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Seed Germination
and Purity
Analysis 1995

BY SHARON M. DOUGLAS



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Official samples of 366 vegetable and 17 lawn seed were collected by inspectors from the Bureau of Regulation and Inspection of the Connecticut Department of Agriculture for testing in 1995. 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 11 companies. Results are presented by plant type, variety, germination claim, germination found, and compliance with the standards for germination. These 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. All tests were replicated twice. Seed lots that failed were retested. In addition, seedlings from the seeds must also 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 366 vegetable seeds tested, five did not meet their claims for germination even after being retested. Three additional samples did not meet label claims for germination but were not retested because of insufficient numbers of seeds. Seed samples were also examined for prohibited noxious weed seeds. No vegetable samples contained weed contaminants.

The total number of germination claims and the percentage of claims in each category for compliance are summarized for each vegetable seed company in Table 2. Table 3 summarizes the total number of samples tested and the percentage of claims in each compliance category 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 labelled 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. Seven of the 17 lawn seed samples tested met label claims for both purity and germination. Seven samples did not meet claims for purity, six samples did not meet claims for germination, and three samples failed label claims for both germination and purity.

In addition to germination and purity tests, label claims for the percentages of inert matter, crop seed (other than lawn seed), weed seed, and the presence of noxious weeds were also evaluated. All samples met label claims for these criteria.

Analyses were performed by Mary K. Inman and Dr. Sharon M. Douglas. Samples were collected by Alton Van Dyke, Seed Control Official. 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. Blanks indicate claims and/or standards are not available for that vegetable; an asterisk (*) indicates the sample does not meet label claims within allowable tolerance. Standards are provided for by the rules and regulations of the Federal Seed Act.

Plant	Variety	Seed Company	Claim	% Germination	
				Found	Standard
Asparagus	Mary Washington	Plantation Products, Inc.	70	7*	70
Bean	Blue Lake 274	NK Lawn & Garden	75	65	75
Bean	Blue Lake 274 Bush	Excel Seeds	75	75	75
Bean	Blue Lake Bush	New England Seed Co.	75	65	75
Bean	Blue Lake Bush 274	Burpee	75	71	75
Bean	Blue Lake Stringless Pole	NK Lawn & Garden	75	67	75
Bean	Bountiful	Comstock-Ferre	90	90	75
Bean	Cherokee Wax	New England Seed Co.	75	92	75
Bean	Commodore	Hart	81	79	75
Bean	Contender	Plantation Products, Inc.	75	65	75
Bean	Derby	Plantation Products, Inc.	75	79	75
Bean	Earliray Pinto	Advance Seed Co.	75	79	75
Bean	French Dwarf Horticultural	Comstock-Ferre	76	75	75
Bean	Gator Green 15	Advance Seed Co.	75	65	75
Bean	Harvester Green Pod Bush	Michael-Leonard Inc.	75	83	75
Bean	KY Blue Pole	Advance Seed Co.	75	68	75
Bean	KY Wonder	New England Seed Co.	75	93	75
Bean	KY Wonder Pole	American Seed	75	76	75
Bean	KY Wonder Wax Pole	Comstock-Ferre	90	90	75
Bean	Pencil Pod Black Wax Bush	Hart	80	91	75
Bean	Romano Pole	NK Lawn & Garden	75	73	75
Bean	Royalty Purple Pod Bush	NK Lawn & Garden	75	75	75
Bean	Tendergreen	Plantation Products, Inc.	75	83	75
Bean	Tendergreen Improved	Hart	79	90	75
Bean, Lima	Baby Fordhook	Burpee	70	82	70
Bean, Lima	Burpee's Improved Bush	Burpee	70	71	70
Bean, Lima	Fordhook 242 Bush	Burpee	70	70	70
Bean, Lima	Henderson Bush	Agway	70	79	70
Bean, Lima	Henderson Bush	Plantation Products, Inc.	70	83	70
Beet	Burpee's Red Ball	Burpee	65	96	65
Beet	Detroit Dark Red	Agway	65	86	65
Beet	Detroit Dark Red	Burpee	65	94	65
Beet	Detroit Dark Red	Excel Seeds	65	84	65
Beet	Detroit Dark Red	Michael-Leonard Inc.	65	92	65
Beet	Detroit Dark Red	New England Seed Co.	65	98	65
Beet	Detroit Dark Red	NK Lawn & Garden	65	89	65
Beet	Early Wonder	Hart	65	80	65
Beet	Early Wonder Green Top	Comstock-Ferre	90	89	65
Beet	Early Wonder Tall Top	Advance Seed Co.	65	94	65
Broccoli	Calabrese	American Seed	75	99	75
Broccoli	Calabrese	Plantation Products, Inc.	75	96	75
Broccoli	Green Comet Hybrid	Advance Seed Co.	75	90	75
Broccoli	Green Goliath	Burpee	75	90	75
Broccoli	Southern Comet Hybrid	Agway	75	80	75
Broccoli	Waltham	Hart	79	85	75
Broccoli	Waltham 29	Comstock-Ferre	75	80	75

Table I (continued). Germination of vegetable seeds. Blanks indicate claims and/or standards are not available for that vegetable; an asterisk (*) indicates the sample does not meet label claims within allowable tolerance. Standards are provided for by the rules and regulations of the Federal Seed Act.

