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Seed Germination
and Purity
Analysis 1997

BY SHARON M. DOUGLAS
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*Bulletin 947
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Official samples of 343 vegetable and 18 lawn seed were collected by inspectors from the Bureau of Regulation and Inspection of the Connecticut Department of Agriculture for testing in 1997. 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 13 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. All tests were replicated twice. In addition, seedlings 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 343 vegetable seeds tested, four did not meet their claims for germination. These 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. Five of the 18 lawn seed samples tested met label claims for both purity and germination. Nine samples did not meet claims for purity and four 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 John Schneider and 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 seed. Standards are provided for by the rules and regulations of the Federal Seed Act.
 * = does not meet label claims within allowable tolerance.

Plant	Variety	Seed Company	Germination	
			Found	Standard
Artichoke	Green Globe	Comstock-Ferre	0*	60
Asparagus	Mary Washington	Hart Seed Co.	87	70
Bean	Black Turtle	Hart Seed Co.	88	70
Bean	Blue Lake 274	Agway	85	75
Bean	Blue Lake 274	NK Lawn and Garden	97	75
Bean	Bountiful	Comstock-Ferre	95	75
Bean	Bountiful	Hart Seed Co.	95	75
Bean	Brittle Wax	W. Atlee Burpee & Co.	98	75
Bean	Cherokee Wax	Plantation Products Inc.	98	75
Bean	Contender	Plantation Products Inc.	98	75
Bean	Derby	Advance Seed Co.	94	75
Bean	Duo Romano Mix pole	Shepherd's Garden Seed	76	75
Bean	Golden Butterwax	Agway	98	75
Bean	Golden Sands	Advance Seed Co.	87	75
Bean	Golden Wax	Bentley Seeds Inc.	98	75
Bean	Improved Tendergreen	NK Lawn and Garden	100	75
Bean	Jade	New England Seed Co.	85	75
Bean	Kentucky Wonder	Comstock-Ferre	99	75
Bean	Kentucky Wonder pole	Hart Seed Co.	97	75
Bean	Kentucky Wonder pole	W. Atlee Burpee & Co.	99	75
Bean	Kentucky Wonder Wax	Comstock-Ferre	98	75
Bean	Long Tendergreen	Agway	100	75
Bean	Navy Pea	Comstock-Ferre	67	75
Bean	Pencil Pod Wax	Hart Seed Co.	100	75
Bean	Quest	W. Atlee Burpee & Co.	96	75
Bean	Roma II bush	New England Seed Co.	93	75
Bean	Royal Burgundy	New England Seed Co.	97	75
Bean, lima	Burpee's Best pole	W. Atlee Burpee & Co.	82	70
Bean, lima	Fordhook 242 bush	Advance Seed Co.	70	70
Bean, lima	Tendergreen	Comstock-Ferre	69	70
Beet	Cylindra	Comstock-Ferre	95	65
Beet	Detroit Dark Red	Agway	78	65
Beet	Detroit Dark Red	Bentley Seeds Inc.	76	65
Beet	Detroit Dark Red	Comstock-Ferre	72	65
Beet	Detroit Dark Red	Hart Seed Co.	73	65
Beet	Detroit Dark Red	NK Lawn and Garden	75	65
Beet	Detroit Dark Red	Plantation Products Inc.	86	65
Beet	Detroit Dark Red	W. Atlee Burpee & Co.	86	65
Beet	Early Wonder Green Top	New England Seed Co.	73	65
Beet	Tall Top Early Wonder	Advance Seed Co.	81	65
Broccoli	Calabrese	Plantation Products Inc.	98	75
Broccoli	Early Pugliese	Comstock-Ferre	98	75
Broccoli	Green Sprouting	Comstock-Ferre	77	75
Broccoli	Southern Comet	Agway	83	75

Table 1. Germination of vegetable seed (continued). Standards are provided for by the rules and regulations of the Federal Seed Act. * = does not meet label claims within allowable tolerance.

