

# Seed Germination and Purity Analysis 2009

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# Seed Germination and Purity Analysis

## 2009

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Official samples of 331 vegetable and 7 lawn seeds were collected by inspectors from the Bureau of Regulation and Inspection of the Connecticut Department of Agriculture for testing in 2009. As the official seed testing laboratory, The Connecticut Agricultural Experiment Station performed germination and purity analyses for compliance with the Connecticut Seed Law Regulations and the Federal Seed Act.

Table 1 shows the results of germination tests for individual vegetable seed samples from 14 companies. Results are presented by plant type, variety, germination found, germination standard, and compliance with the standard. Germination standards are set by the Federal Seed Act. The categories for label compliance are: 1) seeds meet label claims for germination and 2) seeds do not meet label claims for germination within allowable tolerance. Tests were replicated twice. In addition, seedlings must appear "normal", i.e., they have to be free from decay, have well-developed primary root systems, have well-developed and intact hypocotyls and/or epicotyls, and have healthy cotyledons. Of the 331 vegetable seed samples tested, 14 did not meet their label claims for germination. They were not retested because of insufficient numbers of seeds. Seed samples were examined for prohibited noxious weed seeds and no vegetable samples contained weed contaminants.

The total number of germination claims and the percentage of claims that met or failed label claims are summarized for each vegetable seed company in Table 2. Table 3 summarizes the total number of samples tested and the average germination for each type of vegetable. Table 4 shows the results of purity and germination tests for individual lawn grass seed samples. These are presented by company, brand name and/or seed type or variety mixture. The categories for both purity and germination are as previously described for vegetable seeds. Lawn seed samples that were labeled with several varieties within a species or with several species within a genus were separated by genus. Purity and germination results are, therefore, reported as the sum for that genus. The label claim is met as long as this sum equals or

exceeds the sum of the individual components for a genus listed on the label. Five of the 7 lawn seed samples tested met label claims for both purity and germination. Two samples failed purity claims--despite passing purity claims for individual seed components--because they contained less pure seed and more inert matter than stated on the label. None of the 2009 lawn samples contained noxious-weed seed contaminants.

Mary K. Inman and Dr. Sharon M. Douglas performed the analyses per Connecticut Regulations. Alton A. Blodgett, Seed Control Official, and Wayne S. Nelson collected the samples. The Seed Law is administered by the Seed Control Official for the Commissioner of the Department of Agriculture.

Sharon M. Douglas

Table 1. Germination of vegetable seeds. Standards are provided by the rules and regulations of the Federal Seed Act.

\* = Does not meet label claim.

<b>Plant</b>	<b>Variety</b>	<b>Seed Company</b>	<b>Standard</b>	<b>Germ. Found</b>
Artichoke	Carciofo Romanesco	La Semiorto Sementi / New England Seed Co.	60	84
Asparagus	Mary Washington	NK Lawn and Garden / Plantation Products	70	58
Bean	Blue Lake 274 Bush	Burpee Organic / W. Atlee Burpee and Co.	70	83
Bean	Blue Lake 274 Bush	Botanical Interests, Inc.	70	94
Bean	Blue Lake 274 Bush	American Seed / Plantation Products	70	85
Bean	Blue Lake Pole	The Charles C. Hart Seed Company	70	92
Bean	Brittle Wax	W. Atlee Burpee and Company	70	99
Bean	Burro di Rocquencourt	La Semiorto Sementi / New England Seed Co.	70	98
Bean	Cherokee Wax	NK Lawn and Garden / Plantation Products	70	100
Bean	Kentucky Dreamer	Agway Brand / Seedway Inc.	70	93
Bean	Kentucky Wonder Pole	Ferry Morse Seed Company	70	98
Bean	Kentucky Wonder Wax Pole	New England Seed Company	70	96
Bean	Romano Bush	The Charles C. Hart Seed Company	70	88
Bean	Romano Pole	New England Seed Company	70	100
Bean	Tendergreen Improved Bush	Ferry Morse Seed Company	70	99
Bean	Top Crop Bush	Livingston Seed Company	70	96
Bean	Yellow Provider	The Charles C. Hart Seed Company	70	98
Bean, lima	Fordhook # 242	W. Atlee Burpee and Company	70	60
Bean, lima	Henderson's Bush	Ferry Morse Seed Company	70	99
Bean, lima	Henderson's Bush	Agway Brand / Seedway Inc.	70	96
Beet	Chioggia	Burpee's Heirlooms / W. Atlee Burpee and Co.	65	55
Beet	Chioggia	Livingston Seed Company	65	84
Beet	Cylindra	New England Seed Company	65	84
Beet	Detroit Dark Red	The Charles C. Hart Seed Company	65	82
Beet	Detroit Dark Red	American Seed / Plantation Products	65	74
Beet	Detroit Dark Red	NK Lawn and Garden / Plantation Products	65	75
Beet	Early Wonder	Agway Brand / Seedway Inc.	65	80
Beet	Red Ace	The Charles C. Hart Seed Company	65	83
Beet	Scarlet Prince	W. Atlee Burpee and Company	65	89
Beet	Tall Top Early Wonder	Ferry Morse Seed Company	65	80
Beet	Tall Top Early Wonder	Ferry Morse Organic / Ferry Morse Seed Co.	65	80
Broccoli	Calabrese	American Seed / Plantation Products	75	89
Broccoli	DeCicco	Ferry Morse Seed Company	75	98
Broccoli	DiCicco	Botanical Interests, Inc.	75	89
Broccoli	George's Favorite Blend	W. Atlee Burpee and Company	75	81
Broccoli	Green Sprouting Calabrese	Livingston Seed Company	75	96
Broccoli	Southern Comet Hybrid	Agway Brand / Seedway Inc.	75	93
Broccoli	Waltham	The Charles C. Hart Seed Company	75	81
Broccoli-raab	Cima di Rapa	La Semiorto Sementi / New England Seed Co.	75	97
Broccoli-raab	Early Pugliese	New England Seed Company	75	97
Broccoli-raab	Fall	The Charles C. Hart Seed Company	75	98
Brussels sprouts	Catskill	Ferry Morse Seed Company	70	96
Brussels sprouts	Catskill	Agway Brand / Seedway Inc.	70	80
Brussels sprouts	Long Island Improved	The Charles C. Hart Seed Company	70	73

