

Seed Germination and Purity Analysis 2011

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*Technical Bulletin 7
February 2012*

SEED GERMINATION AND PURITY ANALYSIS 2011

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Official samples of 317 vegetable, 8 lawn, and 10 crop seeds were collected by inspectors from the Bureau of Regulation and Inspection of the Connecticut Department of Agriculture for testing in 2011. 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 15 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 317 vegetable seed samples tested, 21 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. Six of the 8 lawn seed samples tested met label claims for both purity and germination. Two samples passed germination claims, but failed purity claims. Of these, one sample contained too much inert matter and the other sample did not meet label claims for fescue or rye components, but met the claim for total pure seed. None of the 2011 lawn samples contained seeds of noxious weeds.

Table 5 shows the results of purity and germination tests on crop seed samples. Of the ten seed samples, eight samples passed claims for both purity and germination. Two samples passed label claims for germination, but failed purity claims. Two crop samples contained noxious weeds—one contained chess and another contained corn cockle and brome grass.

Mary K. Inman and Dr. Sharon M. Douglas performed the analyses following Connecticut Regulations. Wayne S. Nelson, Seed Control Official, collected the samples. The Seed Law is administered by the Seed Control Official for the Commissioner of the Department of Agriculture. Assistance with germination tests was provided by Emily Arsenault and Shalon Hinojosa, summer research assistants for the Experiment Station.