Plant	Variety	Seed Company	Germination	
			Found	Standard
Broccoli	Waltham	Hart Seed Co.	75	75
Broccoli	Waltham 29	NK Lawn and Garden	77	75
Brussels sprouts	Bubbles	Comstock-Ferre	75	70
Brussels sprouts	Catskill	Advance Seed Co.	86	70
Brussels sprouts	Catskill	Agway	80	70
Brussels sprouts	Jade Cross	New England Seed Co.	83	70
Brussels sprouts	Long Island Imp.	Hart Seed Co.	74	70
Cabbage	Chieftain Savoy	Comstock-Ferre	93	75
Cabbage	Copenhagen Market Early	Advance Seed Co.	96	75
Cabbage	Danish Ballhead	Hart Seed Co.	91	75
Cabbage	Earliana	W. Atlee Burpee & Co.	85	75
Cabbage	Early Golden Acre	Plantation Products Inc.	29*	75
Cabbage	Golden Acre	Comstock-Ferre	93	75
Cabbage	Gourmet	Agway	94	75
Cabbage	Late Flat Dutch	Bentley Seeds Inc.	82	75
Cabbage	Red Acre	Agway	87	75
Cabbage	Red Acre	Hart Seed Co.	88	75
Cabbage	Salad Delight	W. Atlee Burpee & Co.	78	75
Cantaloupe	Burpee Hybrid	W. Atlee Burpee & Co.	100	75
Cantaloupe	Delicious 51	Agway	100	75
Cantaloupe	Delicious 51	Hart Seed Co.	96	75
Cantaloupe	Delicious 51	New England Seed Co.	99	75
Cantaloupe	Hale's Best	Plantation Products Inc.	97	75
Cantaloupe	Hale's Best Jumbo	Advance Seed Co.	98	75
Cantaloupe	Iroquois	Comstock-Ferre	96	75
Carrot	Chantenay	NK Lawn and Garden	67	55
Carrot	Chantenay	Plantation Products Inc.	59	55
Carrot	Danvers 126	Agway	74	55
Carrot	Danvers Half Long	Bentley Seeds Inc.	73	55
Carrot	Danvers Half Long	Comstock-Ferre	74	55
Carrot	Imperator	Hart Seed Co.	87	55
Carrot	Imperator Long #58	Advance Seed Co.	80	55
Carrot	Little Fingers	Hart Seed Co.	63	55
Carrot	Little Fingers	W. Atlee Burpee & Co.	72	55
Carrot	Nantes Coreless	Comstock-Ferre	57	55
Carrot	Nantes Coreless	New England Seed Co.	57	55
Carrot	Navajo F1	Johnny's Selected Seed	83	55
Cauliflower	Early Snowball	New England Seed Co.	95	75
Cauliflower	Early White Hybrid	W. Atlee Burpee & Co.	97	75
Cauliflower	Self Blanching	Hart Seed Co.	78	75
Cauliflower	Snow Crown	Agway	94	75
Cauliflower	Snowball Improved	Comstock-Ferre	74	75
Cauliflower	Snowball X	Plantation Products Inc.	98	75

Table 1. Germination of vegetable seed (continued). Standards are provided for by the rules and regulations of the Federal Seed Act. * = does not meet label claims within allowable tolerance.

Plant	Variety	Seed Company	Germination	
			Found	Standard
Celeriac	Prague Giant Smooth	Comstock-Ferre	54	55
Celery	Giant Pascal	New England Seed Co.	74	55
Celery	Golden Self Blanching	Hart Seed Co.	87	55
Chicory		New England Seed Co.	90	65
Chicory	Red Verona	Comstock-Ferre	69	65
Chinese cabbage	Jade Pagoda	Agway	98	75
Chinese cabbage	Mei Qing Choi	Shepherd's Garden Seed	99	75
Chinese cabbage	Orient Express	W. Atlee Burpee & Co.	95	75
Chinese cabbage	Wong Bok Select	Comstock-Ferre	95	75
Collards	Georgia	Advance Seed Co.	100	80
Collards	Georgia	Bentley Seeds Inc.	97	80
Collards	Georgia	Comstock-Ferre	89	80
Collards	Vates	Agway	93	80
Collards	Vates	Hart Seed Co.	98	80
Collards	Vates	Plantation Products Inc.	94	80
Corn	Bodacious	Hart Seed Co.	99	75
Corn	Butter and Sugar	Agway	100	75
Corn	Butter and Sugar	Comstock-Ferre	99	75
Corn	Butter and Sugar	New England Seed Co.	97	75
Corn	Early Golden Bantam	Plantation Products Inc.	92	75
Corn	Early Sunglow	W. Atlee Burpee & Co.	100	75
Corn	Fantasy F1(sh2)	Johnny's Selected Seed	92	75
Corn	Golden Beauty	Comstock-Ferre	96	75
Corn	Golden Cross Bantam	Bentley Seeds Inc.	94	75
Corn	Golden Cross Bantam T-51	Advance Seed Co.	95	75
Corn	Honey and Cream	Hart Seed Co.	97	75
Corn	Jubilee Hybrid	NK Lawn and Garden	89	75
Corn	Kandy Korn	Agway	94	75
Corn	Platinum Lady	Comstock-Ferre	97	75
Corn	Rainbow Inca (sweet)	Seeds of Change	93	75
Corn	Silver Queen	Advance Seed Co.	97	75
Corn	Silver Queen	Agway	97	75
Corn	Silver Queen	Hart Seed Co.	99	75
Corn	Spirit Hybrid	NK Lawn and Garden	87	75
Cowpea	California Black Eye #5	Plantation Products Inc.	89	75
Cowpea	Pinkeye Purple Hull	Advance Seed Co.	71	75
Cress, upland	Curled	Hart Seed Co.	76	75
Cucumber	Boston Pickling	Comstock-Ferre	99	80
Cucumber	Boston Pickling	New England Seed Co.	100	80
Cucumber	Dasher II	Agway	97	80
Cucumber	Marketmore 76	Advance Seed Co.	98	80