## Seed Germination and Purity Analysis 2009

Table 1 (continued). Germination of vegetable seeds. Standards are provided by the rules and regulations of the Federal Seed Act.  
\* = Does not meet label claim.

Plant	Variety	Seed Company	Standard	Germ. Found
Brussels sprouts	Long Island Improved	New England Seed Company	70	91
Cabbage	All Seasons Hybrid Blend	NK Lawn and Garden / Plantation Products	75	89
Cabbage	Chieftain Savoy	New England Seed Company	75	97
Cabbage	Danish Ball Head	The Charles C. Hart Seed Company	75	52 *
Cabbage	Early Jersey Wakefield	The Charles C. Hart Seed Company	75	91
Cabbage	Early Thunder	Agway Brand / Seedway Inc.	75	80
Cabbage	Ferry's Round Dutch	Ferry Morse Seed Company	75	79
Cantaloupe	Delicious 51	New England Seed Company	75	91
Cantaloupe	Hale's Best	The Charles C. Hart Seed Company	75	95
Cantaloupe	Hale's Best	American Seed / Plantation Products	75	96
Cantaloupe	Hale's Best Jumbo	Ferry Morse Heirloom / Ferry Morse Seed Co.	75	99
Cantaloupe	Hale's Best Jumbo	NK Lawn and Garden / Plantation Products	75	94
Cantaloupe	Honey Rock	Livingston Seed Company	75	95
Carrot	Big Top	W. Atlee Burpee and Company	55	74
Carrot	Little Fingers	New England Seed Company	55	59
Carrot	Long Imperator # 58	Ferry Morse Seed Company	55	87
Carrot	Nantes	Livingston Seed Company	55	72
Carrot	New Kuruda	Botanical Interests, Inc.	55	71
Carrot	Scarlet Nantes	The Charles C. Hart Seed Company	55	81
Carrot	Tendersweet	American Seed / Plantation Products	55	76
Carrot	Touchon	Burpee's Heirlooms / W. Atlee Burpee and Co.	55	82
Carrot	Yellowstone	Agway Brand / Seedway Inc.	55	78
Cauliflower	Early Snowball	The Charles C. Hart Seed Company	75	77
Cauliflower	Early Snowball	Ferry Morse Seed Company	75	78
Cauliflower	Early Snowball	New England Seed Company	75	50
Cauliflower	Self Blanching	The Charles C. Hart Seed Company	75	93
Cauliflower	Snow Crown	Agway Brand / Seedway Inc.	75	100
Cauliflower	Snowball X	NK Lawn and Garden / Plantation Products	75	60 *
Celery	Giant Pascal	The Charles C. Hart Seed Company	55	86
Celery	Tall Utah # 5270 Improved	Botanical Interests, Inc.	55	68
Celery	Tall Utah # 52702 Improved	Ferry Morse Seed Company	55	67
Celery	Utah	New England Seed Company	55	87
Chicory	Cicoria Catalogna	New England Seed Company	65	91
Chicory	Cicoria di Bruxelles	La Semiorto Sementi / New England Seed Co.	65	86
Chinese cabbage	Bok Choy Tatsoi	Botanical Interests, Inc.	75	100
Chinese cabbage	Jade Pagoda	Agway Brand / Seedway Inc.	75	100
Chinese cabbage	Michili	New England Seed Company	75	99
Collards	Georgia	New England Seed Company	80	94
Collards	Georgia Green	The Charles C. Hart Seed Company	80	95
Collards	Georgia Southern	Ferry Morse Seed Company	80	100
Collards	Georgia Southern	Botanical Interests, Inc.	80	99
Collards	Vates	The Charles C. Hart Seed Company	80	73
Collards	Vates	Agway Brand / Seedway Inc.	80	50

Table 1 (continued). Germination of vegetable seeds. Standards are provided by the rules and regulations of the Federal Seed Act.  
\* = Does not meet label claim.