Plant	Variety	Seed Company	Claim	% Germination	
				Found	Standard
Broccoli	Waltham 29	Michael-Leonard Inc.	75	74	75
Broccoli	Waltham 29	NK Lawn & Garden	75	91	75
Broccoliraab	Early Pugliese	New England Seed Co.	75	97	75
Brussels sprouts	Catskill	Agway	70	94	70
Brussels sprouts	Jade Cross Hybrid	Comstock-Ferre	78	77	70
Brussels sprouts	Jade Cross Hybrid	New England Seed Co.	70	95	70
Brussels sprouts	Long Island Improved Catskill	Burpee	70	90	70
Cabbage	Copenhagen Market	Comstock-Ferre	90	93	75
Cabbage	Copenhagen Market	NK Lawn & Garden	75	98	75
Cabbage	Danish Ball Head	New England Seed Co.	75	65	75
Cabbage	Danish Round Head	Burpee	75	95	75
Cabbage	Early Copenhagen	Excel Seeds	75	94	75
Cabbage	Early Golden Acre	Plantation Products, Inc.	75	97	75
Cabbage	Early Jersey Wakefield	Hart	80	98	75
Cabbage	Early Jersey Wakefield	Michael-Leonard Inc.	75	95	75
Cabbage	Ferry's Round Dutch	Advance Seed Co.	75	94	75
Cabbage	Golden Acre	Burpee	75	98	75
Cabbage	Gourmet	Agway	75	95	75
Cabbage	Red Acre	Hart	90	96	75
Cantaloupe	Alaska Hybrid	Comstock-Ferre	90	94	75
Cantaloupe	Alaska Hybrid	New England Seed Co.	75	87	75
Cantaloupe	Delicious 5I	Agway	75	92	75
Cantaloupe	Delicious 5I	Hart	82	96	75
Cantaloupe	Delicious 5I	Plantation Products, Inc.	75	96	75
Cantaloupe	Hales Best	American Seed	75	99	75
Cantaloupe	Hales Best	Hart	90	92	75
Cantaloupe	Hales Best	Michael-Leonard Inc.	75	87	75
Cantaloupe	Iroquois	NK Lawn & Garden	75	97	75
Cantaloupe	Sierra Gold	Advance Seed Co.	75	96	75
Carrot	Chantenay	Michael-Leonard Inc.	55	79	55
Carrot	Chantenay Red Core	NK Lawn & Garden	55	83	55
Carrot	Danvers 126	Agway	55	75	55
Carrot	Danvers Half Long	Burpee	55	79	55
Carrot	Danvers Half Long	Hart	80	93	55
Carrot	Gold Pack	Comstock-Ferre	90	95	55
Carrot	Laranda Hybrid	NK Lawn & Garden	55	87	55
Carrot	Little Finger	Burpee	55	88	55
Carrot	Long Imperator	Plantation Products, Inc.	55	79	55
Carrot	Long Imperator #58	Advance Seed Co.	55	90	55
Carrot	Nantes Coreless	American Seed	55	79	55
Carrot	Nantes Long	Agway	55	83	55
Carrot	Orbit	Comstock-Ferre	78	72	55
Carrot	Red Core Chantenay	New England Seed Co.	55	78	55
Carrot	Red Core Chantenay	NK Lawn & Garden	55	74	55

Table 1 (continued). Germination of vegetable seeds. Blanks indicate claims and/or standards are not available for that vegetable; an asterisk (*) indicates the sample does not meet label claims within allowable tolerance. Standards are provided for by the rules and regulations of the Federal Seed Act.