Table 1. Germination of vegetable seed (continued). Standards are provided for by the rules and regulations of the Federal Seed Act. * = does not meet label claims within allowable tolerance.

Plant	Variety	Seed Company	Germination	
			Found	Standard
Cucumber	Marketmore 76	Bentley Seeds Inc.	91	80
Cucumber	Marketmore 76	Comstock-Ferre	99	80
Cucumber	Muncher	Plantation Products Inc.	98	80
Cucumber	Poinsett 76	NK Lawn and Garden	97	80
Cucumber	SMR 58 Pickling	Hart Seed Co.	99	80
Cucumber	Spacemaster	Comstock-Ferre	93	80
Cucumber	Straight Eight	Hart Seed Co.	98	80
Cucumber	Straight Eight	W. Atlee Burpee & Co.	100	80
Cucumber	Sumter	Advance Seed Co.	96	80
Cucumber	Wisconsin SMR-58	Agway	97	80
Eggplant	Black Beauty	Bentley Seeds Inc.	86	60
Eggplant	Black Beauty	Comstock-Ferre	88	60
Eggplant	Black Beauty	Hart Seed Co.	91	60
Eggplant	Black Beauty	Plantation Products Inc.	84	60
Eggplant	Dusky	New England Seed Co.	96	60
Eggplant	High Bush Select	Agway	79	60
Eggplant	Long Purple	Comstock-Ferre	57	60
Endive		Bentley Seeds Inc.	90	70
Endive	Broadleaf Escarole	Hart Seed Co.	78	70
Endive	Salad King	Agway	91	70
Endive	Salad King	Comstock-Ferre	94	70
Kale	Blue Curled	Hart Seed Co.	92	75
Kale	Blue Scotch	Agway	97	75
Kale	Red Russian	Seeds of Change	93	75
Kale	Vates Dwarf Blue Curled	Advance Seed Co.	95	75
Kohlrabi	Early Purple Vienna	Agway	94	75
Kohlrabi	Early White Vienna	Advance Seed Co.	95	75
Kohlrabi	Purple	Hart Seed Co.	92	75
Kohlrabi	Purple Vienna	Comstock-Ferre	89	75
Leek	American Broad Flag	New England Seed Co.	94	60
Leek	Carina	Agway	93	60
Leek	Scotland Heirloom	Seeds of Change	92	60
Leek	Tadorna	Johnny's Selected Seed	90	60
Lettuce	Bibb, Buttercrunch	Comstock-Ferre	84	80
Lettuce	Bibb, Butterhead	Comstock-Ferre	97	80
Lettuce	Bibb, Deer Tongue	Johnny's Selected Seed	98	80
Lettuce	Black Seeded Simpson	Comstock-Ferre	92	80
Lettuce	Black Seeded Simpson	Hart Seed Co.	97	80
Lettuce	Buttercrunch	Agway	96	80
Lettuce	Grand Rapids	NK Lawn and Garden	98	80
Lettuce	Great Lakes #118	Advance Seed Co.	95	80
Lettuce	Iceberg	Hart Seed Co.	95	80
Lettuce	Iceberg	Plantation Products Inc.	99	80

Table 1. Germination of vegetable seed (continued). Standards are provided for by the rules and regulations of the Federal Seed Act. * = does not meet label claims within allowable tolerance.