Plant	Variety	Seed Company	Standard	Germ. Found
Collards	Vates	NK Lawn and Garden / Plantation Products	80	70 *
Corn	Argent	Agway Brand / Seedway Inc.	75	90
Corn	Early and Often Hybrid	W. Atlee Burpee and Company	75	94
Corn	Golden Bantam	Burpee Organic / W. Atlee Burpee and Co.	75	80
Corn	Golden Beauty	The Charles C. Hart Seed Company	75	96
Corn	Golden Cross Bantam	The Charles C. Hart Seed Company	75	86
Corn	Jubilee	NK Lawn and Garden / Plantation Products	75	96
Corn	Kandy Korn	New England Seed Company	75	89
Corn	Peaches and Cream	The Charles C. Hart Seed Company	75	96
Corn	Silver 'n Gold 65	Livingston Seed Company	75	83
Corn	Silver Queen Hybrid	Ferry Morse Seed Company	75	94
Corn, popcorn	Robust Hulless	New England Seed Company	75	79
Cornsalad	Mache, Big Seeded	Botanical Interests, Inc.	70	77
Cowpeas	California Blackeye # 5	Botanical Interests, Inc.	75	80
Cowpeas	Pink Eye Purple Hull	Ferry Morse Seed Company	75	59 *
Cress, upland	Peppergrass	New England Seed Company	75	100
Cucumber	Boston Pickle	The Charles C. Hart Seed Company	80	92
Cucumber	Cross Country	Ferry Morse Seed Company	80	38 *
Cucumber	Lemon	NK Lawn and Garden / Plantation Products	80	87
Cucumber	Marketmore 76	The Charles C. Hart Seed Company	80	92
Cucumber	Marketmore 76	Agway Brand / Seedway Inc.	80	100
Cucumber	Muncher	Livingston Seed Company	80	97
Cucumber	National Pickling	American Seed / Plantation Products	80	93
Cucumber	Pioneer Hybrid	New England Seed Company	80	93
Cucumber	Poinsett 76	Ferry Morse Seed Company	80	84
Cucumber	Spacemaster	New England Seed Company	80	87
Cucumber	Straight Eight	W. Atlee Burpee and Company	80	99
Cucumber	Straight Eight	Burpee Organic / W. Atlee Burpee and Co.	80	70
Cucumber	Straight Eight	Burpee's Heirlooms / W. Atlee Burpee and Co.	80	100
Cucumber	Wisconsin SMR-58	Agway Brand / Seedway Inc.	80	91
Dill	Bouquet	The Charles C. Hart Seed Company	60	68
Dill	Bouquet	Ferry Morse Seed Company	60	67
Dill	Bouquet	New England Seed Company	60	69
Dill	Dukat	Agway Brand / Seedway Inc.	60	76
Dill	Fernleaf	W. Atlee Burpee and Company	60	55
Dill	Long Island Mammoth	NK Lawn and Garden / Plantation Products	60	68
Dill	Mammoth	Livingston Seed Company	60	75
Eggplant	Black Beauty	The Charles C. Hart Seed Company	60	73
Eggplant	Black Beauty	Burpee's Heirlooms / W. Atlee Burpee and Co.	60	80
Eggplant	Burpee Hybrid	W. Atlee Burpee and Company	60	87
Eggplant	Early Long Purple	Ferry Morse Organic / Ferry Morse Seed Co.	60	84
Eggplant	High Bush Select	Agway Brand / Seedway Inc.	60	82
Eggplant	Long Purple	New England Seed Company	60	85