Plant	Variety	Seed Company	Claim	% Germination	
				Found	Standard
Carrot	Scarlet Nantes	Excel Seeds	55	86	55
Carrot	Thumbelina	Plantation Products, Inc.	55	72	55
Carrot	Toudo Hybrid	Burpee	55	79	55
Cauliflower	Early Snowball	Hart	75	87	75
Cauliflower	Early Snowball A	Advance Seed Co.	75	89	75
Cauliflower	Early White Hybrid	Burpee	75	98	75
Cauliflower	Self-Blanche	Agway	75	96	75
Cauliflower	Snow King Hybrid	Comstock-Ferre	82	75	75
Cauliflower	Snow King Hybrid	New England Seed Co.	75	97	75
Celery	Giant Pascal	New England Seed Co.	55	82	55
Celery	Golden Self Blanching	Comstock-Ferre	84	84	55
Celery	Golden Self Blanching	Hart	80	82	55
Celery	Tall Utah 52-70R Imp.	Burpee	55	96	55
Chicory	Red Verona Radicchio	Burpee	65	92	65
Chicory	Witloof	Comstock-Ferre	85	64*	65
Chinese cabbage	Early Jade Pagoda Hybrid	Comstock-Ferre	90	98	75
Chinese cabbage	Jade Pagoda	Agway	75	95	75
Chinese cabbage	Two Seasons Hybrid	Burpee	75	99	75
Chives		Agway	50	77	50
Collards	Georgia	Comstock-Ferre	89	95	80
Collards	Georgia Green	Hart	80	99	80
Collards	Vates	Agway	80	98	80
Collards	Vates	NK Lawn & Garden	80	96	80
Collards	Vates Non-heading	Plantation Products, Inc.	80	95	80
Corn	Bodacious	Hart	88	95	75
Corn	Breeders Choice Hybrid	Burpee	75	96	75
Corn	Butter and Sugar	Agway	75	97	75
Corn	Butter and Sugar	Comstock-Ferre	90	98	75
Corn	Butter and Sugar	Hart	88	96	75
Corn	Butter and Sugar	New England Seed Co.	75	99	75
Corn	Comstock's Pride and Joy	Comstock-Ferre	90	81	75
Corn	Double Delight Extra Sweet	Comstock-Ferre	88	85	75
Corn	Early Extra Sweet Hybrid	NK Lawn & Garden	75	95	75
Corn	Early Golden Bantam	Plantation Products, Inc.	75	94	75
Corn	Early Sunglow Hybrid	Burpee	75	97	75
Corn	Golden Beauty Hybrid	Excel Seeds	75	95	75
Corn	Golden Cross Bantam	American Seed	75	93	75
Corn	Golden Cross Bantam Hybrid	Michael-Leonard Inc.	75	97	75
Corn	Golden Cross Bantam T-51	Advance Seed Co.	75	96	75
Corn	Honeybutter Hybrid	NK Lawn & Garden	75	92	75
Corn	Iochief Hybrid	Plantation Products, Inc.	75	91	75
Corn	Jubilee Supersweet Hybrid	NK Lawn & Garden	75	77	75
Corn	Silver Bullet Hybrid	Advance Seed Co.	75	93	75

Table 1 (continued). Germination of vegetable seeds. Blanks indicate claims and/or standards are not available for that vegetable; an asterisk (*) indicates the sample does not meet label claims within allowable tolerance. Standards are provided for by the rules and regulations of the Federal Seed Act.

Plant	Variety	Seed Company	Claim	% Germination	
				Found	Standard
Corn	Silver Queen	Hart	90	96	75
Corn	Silver Queen Hybrid	Burpee	75	94	75
Corn	True Gold	NK Lawn & Garden	75	95	75
Cucumber	Boston Pickling	Hart	89	100	80
Cucumber	Boston Pickling	New England Seed Co.	80	99	80
Cucumber	Burpee Hybrid II	Burpee	80	99	80
Cucumber	Burpless Hybrid	NK Lawn & Garden	80	97	80
Cucumber	Bush Pickle	Hart	90	100	80
Cucumber	Dasher II	Agway	80	95	80
Cucumber	Marketer	Comstock-Ferre	90	100	80
Cucumber	Marketmore 76	Advance Seed Co.	80	100	80
Cucumber	Marketmore 76	Excel Seeds	80	99	80
Cucumber	Marketmore 76	Plantation Products, Inc.	80	98	80
Cucumber	Marketmore 86 Bush	Hart	82	92	80
Cucumber	National Pickling	American Seed	80	98	80
Cucumber	Picarow	Agway	80	94	80
Cucumber	Saladin Pickling Hybrid	Comstock-Ferre	90	97	80
Cucumber	SMR 58	Michael-Leonard Inc.	80	92	80
Cucumber	Spacemaster	Burpee	80	92	80
Cucumber	Straight Eight	Burpee	80	100	80
Cucumber	Straight Eight	New England Seed Co.	80	99	80
Cucumber	Straight Eight	Plantation Products, Inc.	80	98	80
Cucumber	Sumter	Advance Seed Co.	80	98	80
Cucumber	Tasty Green-Burpless Hybrid #2	Comstock-Ferre	90	99	80
Eggplant	Black Beauty	Advance Seed Co.	60	97	60
Eggplant	Black Beauty	American Seed	60	97	60
Eggplant	Black Beauty	Hart	85	97	60
Eggplant	Black Beauty	Plantation Products, Inc.	60	89	60
Eggplant	Dusky Hybrid	New England Seed Co.	60	95	60
Eggplant	Early Long Purple	Comstock-Ferre	90	91	60
Endive	Batavian Full Heart	New England Seed Co.	70	92	70
Endive	Florida Deep Heart	Agway	70	89	70
Escarolle	Broadleaf	Hart	85	92	75
Kale	Blue Scotch	Agway	75	93	75
Kale	Dwarf Siberian	Hart	90	86	75
Kale	Vates Dwarf Blue Curled	NK Lawn & Garden	75	94	75
Kale	Vates Dwarf Curled	New England Seed Co.	75	94	75
Kale	Vates Improved	Comstock-Ferre	90	89	75
Kohlrabi	Early Purple	Hart	90	84	75
Kohlrabi	Early Purple Vienna	Agway	75	96	75
Kohlrabi	Early Purple Vienna	Comstock-Ferre	90	97	75
Kohlrabi	Early White Vienna	Plantation Products, Inc.	75	90	75
Leek	American Broad Flag	New England Seed Co.	60	85	60
Leek	Carina	Agway	60	93	60

Table 1 (continued). Germination of vegetable seeds. Blanks indicate claims and/or standards are not available for that vegetable; an asterisk (*) indicates the sample does not meet label claims within allowable tolerance. Standards are provided for by the rules and regulations of the Federal Seed Act.