Plant	Variety	Seed Company	Germination	
			Found	Standard
Lettuce	Red Sails	New England Seed Co.	98	80
Lettuce	Romaine	Hart Seed Co.	92	80
Lettuce	Romaine, Little Caesar	W. Atlee Burpee & Co.	100	80
Lettuce	Royal Red Leaf	Livingston Seed Co.	91	80
Lettuce	Salad Bowl	New England Seed Co.	95	80
Lettuce	Simpson's Curled	Bentley Seeds Inc.	95	80
Lettuce	Summertime	Agway	99	80
Mustard	Florida Broadleaf	Advance Seed Co.	95	75
Mustard	Florida Broadleaf	Hart Seed Co.	84	75
Mustard	Green Wave	Comstock-Ferre	87	75
Mustard	Tendergreen	Plantation Products Inc.	95	75
Okra	Clemson Spineless	Agway	59	50
Okra	Clemson Spineless	Comstock-Ferre	76	50
Okra	Clemson Spineless	Hart Seed Co.	74	50
Okra	Clemson Spineless	W. Atlee Burpee & Co.	71	50
Okra	Emerald	Advance Seed Co.	41	50
Onion	Burgermaster	New England Seed Co.	93	70
Onion	Early Aviv	Shepherd's Garden Seed	97	70
Onion	Green Scallions	Comstock-Ferre	91	70
Onion	Hardy White Bunching	New England Seed Co.	77	70
Onion	Heshiko Long White Bunching	Comstock-Ferre	97	70
Onion	Long White Bunching	Agway	88	70
Onion	Redman	W. Atlee Burpee & Co.	88	70
Onion	Sweet Spanish	Agway	94	70
Onion	Sweet Spanish	Bentley Seeds Inc.	93	70
Onion	Utah Yellow Sweet Spanish	Advance Seed Co.	92	70
Onion	Wethersfield Red	Hart Seed Co.	84	70
Onion	White Lisbon Bunching	NK Lawn and Garden	98	70
Onion	White Sweet Spanish	Hart Seed Co.	97	70
Parsley	Moss Curled	Agway	78	60
Parsley	Moss Curled	New England Seed Co.	65	60
Parsley	Plain Leaf	Hart Seed Co.	73	60
Parsnip	All American	Agway	82	60
Pea	Alaska	Advance Seed Co.	97	80
Pea	Dwarf Gray Sugar	Comstock-Ferre	99	80
Pea	Early Frosty	Agway	99	80
Pea	Gray Sugar	Plantation Products Inc.	97	80
Pea	Green Arrow	Hart Seed Co.	97	80
Pea	Laxton's Progress	Bentley Seeds Inc.	89	80
Pea	Little Marvel	NK Lawn and Garden	97	80
Pea	Little Marvel	Plantation Products Inc.	96	80
Pea	Melting Sugar	Advance Seed Co.	92	80
Pea	Oregon Giant Sugar	Johnny's Selected Seed	92	80

Table 1. Germination of vegetable seed (continued). Standards are provided for by the rules and regulations of the Federal Seed Act. * = does not meet label claims within allowable tolerance.

Plant	Variety	Seed Company	Germination	
			Found	Standard
Pea	Oregon Sugar Pod II	NK Lawn and Garden	99	80
Pea	Snap, Sugar Daddy	Hart Seed Co.	87	80
Pea	Snap, Sugar Daddy	New England Seed Co.	90	80
Pea	Snow, Early Norli	Shepherd's Garden Seed	98	80
Pea	Snowbird	W. Atlee Burpee & Co.	100	80
Pea	Sugar Snap	Agway	98	80
Pea	Sugar Snap	Comstock-Ferre	88	80
Pea	Tall Telephone	New England Seed Co.	97	80
Pea	Wando	Comstock-Ferre	98	80
Pea	Wando	W. Atlee Burpee & Co.	92	80
Pepper	Anaheim Chili	W. Atlee Burpee & Co.	73	55
Pepper	California Wonder	Hart Seed Co.	60	55
Pepper	California Wonder	Plantation Products Inc.	77	55
Pepper	California Wonder 300 TMR	Advance Seed Co.	88	55
Pepper	Cubanella	Advance Seed Co.	67	55
Pepper	Cubanella	Hart Seed Co.	84	55
Pepper	Early Calwonder	Comstock-Ferre	68	55
Pepper	Early Jalapeno	New England Seed Co.	86	55
Pepper	Garden Salsa	Agway	94	55
Pepper	Golden Calwonder	New England Seed Co.	82	55
Pepper	Habanero	Comstock-Ferre	85	55
Pepper	Hungarian Wax	W. Atlee Burpee & Co.	88	55
Pepper	Jalapeno	Hart Seed Co.	70	55
Pepper	Jalapeno	NK Lawn and Garden	91	55
Pepper	Jalapeno	Plantation Products Inc.	92	55
Pepper	Large Red Cayenne	New England Seed Co.	84	55
Pepper	Long Thin Cayenne	Advance Seed Co.	79	55
Pepper	Super Chili	Comstock-Ferre	83	55
Pepper	Sweet Banana	Agway	86	55
Pepper	Sweet Banana	Comstock-Ferre	34*	55
Popcorn	Robust	Agway	100	75
Pumpkin	Baby Pam	Agway	98	75
Pumpkin	Big Max	Advance Seed Co.	92	75
Pumpkin	Big Max	Comstock-Ferre	79	75
Pumpkin	Jack Be Little	Hart Seed Co.	91	75
Pumpkin	Jack O'Lantern	New England Seed Co.	100	75
Pumpkin	Jack O'Lantern	NK Lawn and Garden	87	75
Pumpkin	Jack O'Lantern	Plantation Products Inc.	92	75
Pumpkin	Thomas Halloween	Agway	97	75
Pumpkin	Triple Treat	W. Atlee Burpee & Co.	95	75
Radish	Champion	Agway	95	75
Radish	Champion	Comstock-Ferre	93	75
Radish	Cherry Belle	Bentley Seeds Inc.	97	75
Radish	Cherry Belle	Hart Seed Co.	91	75
Radish	Daikon Long	NK Lawn and Garden	88	75