## Seed Germination and Purity Analysis 2009

Table 1 (continued). Germination of vegetable seeds. Standards are provided by the rules and regulations of the Federal Seed Act.  
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Plant	Variety	Seed Company	Standard	Germ. Found
Eggplant	Long Purple Japanese	Botanical Interests, Inc.	60	85
Endive	Broadleaf	The Charles C. Hart Seed Company	70	86
Endive	Green Ruffle	Agway Brand / Seedway Inc.	70	93
Endive	Salad King	New England Seed Company	70	83
Kale	Blue Scotch	Agway Brand / Seedway Inc.	75	97
Kale	Italian Lacinato	Botanical Interests, Inc.	75	99
Kale	Vates Dwarf Blue Curled	The Charles C. Hart Seed Company	75	95
Kale	Vates Dwarf Blue Curled	Ferry Morse Seed Company	75	98
Kohlrabi	Chancellor	W. Atlee Burpee and Company	75	98
Kohlrabi	Early Purple Vienna	Agway Brand / Seedway Inc.	75	99
Kohlrabi	Early White Vienna	Ferry Morse Seed Company	75	98
Kohlrabi	Early White Vienna	New England Seed Company	75	98
Kohlrabi	Early White Vienna	NK Lawn and Garden / Plantation Products	75	65
Kohlrabi	Purple and White Vienna Blend	Botanical Interests, Inc.	75	97
Kohlrabi	White	The Charles C. Hart Seed Company	75	95
Leek	American Broad Flag	New England Seed Company	60	88
Leek	American Flag	The Charles C. Hart Seed Company	60	91
Leek	American Flag	Ferry Morse Seed Company	60	96
Leek	American Flag	Livingston Seed Company	60	80
Leek	American Flag	Botanical Interests, Inc.	60	90
Leek	Arkansas	Agway Brand / Seedway Inc.	60	88
Lettuce	Black Seeded Simpson	The Charles C. Hart Seed Company	80	98
Lettuce	Big Boston	New England Seed Company	80	94
Lettuce	Black Seeded Simpson	Burpee Organic / W. Atlee Burpee and Co.	80	79
Lettuce	Black Seeded Simpson	Agway Brand / Seedway Inc.	80	96
Lettuce	Black Seeded Simpson	New England Seed Company	80	94
Lettuce	Black Seeded Simpson	Livingston Seed Company	80	97
Lettuce	Black Seeded Simpson	NK Lawn and Garden / Plantation Products	80	93
Lettuce	Burpee Bibb	W. Atlee Burpee and Company	80	99
Lettuce	Buttercrunch	Agway Brand / Seedway Inc.	80	24 *
Lettuce	Butterhead	Botanical Interests, Inc.	80	67 *
Lettuce	Grand Rapids	Ferry Morse Seed Company	80	97
Lettuce	Great Lakes	New England Seed Company	80	82
Lettuce	Iceberg	The Charles C. Hart Seed Company	80	91
Lettuce	Iceberg	American Seed / Plantation Products	80	95
Lettuce	Lollo Rossa	W. Atlee Burpee and Company	80	88
Lettuce	Oakleaf	The Charles C. Hart Seed Company	80	89
Lettuce	Parris Island Cos	Ferry Morse Seed Company	80	89
Lettuce	Parris Island Cos	Agway Brand / Seedway Inc.	80	94
Lettuce	Red Sails	New England Seed Company	80	93
Lettuce	Royal Red	Livingston Seed Company	80	94
Melon	Melone Rugoso di Cosenza	La Semiorto Sementi / New England Seed Co.	75	84
Mustard	Florida Broadleaf	The Charles C. Hart Seed Company	75	72
Mustard	Green Wave	New England Seed Company	75	98