Plant	Variety	Seed Company	Claim	% Germination	
				Found	Standard
Lettuce	All the Year Round	NK Lawn & Garden	80	95	80
Lettuce	Bibb	Michael-Leonard Inc.	80	98	80
Lettuce	Black Seeded Simpson	Advance Seed Co.	80	97	80
Lettuce	Black Seeded Simpson	Hart	86	97	80
Lettuce	Buttercrunch	Excel Seeds	80	69*	80
Lettuce	Buttercrunch	Hart	90	99	80
Lettuce	Dapple Butterhead	Burpee	80	98	80
Lettuce	Grand Rapids	American Seed	80	89	80
Lettuce	Iceberg	Plantation Products, Inc.	80	96	80
Lettuce	Iceberg Crisphead	Burpee	80	97	80
Lettuce	Marvel of 4 Seasons	Advance Seed Co.	80	97	80
Lettuce	Parris Island Cos	Agway	80	92	80
Lettuce	Red Sails	Comstock-Ferre	90	99	80
Lettuce	Red Winter	NK Lawn & Garden	80	99	80
Lettuce	Simpson Elite	New England Seed Co.	80	99	80
Lettuce	Summer Bibb	Comstock-Ferre	90	97	80
Melon	Burpee Early Crenshaw Hybrid	Burpee	75	97	75
Mustard	Florida Broadleaf	Hart	90	99	75
Mustard	Tendergreen	American Seed	75	97	75
Mustard	Tendergreen	Comstock-Ferre	90	99	75
Okra	Burgundy	Comstock-Ferre	79	56*	50
Okra	Clemson Spineless	Agway	50	75	50
Okra	Clemson Spineless	Hart	80	88	50
Okra	Clemson Spineless #80	Advance Seed Co.	50	79	50
Okra	Emerald Green	Plantation Products, Inc.	50	71	50
Okra	North-South Hybrid	Burpee	50	82	50
Onion	Green Bunching	Michael-Leonard Inc.	70	79	70
Onion	Long White Bunching	Agway	70	86	70
Onion	Red Baron	NK Lawn & Garden	70	96	70
Onion	Southport White Globe	Advance Seed Co.	70	93	70
Onion	Utah Sweet Spanish	Comstock-Ferre	90	83	70
Onion	Utah Sweet Spanish	New England Seed Co.	70	94	70
Onion	Utah Sweet Spanish	NK Lawn & Garden	70	77	70
Onion	Wethersfield Red	Hart	70	81	70
Onion	White Lisbon Bunching	Excel Seeds	70	87	70
Onion	White Lisbon Bunching	Plantation Products, Inc.	70	76	70
Onion	Yellow Sweet Spanish	Hart	88	93	70
Parsley	Moss Curled	New England Seed Co.	60	65	60
Parsnip	All American	Agway	60	74	60
Parsnip	All American	New England Seed Co.	60	86	60
Parsnip	Harris Model	Advance Seed Co.	60	84	60
Parsnip	Hollow Crown	Burpee	60	84	60
Parsnip	Hollow Crown	Comstock-Ferre	85	77	60
Parsnip	Hollow Crown	Michael-Leonard Inc.	60	53	60

Table 1 (continued). Germination of vegetable seeds. Blanks indicate claims and/or standards are not available for that vegetable; an asterisk (*) indicates the sample does not meet label claims within allowable tolerance. Standards are provided for by the rules and regulations of the Federal Seed Act.

