	60	60
Parsnip	Hollow Crown	Plantation Products LLC	60	26**
Peas	Dwarf Gray Sugar	The Chas. C. Hart Seed Co	80	100
Peas	Early Frosty	The Chas. C. Hart Seed Co	80	97
Peas	Laxton's Progress 20"	New England Seed Co.	80	93
Peas	Oregon Sugar Pod II	New England Seed Co.	80	96
Peas	Progress #9	Burpee Garden Products Co.	80	94
Peas	Sugar Daddy	Burpee Garden Products Co.	80	96
Peas	Sugar Daddy 24"	New England Seed Co.	80	84
Pepper	Caloundra	New England Seed Co.	55	81
Pepper	Cillegia Piccante	New England Seed Co.	55	95
Pepper	Jalapeno	The Chas. C. Hart Seed Co	55	94
Pepper	Long Red Cayenne	New England Seed Co.	55	95
Pepper	Nocera Giallo	New England Seed Co.	55	56
Pepper	Sweet Banana	The Chas. C. Hart Seed Co	55	85
Pepper	Sweet Banana	New England Seed Co.	55	81
Pumpkin	Big Max	The Chas. C. Hart Seed Co	75	72****
Pumpkin	CT Field	The Chas. C. Hart Seed Co	75	90
Pumpkin	Mr. Wrinkles HYB	New England Seed Co.	75	99
Pumpkin	Rouge Vif d'Etampes	New England Seed Co.	75	98
Pumpkin	Small Sugar	The Chas. C. Hart Seed Co	75	98
Pumpkin	Small Sugar	New England Seed Co.	75	98
Pumpkin	Stella Lina HYB	New England Seed Co.	75	100
Radish	1/2 Lungo Rosso P.B	New England Seed Co.	75	99

Radish	Champion	The Page Seed Co.	75	97
Radish	Cherry Belle	New England Seed Co.	75	98
Radish	Cherry Belle	Botanical Interests INC.	75	96
Radish	Chinese White Winter	Seedway LLC	75	100
Radish	Early Scarlet Globe	The Chas. C. Hart Seed Co	75	97
Radish	Early Scarlet Globe	The Page Seed Co.	75	99
Radish	French Breakfast	New England Seed Co.	75	99
Radish	French Breakfast	Plantation Products LLC	75	100
Radish	German Giant	Seedway LLC	75	95
Radish	Icicle, Short Top	Ferry Morse-Plantation Products LLC	75	100
Radish	Pink Beauty	Burpee Garden Products Co.	75	98
Radish	Round Red/Grimson Crunch	Renee's Garden	75	100
Radish	Watermelon	The Chas. C. Hart Seed Co	75	97
Rutabaga	American Purple Top	Seedway LLC	75	97
Rutabaga	Improved Purple Top Yellow	New England Seed Co.	75	100
Soybean	Chiba Green	Botanical Interests INC.	75	N/A****
Spinach	Big Ruffles Hybrid	Burpee Garden Products Co.	60	84
Spinach	Bloomsdale Long Standing	Plantation Products LLC	60	83
Spinach	Bloomsdale Long Standing	The Page Seed Co.	60	91
Spinach	Bloomsdale Savoy	New England Seed Co.	60	93
Spinach	Bloomsdale Long Standing	Ferry Morse-Plantation Products LLC	60	91
Spinach	Renegade F1	Seeds of Change	60	92
Spinach	Winter Bloomsdale	Seedway LLC	60	96
Squash	Acorn Squash	New England Seed Co.	75	96
Squash	Crookneck	The Chas. C. Hart Seed Co	75	97
Squash	Delicata	The Chas. C. Hart Seed Co	75	99
Squash	Ortolana di Faenza	New England Seed Co.	75	72****
Squash	Lungo di Napoli	New England Seed Co.	75	94
Squash	Round Zucchini	The Chas. C. Hart Seed Co	75	98
Squash	Summer Zucchini	New England Seed Co.	75	96
Squash	Waltham Butternut	New England Seed Co.	75	82
Squash	Waltham Butternut	The Chas. C. Hart Seed Co	75	72****
Squash	Winter	New England Seed Co.	75	N/A****
Squash	Yellow Zucchini	New England Seed Co.	75	99
Squash	Zucchini Tondo di Piacenza	New England Seed Co.	75	61**
Swiss Chard	Burpee's Rhubarb Chard	Burpee Garden Products Co.	65	97
Swiss Chard	Fordhook	Seeds of Change	65	88
Swiss Chard	Fordhook Giant	New England Seed Co.	65	64****
Swiss Chard	Fordhook Giant	Plantation Products LLC	65	98
Swiss Chard	Lucullus	The Chas. C. Hart Seed Co	65	60****