Table 1 (continued). Germination of vegetable seeds. Standards are provided by the rules and regulations of the Federal Seed Act.  
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Plant	Variety	Seed Company	Standard	Germ. Found
Mustard	India Southern Giant Curled	Ferry Morse Seed Company	75	100
Mustard	Mizuna	Botanical Interests, Inc.	75	99
Mustard	Southern Curled	The Charles C. Hart Seed Company	75	98
Mustard	Tendergreen Spinach Mustard	American Seed / Plantation Products	75	96
New Zealand Spinach		New England Seed Company	40	88
Okra	Clemson Spineless	The Charles C. Hart Seed Company	50	68
Okra	Clemson Spineless	New England Seed Company	50	83
Okra	Clemson Spineless	Livingston Seed Company	50	88
Okra	Emerald	Ferry Morse Seed Company	50	35 *
Onion	Evergreen Bunching	The Charles C. Hart Seed Company	70	88
Onion	Evergreen Long White Bunching	W. Atlee Burpee and Company	70	82
Onion	Evergreen Long White Bunching	Burpee Organic / W. Atlee Burpee and Co.	70	78
Onion	Flat of Italy	Botanical Interests, Inc.	70	90
Onion	Granex Hybrid	W. Atlee Burpee and Company	70	86
Onion	Lisbon White Bunching	NK Lawn and Garden / Plantation Products	70	57 *
Onion	Red Burgundy	Ferry Morse Seed Company	70	86
Onion	Sweet Spanish	Agway Brand / Seedway Inc.	70	90
Onion	Utah Sweet Spanish Yellow	Ferry Morse Seed Company	70	69
Onion	Utah Yellow Spanish	New England Seed Company	70	90
Onion	White Bunching	New England Seed Company	70	76
Onion	White Portugal	The Charles C. Hart Seed Company	70	88
Parsley	Extra Curled Dwarf	W. Atlee Burpee and Company	60	79
Parsley	Forest Green	Agway Brand / Seedway Inc.	60	72
Parsley	Hamburg Turnip Root	The Charles C. Hart Seed Company	60	72
Parsley	Italian	Livingston Seed Company	60	95
Parsley	Italian Dark Green Flat	Botanical Interests, Inc.	60	83
Parsley	Moss Curled	American Seed / Plantation Products	60	67
Parsley	Plain	Ferry Morse Seed Company	60	85
Parsley	Plain Leaf Italian	The Charles C. Hart Seed Company	60	82
Parsley	Plain Leaf Italian	Burpee Organic / W. Atlee Burpee and Co.	60	92
Parsley	Plain Leaf Italian	New England Seed Company	60	67
Parsnip	All American	Agway Brand / Seedway Inc.	60	85
Parsnip	All American	New England Seed Company	60	82
Parsnip	All American	Botanical Interests, Inc.	60	89
Parsnip	Harris Model	Ferry Morse Seed Company	60	89
Parsnip	Hollow Crown	The Charles C. Hart Seed Company	60	56
Pea	Alaska	Ferry Morse Seed Company	80	95
Pea	Dark Seeded Early Perfection	W. Atlee Burpee and Company	80	92
Pea	Dwarf White Sugar	Agway Brand / Seedway Inc.	80	96
Pea	Laxton's Progress # 9	The Charles C. Hart Seed Company	80	91
Pea	Mr. Big	Agway Brand / Seedway Inc.	80	59
Pea	Oregon Sugar Pod	Burpee Organic / W. Atlee Burpee and Co.	80	91
Pea	Oregon Sugar Pod II	Livingston Seed Company	80	86
Pea	Sugar Ann	The Charles C. Hart Seed Company	80	85
Pea	Sugar Snap	Ferry Morse Seed Company	80	90

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Table 1 (continued). Germination of vegetable seeds. Standards are provided by the rules and regulations of the Federal Seed Act.  
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<b>Plant</b>	<b>Variety</b>	<b>Seed Company</b>	<b>Standard</b>	<b>Germ. Found</b>
Pea	Sugar Snap	W. Atlee Burpee and Company	80	96
Pea	Sugar Snap	New England Seed Company	80	82
Pea	Tall Telephone	The Charles C. Hart Seed Company	80	70
Pea	Tall Telephone	New England Seed Company	80	71
Pea	Thomas Laxton	Burpee's Heirlooms / W. Atlee Burpee and Co.	80	96
Pea	Wando	Botanical Interests, Inc.	80	92
Pepper	Anaheim Chili	Ferry Morse Seed Company	55	68
Pepper	California Wonder	The Charles C. Hart Seed Company	55	84
Pepper	California Wonder	Ferry Morse Heirloom / Ferry Morse Seed Co.	55	77
Pepper	California Wonder	Burpee Organic / W. Atlee Burpee and Co.	55	76
Pepper	California Wonder	Agway Brand / Seedway Inc.	55	65
Pepper	Calwonder	New England Seed Company	55	77
Pepper	Chinese Giant	Burpee's Heirlooms / W. Atlee Burpee and Co.	55	71
Pepper	Cubanelle	New England Seed Company	55	80
Pepper	Early Jalapeno	Botanical Interests, Inc.	55	85
Pepper	Habanero	W. Atlee Burpee and Company	55	67
Pepper	Hungarian Hot Yellow Wax	American Seed / Plantation Products	55	87
Pepper	Jalapeno Chili	NK Lawn and Garden / Plantation Products	55	76
Pepper	Jalapeno M	Ferry Morse Seed Company	55	91
Pepper	Jalapeno M	W. Atlee Burpee and Company	55	86
Pepper	Long Red Cayenne	Livingston Seed Company	55	75
Pepper	NuMex Joe E. Parker	Botanical Interests, Inc.	55	86
Pepper	Peperone Giapponese	La Semiorto Sementi / New England Seed Co.	55	76
Pepper	Red Cherry Hot	The Charles C. Hart Seed Company	55	57
Pepper	Red Cherry Hot	New England Seed Company	55	72
Pepper	Red Mercury	Livingston Seed Company	55	98
Pepper	Serrano Chili	Ferry Morse Seed Company	55	81
Pepper	Sweet Banana	Agway Brand / Seedway Inc.	55	76
Pepper	Sweet Banana	American Seed / Plantation Products	55	91
Pepper	Tabby Hybrid	New England Seed Company	55	80
Pumpkin	Big Max	The Charles C. Hart Seed Company	75	96
Pumpkin	Connecticut Field	The Charles C. Hart Seed Company	75	99
Pumpkin	Howden	The Charles C. Hart Seed Company	75	87
Pumpkin	Jack Be Little	The Charles C. Hart Seed Company	75	83
Radish	Champion	Ferry Morse Seed Company	75	88
Radish	Cherry Belle	Burpee Organic / W. Atlee Burpee and Co.	75	97
Radish	Cherry Belle	Livingston Seed Company	75	94
Radish	Crimson Giant	Botanical Interests, Inc.	75	95
Radish	Early Scarlet Globe	Agway Brand / Seedway Inc.	75	95
Radish	Early Scarlet Globe	American Seed / Plantation Products	75	92
Radish	French Blush	W. Atlee Burpee and Company	75	79
Radish	French Breakfast	New England Seed Company	75	95
Radish	White Icicle	W. Atlee Burpee and Company	75	89
Rutabaga	American Purple Top	Agway Brand / Seedway Inc.	75	93
Rutabaga	Laurentian	New England Seed Company	75	95
Sage	Broadleaf	Ferry Morse Seed Company	60	79