Plant	Variety	Seed Company	Claim	% Germination	
				Found	Standard
Pea	Dwarf Gray Sugar Snow	New England Seed Co.	80	90	80
Pea	Dwarf Grey Sugar	Burpee	80	96	80
Pea	Dwarf Grey Sugar	Plantation Products, Inc.	80	96	80
Pea	Dwarf White Sugar	Agway	80	85	80
Pea	Early Perfection	Excel Seeds	80	90	80
Pea	Early Perfection	NK Lawn & Garden	80	92	80
Pea	Freezonia	Hart	80	95	80
Pea	Green Arrow	Comstock-Ferre	90	95	80
Pea	Little Marvel	Hart	90	93	80
Pea	Little Marvel	Michael-Leonard Inc.	80	92	80
Pea	Mammoth Melting Sugar	Comstock-Ferre	88	84	80
Pea	Oregon Sugar Pod	NK Lawn & Garden	80	94	80
Pea	Progress #9	Agway	80	90	80
Pea	Snowbird	Burpee	80	98	80
Pea	Sparkle	New England Seed Co.	80	95	80
Pea	Sugar Snap	Hart	85	95	80
Pea	Sugar Snap	Plantation Products, Inc.	80	91	80
Pea	Thomas Laxton	Plantation Products, Inc.	80	84	80
Pea	Wando	Advance Seed Co.	80	90	80
Pea	Wando	Burpee	80	83	80
Pepper	Anaheim Chili Hot	Burpee	55	87	55
Pepper	California Wonder	American Seed	55	71	55
Pepper	California Wonder	Burpee	55	84	55
Pepper	California Wonder	Excel Seeds	55	74	55
Pepper	California Wonder	Hart	90	90	55
Pepper	California Wonder	Michael-Leonard Inc.	55	92	55
Pepper	California Wonder	Plantation Products, Inc.	55	72	55
Pepper	California Wonder 300 TMR	Advance Seed Co.	55	96	55
Pepper	Cayenne Long Slim	NK Lawn & Garden	55	82	55
Pepper	Early Calwonder	Agway	55	91	55
Pepper	Early Calwonder	New England Seed Co.	55	70	55
Pepper	Golden Calwonder	New England Seed Co.	55	55	55
Pepper	Habanero	Advance Seed Co.	55	96	55
Pepper	Habanero	Comstock-Ferre	90	90	55
Pepper	Jalapeno	Plantation Products, Inc.	55	75	55
Pepper	Jupiter	NK Lawn & Garden	55	69	55
Pepper	Large Red Cayenne Hot	New England Seed Co.	55	68	55
Pepper	Long Red Cayenne	Hart	82	71*	55
Pepper	Midway	Comstock-Ferre	90	91	55
Pepper	Nardello	NK Lawn & Garden	55	92	55
Pepper	Red Cherry Hot	Hart	87	85	55
Pepper	Surefire	Agway	55	84	55
Pepper	Sweet Banana	Comstock-Ferre	87	77	55
Popcorn	Robust	Agway	75	96	55
Pumpkin	Atlantic Giant	Comstock-Ferre	90	99	75
Pumpkin	Baby Pam	Agway	75	98	75

Table 1 (continued). Germination of vegetable seeds. Blanks indicate claims and/or standards are not available for that vegetable; an asterisk (*) indicates the sample does not meet label claims within allowable tolerance. Standards are provided for by the rules and regulations of the Federal Seed Act.

Plant	Variety	Seed Company	Claim	% Germination	
				Found	Standard
Pumpkin	Big Max	Hart	87	75*	75
Pumpkin	Big Max	New England Seed Co.	75	88	75
Pumpkin	Connecticut Field	New England Seed Co.	75	84	75
Pumpkin	Ghostrider	Hart	90	95	75
Pumpkin	Howden	Comstock-Ferre	90	88	75
Pumpkin	Jack O'Lantern	Hart	87	92	75
Pumpkin	Jack O'Lantern	NK Lawn & Garden	75	100	75
Pumpkin	Jack O'Lantern	Plantation Products, Inc.	75	70	75
Radish	Black Spanish Round	Hart	90	100	75
Radish	Champion	Hart	90	98	75
Radish	Cherry Belle	Advance Seed Co.	75	100	75
Radish	Crimson Giant	Burpee	75	99	75
Radish	Crunchy Red Hybrid	NK Lawn & Garden	75	98	75
Radish	Early Scarlet Globe	American Seed	75	99	75
Radish	Early Scarlet Globe	Michael-Leonard Inc.	75	100	75
Radish	Early Scarlet Globe	NK Lawn & Garden	75	99	75
Radish	French Breakfast	Comstock-Ferre	90	99	75
Radish	Sparkles White Tip	Plantation Products, Inc.	75	100	75
Radish	White Icicle	Agway	75	100	75
Radish	White Icicle	New England Seed Co.	75	99	75
Roquette	Arugala	Burpee		98	
Rutabaga	Burpee's Purple Top Yellow	Burpee	75	95	75
Rutabaga	Improved Purple Top Yellow	Comstock-Ferre	90	95	75
Salsify	Mammoth Sandwich Island	Comstock-Ferre	85	81	75
Spinach	Bloomsdale Long Standing	Advance Seed Co.	60	84	60
Spinach	Bloomsdale Long Standing	Burpee	60	93	60
Spinach	Bloomsdale Long Standing	Excel Seeds	60	88	60
Spinach	Bloomsdale Long Standing	Hart	90	93	60
Spinach	Bloomsdale Long Standing	NK Lawn & Garden	60	90	60
Spinach	Melody Hybrid	Burpee	60	96	60
Spinach	Melody Hybrid	New England Seed Co.	60	93	60
Spinach	Winter Bloomsdale	Agway	60	85	60
Spinach, New Zealand		Comstock-Ferre	83	76	40
Squash	Bennings Green Tint	NK Lawn & Garden	75	90	75
Squash	Black Beauty Zucchini	Advance Seed Co.	75	81	75
Squash	Black Beauty Zucchini	New England Seed Co.	75	95	75
Squash	Blue Hubbard	Comstock-Ferre	90	99	75
Squash	Burpee's Golden Zucchini	Burpee	75	95	75
Squash	Butter Blossom	Comstock-Ferre	82	61*	75
Squash	Buttercup	New England Seed Co.	75	92	75
Squash	Buttercup Bush	Hart	88	93	75
Squash	Butternut	Michael-Leonard Inc.	75	95	75
Squash	Dark Green Zucchini	Hart	78	73	75
Squash	Delicata	NK Lawn & Garden	75	90	75