Swiss Chard	Ruby Red	Seedway LLC	65	79
Swiss Chard	Neon Glow (Rainbow)	Renee's Garden	65	83
Thyme	Broad Leaf	New England Seed Co.	50	85
Thyme	Common	Ferry Morse-Plantation Products LLC	50	76
Tomatillo	Verde	New England Seed Co.	75	86
Tomato	Arkansas Traveler	New England Seed Co.	75	89
Tomato	Aunt Ruby German Green	New England Seed Co.	75	95
Tomato	Beefsteak	The Chas. C. Hart Seed Co	75	94
Tomato	Beefsteak	Ferry Morse-Plantation Products LLC	75	96
Tomato	Brandywine Red	New England Seed Co.	75	85
Tomato	Burbank	The Chas. C. Hart Seed Co	75	94
Tomato	Kentucky Beefsteak	New England Seed Co.	75	98
Tomato	Nano S. Marzano	New England Seed Co.	75	96
Tomato	Principe Borghese	New England Seed Co.	75	95
Tomato	Red Cherry, Lg Fruited	Ferry Morse-Plantation Products LLC	75	95
Tomato	S. Marzano 2	New England Seed Co.	75	99
Tomato	Sweet 100	The Chas. C. Hart Seed Co	75	91
Turnip	Catozza Napoletana	New England Seed Co.	80	97
Turnip	Purple Top White globe	New England Seed Co.	80	98
Turnip	Purple Top White globe	Plantation Products LLC	80	99
Turnip	Purple Top White globe	Seedway LLC	80	93
Turnip	Purple Top White globe	Ferry Morse-Plantation Products LLC	80	97
Turnip	Purple Top White globe	Burpee Garden Products Co.	80	97
Turnip	Seven Top	The Page Seed Co.	80	94
Watermelon	Charleston Grey	New England Seed Co.	70	74
Watermelon	Charleston Grey	The Chas. C. Hart Seed Co	70	84
Watermelon	Orange Krush HYB	New England Seed Co.	70	94
Watermelon	Plantation Pride	New England Seed Co.	70	90
Watermelon	Sugarbaby	The Chas. C. Hart Seed Co	70	95

*: Did not meet the label claim

**: Did not meet the label claim and there were not enough seed for retest

***: 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 companies

Company	Number of Samples	Meeting Label Claims (%)
Botanical Interests INC.	10	90
Burpee Garden Products Co.	26	89
Ferry Morse - Plantation Products	25	88
New England Seed Co.	99	95
Plantation Products LLC	22	91
Renee's Garden	12	92
Seeds of Change	15	87
Seedway LLC	29	100
The Chas. C. Hart Seed Co	58	93
The Page Seed Co.	10	100

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

Plant	Number of Samples ^z	Germination (%)		Samples Meeting the Label Claim (%)
		Label Claim	Average Found	
Basil	8	70	85	100
Beans	12*	75	66	67
Beet	10	65	88	100
Broccoli	10	75	91	100
Brussels Sprouts	6*	70	80	83
Cabbage	12*	75	81	92
Cantaloupe	5	75	89	100
Carrot	10	55	82	90
Cauliflower	5	75	93	100
Celery	4*	55	64	75
Chervil	1	65	59	100
Chicory	2	65	88	100
Chives	1	50	3	0
Cilantro	3	70	70	67
Collards	5	80	96	100
Corn	4	75	85	75
Cucumber	11	80	92	100
Dandelion	1	60	89	100
Dill	9	60	85	100
Eggplant	4	60	80	100
Endive	5	70	91	100
Fennel	3	60	75	100
Kale	12	75	88	91
Kohlrabi	5	75	93	100
Leek	4*	60	48	50
Lettuce	26	80	98	96
Lima Bean	2	70	6	0
Marjoram	2	50	69	100
Mustard	3	75	95	100
Okra	2	50	52	100
Onion	10	70	72	80
Oregano	1	60	53	100
Pakchoi	3	75	97	100
Parsley	11	60	82	100
Parsnip	3*	60	29	33
Peas	7	80	94	100