Table 1 (continued). Germination of vegetable seeds. Standards are provided by the rules and regulations of the Federal Seed Act.  
\* = Does not meet label claim.

Plant	Variety	Seed Company	Standard	Germ. Found
Sage		New England Seed Company	60	69
Soybean	Edamame	Botanical Interests, Inc.	75	66
Spinach	Bloomsdale Long Standing	Burpee Organic / W. Atlee Burpee and Co.	60	68
Spinach	Bloomsdale Long Standing	Livingston Seed Company	60	92
Spinach	Bloomsdale Long Standing	NK Lawn and Garden / Plantation Products	60	74
Spinach	Correnta	Botanical Interests, Inc.	60	89
Spinach	Correnta	American Seed / Plantation Products	60	79
Spinach	Melody Hybrid	W. Atlee Burpee and Company	60	90
Spinach	Melody Hybrid	New England Seed Company	60	85
Spinach	Teton Hybrid	Ferry Morse Seed Company	60	80
Spinach	Winter Bloomsdale	Agway Brand / Seedway Inc.	60	90
Squash	Black Beauty Zucchini	Ferry Morse Heirloom / Ferry Morse Seed Co.	75	77
Squash	Black Beauty Zucchini	Agway Brand / Seedway Inc.	75	92
Squash	Black Beauty Zucchini	New England Seed Company	75	96
Squash	Black Beauty Zucchini	Botanical Interests, Inc.	75	95
Squash	Blue Hubbard	The Charles C. Hart Seed Company	75	89
Squash	Buttercup	Agway Brand / Seedway Inc.	75	94
Squash	Buttercup	NK Lawn and Garden / Plantation Products	75	62 *
Squash	Dark Zucchini	Livingston Seed Company	75	80
Squash	Early Prolific Straightneck	Ferry Morse Heirloom / Ferry Morse Seed Co.	75	97
Squash	Early Prolific Straightneck	Agway Brand / Seedway Inc.	75	92
Squash	Early Prolific Straightneck	New England Seed Company	75	96
Squash	Early White Bush Scallop	Ferry Morse Seed Company	75	78
Squash	Pinata Delicata	New England Seed Company	75	67
Squash	Spaghetti	The Charles C. Hart Seed Company	75	86
Squash	Straight Neck Early Yellow	American Seed / Plantation Products	75	61 *
Squash	Straightneck	The Charles C. Hart Seed Company	75	97
Squash	Table Queen	The Charles C. Hart Seed Company	75	81
Squash	Turks Turban	New England Seed Company	75	67
Squash	Waltham Butternut	W. Atlee Burpee and Company	75	94
Squash	Waltham Butternut	Livingston Seed Company	75	94
Squash	Zucca Longa da Pergola	La Semiorto Sementi / New England Seed Co.	75	62 *
Squash	Zucchini Tonda di Piacenza	La Semiorto Sementi / New England Seed Co.	75	8 *
Swiss chard	Bright Lights	Agway Brand / Seedway Inc.	65	82
Swiss chard	Bright Lights	Botanical Interests, Inc.	65	65
Swiss chard	Burpee's Rhubarb Chard	W. Atlee Burpee and Company	65	90
Swiss chard	Fordhook	New England Seed Company	65	87
Swiss chard	Fordhook Giant	NK Lawn and Garden / Plantation Products	65	76
Swiss chard	Large Ribbed Dark Green	Ferry Morse Seed Company	65	90
Tomatillo	Mexican Husk	Ferry Morse Seed Company	50	91
Tomatillo	Toma Verde	Botanical Interests, Inc.	50	95
Tomato	Beefsteak	Ferry Morse Organic / Ferry Morse Seed Co.	75	85
Tomato	Beefsteak	W. Atlee Burpee and Company	75	99
Tomato	Beefsteak	American Seed / Plantation Products	75	89
Tomato	Brandywine Red Heirloom	New England Seed Company	75	88

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Table 1 (continued). Germination of vegetable seeds. Standards are provided by the rules and regulations of the Federal Seed Act.  
 \* = Does not meet label claim.