Table 1. Germination of vegetable seed (continued). Standards are provided for by the rules and regulations of the Federal Seed Act. * = does not meet label claims within allowable tolerance.

Plant	Variety	Seed Company	Germination	
			Found	Standard
Radish	Early Scarlet Globe	Plantation Products Inc.	93	75
Radish	Easter Egg	Johnny's Selected Seed	97	75
Radish	French Breakfast	NK Lawn and Garden	93	75
Radish	Sparkler	Advance Seed Co.	93	75
Radish	White Icicle	Comstock-Ferre	89	75
Radish	White Icicle	New England Seed Co.	96	75
Radish	White Icicle	W. Atlee Burpee & Co.	94	75
Rutabaga	American Purple Top	Agway	92	75
Rutabaga	Imp. American Purple Top	Comstock-Ferre	89	75
Rutabaga	Improved Purple Top Yellow	New England Seed Co.	87	75
Spinach	Bloomsdale	Hart Seed Co.	65	60
Spinach	Bloomsdale Long Standing	Advance Seed Co.	85	60
Spinach	Bloomsdale Long Standing	Comstock-Ferre	87	60
Spinach	Correnta	Comstock-Ferre	96	60
Spinach	Giant Noble	Plantation Products Inc.	91	60
Spinach	Indian Summer Hybrid	NK Lawn and Garden	94	60
Spinach	Melody	New England Seed Co.	87	60
Spinach	Space Fl	Johnny's Selected Seed	92	60
Spinach	Winter Bloomsdale	Agway	79	60
Spinach, New Zealand		Agway	65	40
Spinach, New Zealand		Comstock-Ferre	41	40
Squash	Acorn	Bentley Seeds Inc.	73	75
Squash	Acorn, Table Ace	Agway	95	75
Squash	Acorn, Table Ace	Comstock-Ferre	91	75
Squash	Acorn, Table Queen	Comstock-Ferre	85	75
Squash	Blue Hubbard	Agway	38 *	75
Squash	Blue Hubbard	New England Seed Co.	92	75
Squash	Buttercup	Agway	85	75
Squash	Butternut, Waltham	Advance Seed Co.	89	75
Squash	Butternut, Waltham	Hart Seed Co.	90	75
Squash	Butternut, Waltham	Plantation Products Inc.	92	75
Squash	Butternut, Waltham	W. Atlee Burpee & Co.	98	75
Squash	Neck Pumpkin	Agway	94	75
Squash	Spaghetti	New England Seed Co.	74	75
Squash	Spaghetti	W. Atlee Burpee & Co.	94	75
Squash	Table Queen	NK Lawn and Garden	80	75
Squash	Yellow, Crookneck	Bentley Seeds Inc.	90	75
Squash	Yellow, Early Prolific Straight	Advance Seed Co.	93	75
Squash	Yellow, Early Summer Crookneck	Comstock-Ferre	98	75
Squash	Yellow, Early Summer Crookneck	New England Seed Co.	96	75
Squash	Yellow, Gold Slice	Agway	76	75
Squash	Yellow, Straightneck	Hart Seed Co.	94	75
Squash	Zucchini, Black Beauty	Advance Seed Co.	95	75
Squash	Zucchini, Black Beauty	Agway	87	75
Squash	Zucchini, Black Beauty	Comstock-Ferre	77	75

Table 1. Germination of vegetable seed (continued). Standards are provided for by the rules and regulations of the Federal Seed Act. * = does not meet label claims within allowable tolerance.