Table 1 (continued). Germination of vegetable seeds. Blanks indicate claims and/or standards are not available for that vegetable; an asterisk (*) indicates the sample does not meet label claims within allowable tolerance. Standards are provided for by the rules and regulations of the Federal Seed Act.

Plant	Variety	Seed Company	Claim	% Germination	
				Found	Standard
Squash	Early Prolific Straightneck	Agway	75	99	75
Squash	Early Summer Crookneck	New England Seed Co.	75	100	75
Squash	Goldbar Hybrid	New England Seed Co.	75	99	75
Squash	Grey Zucchini	Plantation Products, Inc.	75	92	75
Squash	Greyzini Hybrid	Comstock-Ferre	90	99	75
Squash	Milano Zucchini	Agway	75	93	75
Squash	Neck Pumpkin	Agway	75	93	75
Squash	Spaghetti	New England Seed Co.	75	99	75
Squash	Straightneck	Hart	90	88	75
Squash	Table Queen Acorn	Agway	75	96	75
Squash	Waltham Butternut	Hart	88	94	75
Squash	Zucchini	Michael-Leonard Inc.	75	99	75
Swiss chard	Fordhook	Excel Seeds	65	95	65
Swiss chard	Fordhook Giant	Agway	65	87	65
Swiss chard	Giant Lucullus	New England Seed Co.	65	96	65
Swiss chard	Lucullus	Hart	88	87	65
Tomatillo		NK Lawn & Garden	50	71	50
Tomato	Beefmaster	Comstock-Ferre	90	88	75
Tomato	Beefsteak	American Seed	75	100	75
Tomato	Better Boy	Hart	90	90	75
Tomato	Better Boy VFN Hybrid	Burpee	75	98	75
Tomato	Burbank Red Slicing	NK Lawn & Garden	75	77	75
Tomato	Burpee's Big Boy Hybrid	Burpee	75	80	75
Tomato	Burpee's Long-Keeper	Comstock-Ferre	90	89	75
Tomato	Burpee's Supersteak VFN Hybrid	Burpee	75	90	75
Tomato	Cherry	Michael-Leonard Inc.	75	90	75
Tomato	Early Girl	New England Seed Co.	75	94	75
Tomato	Heinz 1370	Agway	75	90	75
Tomato	Jet Star	Hart	90	97	75
Tomato	Jubilee	NK Lawn & Garden	75	85	75
Tomato	Jumbo Jim	Agway	75	95	75
Tomato	Large Red Cherry	Plantation Products, Inc.	75	98	75
Tomato	Market Pride	Comstock-Ferre	90	80	75
Tomato	Patio Hybrid	New England Seed Co.	75	87	75
Tomato	Roma VF	Hart	90	87	75
Tomato	Rutgers	Advance Seed Co.	75	92	75
Tomato	Rutgers	Excel Seeds	75	80	75
Tomato	Rutgers Select	Plantation Products, Inc.	75	98	75
Tomato	San Marzano	Advance Seed Co.	75	79	75
Tomato	Super Marmande	NK Lawn & Garden	75	36*	75
Turnip	Purple Top White Globe	Agway	80	98	80
Turnip	Purple Top White Globe	Excel Seeds	80	98	80
Turnip	Purple Top White Globe	Michael-Leonard Inc.	80	100	80
Turnip	Purple Top White Globe	New England Seed Co.	80	98	80
Turnip	Purple Top White Globe	NK Lawn & Garden	80	96	80
Turnip	Seven Top	Advance Seed Co.	80	99	80

Table 1 (continued). Germination of vegetable seeds. Blanks indicate claims and/or standards are not available for that vegetable an asterisk (*) indicates the sample does not meet label claims within allowable tolerance. Standards are provided for by the rules and regulations of the Federal Seed Act.

Plant	Variety	Seed Company	Claim	% Germination	
				Found	Standard
Turnip	Seven Top Summer Green	Comstock-Ferre	90	99	80
Turnip	Tokyo Cross Hybrid	NK Lawn & Garden	80	94	80
Turnip	Yellow Globe	Hart	83	93	80
Watermelon	Jubilee	Advance Seed Co.	70	97	70
Watermelon	Kleckley's Sweet	Comstock-Ferre	90	96	70
Watermelon	Sugar Baby	Agway	70	99	70
Watermelon	Sugar Baby	Hart	90	99	70
Watermelon	Sugar Baby	NK Lawn & Garden	70	93	70
Watermelon	Sugar Baby	Plantation Products, Inc.	70	98	70

Table 2. Summary for each seed company of total number of germination claims and the percentage of claims in each compliance category. Category 1 indicates samples met label claims and category 2 indicates samples did not meet label claims within allowable tolerance.