Sharon M. Douglas

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Table 1. 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	
Artichoke	Green Globe	Comstock, Ferre, and Company	60	57	
Asparagus	Giant Argenteuil	Comstock, Ferre, and Company	70	86	
Asparagus	Mary Washington	Plantation Products Inc./N K Lawn and Garden	70	73	
Asparagus	Precoce D'Argenteuil	Lake Valley Seed Company Inc./Pagano	70	93	
Bean	Black Valentine Pole	Comstock, Ferre, and Company	70	94	
Bean	Blue Lake Bush	Livingston Seed Company	70	69	
Bean	Bountiful	Hart Seed Company	70	57	*
Bean	Burpee's Stringless Pod	W. Atlee Burpee and Company	70	97	
Bean	Bush Blue Lake 274	Seedway, Inc.	70	87	
Bean	Contender	Ferry-Morse Seed Company	70	98	
Bean	Golden Butterwax	Seedway, Inc.	70	90	
Bean	Goldrush	W. Atlee Burpee and Company	70	81	
Bean	Green Crop	Plantation Products Inc./N K Lawn and Garden	70	16	*
Bean	Lingua di Fuocco	Lake Valley Seed Company Inc./Pagano	70	89	
Bean	Pencil Pod Black Wax	Lake Valley Seed Company Inc.	70	75	
Bean	Provider	Hart Seed Company	70	88	
Bean	Romano Pole	New England Seed	70	88	
Bean	Scarlet Emperor	Botanical Interests Inc.	70	84	
Bean, lima	Fordhook	Hart Seed Company	70	70	
Bean, lima	Fordhook 242	New England Seed	70	78	
Bean, lima	Fordhook 242	Seedway, Inc.	70	61	
Bean, lima	Henderson's Bush	Baker Creek Heirloom Seeds	70	86	
Beet	Bull's Blood	W. Atlee Burpee and Company/Organic	65	82	
Beet	Cylindra	New England Seed	65	91	
Beet	Detroit Dark Red	Lake Valley Seed Company Inc.	65	74	
Beet	Detroit Golden	Livingston Seed Company	65	65	
Beet	Detroit Red	Hart Seed Company	65	85	
Beet	Early Wonder Spinach Leaf	Seedway, Inc.	65	81	
Beet	Flat of Egypt	Baker Creek Heirloom Seeds	65	82	
Beet	Ruby Queen	Comstock, Ferre, and Company	65	74	
Beet	Tall Top Early Wonder	Ferry-Morse Seed Company	65	66	
Broccoli	Baton Hybrid	New England Seed	75	95	
Broccoli	Calabrese	Hart Seed Company	75	95	
Broccoli	Green Goliath	W. Atlee Burpee and Company	75	89	
Broccoli	Green Sprouting Calabrese	Ferry-Morse Seed Company/Organic	75	94	
Broccoli	Romanesco Italia	Baker Creek Heirloom Seeds	75	82	
Broccoli	Southern Comet	Seedway, Inc.	75	86	
Broccoli	Waltham 29	Lake Valley Seed Company Inc.	75	96	
Broccoli	Waltham 29	Plantation Products Inc./N K Lawn and Garden	75	94	
Broccoli raab	Fall Raab	Hart Seed Company	75	93	
Broccoli raab	Rapini	W. Atlee Burpee and Company/Organic	75	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
Brussels sprouts	Catskill	Seedway, Inc.	70	95
Brussels sprouts	Long Island Improved	Hart Seed Company	70	87
Brussels sprouts	Long Island Improved	Livingston Seed Company	70	98
Brussels sprouts	Long Island Improved	New England Seed	70	95
Cabbage	Chieftain	Hart Seed Company	75	89
Cabbage	Copenhagen	Hart Seed Company	75	92
Cabbage	Copenhagen Market	Ferry-Morse Seed Company	75	92
Cabbage	Copenhagen Market	Lake Valley Seed Company Inc.	75	95
Cabbage	Danish Ball Head	New England Seed	75	97
Cabbage	Danish Ballhead	Comstock, Ferre, and Company	75	96
Cabbage	Early Golden Acre	Plantation Products Inc./N K Lawn and Garden	75	83
Cabbage	Mammoth Red Rock	Baker Creek Heirloom Seeds	75	94
Cabbage	Red Acre	W. Atlee Burpee and Company/Organic	75	89
Cabbage	Royal Savoy	Seedway, Inc.	75	95
Cabbage	Salad Delight	W. Atlee Burpee and Company	75	92
Carrot	Big Top	W. Atlee Burpee and Company	55	61
Carrot	Danvers 126	Seedway, Inc.	55	70
Carrot	Danvers 126 Half Long	Baker Creek Heirloom Seeds	55	66
Carrot	Danvers Halflong	Livingston Seed Company	55	60
Carrot	Imperator 58	New England Seed	55	87
Carrot	Little Fingers	Hart Seed Company	55	83
Carrot	Nantes Coreless	The Page Seed Company/Valley Greene	55	74
Carrot	Scarlet Nantes	Lake Valley Seed Company Inc.	55	79
Cauliflower	Early Snowball	Hart Seed Company	75	59
Cauliflower	Early Snowball	Lake Valley Seed Company Inc.	75	95
Cauliflower	Early Snowball	New England Seed	75	93
Cauliflower	Early Snowball A	Ferry-Morse Seed Company	75	94
Cauliflower	Giant of Naples	Baker Creek Heirloom Seeds	75	98
Cauliflower	Snow Crown	Seedway, Inc.	75	92
Cauliflower	Snowball X	Plantation Products Inc./N K Lawn and Garden	75	76
Celery	Giant Pascal	Comstock, Ferre, and Company	55	70
Celery	Tall Utah	New England Seed	55	92
Chicory	Catalogna	New England Seed	65	84
Chicory	Italian Dandelion	Hart Seed Company	60	87
Chinese cabbage	Bok Choi	Hart Seed Company	75	99
Chinese cabbage	Jade Pagoda	Seedway, Inc.	75	96
Chinese cabbage	Michili	New England Seed	75	94
Collards	Georgia	New England Seed	80	95
Collards	Georgia	W. Atlee Burpee and Company	80	91
Collards	Georgia Green	Hart Seed Company	80	94
Collards	Georgia Southern	Lake Valley Seed Company Inc.	80	95

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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.