Plant	Variety	Seed Company	Germination	
			Found	Standard
Squash	Zucchini, Black Beauty	NK Lawn and Garden	92	75
Squash	Zucchini, Dark Green	Plantation Products Inc.	89	75
Swiss chard		Agway	78	65
Swiss chard	Fordhook	Hart Seed Co.	69	65
Swiss chard	Fordhook Giant	Comstock-Ferre	72	65
Swiss chard	Large Ribbed Dark Green	Advance Seed Co.	82	65
Swiss chard	Rhubarb	New England Seed Co.	82	65
Tomatillo		Comstock-Ferre	92	50
Tomato	Ace 55 VF	Bentley Seeds Inc.	85	75
Tomato	Better Boy	Hart Seed Co.	94	75
Tomato	Burpee Big Boy	Agway	90	75
Tomato	Delicious	W. Atlee Burpee & Co.	97	75
Tomato	Early Girl	New England Seed Co.	94	75
Tomato	Large Red Cherry	Advance Seed Co.	96	75
Tomato	Large Red Cherry	Plantation Products Inc.	95	75
Tomato	Marglobe	Hart Seed Co.	95	75
Tomato	Mountain Gold	Agway	94	75
Tomato	Roma	Bentley Seeds Inc.	96	75
Tomato	Roma VFN	Advance Seed Co.	86	75
Tomato	Rutgers	Advance Seed Co.	96	75
Tomato	Rutgers	Comstock-Ferre	91	75
Tomato	Rutgers	Comstock-Ferre	90	75
Tomato	Rutgers	Plantation Products Inc.	84	75
Tomato	Super Beefsteak	W. Atlee Burpee & Co.	92	75
Tomato	Super Marzano	Comstock-Ferre	88	75
Tomato	Sweet 100	Hart Seed Co.	92	75
Tomato	Sweet 100	New England Seed Co.	98	75
Turnip	Purple Top White	Hart Seed Co.	93	80
Turnip	Purple Top White Globe	Comstock-Ferre	94	80
Turnip	Seven Top	Advance Seed Co.	95	80
Turnip	Seven Top	Plantation Products Inc.	95	80
Turnip	Yellow Globe	Comstock-Ferre	76	80
Watermelon	Charleston Gray	NK Lawn and Garden	75	75
Watermelon	Congo	Advance Seed Co.	93	70
Watermelon	Kleckley's Sweet	Comstock-Ferre	95	70
Watermelon	Sugar Baby	Comstock-Ferre	96	70
Watermelon	Sugar Baby	Hart Seed Co.	98	70
Watermelon	Sugar Baby	Plantation Products Inc.	97	70

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 claims	% meeting claims	% not meeting claims
Advance Seed Co.	37	100	0
Agway	50	98	2
Bentley Seeds Inc.	17	100	0
Comstock-Ferre	65	97	3
Hart Seed	50	100	0
Johnny's Selected Seed	7	100	0
Livingston Seed Co.	1	100	0
New England Seed Co.	35	100	0
NK Lawn and Garden	20	100	0
Plantation Products Inc.	28	96	4
Seeds of Change	3	100	0
Shepherd's Garden Seed	4	100	0
W. Atlee Burpee & Co.	26	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.

Vegetable	Samples tested	Average % Germination	
		Found	Standard
Artichoke	1	0	60
Asparagus	1	87	70
Bean	25	94	75
Bean, lima	3	74	70
Beet	10	80	65
Broccoli	6	85	75
Brussels sprouts	5	80	70
Cabbage	11	83	75
Cantaloupe	7	98	75
Carrot	12	71	55
Cauliflower	6	89	75
Celeriac	1	54	55
Celery	2	81	55
Chicory	2	80	65
Chinese cabbage	4	97	75
Collards	6	95	80
Corn	19	95	75
Cowpea	2	80	75
Cress, upland	1	76	75
Cucumber	14	97	80
Eggplant	7	83	60
Endive	4	88	70
Kale	4	94	75
Kohlrabi	4	93	75
Leek	4	92	60
Lettuce	17	95	80
Mustard	4	90	75
Okra	5	64	50
Onion	13	91	70
Parsley	3	72	60
Parsnip	1	82	60
Pea	20	95	80
Pepper	20	79	55
Popcorn	1	100	75
Pumpkin	9	92	75
Radish	12	93	75
Rutabaga	3	89	75
Spinach	9	86	60
Spinach, New Zealand	2	53	40
Squash	26	87	75
Swiss chard	5	77	65
Tomatillo	1	92	50
Tomato	19	92	75
Turnip	5	91	80
Watermelon	6	92	71

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 as the sum for that genus. Tolerance calculated according to the rules for seed testing published by the Association of Official Seed Analysts (AOSA). Variance is calculated as purity found minus purity claimed. * = does not meet label claims within allowable tolerance.