Seed Company	Claims	% Samples in Each Compliance Category	
		1	2
Advance	29	100	0
Agway	40	100	0
American Seed	12	100	0
Burpee	42	100	0
Comstock-Ferre	49	94	6
Excel Seeds	14	93	7
Hart	51	96	4
Michael-Leonard Inc.	18	100	0
New England Seed Co.	40	100	0
NK Lawn & Garden	40	98	2
Plantation Products	31	97	3

Table 3. Summary for each vegetable of the total number of samples tested and the percentage of claims in each compliance category. Category 1 indicates samples met label claims and category 2 indicates samples did not meet label claims within allowable tolerance.

Vegetable	No. of Samples	% Samples in Each Compliance Category	
		1	2
Asparagus	1	0	100
Bean	23	100	0
Bean, Lima	5	100	0
Beet	10	100	0
Broccoli	9	100	0
Broccoliraab	1	100	0
Brussels sprouts	4	100	0
Cabbage	12	100	0
Cantaloupe	10	100	0
Carrot	18	100	0
Cauliflower	6	100	0
Celery	4	100	0
Chicory	2	50	50
Chinese cabbage	3	100	0
Chives	1	100	0
Collards	5	100	0
Corn	22	100	0
Cucumber	21	100	0
Eggplant	6	100	0
Endive	2	100	0
Escarolle	1	100	0
Kale	5	100	0
Kohrabi	4	100	0
Leek	2	100	0
Lettuce	16	94	6
Melon	1	100	0
Mustard	3	100	0
Okra	6	83	17
Onion	11	100	0
Parsley	1	100	0
Parsnip	6	100	0
Pea	20	100	0
Pepper	23	96	4
Popcorn	1	100	0
Pumpkin	10	90	10
Radish	12	100	0
Roquette	1	100	0
Rutabaga	2	100	0
Salsify	1	100	0
Spinach	8	100	0
Spinach, New Zealand	1	100	0
Squash	23	96	4
Swiss chard	4	100	0
Tomatillo	1	100	0
Tomato	23	96	4
Turnip	9	100	0
Watermelon	6	100	0

Table 4. Germination and Purity of Lawn Seed. A dagger (†) indicates results for seeds which were separated by genus and not by species or by variety which are reported as the sum for that genus. An asterisk (*) indicates that the sample does not meet label claims within tolerance.

Seed Company/Seed mixture	% PURITY		% GERMINATION	
	Claim	Found†	Claim	Found†
A. ERTAG INC. <i>Perennial Ryegrass Mixture</i>				
Pennfine Perennial Rye	32.67		90	58*
Citation Perennial Rye	32.67		90	58*
Manhattan II Perennial Rye	32.66		90	58*
TOTAL RYEGRASS	98	71.42*		
Bluegrass	0	24.43*		5*
Fescue	0	3.69*		8*
A. ERTAG INC. <i>Ryegrass/Bluegrass Mix</i>				
A-34 Kentucky Bluegrass	16.33		85	5*
Fylking Kentucky Bluegrass	16.33		85	5*
Park Kentucky Bluegrass	16.34		85	5*
TOTAL BLUEGRASS	49	24.7*		
All-Star Perennial Ryegrass	16.33		90	56*
Manhattan II Perennial Ryegrass	16.33		90	56*
Citation II Perennial Ryegrass	16.34		90	56*
TOTAL RYEGRASS	49	65.29*		
Fescue	0	8.8*		
HART'S SEED <i>Quick Green Lawn Seed Mixture</i>				
Perennial Ryegrass	9.84		90	95
Annual Ryegrass	68.68		90	95
TOTAL RYEGRASS	78.52	81.34		
Creeping Red Fescue	19.6	17.86	85	89
HART'S SEED <i>Small Spot Lawn Seed Blender</i>				
Kentucky Bluegrass	17.29	17.78	80	71
Express Perennial Ryegrass	29.46		90	95
Magic Perennial Ryegrass	19.64		90	95
TOTAL RYEGRASS	49.1	49.41		
Creeping Red Fescue	29.25	28.09	85	92
STAMFORD SEED CO. <i>Holdridge Custom Mix Multi-Purpose</i>				
Kentucky Bluegrass	14.76	18.86	85	88
Patriot II Perennial Ryegrass	9.96		90	97
Aquarius II Perennial Ryegrass	9.96		90	97
Allaire II Perennial Ryegrass	9.69		90	97
TOTAL RYEGRASS	29.61	31.27		
Creeping Red Fescue	54.15	48.47*	90	97
STAMFORD SEED CO. <i>Holdridge Contractor's Mixture</i>				
Kentucky Bluegrass	9.04	9.46	85	75*
Perennial Ryegrass	19.6		90	97
Annual Ryegrass	67.49		90	97
TOTAL RYEGRASS	87.09	89.01		

Table 4 (continued). Germination and Purity of Lawn Seed. A dagger (†) indicates results for seeds which were separated by genus and not by species or by variety which are reported as the sum for that genus. An asterisk (*) indicates that the sample does not meet label claims within tolerance.