Plant	Variety	Seed Company	Standard	Germ Found
Corn	Ambrosia	Hart Seed Company	75	96
Corn	Bi-licious	W. Atlee Burpee and Company	75	77
Corn	Butter and Sugar	Hart Seed Company	75	97
Corn	Butter and Sugar	Seedway, Inc.	75	99
Corn	Golden Beauty	Hart Seed Company	75	97
Corn	Incredible	Seedway, Inc.	75	98
Corn	Quickie	New England Seed	75	97
Corn	Silver Queen	Hart Seed Company	75	91
Corn	Spring Treat	Lake Valley Seed Company Inc.	75	97
Corn	Stowell's Evergreen	Comstock, Ferre, and Company	75	92
Corn	Thompson Prolific	Baker Creek Heirloom Seeds	75	90
Cornsalad	Verte D'Etampes	Baker Creek Heirloom Seeds	70	84
Cornsalad	Vit	W. Atlee Burpee and Company/Organic	70	91
Cowpea	California Blackeye	Plantation Products Inc./N K Lawn and Garden	75	86
Cress	Curled or Peppergrass	New England Seed	75	100
Cucumber	Armenian	W. Atlee Burpee and Company	80	99
Cucumber	Boston Pickling	Livingston Seed Company	80	96
Cucumber	Boston Pickling	New England Seed	80	100
Cucumber	Bush Pickle	Hart Seed Company	75	94
Cucumber	Chicago Pickling	The Page Seed Company/Valley Greene	80	77
Cucumber	Marketmore	Hart Seed Company	80	92
Cucumber	National Pickling	Lake Valley Seed Company Inc.	80	88
Cucumber	Spacemaster	Lake Valley Seed Company Inc.	80	96
Cucumber	Spacemaster	New England Seed	80	97
Cucumber	Straight Eight	Hart Seed Company	80	100
Cucumber	Straight Eight	W. Atlee Burpee and Company/Organic	80	97
Cucumber	Sumter	Ferry-Morse Seed Company/Organic	80	91
Cucumber	Wisconsin SMR 58	Seedway, Inc.	80	97
Dill	Bouquet	Ferry-Morse Seed Company	60	66
Dill	Bouquet	Hart Seed Company	60	74
Dill	Bouquet	New England Seed	60	75
Dill	Dukat	Plantation Products Inc./N K Lawn and Garden	60	70
Dill	Elephant	Baker Creek Heirloom Seeds	60	83
Dill	Fernleaf	Lake Valley Seed Company Inc.	60	75
Dill	Fernleaf	W. Atlee Burpee and Company	60	71
Dill	Tetra	Botanical Interests Inc.	60	72
Eggplant	Black Beauty	Hart Seed Company	70	86
Eggplant	Black Beauty	Lake Valley Seed Company Inc.	65	90
Eggplant	Black Beauty	New England Seed	60	82
Eggplant	Black Beauty	Plantation Products Inc./N K Lawn and Garden	60	42
Eggplant	Long Purple	Botanical Interests Inc.	60	86

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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.

Plant	Variety	Seed Company	Standard	Germ Found	
Eggplant	Romanesca Round White	Lake Valley Seed Company Inc./Pagano	60	97	
Endive	Batavia Broad-leaved	Comstock, Ferre, and Company	70	94	
Endive	Batavian Full Heart	Baker Creek Heirloom Seeds	70	94	
Endive	Catalogna Emerald	W. Atlee Burpee and Company/Organic	70	83	
Endive	Green Curled	Hart Seed Company	60	98	
Endive	Green Curled	Plantation Products Inc./N K Lawn and Garden	70	41	*
Endive	Green Ruffle	Seedway, Inc.	70	97	
Endive	Salad King	New England Seed	70	94	
Kale	Blue Scotch	Seedway, Inc.	75	98	
Kale	Dwarf Siberian	Baker Creek Heirloom Seeds	75	99	
Kale	Red Russian	Lake Valley Seed Company Inc.	75	95	
Kale	Red Winter	Botanical Interests Inc.	75	69	
Kale	Red Winter	W. Atlee Burpee and Company/Organic	75	99	
Kale	Siberian	Comstock, Ferre, and Company	75	98	
Kale	Vates	New England Seed	75	97	
Kohlrabi	Early Purple Vienna	Lake Valley Seed Company Inc.	75	99	
Kohlrabi	Early Purple Vienna	Seedway, Inc.	75	97	
Kohlrabi	Early White Vienna	Plantation Products Inc./N K Lawn and Garden	75	57	*
Kohlrabi	Purple Vienna	W. Atlee Burpee and Company/Organic	75	97	
Kohlrabi	White Vienna	New England Seed	75	100	
Leek	American Broad Flag	New England Seed	60	93	
Leek	American Flag	Hart Seed Company	60	87	
Leek	American Flag	Livingston Seed Company	60	76	
Leek	American Flag	Plantation Products Inc./N K Lawn and Garden	60	83	
Leek	Arkansas	Seedway, Inc.	60	95	
Leek	no variety named- "heirloom"	Botanical Interests Inc.	60	86	
Lettuce	Bibb	Lake Valley Seed Company Inc.	80	98	
Lettuce	Big Boston	New England Seed	80	78	
Lettuce	Black Seeded Simpson	Hart Seed Company	80	90	
Lettuce	Black Seeded Simpson	Lake Valley Seed Company Inc.	80	86	
Lettuce	Black Seeded Simpson	The Page Seed Company/Valley Greene	80	89	
Lettuce	Burpee Bibb	W. Atlee Burpee and Company	80	99	
Lettuce	Buttercrunch	Lake Valley Seed Company Inc.	80	85	
Lettuce	Buttercrunch	Livingston Seed Company	80	98	
Lettuce	Danyelle	W. Atlee Burpee and Company/Organic	80	92	
Lettuce	Flame	Baker Creek Heirloom Seeds	80	33	*
Lettuce	Grand Rapids	Plantation Products Inc./N K Lawn and Garden	80	91	
Lettuce	Iceberg	Hart Seed Company	80	8	*
Lettuce	Little Caesar	W. Atlee Burpee and Company	80	0	*
Lettuce	Marvel of Four Seasons	Botanical Interests Inc.	80	9	*
Lettuce	Oakleaf	Hart Seed Company	80	88	
Lettuce	Parris Island Cos	The Page Seed Company/Valley Greene	80	84	
Lettuce	Prizehead	Plantation Products Inc./N K Lawn and Garden	80	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.