Seed Company/Seed Mixture	Claim	PURITY			GERMINATION	
		Found	Tolerance	Variance	Claim	Found
Lebanon/Seaboard MACKEYS PREMIUM MIXTURE						
Park Kentucky Bluegrass	24.19	27.85*	3.02	3.66	85	83
Statesman Perennial Ryegrass	19.41					
Patriot II Perennial Ryegrass	19.39					
Affinity Perennial Ryegrass	9.71					
—total ryegrass	48.51	50.00	4.66	1.49	90	91
Creeping Red Fescue	24.43	20.45*	3.54	-3.98	85	84
Lebanon/Seaboard MACKEY'S ECONOMY MIXTURE						
Kentucky Bluegrass	8.89	7.18*	1.19	-1.71	80	93
Perennial Ryegrass	9.76					
Annual Ryegrass	76.94					
—total ryegrass	86.70	91.84*	1.47	5.14	90	95
Lebanon/Seaboard MACKEY'S LAWN BEAUTIFUL MIXTURE						
Kentucky Bluegrass	22.23	29.71*	2.81	7.48	80	90
Stallion Perennial Ryegrass	24.48					
Allaire II Perennial Ryegrass	14.65					
—total ryegrass	39.13	39.48	4.86	0.35	90	90
Creeping Red Fescue	34.20	28.39*	3.78	-5.81	85	84
Blue Seal Feeds, Inc. BLUE SEAL EARLY GREEN LAWN MIXTURE						
Kentucky Bluegrass	14.80	18.63	2.07	3.83	90	87
Perennial Ryegrass	42.69					
Fiesta II Perennial Ryegrass	4.96					
Annual Ryegrass	9.97					
—total ryegrass	57.62	57.28	4.86	-0.34	90	93
Creeping Red Fescue	24.83	22.95	3.78	-1.88	85	78
Blue Seal Feeds, Inc. BLUE SEAL TURF GREEN II LAWN MIXTURE						
Merit Kentucky Bluegrass	19.83					
Liberty Kentucky Bluegrass	19.73					
—total bluegrass	39.56	45.65*	4.53	6.09	85	85
Manhattan II E Perennial Ryegrass	19.89	18.98	4.54	-0.91	85	94
Vista Creeping Red Fescue	39.66	33.03*	4.32	-6.63	90	92
Blue Seal Feeds, Inc. BLUE SEAL SHADY LAWN MIXTURE						
Kentucky Bluegrass	9.87					
Ram I Kentucky Bluegrass	4.86					
—total Kentucky Bluegrass	14.73	20.95*	2.29	6.22	85	91
Rough Bluegrass (<i>Poa trivialis</i>)	19.91	21.53	2.41	1.62	85	94
Perennial Ryegrass	14.23	14.23	4.66	0.00	90	88
Creeping Red Fescue	39.07					
Chewings Fescue	9.83					
—total fescue	48.90	41.34*	4.80	-7.56	85	73*

Table 4 Germination and Purity of Lawn Seed (continued). Results for purity and germination are for seeds separated by genus and not by species or variety are reported as the sum for that genus. Tolerance calculated according to the rules for seed testing published by the Association of Official Seed Analysts (AOSA). Variance is calculated as purity found minus purity claimed. * = does not meet label claims within allowable tolerance.