Pepper	7	55	84	100
Pumpkin	7	75	94	100
Radish	14	75	98	100
Rutabaga	2	75	98	100
Soybean	1*	75	0	0
Spinach	7	60	90	100
Squash	12*	75	80	83
Swiss Chard	7	65	98	100
Thyme	2	50	81	100
Tomatillo	1	75	86	100
Tomato	12	75	94	100
Turnip	7	80	96	100
Watermelon	5	70	87	100

^z: * indicates that one sample in the crop did not have enough seed for germination tests.

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

Seed Company	Seed Sample and Ingredient	Purity (%)		Germination (%)	
		Claim	Found ^z	Claim	Found ^z
Ontario Specialty Grains	Winter Rye VNS Rye	98.0	100	85	91
Ragan & Massey Inc	Plotspike Forage Feast Maxie wheat Oats, LA 99016 Australian winter peas Rangi rape Dixie Crimson reseeding clover Wrens Abruzzi rye	58.0 23.0 10.0 3.0 2.0 2.0	64.0 19.0* 9.0* 3.0 2.0 3.0	85 85 80 80 80 85	98 89 N/A** 79*** 97 91
King's Agriseeds Inc.	Soil Builder Plus Mix MO-1 annual ryegrass Kodiak annual ryegrass Trical 815 tritcale Bolt tritcale Dixie Reseeding Crimson clover VNS Hairy vetch Daikon radish	5.0 5.0 33.2 33.0 11.6 10.0 1.7	9.6*** 62.8*** 15.3 9.0* 1.6***	90 90 90 90 81 92 90	100 88*** 93 82* N/A**
Ontario Specialty Grains	Winter Rye VNS Winter Rye	98.0	100	85	78***
Semican Inc	Winter Rye Rye	99.7	99.7	82	88
Robert Mosher Transport Inc	Rye Rye	96.0	95.0***	96	75*
Pleasant View Farm Inc	VNS Winter Rye Winter Rye	98.8	98.3***	86	85***
Kent Nutrition Group, Inc	Buckwheat Buckwheat	100	99.8***	90	97
Seedway LLC	Rye VNS Rye	98.8	98.8	85	96

^z: * fail to meet the claim;

** not enough seed for the germination test;

***: 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

Seed and Seed Mixture Samples	Purity (%)		Germination (%)	
	Claim	Found ^z	Claim	Found ^z
Agway Conservation Green Mixture				
Kentucky bluegrass	19.8	20.0	85	89
MB perennial ryegrass	31.5	37.8	90	97
Annual ryegrass	17.8	18.6	90	97
Creeping red fescue	24.5	24.6	85	91
White clover	4.91	5.8	85	66*
Kentucky 31				
Kentucky 31 tall fescue	97.7	98.7	85	90
Trio Mixture				
Kenblue Kentucky bluegrass	31.6	34.4	85	89
Sideways perennial ryegrass	11.9		90	
Paragon GLR perennial ryegrass	10.9	30.9**	90	92
Pangea GLR perennial ryegrass	10.9		90	
Boreal creeping fescue	32.3	34.4	88	86**
Blue Seal Shady Lawn Mixture				
Ruby11 Kentucky blue grass	5.0		90	
<i>Poa trivialis</i>	14.9	24.2	85	74*
Gator 3 perennial ryegrass	24.7	22.2*	95	98
Boreal creeping red fescue	34.4		94	
Chewings fescue	19.7	52.3**	92	78*
Blue Seal Early Green Lawn Mixture				
VNS Kentucky blue grass	13.9	16.6	80	79**
VNS Perennial ryegrass	49.8	43.0*	90	98
Annual ryegrass	9.9	13.3	85	95
Creeping red fescue	24.6	26.0	85	89
Blue Seal Classic Lawn Mixture				
Noble Kentucky bluegrass	24.8		85	
Argyle Kentucky bluegrass	1.8	29.7	90	92
Accent perennial ryegrass	25.7		94	
All Star 2 perennial ryegrass	23.6	47.8**	90	92
Creeping red fescue	22.6	21.6*	90	88**

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

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

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