Plant	Variety	Seed Company	Standard	Germ Found
Lettuce	Prizehead	Seedway, Inc.	80	97
Lettuce	Red Sails	New England Seed	80	97
Lettuce	Rouge D'Hiver Romaine	Botanical Interests Inc.	80	98
Lettuce	Rouge D'Hiver Romaine	Comstock, Ferre, and Company	80	54
Lettuce	Summertime	Seedway, Inc.	80	92
Muskmelon	Ananas	Baker Creek Heirloom Seeds	75	88
Muskmelon	Delicious	Hart Seed Company	75	90
Muskmelon	Delicious 51	New England Seed	75	92
Muskmelon	Golden Amarillo	Lake Valley Seed Company Inc./Pagano	75	80
Muskmelon	Hale's Best Jumbo	Ferry-Morse Seed Company	75	100
Muskmelon	Hale's Best Jumbo	Plantation Products Inc./N K Lawn and Garden	75	89
Muskmelon	Hearts of Gold	Lake Valley Seed Company Inc.	75	90
Mustard	Black Mustard Greens	Baker Creek Heirloom Seeds	75	96
Mustard	Early Mazuna	Ferry-Morse Seed Company/Organic	75	99
Mustard	Florida Broadleaf	Lake Valley Seed Company Inc.	75	95
Mustard	Giant Red	W. Atlee Burpee and Company/Organic	75	93
Mustard	Green Wave	New England Seed	75	97
Mustard	Southern Curled	Hart Seed Company	75	96
Mustard	Tendergreen	Plantation Products Inc./N K Lawn and Garden	75	97
New Zealand Spinach		Comstock, Ferre, and Company	40	96
New Zealand Spinach		New England Seed	40	99
Okra	Clemson Spineless	Lake Valley Seed Company Inc.	50	91
Okra	Clemson Spineless	New England Seed	50	80
Okra	Clemson Spineless	Plantation Products Inc./N K Lawn and Garden	50	60
Onion	Australian Brown	Baker Creek Heirloom Seeds	70	91
Onion	Candy	Seedway, Inc.	70	91
Onion	Evergreen Long White	W. Atlee Burpee and Company/Organic	70	84
Onion	Ringmaster	Botanical Interests Inc.	70	74
Onion	Sweet Spanish	Hart Seed Company	70	77
Onion	Sweet Spanish	New England Seed	70	74
Onion	Tropea Red Long	Lake Valley Seed Company Inc./Pagano	70	87
Onion	Walla Walla	Lake Valley Seed Company Inc.	70	81
Onion	Walla Walla	Plantation Products Inc./N K Lawn and Garden	70	85
Onion	Wethersfield Large Red	Comstock, Ferre, and Company	70	95
Onion	White Barletta	Comstock, Ferre, and Company	70	78
Onion	White Bunching	New England Seed	70	86
Onion	White Light	W. Atlee Burpee and Company	70	96
Onion	White Lisbon	Lake Valley Seed Company Inc.	70	77
Parsley	Dark Moss Curled	Plantation Products Inc./N K Lawn and Garden	60	77
Parsley	Dwarf Curled	Lake Valley Seed Company Inc./Pagano	60	67
Parsley	Forest Green	Seedway, Inc.	60	60
Parsley	Giant of Italy	Baker Creek Heirloom Seeds	60	74