Seed Company/Seed Mixture	Claim	PURITY			GERMINATION	
		Found	Tolerance	Variance	Claim	Found
Agway, Inc. AGWAY SUNNY GREEN MIXTURE						
Conni Kentucky Bluegrass	19.40	22.93*	2.49	3.53	85	88
Dasher II Perennial Ryegrass	33.95					
Allaire Perennial Ryegrass	24.25					
—total ryegrass	58.20	58.02	4.88	-0.18	90	94
Creeping Red Fescue	19.40	13.58*	4.28	-5.82	85	74*
Agway, Inc. AGWAY SHADY GREEN MIXTURE						
Conni Kentucky Bluegrass	19.40	21.66	2.41	2.21	85	90
Patriot II Perennial Ryegrass	9.70					
Nomad Perennial Ryegrass	9.70					
—total ryegrass	19.40	20.51	3.94	1.11	90	94
Shademaster Red Fescue	29.10					
Saxon Hard Fescue	29.10					
—total fescue	58.20	54.46	3.83	-3.74	85	85
Agway, Inc. AGWAY LANDSCAPER MIX						
Kentucky Bluegrass	28.05	37.53*	3.51	9.48	80	95
Dasher II Perennial Ryegrass	32.98	33.56	4.88	-0.58	90	96
Pennlawn Red Fescue	32.01	25.96*	4.28	-6.05	85	90
New England Seed Co. PUTNAM CO-OP LANDSCAPE 85 MIX						
Kentucky Bluegrass	17.17	22.79*	2.24	5.62	80	95
Manhattan II Perennial Ryegrass	19.57					
Annual Ryegrass	14.49					
—total ryegrass	34.06	32.02	4.88	-2.04	90	94
Chewings Fescue	24.68					
Creeping Red Fescue	19.67					
—total fescue	44.35	42.67	3.79	-1.68	85	86
New England Seed Co. PUTNAM FARMERS CONSERVATION MIX						
Perennial Ryegrass	16.98					
Annual Ryegrass	19.68					
—total ryegrass	36.66	31.42*	3.78	-5.24	90	91
Creeping Red Fescue	38.97	45.63*	3.60	6.66	91	81*
Kentucky 31 Tall Fescue	19.60	17.96	3.35	-1.64	85	81
White Clover	3.00	3.08	1.60	0.08	88	86
Agriturf, Inc. PUTNAM FARMERS LANDSCAPE MIX						
Kentucky Bluegrass	17.33	23.99*	2.44	6.66	88	73*
Pennant Perennial Ryegrass	19.61					
Annual Ryegrass	14.49					
—total ryegrass	34.10	26.86*	4.88	-7.24	90	94
Creeping Red Fescue	24.46				93	
SR 5100 Chewings Fescue	19.78				85	
—total fescue	44.24	45.73	3.79	1.49		90

Table 4 Germination and Purity of Lawn Seed (continued). Results for purity and germination are for seeds separated by genus and not by species or variety are reported as the sum for that genus. Tolerance calculated according to the rules for seed testing published by the Association of Official Seed Analysts (AOSA). Variance is calculated as purity found minus purity claimed. * = does not meet label claims within allowable tolerance.

Seed Company/Seed Mixture	Claim	PURITY			GERMINATION	
		Found	Tolerance	Variance	Claim	Found
New England Seed Co. UNIVERSITY OF RI NO.2 LAWN SEED MIX						
Marquis Kentucky Bluegrass	19.91				85	
Kentucky Bluegrass	19.85				85	
—total bluegrass	39.76	23.08*	3.51	-16.68		84
Manhattan II E Perennial Ryegrass	19.57	39.14*	4.86	19.57	90	92
Creeping Red Fescue	39.36	31.44*	4.32	-7.92	85	85
Loft's Seed, Inc. RIVER RUN WEAR&TEAR MIXTURE						
Perennial Ryegrass	79.68					
Annual Ryegrass	19.57					
—total ryegrass	99.25	99.61	0.57	0.36	90	95
Loft's Seed, Inc. RIVER RUN SUN&SHADE MIXTURE						
Kentucky Bluegrass	8.93	10.66*	1.40	1.72	88	90
Perennial Ryegrass	29.88	26.44	4.28	-3.44	90	96
Boreal Creeping Red Fescue	58.25	60.01	3.79	1.76	85	90
Pennington Seed, Inc. ULTIMATE TALL FESCUE BLEND						
Virtue Tall Fescue	80.00					
Duster Tall Fescue	15.00					
—total tall fescue	95.00	95.91	1.49	0.91	85	82
The Scotts Co. SCOTTS FALL GRASS SEED MIX						
Kentucky Bluegrass	5.76	6.36	1.03	0.60	87	89
Perennial Ryegrass	44.00	46.38	4.17	2.38	90	94
Creeping Red Fescue	44.89	45.36	3.60	0.47	85	91
Pennington Seed, Inc. BETTER HOMES & GARDENS CONTRACTOR'S MIX						
Kenblue Kentucky Bluegrass	6.00	9.62*	1.13	3.62	85	95
Shining Star Perennial Ryegrass	18.00					
Gulf Annual Ryegrass	37.00					
—total ryegrass	55.00	51.18	3.94	-3.82	85	93
Boreal Creeping Red Fescue	34.00	37.19	3.83	3.19	85	84

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