<b>Plant</b>	<b>Variety</b>	<b>Seed Company</b>	<b>Standard</b>	<b>Germ. Found</b>
Tomato	Cherry Rainbow Blend	Botanical Interests, Inc.	75	100
Tomato	German Johnson Heirloom	New England Seed Company	75	76
Tomato	Homestead	NK Lawn and Garden / Plantation Products	75	66
Tomato	Jubilee	Ferry Morse Seed Company	75	81
Tomato	Large Red Cherry	The Charles C. Hart Seed Company	75	100
Tomato	Marglobe	The Charles C. Hart Seed Company	75	89
Tomato	Mountain Gold	Agway Brand / Seedway Inc.	75	88
Tomato	Mr. Stripey Heirloom	New England Seed Company	75	95
Tomato	Roma	W. Atlee Burpee and Company	75	91
Tomato	Roma	W. Atlee Burpee and Company	75	90
Tomato	Roma VF	Ferry Morse Seed Company	75	93
Tomato	Rutgers	Ferry Morse Heirloom / Ferry Morse Seed Co.	75	79
Turnip	Purple Top White Globe	Ferry Morse Seed Company	80	100
Turnip	Purple Top White Globe	W. Atlee Burpee and Company	80	99
Turnip	Purple Top White Globe	Agway Brand / Seedway Inc.	80	98
Turnip	Purple Top White Globe	New England Seed Company	80	100
Turnip	Purple Top White Globe	Livingston Seed Company	80	100
Watermelon	Black Diamond	Livingston Seed Company	70	85
Watermelon	Congo	W. Atlee Burpee and Company	70	88
Watermelon	Jubilee	Ferry Morse Seed Company	70	81
Watermelon	Sugar Baby	The Charles C. Hart Seed Company	70	93

Table 2. Summary for each seed company of total number of germination claims and the percentage that met or failed label claims.

<b>Seed Company</b>	<b>Total Number of Claims</b>	<b>% Meeting Claims</b>	<b>% Not Meeting Claims</b>
Agway Brand / Seedway Inc.	38	92	8
American Seed / Plantation Products	15	93	7
Botanical Interests, Inc.	27	96	4
Burpee Organic / W. Atlee Burpee and Co.	10	100	0
Burpee's Heirlooms / W. Atlee Burpee and Co.	6	100	0
Ferry Morse Heirloom / Ferry Morse Seed Co.	5	100	0
Ferry Morse Organic / Ferry Morse Seed Co.	3	100	0
Ferry Morse Seed Company	42	93	7
La Semiorio Sementi / New England Seed Co.	8	75	25
Livingston Seed Company	22	100	0
New England Seed Company	53	98	2
NK Lawn and Garden / Plantation Products	18	89	11
The Charles C. Hart Seed Company	55	98	2
W. Atlee Burpee and Company	29	100	0

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Table 3. Summary by vegetable type of number of samples tested, average percent germination found, and germination standards. Standards are provided for by the rules and regulations of the Federal Seed Act.

<b>Plant</b>	<b>Samples Tested</b>	<b>Standard</b>	<b>Average Germination</b>
Artichoke	1	60	84
Asparagus	1	70	58
Bean	15	70	95
Bean, lima	3	70	85
Beet	11	65	79
Broccoli	7	75	90
Broccoli-raab	3	75	97
Brussels sprouts	4	70	85
Cabbage	6	75	81
Cantaloupe	6	75	95
Carrot	9	55	76
Cauliflower	6	75	76
Celery	4	55	77
Chicory	2	65	88
Chinese cabbage	3	75	100
Collards	7	80	83
Corn	10	75	90
Corn, popcorn	1	75	79
Cornsalad	1	70	77
Cowpeas	2	75	70
Cress, upland	1	75	100
Cucumber	14	80	87
Dill	7	60	68
Eggplant	7	60	82
Endive	3	70	87
Kale	4	75	97
Kohlrabi	7	75	93
Leek	6	60	89
Lettuce	20	80	88
Melon	1	75	84
Mustard	6	75	94
New Zealand Spinach	1	40	88
Okra	4	50	69
Onion	12	70	82
Parsley	10	60	79
Parsnip	5	60	80
Pea	15	80	86
Pepper	24	55	78
Pumpkin	4	75	91
Radish	9	75	92
Rutabaga	2	75	94
Sage	2	60	74
Soybean	1	75	66
Spinach	9	60	83
Squash	22	75	80
Swiss chard	6	65	82
Tomatillo	2	50	93
Tomato	16	75	88
Turnip	5	80	99
Watermelon	4	70	87

Table 4. Germination and purity of lawn seed. Results for purity and germination are for seeds separated by genus and not by species or variety are reported for that genus. Tolerance (Tol) is calculated according to the rules for seed testing published by the Association of Official Seed Analysts (AOSA). Variance (Var) is calculated as Purity Found (Pur F) minus Purity Claimed (Pur C). Germination Claimed (Germ C); Germination Found (Germ F). \* = Does not meet label claim.