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	
Parsley	Giante D'Italia	W. Atlee Burpee and Company/Organic	60	71	
Parsley	Italian	Ferry-Morse Seed Company	60	76	
Parsley	Italian Plain Leaf	New England Seed	60	78	
Parsley	Moss Curled	Botanical Interests Inc.	60	89	
Parsley	Moss Curled	Hart Seed Company	60	45	*
Parsley	Plain Leaf Italian	Hart Seed Company	60	72	
Parsnip	All American	Botanical Interests Inc.	60	74	
Parsnip	All American	New England Seed	60	64	
Parsnip	Hollow Crown	Hart Seed Company	60	70	
Parsnip	Hollow Crown	Lake Valley Seed Company Inc.	60	74	
Parsnip	Hollow Crown	Plantation Products Inc./N K Lawn and Garden	60	36	*
Pea	Dark Seeded Early Perfection	W. Atlee Burpee and Company	80	93	
Pea	Dwarf Grey Sugar	New England Seed	80	92	
Pea	Early Frosty	Hart Seed Company	80	81	
Pea	Green Arrow	Hart Seed Company	80	84	
Pea	Lincoln	New England Seed	80	83	
Pea	Little Marvel	Lake Valley Seed Company Inc.	80	82	
Pea	Little Marvel	Plantation Products Inc./N K Lawn and Garden	80	90	
Pea	Mr. Big	Seedway, Inc.	80	89	
Pea	Sugar Ann	Hart Seed Company	80	93	
Pea	Sugar Snap	Lake Valley Seed Company Inc.	80	92	
Pea	Super Snappy	W. Atlee Burpee and Company	80	89	
Pepper	Anaheim Chili	Plantation Products Inc./N K Lawn and Garden	55	13	*
Pepper	Calabrese	Lake Valley Seed Company Inc./Pagano	75	37	*
Pepper	California Wonder	Hart Seed Company	55	55	
Pepper	California Wonder	Livingston Seed Company	55	60	
Pepper	California Wonder	W. Atlee Burpee and Company	55	34	*
Pepper	Calwonder	New England Seed	55	53	
Pepper	Cubanelle	Hart Seed Company	55	33	*
Pepper	Early Jalapeno	Botanical Interests Inc.	75	57	*
Pepper	Early Jalapeno	New England Seed	55	66	
Pepper	Keystone Resistant Giant	The Page Seed Company/Valley Greene	55	68	
Pepper	Poblano	Lake Valley Seed Company Inc.	55	15	*
Pepper	Sweet Banana	New England Seed	55	80	
Pepper	Sweet Red	Lake Valley Seed Company Inc.	55	44	
Pumpkin	Baby Bear	Hart Seed Company	75	91	
Pumpkin	Big Max	Hart Seed Company	75	85	
Pumpkin	Jack O'Lantern	Hart Seed Company	75	73	
Pumpkin	Small Sugar	Hart Seed Company	75	81	
Radish	Cherry Bell	Hart Seed Company	75	92	
Radish	Chinese White Winter	Seedway, Inc.	75	97	
Radish	French Breakfast	W. Atlee Burpee and Company/Organic	75	89	
Radish	Munchener Bier	Baker Creek Heirloom Seeds	75	97	

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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.