Seed Company/Seed mixture	PURITY		GERMINATION	
	Claim	Found†	Claim	Found†
BLUE SEAL FEEDS <i>Fleming's Contractor's Mix</i>				
Perennial Ryegrass	24.76		90	97
Annual Ryegrass	23.74		90	97
TOTAL RYEGRASS	48.5	49.52		
Creeping Red Fescue	19.4	18.03	90	96
KY 31 Tall Fescue	29.42	31.23	85	88
BLUE SEAL FEEDS <i>Fleming's Athletic Mixture</i>				
Kentucky Bluegrass	19.86	24.43	85	84
Perennial Ryegrass	19.81	19.78	90	96
Creeping Red Fescue	29.13		90	86
Chewings Fescue	14.72		85	86
TOTAL FINE FESCUE	43.85	41.13		
KY 31 Tall Fescue	14.67	13.48	85	84
AGWAY INC. <i>Agway Contractor's Mix</i>				
Perennial Ryegrass	34.65		90	96
Annual Ryegrass	34.73		90	96
TOTAL RYEGRASS	69.38	64.91*		
Creeping Red Fescue	29.07	34.09*	85	91
AGWAY INC. <i>Agway Soil Conservation Grass Seed Mix</i>				
Kentucky Bluegrass	13.06	15.86	80	69*
Pleasure Perennial Ryegrass	34.22		90	95
Annual Ryegrass	8.9		90	95
TOTAL RYEGRASS	43.12	40.94		
Creeping Red Fescue	34.41	33.94	85	95
White Clover	5.95	6.92	80	92
LOFTS SEED INC. <i>River Run Sunny Mixture</i>				
Kentucky Bluegrass	19.6	23.77	85	89
Palmer Perennial Ryegrass	58.8	56.95	90	96
Creeping Red Fescue	19.4	17.96	85	95
LOFTS SEED INC. <i>River Run Shade Mixture</i>				
Kentucky Bluegrass	8.5	10.95	80	71
Perennial Ryegrass	19.6	21.66	90	95
Creeping Red Fescue	58.2		85	95
Cascade Chewings Fescue	9.7		85	95
TOTAL FINE FESCUE	67.9	64.31*		

Table 4 (continued). Germination and Purity of Lawn Seed. A dagger (†) indicates results for seeds which were separated by genus and not by species or by variety which are reported as the sum for that genus. An asterisk (*) indicates that the sample does not meet label claims within tolerance.

Seed Company/Seed mixture	PURITY		GERMINATION	
	Claim	Found†	Claim	Found†
HALSEY SEED CO. <i>Halsey Conservation Mix</i>				
Kentucky Bluegrass	8.9	12.07	80	70*
Perennial Ryegrass	11.71		90	94
Annual Ryegrass	14.21		90	94
TOTAL RYEGRASS	25.92	26.32		
Creeping Red Fescue	34.02	33.84	84	83
Fawn Tall Fescue	24.61	22.21	90	92
NZ White Clover	2.99	3.86	86	89
HALSEY SEED <i>Halsey Landscape 85 Mix</i>				
Kentucky Bluegrass	17.97	24.84	80	64*
Turfmaster Bld. Perennial Ryegrass	19.19		90	87
Annual Ryegrass	14.25		90	87
TOTAL RYEGRASS	33.44	38.65		
Creeping Red Fescue	24.67		85	80
Chewings Fescue	19.56		83	80
TOTAL FINE FESCUE	44.23	34.67*		
AGRI TURF <i>Agriturf Landscape Mix</i>				
Kentucky Bluegrass	17.71	20.24	80	83
Pennant Perennial Ryegrass	19.57		90	94
Annual Ryegrass	14.77		90	94
TOTAL RYEGRASS	34.34	33.66		
Creeping Red Fescue	24.31		94	85
Chewings Fescue	19.71		85	85
TOTAL FINE FESCUE	44.02	42.81		
NEW ENGLAND SEED CO. <i>Slope Mix Lawn Seed Mixture</i>				
Perennial Ryegrass	19.9		85	92
Annual Ryegrass	58.88		90	92
TOTAL RYEGRASS	78.78	76.51		
Tall Fescue	19.88	20.58	85	79
NEW ENGLAND SEED CO. <i>Improved URI No.2 Mix</i>				
Nassau Kentucky Bluegrass	19.91		85	95
Kentucky Bluegrass	19.85		85	95
TOTAL BLUEGRASS	39.76	44.09		
Manhattan II E Perennial Ryegrass	19.57	18.96	90	96
Creeping Red Fescue	39.36	35.39*	85	78



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