Seed Company	Seed Mixture	Pur C	Pur F	Var	Tol	Germ C	Germ F
New England Seed Company	<i>Putnam Co-Op Landscape Mix</i>						
	Kentucky Bluegrass, variety not stated	18.34	20.32	1.98	2.24	80	
	Nexus Perennial Ryegrass	14.66				90	91
	Annual Ryegrass, variety not stated	14.98				90	91
	total ryegrass	29.64	29.93	0.29	4.28		
	Creeping Red Fescue, variety not stated	34.48	34.50	0.02	3.30	85	78
	Genesis Tall Fescue	14.66	11.80	-2.86	3.69		
Lesco, Inc.	<i>Lesco Premium Sun and Shade Mixture</i>						
	Excursion Kentucky Bluegrass	31.77	34.91	3.14	3.51	88	86
	Attribute Perennial Ryegrass	30.99	29.94	-1.05	4.88	90	87
	Foxfire Creeping Red Fescue	17.70				90	96
	Shadow II Chewings Fescue	17.65				90	96
	total fine fescue	35.35	34.39	-0.96	4.31		
Pennington Seed Inc.	<i>Pennington Contractor's Mix</i>						
	Kenblue Kentucky Bluegrass	8.50	9.42	0.92	1.30	85	91
	Sonata Perennial Ryegrass	44.00				85	96
	Gulf Annual Ryegrass	35.00				85	96
	total ryegrass	79.00	79.49	0.49	2.41		
	Boreal Red Fescue	8.50	10.25	1.75	2.07	80	92
Southern States Co-Op., Inc.	<i>Agway Sun and Shade Mixture</i>						
	Kentucky Bluegrass, variety not stated	19.66	21.71	2.05	2.27	85	82
	Buccaneer Perennial Ryegrass	34.48				90	96
	1 G Squared Perennial Ryegrass	24.40				90	96
	total ryegrass	58.88	59.86	0.98	4.19		
	Chewings Fescue, variety not stated	9.94				85	84
	Creeping Red Fescue, variety not stated	9.81				85	84
	total fine fescue	19.75	17.41	-2.34	2.76		
Southern States Co-Op., Inc.	<i>Agway Sunny Green Mixture</i>						
	Bluechip Kentucky Bluegrass	24.87	26.36	1.49	2.90	85	
	ASP6005 Perennial Ryegrass	59.68	56.65	-3.03	4.53	90	89
	Silverlawn Creeping Red Fescue	14.83	15.41	0.58	2.52	85	93
	Inert matter	0.58	1.49	0.91	0.78 *		
	Pure seed	99.38	98.42		0.78 *		
The Scotts Company	<i>Scott's Classic Sun and Shade Mix</i>						
	Boreal Creeping Red Fescue	14.34	14.67	0.31	2.15	81	82
	Gulf Annual Ryegrass	14.36	15.65	1.31	2.52	90	96
	Mystix Tall Fescue	45.36				85	93
	Einstein Tall Fescue	23.75				85	93
	total tall fescue	69.11	68.26	-0.85	3.14		

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Table 4 (continued). Germination and purity of lawn seed. Results for purity and germination are for seeds separated by genus and not by species or variety are reported for that genus. Tolerance (Tol) is calculated according to the rules for seed testing published by the Association of Official Seed Analysts (AOSA). Variance (Var) is calculated as Purity Found (Pur F) minus Purity Claimed (Pur C). Germination Claimed (Germ C); Germination Found (Germ F). \* = Does not meet label claim.

<b>Seed Company</b>	<b>Seed Mixture</b>	<b>Pur C</b>	<b>Pur F</b>	<b>Var</b>	<b>Tol</b>	<b>Germ C</b>	<b>Germ F</b>
The Scotts Company	<i>Scott's Turf Builder Contractor's All Purpose Mixture</i>						
	SR 2100 Kentucky Bluegrass	14.70	13.22	-1.48	1.68	82	82
	Salmas Perennial Ryegrass	29.64				90	91
	Gulf Annual Ryegrass	29.02				90	91
	total ryegrass	58.66	56.79	-1.87	3.83		
	Boreal Creeping Red Fescue	24.30	25.78	1.48	3.05	81	93
	Inert matter	1.75	4.06	2.31	1.21 *		
	Pure seed	97.66	95.79		1.21 *		

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