Plant	Variety	Seed Company	Standard	Germ Found	
Radish	Red Emperor	W. Atlee Burpee and Company	75	99	
Radish	Sparkler	Lake Valley Seed Company Inc.	75	96	
Radish	Watermelon	New England Seed	75	88	
Rutabaga	American Purple Top	Comstock, Ferre, and Company	75	98	
Rutabaga	Laurentian	Baker Creek Heirloom Seeds	75	97	
Rutabaga	Laurentian	New England Seed	75	85	
Rutabaga	Purple Top	Lake Valley Seed Company Inc.	75	91	
Sage	Broadleaf	Comstock, Ferre, and Company	60	54	
Sage		Hart Seed Company	60	78	
Salsify	Mammoth Sandwich Island	Comstock, Ferre, and Company	65	80	
Soybean	Envy	Baker Creek Heirloom Seeds	75	93	
Spinach	Avon	W. Atlee Burpee and Company	60	80	
Spinach	Bloomsdale	Hart Seed Company	60	85	
Spinach	Bloomsdale	Lake Valley Seed Company Inc.	60	71	
Spinach	Bloomsdale Longstanding	Ferry-Morse Seed Company/Organic	60	81	
Spinach	Bloomsdale Savoy	New England Seed	60	91	
Spinach	Correnta	Plantation Products Inc./N K Lawn and Garden	60	85	
Spinach	Tyee	Botanical Interests Inc.	60	96	
Spinach	Winter Giant	Lake Valley Seed Company Inc./Pagano	60	97	
Squash	Black Beauty	Lake Valley Seed Company Inc.	75	83	
Squash	Black Beauty Zucchini	Seedway, Inc.	75	84	
Squash	Butta	New England Seed	75	96	
Squash	Buttercup	Plantation Products Inc./N K Lawn and Garden	75	93	
Squash	Cocozele	New England Seed	75	72	
Squash	Cocozele	Plantation Products Inc./N K Lawn and Garden	75	79	
Squash	Early Prolific Straight Neck	Livingston Seed Company	75	96	
Squash	Early Prolific Straight Neck	W. Atlee Burpee and Company	75	97	
Squash	Early White Scallop Bush	Ferry-Morse Seed Company	75	59	*
Squash	Puritan Butternut	Seedway, Inc.	75	91	
Squash	San Pasquale	Lake Valley Seed Company Inc./Pagano	75	87	
Squash	Spaghetti	Hart Seed Company	75	94	
Squash	Speckled Hound	New England Seed	75	97	
Squash	Table Princess	New England Seed	75	0	*
Squash	Table Queen Acorn	Lake Valley Seed Company Inc.	75	94	
Squash	Turks Turban	New England Seed	75	95	
Squash	Waltham Butternut	Hart Seed Company	75	94	
Swiss chard	Burpee Rhubarb Chard	W. Atlee Burpee and Company	65	84	
Swiss chard	Five Colored Silverbeet	Botanical Interests Inc.	65	81	
Swiss chard	Fordhook	Lake Valley Seed Company Inc.	65	86	
Swiss chard	Fordhook Giant	Livingston Seed Company	65	81	
Swiss chard	Giant Lucullus	New England Seed	65	89	

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
Swiss chard	Ruby	Ferry-Morse Seed Company/Organic	65	66
Tomatillo	Verde	New England Seed	50	68
Tomato	Beefsteak	Lake Valley Seed Company Inc.	75	95
Tomato	Better Boy	New England Seed	75	98
Tomato	Homestead	Plantation Products Inc./N K Lawn and Garden	75	81
Tomato	Marglobe	Hart Seed Company	75	95
Tomato	Paste DRT-04-133	New England Seed	75	98
Tomato	Principe Borhese	Lake Valley Seed Company Inc./Pagano	75	94
Tomato	Roma	Hart Seed Company	75	94
Tomato	Roma VF	Seedway, Inc.	75	92
Tomato	Rutgers	New England Seed	75	89
Tomato	Rutgers	The Page Seed Company/Valley Greene	75	94
Tomato	San Marzano	Lake Valley Seed Company Inc.	75	82
Turnip	Early Snowball	Comstock, Ferre, and Company	80	96
Turnip	Milan Purple Top	Baker Creek Heirloom Seeds	80	94
Turnip	Purple Top White Globe	Lake Valley Seed Company Inc.	80	96
Turnip	Purple Top White Globe	New England Seed	80	98
Turnip	Purple Top White Globe	The Page Seed Company/Valley Greene	80	97
Turnip	Purple Top White Globe	W. Atlee Burpee and Company	80	95
Turnip	Seven Top Greens	Plantation Products Inc./N K Lawn and Garden	80	89
Watermelon	Charleston Grey	Hart Seed Company	70	94
Watermelon	Charleston Grey	Lake Valley Seed Company Inc.	70	62
Watermelon	Congo	W. Atlee Burpee and Company	70	83
Watermelon	Florida Giant	New England Seed	70	97
Watermelon	Moon and Stars Red	New England Seed	70	80

Seed Germination and Purity Analysis 2011

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

Seed Company	Total Number of Claims	% Meeting Claims	% Not Meeting Claims
Baker Creek Heirloom Seeds	20	95	5
Botanical Interests Inc.	13	85	15
Comstock, Ferre, and Company	17	94	6
Ferry-Morse Seed Company	8	88	12
Ferry-Morse Seed Company/Organic	5	100	0
Hart Seed Company	51	90	10
Lake Valley Seed Company Inc.	37	98	2
Lake Valley Seed Company Inc./Pagano	10	90	10
Livingston Seed Company	10	100	0
New England Seed	53	98	2
Plantation Products Inc./N K Lawn and Garden	26	77	23
Seedway, Inc.	26	100	0
The Page Seed Company/Valley Greene	7	100	0
W. Atlee Burpee and Company	21	90	10
W. Atlee Burpee and Company/ Organic	13	100	0

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.

Plant	Samples Tested	Standard	Average Germination
Artichoke	1	60	57
Asparagus	3	70	86
Bean	14	70	79
Bean, lima	4	70	74
Beet	9	65	78
Broccoli	8	75	91
Broccoli raab	2	75	86
Brussels sprouts	4	70	94
Cabbage	11	75	92
Carrot	8	55	73
Cauliflower	7	75	87
Celery	2	55	81
Chicory	2	60	86
Chinese cabbage	3	75	96
Collards	4	80	94
Corn	11	75	94
Cornsalad	2	70	88
Cowpea	1	75	86
Cress	1	75	100
Cucumber	13	75	94
Dill	8	60	73
Eggplant	6	70	81
Endive	7	60	86
Kale	7	75	94
Kohlrabi	5	75	90
Leek	6	60	87
Lettuce	22	80	75
Muskmelon	7	75	90
Mustard	7	75	96
New Zealand Spinach	2	40	98
Okra	3	50	77
Onion	14	70	84
Parsley	10	60	71
Parsnip	5	60	64
Pea	11	80	88
Pepper	13	55	47
Pumpkin	4	75	83
Radish	7	75	94
Rutabaga	4	75	93
Sage	2	60	66
Salsify	1	65	80
Soybean	1	75	93
Spinach	8	60	86
Squash	17	75	83
Swiss chard	6	65	81
Tomatillo	1	50	68
Tomato	11	75	92
Turnip	7	80	95
Watermelon	5	70	83

Seed Germination and Purity Analysis 2011

Table 4. Germination and purity of lawn seed. Tolerance =Tol; Variance =Var; Purity Found =Pur F; 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
Southern States Co-op. Inc.	<i>Landscaper Mixture</i>						
	Kentucky Bluegrass, VNS	15.00	15.37	0.37	1.86	85	79
	Perennial Ryegrass, VNS	68.48	67.04	-1.44	3.34	90	90
	Creeping Red Fescue, VNS	14.45	15.26	0.81	2.52	85	80
Southern States Co-op. Inc.	<i>Contractors Mixture</i>						
	Perennial Ryegrass, VNS	43.63				90	
	Annual Ryegrass	40.00				90	
	total ryegrass	83.63	83.59	-0.04	2.29		89
	Creeping Red Fescue, VNS	14.52	14.49	-0.03	2.15	85	92
Southern States Co-op. Inc.	<i>Shady Green Mixture</i>						
	Blue Chip Plus Kentucky Bluegrass	9.94	11.35	1.41	1.50	85	96
	ASP 6001 Perennial Ryegrass	24.62				90	
	ASP 6003 Perennial Ryegrass	19.75				90	
	total ryegrass	44.37	40.73	-3.64	4.17		90
	Cascade Chewings Fescue	29.76				85	
	Boreal Creeping Red Fescue	14.56				85	
	total fine fescue	44.32	44.23	-0.09	3.50		93
	Inert	1.15	3.60	2.45	1.10	*	
	Pure seed	98.63	96.31	-2.32	1.21	*	
Pennington Seed Inc.	<i>Ultimate Seed Mixture</i>						
	Oracle Red Fescue	19.00				85	
	7 Seas Chewings Fescue	9.00				80	
	total fine fescue	28.00	32.03	4.03	3.14		90
	Rebel Exeda Tall Fescue	69.00	66.81	-2.19	3.14	85	83
Barenburg USA	<i>Vigoro Contractors Northern Grass Mixture</i>						
	Brooklawn Kentucky Bluegrass	9.62	10.43	0.81	1.50	85	94
	Pace Perennial Ryegrass	19.49				85	
	Panterra Italian Ryegrass	19.43				90	
	Panterra V Italian Ryegrass	19.62				90	
	total ryegrass	58.54	53.39	-5.15	3.83	*	93
	Bargena III Creeping Red Fescue	14.61				85	
	Bridgeport II Chewings Fescue	14.58				85	
	total fine fescue	29.19	33.18	3.99	3.30	*	84
The Scotts Company	<i>Contractors All Purpose Mix</i>						
	Palouse Kentucky Bluegrass	9.83	10.04	0.21	1.33	82	87
	Bright Star SLT Perennial Ryegrass	19.23				90	
	Transist 2400 Intermediate Ryegrass	14.39				90	
	Jackson Annual Ryegrass	24.65				90	
	total ryegrass	58.27	60.00	1.73	3.83		87
	Boreal Creeping Red Fescue	29.56	28.52	-1.04	3.20	81	81

Table 4 (continued). Germination and purity of lawn seed. Tolerance =Tol; Variance =Var; Purity Found =Pur F; 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
Pennington Seed Inc	<i>Rebel Brand Tall Fescue Blend</i>						
	Rebel IV Tall Fescue	39.10				90	
	Rebel Advance Tall Fescue	39.10				90	
	Brockton Tall Fescue	19.50				90	
	total tall fescue	97.70	99.37	1.67	0.86		85
The Scotts Company	<i>Sun and Shade Water Smart Mix (coated)</i>						
	Abbey Kentucky Bluegrass	6.81				85	
	Thermal Blue Kentucky Bluegrass	2.83				85	
	total Kentucky bluegrass	9.64	10.41	0.77	1.50		87
	Apple GL Perennial Ryegrass	9.52				90	
	Silver Dollar Perennial Ryegrass	9.48				90	
	total ryegrass	19.00	19.09	0.09	4.54		88
	Foxy II Creeping Red Fescue	9.56				85	
	Aruba Creeping Red Fescue	9.54				85	
total fine fescue	19.10	21.62	2.52	3.45		83	

Seed Germination and Purity Analysis 2011

Table 5. Germination and purity of crop seed. * = Does not meet label claim.

Seed Company	Seed	Purity Claim	Purity Found	Germ Claim	Germ Found	
Fieldworks Ag Services	Wheat	99.32	98.42	*	94	96
	Crop	0.32	0.02			
	Inert	0.36	1.56	*		
	Weed	0.00	0.00			
Mosher's	Winter Rye	98.00	99.87		85	93
	Crop	0.50	0.02			
	Inert	1.00	0.11			
	Weed	0.50	0.00			
Fieldworks Ag Services	Rye	99.82	99.74		85	91
	Crop	0.00	0.00			
	Inert	0.07	0.26			
	Weed					
	Noxious weed chess					
Logue Farm Inc.	Rye	93.33	95.28		93	96
	Crop	0.00	0.00			
	Inert	0.08	0.21			
	Weed cheat, starwort	6.59	4.51			
Carolina Eastern-Vail Inc.	Rye	99.54	98.60	*	91	91
	Crop	0.04	0.42			
	Inert	0.23	0.88	*		
	Weed	0.19	0.10			
	Noxious weed corncockle brome grass					
Eldred Hay And Grain Co.	Wheat	99.50	99.09		85	93
	Crop	0.05	0.00			
	Inert	0.43	0.91			
	Weed	0.02	0.00			
Preferred Seed Company, Inc.	Rye, Lot 2010-05	98.00	99.97		85	90
	Crop	0.05	0.00			
	Inert	1.00	0.03			
	Weed	0.05	0.00			
Preferred Seed Company, Inc.	Rye, Lot 2010-04	98.00	99.97		85	92
	Crop	0.50	0.00			
	Inert	1.00	0.03			
	Weed	0.50	0.00			

Table 5 (continued). Germination and purity of crop seed. * = Does not meet label claim.

Seed Company	Seed	Purity Claim	Purity Found	Germ Claim	Germ Found
Preferred Seed Company, Inc.	Buckwheat	99.98	99.98	91	85
	Crop	0.01	0.00		
	Inert	0.01	0.02		
	Weed	0.00	0.00		
Michigan Agricultural Commodities Inc.	Rye	97.00	99.56	85	87
	Crop	1.82	0.00		
	Inert	1.15	0.44		
	Weed	0.03	0.00		

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